The Tide Comes In for the Radio Man!
Here's the answer to replacements on millions of condensers now in use... and the only adequate answer to the problem of replacements on inexpensive compact receivers.

On every point, the Mallory line of Tubular Condensers assures you of faster, more efficient replacement... at a better profit. The line is complete. You never have to compromise on replacement needs. And each individual unit reduces mounting problems to the simplest possible form.

Remember... Mallory Tubular Condensers have been developed around an exhaustive study of all original equipment types. You can be sure of the exact replacement you need every time.

**Over 50 Ratings to choose from**

Mallory Tubular Condensers include, wherever sizes permit, multiple separate section units. The complete line is furnished in attractive, neat, permanently marked tubes... definitely sealed against humidity and moisture. All condensers are provided with 6-inch flexible leads for installation convenience.

---

*FP (Fabricated Plate) Tubular Condensers (Type BD)*

Made by **MALLORY**

Every advantage of FP construction is afforded in these small, metal en-cased tubulars. Made with one piece drawn aluminum can and insulated with an attractive cardboard cover clearly marked for rating identification. Strong internal construction eliminates troublesome open circuits.

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

*Not etched construction*
ARVIN 1941 Headliners

ALL HOT NUMBERS!

MODEL 622A
Ivory plastic cabinet, above...
$14.95

MODEL 622
Walnut plastic cabinet...
$13.95


MODEL 632
Rubbed walnut wood cabinet...
$17.95

In loop antenna. Radio plays anywhere you plug it in, no ground needed. Connection on back of loop antenna permits use of outside aerial for extra distance. High sensitivity electro-magnetic speaker. Big easy-to-read illuminated dial. Bond coverage 540 to 1600 kc. Large attractive cabinets.

MODEL 302A
Unbreakable cabinet in ivory, above...
$16.95

Model 302, in deep brown finish...
$14.95

RADIO-PHONOGRAPH—Powerful four-tube radio (including rectifier). Brings in radio broadcasts or plays 10” or 12” recordings beautifully. Audio system gives high output and clarity of reproduction. Attached aerial. Self-starting, constant 78 r.p.m. phonograph motor.

MODEL 522A
Unbreakable cabinet in ivory,...$10.95
At right...

Model 522, same as above in walnut...
$9.95

Hot performing 5-tube superheterodyne (including power rectifier tube). Two dual-purpose tubes increase performance. Built-in loop antenna, electro-dynamic speaker, quadrapled tuned I. F. amplifier for knife-edge selectivity and high-power output. Attractive airplane-type dial. Band coverage 540 to 1600 kc.

MODEL 722A
Ivory plastic cabinet, left...
$19.95

Model 722...
$18.95
WALNUT PLASTIC CABINET.


MODEL 732
Rubbed walnut wood cabinet...
$24.95

ALL PRICES HIGHER WEST AND SOUTH

Low list prices, good discounts, exceptional performance and eye appeal are all combined to bring you quick turnover on Arvins.

Arvin is the best net profit line in the industry—because all Arvins are small but hot numbers, all "headliner-attractions" for volume sales and "clear" profits.

All Arvins sell fast—are easy to handle—are quickly obtained from conveniently located jobbers who co-operate with you in merchandising any one or all models. And every Arvin Radio is backed by a company with total capital, surplus and reserves of more than $5,000,000. Alert dealers will get the handsome free floor display, shown here in miniature, by ordering at least one each of any six Arvin models now. Strongly constructed and beautifully colored—5 foot high, 3 feet wide.

Arvin hot numbers and this merchandiser will boost your radio profits. Get your order in now.

NOBLITT-SPARKS INDUSTRIES, INC., COLUMBUS, INDIANA

The company behind Arvin Radio sold four times as many sets in 1939 as in the year before—and 20% more in first 6 months of 1940 than in all of 1939.
Now ROCK-OLA

THE BIGGEST, RICHEST MARKET SINCE RADIO

PUTS INTO YOUR GRASP

For Really "Big-Time" Profits from Home Recorders, BACK ROCK-OLA

- Home record-making is here—the thrill and fun sensation of the century. Are you ready for it?—ready to capitalize on this lushest market since radio itself? Think of it in terms of the thousands, the millions, who will find a tremendous irresistible appeal in the suggestion "make records at home as simply as you switch on a light"—and plan now to get your share.

Now, as you read these words, the huge Rock-Ola factory is turning out 6 great models—and the Rock-Ola organization is developing a merchandising plan to help you move them in big volume.

Rock-Ola, as the world's greatest phonograph maker, and as one of the 10 furniture manufacturers with national distribution, has the background, the experience and the ability to help you put across this grand new, eagerly-awaited instrument.

So, expect to find in Rock-Ola Recorders all the engineering points required for simple, satisfactory, care-free operation; all the convenience features that such an instrument needs to have mass consumer appeal; plus outstanding cabinet styling and design.

Get set for prices in a range that mean mass sales—with full discounts on every set. Above all, look for the backing that only an organization like Rock-Ola can give—for advertising, sales promotion and merchandising all aimed at selling an exclusive home recorder line.

Does it read like a worthwhile proposition? Then get the complete Rock-Ola story now—find out how a Rock-Ola dealers puts you in line for big, quick profits from this exclusive home recorder line. Mail the coupon today.

IMPORTANT: Be sure to ask about Rock-Ola's sensation-filled home recording discs.

ROCK-OLA MANUFACTURING CORPORATION.
Dept. R-8, Recorder Division
800 N. Kedzie Ave., Chicago 13

Please send me the complete Rock-Ola dealer story, including full details on merchandising plans, discounts, etc.

I am interested in Rock-Ola Discs.

Name: ...........................................
Address: ......................................
City: ...........................................
State: ......................................
An acknowledged leader in the field of aircraft radio direction finders is Lear. Their equipment bears the official mark of approval of the Civil Aeronautics Authority and is used not only by the United States Government but also by Governments of Canada, China, England, Japan, Peru, Sweden, and many others.

It is not surprising that an independent survey by the Lear engineers of available tubes for these delicate and vital instruments showed Raytheons to be the best for the work and most reliable.

Yet these are the same tubes from the same production that you might be using as replacements in an ordinary home radio receiver! Is it any wonder that the best engineers of set manufacturers and most successful servicemen use Raytheons in their work? Especially so, Raytheons actually cost no more!


"World's Largest Exclusive Radio Tube Manufacturers"
Nearly half the Industry's Output is using PREFERRED TYPE TUBES

Climbing—and climbing! This graph tells better than a thousand words how the RCA Preferred Type Tubes Program is gaining added acceptance month by month. When the Program began, only 32% of all RCA Receiving Tubes ordered by set manufacturers were among the “Preferred 36.” Today, the proportion is around 90%!

Less than one tube type in ten, of the nearly 500 tube types now cluttering the market, is actually needed to design practically every type of radio receiver for finest performance at the lowest ultimate cost.

More than 5,000,000 SETS IN 1940 will use Preferred Type Tubes!

Into new 1940 receivers are going almost as many of the 36 Preferred Type tubes as the total of all the 400-odd other types combined! And the curve of acceptance for Preferred Types is still skyrocketing up!

Acceptance: Five Million 1940 Receivers—approximately half the industry's total output in 1940—will use Preferred Type Tubes. Acceptance: 18 of the country's leading radio set manufacturers have endorsed the RCA Preferred Type Tubes Program—have endorsed it, followed it, and adapted it to their production because they believe it a benefit to the industry...to themselves...to you.

Everyone gains, when the road is cleared for standardization. Manufacturers gain because engineers can design virtually every type of receiving set for a desired performance at lowest ultimate cost. Distributors, dealers and servicemen gain—and will gain increasingly—through faster turnover and fewer stock items. The consumer gains, because more production of fewer types means less costly production of better, more uniform tubes—more tube value for his tube dollar.

The way has been pointed. The road is open. Streamline your problems with the RCA Preferred Type Tubes Program!

Over 380 million RCA Radio Tubes have been purchased by radio users.

RCA Manufacturing Co., Inc.
Camden, New Jersey • A Service of Radio Corporation of America

RADIO TODAY
NEW FM
STROMBERG-CARLSONS
BOOST UNIT SALES and UNIT PROFITS!

When radio dealers telegraph their approval of a radio line, THAT'S NEWS! And even more important is their report that FM Stromberg-Carlsons are increasing unit sales and profits.

If you want MORE SALES . . . BIGGER SALES . . . and BETTER PROFITS, push Stromberg-Carlson—the line that includes Frequency Modulation . . . backed by over a year's field experience. And remember—Stromberg-Carlson alone brings you the exclusive Labyrinth and Carpinchoe Speaker System that captures the utmost of Staticless Radio's extended musical range.

For complete details of the radio that's a year ahead, see your distributor today—or write direct to STROMBERG-CARLSON TELEPHONE MFG. CO., Rochester, N. Y.

They say . . .

"May we express our appreciation for the opportunity Stromberg-Carlson has afforded us through the introduction of FM receivers. For the first time in years we are making profitable high unit sales. We feel the coming season will bring real prosperity to every radio dealer who hitches his wagon to the Stromberg-Carlson star."

Sam Garard, Sun Radio Co.
New York City

"Our nearest FM station is fifty miles away but the public is convinced that FM is radio's greatest achievement in years. Have sold twenty Stromberg-Carlson receivers to date. Boston soon to have two FM stations and then we will really go."

F. T. White, Radio Manager, Chickering and Sons Division
Boston, Mass.

"Frequency Modulation has given us the finest reception we ever had and is a great improvement over standard broadcasting. New FM Stromberg-Carlson models have stimulated business tremendously."

E. F. Cass, President, Broadway House of Music, Inc.
Milwaukee, Wis.

"My radio business advanced forty percent selling Stromberg-Carlson FM receivers since January first. Second Frequency Modulation transmitter recently opened in Worcester area and my sales will skyrocket during next few months. Units up, profits up with Stromberg-Carlson."


"Effect of FM sales on our business during past six months most satisfactory. Expect to double our volume on your line with more than double profit because unit sale is greatly increased. Stromberg-Carlson FM pioneering appreciated."

Heins & Balet, New York City
TWO GREAT
JOIN COLUMBIA'S LIST
Leopold Stokowski
conducting the All-American Youth Orchestra

AGAIN Columbia announces one of the greatest scoops in record history! Two more of the world's most famous musical names—names that really build sales—have now been added to Columbia's unbeatable list of exclusive classical artists and orchestras!

But that's not all! Besides one of the most amazing arrays of talent ever assembled, Columbia offers you 3 OTHER SPECTACULAR SALES ADVANTAGES: First, Columbia's new low prices open vast new markets for sales of fine recordings! Second, Columbia "Masterworks" are today the finest records ever made. They give your customers greater fidelity...less surface sound...and longer wear than ever before! Third, Columbia "Masterworks" at the new low prices are now backed by the biggest, hardest hitting advertising campaign in the industry's history!

NOW THE WORLD'S GREATEST ARTISTS ARE ON COLUMBIA "MASTERWORKS"
Leopold Stokowski Conducting
The All-American Youth Orchestra
The Philharmonic-Symphony Orchestra of New York
John Barbirolli, Conductor
Artur Rodzinski and the Cleveland Orchestra
Frederick Stock and the Chicago Symphony Orchestra
Dimitri Mitropoulos and the Minneapolis Symphony Orchestra
Sir Thomas Beecham
Felix Weingartner
Igor Stravinsky
Howard Barlow
Andre Kostelanetz
Joseph Szigeti
Nathan Milstein
Alfredo Campoli
Walter Gieseking
Egon Petri
Edward Kilenyi
Sir Thomas Beecham
Felix Weingartner
Igor Stravinsky
Howard Barlow
Andre Kostelanetz
Joseph Szigeti
Nathan Milstein
Alfredo Campoli
Walter Gieseking
Egon Petri
Edward Kilenyi
Robert Casadesus
Nelson Eddy
Nino Martini
Don Cossack Chorus
Bartlett and Robertson
Gregor Piatigorsky
Emanuel Feuermann
Ernst Victor Wolff
Charles Kullman
Josephine Antoine
Budapest String Quartet
Roth String Quartet
Pasquier Trio
Lener String Quartet
Stuyvesant String Quartet
Curis String Quartet
Dorian String Quartet
Maurice Evans
Orson Welles
Roland Hayes
Kathryn Veile
Carlo Morelli

NEW NAMES
OF EXCLUSIVE ARTISTS

The Philharmonic-Symphony
Orchestra of New York

Feature these Sensational
new September Releases!

Leopold Stokowski
CONDUCTING THE ALL-AMERICAN
YOUTH ORCHESTRA

THE STAR SPANGLED BANNER
GOD BLESS AMERICA
10-inch record No. 17204-D
.75

SYMPHONY NO. 5 IN E MINOR
("From the New World")
(Dvorak). Set M-AM-MM
416. Six 12-inch records.
$6.25

SCHERERAZADE (Rimsky-Korsakov), The Cleveland
Orchestra, Artur Rodzinski, Conductor. Set M-
AM-MM 398. Five 12-inch
records.
$10.00 $5.50

NUTCRACKER SUITE (Tchaikovsky), Chicago Symphony
Orchestra, Frederick Stock, Conductor. Set M-AM-MM
395. Three 12-inch records.
$5.00 $3.50

"MASTERWORKS" Records

AUGUST, 1940
TWO GREAT NEW NAMES JOIN COLUMBIA'S LIST

Leopold Stokowski conducting the All-American Youth Orchestra

AGAIN Columbia announces one of the greatest scoops in record history! Two more of the world's most famous musical names — names that really build sales — have now been added to Columbia's unbeatable list of exclusive classical artists and orchestras.

But that's not all! Besides one of the most amazing arrays of talent ever assembled, Columbia offers you 3 OTHER SPECTACULAR SALES ADVANTAGES: First, Columbia's new low prices open vast new markets for sales of fine recordings! Second, Columbia "Masterworks" are today the finest records ever made. They give your customers greater fidelity... less surface sound... and longer wear than ever before! Third, Columbia "Masterworks" at the new low prices are now backed by the biggest, hardest hitting advertising campaign in the industry's history!
The smooth trimness that makes silk hosiery so attractive and alluring depends on clear, even silk threads. To insure a flawless product, quality hosiery mills carefully test the strength of their thread. The knitters, then, get only clean, unknotted silk from which they can make good hosiery.

The "Scott Tester" developed for hosiery and other textile manufacturers, is used to test fine thread and cloth. Sylvania saw this same precision measuring device could just as efficiently be used for testing and measuring Molybdenum and alloy wires used for grids, filaments and other delicate parts in Sylvania Radio Tubes.

Before Sylvania enterprise led to this improved method, it was common practice to judge wire according to elongation. But the important criterion for determining wire is uniform strength, tensile strength and yield point—and Sylvania pioneered the way! In fact, research on the filament wire for the Sylvania 1.4 volt battery tubes was made possible through the accurate testing of this machine. The filament wire in these tubes is \( \frac{1}{3} \) the thickness of a human hair—so fine that the common method of judging wire could not be used.

Testing wire with the Scott Tester is only one of the hundreds of special operations that help to make Sylvania Radio Tubes better. To you who sell Sylvania, this care and precision means SATISFIED CUSTOMERS—the kind that give you profitable, repeat business.

*Hygrade Sylvania Corporation, Emporium, Pa.*

**SYLVANIA**

**SET-TESTED RADIO TUBES**
Make no mistake — this is your big year for bigger profits — and you’re going to get them with the finest, fastest-selling RCA Victrola radio phonographs that ever kept a cash-register ringing.

TAKE A LOOK AT THE REASONS WHY!

1 You have a complete line — 13 great models covering complete range of style and price!
2 Authentic Period Style Cabinets — the most beautiful instruments you’ve ever had to offer!
3 New Exclusive RCA Victor Tone Guard — show your customers how it means pure record tone!
4 Stabilized Electric Tuning — a grand selling feature — push a button, there’s your station!
5 Amazing new Overseas Dial — the hottest feature of the hottest RCA Victrola line in history!
6 Home Recording — the latest thing and the one most-wanted feature of the year!

LOW COST TO YOUR CUSTOMERS — BIG PROFITS FOR YOU!

RCA Victrola Model V-170, priced so low you’ll be amazed, enables you to offer such great selling features as Gentle Action Automatic Record Changer for 10” or 12” records ... 6 RCA Victor Preferred Type Tubes ... American and foreign radio reception ... Electric Tuning ... Two Built-in Magic Loop Antennas for domestic and foreign programs ... supersensitive 12” Electrodynamic Speaker ... 3-point bass and treble tone control for RCA-Victrola, 2-point tone control for radio ... and many other advantages. Compact, modern cabinet of heart walnut veneer with a band of stripe mahogany veneer, measures only 33⅛” high, 25⅜” wide, 16¾” deep. Price includes $4.50 in Victor Records and record rack.

THIS “CONCENTRATION OF VALUE” WILL SELL PLENTY!

RCA Victrola Model V-205. Constructed of heart walnut, butt walnut and Prima Vera veneers with instrument panel conveniently located in front. Has Gentle Action Automatic Record Changer for 10” or 12” records ... exclusive RCA Victor Tone Guard ... 9 RCA Victor Preferred Type Tubes ... American and foreign reception on 3 bands ... Electric Tuning ... Built-in rotatable loop antenna with separate antenna for foreign programs ... and more than a score of other features. Cabinet, which is available in mahogany as well as walnut, is 36⅞” high, 33⅛” wide, 17¼” deep. Price includes $4.50 in Victor Records and record rack. Also available with home recorder as Model VHR-207. Price includes 7 home recording blanks.


OUTSTANDING IN BEAUTY — OUTSTANDING IN SALES APPEAL!

RCA Victrola De Luxe Model V-300. In this bow front cabinet heart walnut, butt walnut and Prima Vera veneers are beautifully blended. RCA Victrola Model V-300 will thrill your customers who have a real eye for beauty. Also available in mahogany, it is 35” high, 34¾” wide, 18½” deep. This instrument provides Gentle Action Automatic Record Changer for 10” or 12” records ... exclusive RCA Victor Tone Guard ... 10 RCA Victor Preferred Type Tubes plus Magic Eye ... American and foreign reception on four bands ... Overseas Dial with 31-meter spread band ... Electric Tuning ... 15” supersensitive Electrodynamic Speaker ... and many other outstanding features. Price includes $5 in Victor Records of customer’s selection.
"You know, 1941 is the 21st Birthday year of American radio—because back in 1920 Westinghouse made the first radio program broadcast and the first commercially built radio receivers for home use. In celebration of these events the 1941 Westinghouse Radio Line offers the public something finer in radio beauty and performance than ever before. I've been in the radio business a good many years, and this is a fast-selling, money-making line if I ever saw one!"

"Two leaders at the moment are models WR-484 and WR-388, but you'll find every number in the Westinghouse 21st Birthday Series a triumph in tone quality, cabinet construction and design. Every set is priced to enable you readily to meet competition. And you'll like the profit margin!"

"You couldn't ask for much more... Eye-catching styles! Real performance! Fast-moving prices! And handsome profits, too!"

"Why not phone your nearest Westinghouse Distributor now?"
SERVICING 50,000,000 U.S. RADIOS

To the public, to the broadcasters, and to radio manufacturers and distributors, the most important figure in the problem of keeping America's fifty million radio sets in continuous service, is The Man on the Service Firing-line!

RADIO TODAY has sent survey parties into the field to study servicing situations at first hand. The results shown on this page confirm similar studies made in 1937, 1938 and 1940.

DEALER-SERVICE OUTLET GETS THE BUSINESS

All of these studies reveal that it is the Dealer-Service type of outlet who gets three-fourths to nine-tenths of the service business in the community. If this finding is surprising to manufacturers, it may be because they often lack actual field contact, being content to rely on their wholesalers for their knowledge of field conditions. They therefore stop short of the goal.

In brief, it is the dealer-service outlet who gets the business, and in this group the radio-music type of outlet invariably predominates in volume and service sales.

RESULTS OF RADIO TODAY'S SURVEY

<table>
<thead>
<tr>
<th>SPRINGFIELD</th>
<th>DAYTON</th>
<th>SCRANTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASS</td>
<td>OHIO</td>
<td>PA.</td>
</tr>
<tr>
<td>List of retail sales and/or service stores, from directories, mailing services, manufacturers' and jobbers' lists, etc.</td>
<td>111</td>
<td>137</td>
</tr>
<tr>
<td>Verified as Out-of-Business, Inactive, Radio Discontinued, Dual Names, etc.</td>
<td>43</td>
<td>47</td>
</tr>
<tr>
<td>Active radio establishments, all types, retail only</td>
<td>68</td>
<td>90</td>
</tr>
<tr>
<td>Dealers</td>
<td>43</td>
<td>68</td>
</tr>
<tr>
<td>Large &quot;Key&quot; outlets</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>% of set sales by &quot;Key&quot; outlets</td>
<td>90%</td>
<td>87%</td>
</tr>
<tr>
<td>Dealers with own service departments and Service shops stocking sets</td>
<td>65%</td>
<td>64%</td>
</tr>
<tr>
<td>Independent servicemen, full or part time</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Servicemen employed by Dealers and Dealer-Service stores</td>
<td>34</td>
<td>73</td>
</tr>
<tr>
<td>% of service done by Dealer-Service outlets</td>
<td>88%</td>
<td>79%</td>
</tr>
</tbody>
</table>
price increases and further possible dilution of our currency, may well produce the greatest radio "last-quarter" since 1939.

Cashing in on Air Battles of 1940

The radio industry's big campaign on "Listen Before You Vote" is set for public launching Sept. 16. Stations all over the U.S. are ready to start on that date, with complete promotion materials suggested by National Association of Broadcasters. Dealers and distributors will find

More Buyers for Radio

General retail trade has continued to run about 5 per cent ahead of last year, with every prospect that as the "defense spending" gets under way, buying power and business will improve more.

Consumers are spending in the upper brackets. Many automobile producers report that they've had the best July sales on record. Radio, by comparison with 1939, may not hold its own with general business increases during August and September because of the tremendous impetus which the war gave to radio sales a year ago.

Improving consumer buying power, a Presidential election that holds greater popular interest than for many years, and the increased spending in the upper brackets in anticipation of

TODAY'S TRENDS

grants are heard each Monday at 7:15 p.m. EDT (6:15 p.m. CST) on NBC Blue Network stations.

A fancy review of the highly popular "Radio Magic" series has just been published by NBC. It says that "no one has done more to popularize radio throughout the United States than Dr. Caldwell" and it reveals that large numbers of enthusiastic letters are being received from all over the country. The NBC announcement extravagantly lauds the editor of Radio Today for his unique programs on what's new and interesting in radio, radio tubes, and radio devices.


RMA Launches National Television Committee

Under auspices of the Radio Manufacturers Association, a group of television leaders met with Chairman Fly and Engineer Jett of the FCC at New York, July 31, to plan a national television system. "Television is bound to move forward expeditiously and successfully," declared Chairman Fly.

"The RMA has always attempted to serve the industry," explained President Knowlson of RMA. "As soon as the FCC stated it was ready for the
industry to develop standards, I offered the RMA facilities and machinery." The new industry committee will act, he said, "not as part of RMA but under the auspices of RMA, to search for and develop the best possible standards which may be set up for television at this time."

Dr. W. R. G. Baker of General Electric was appointed general chairman, and in delegating the technical sub-committees, he explained that the new television-system committee has "the responsibility for determining basic standards of a system of communication capable of transmitting intelligence in a form which will, in the future, probably have more effect on the life of the American people than any system known today."

"The real possibilities of television," continued Chairman Baker, "as a means of education and entertainment, are not yet understood. Television represents a new textbook as yet unopened—a theatre stage whose curtains have not been drawn—a movie screen that is as yet dark."

**New Statistics for Parts Manufacturers**

In July the new RMA statistical service for parts and accessory manufacturer members was inaugurated. The weekly reports give valuable figures on business trends in the parts industry, the initial report for July 6 showing an increase of parts sales to radio manufacturers of 11.7 per cent over the comparative week in 1939, and an increase in jobber sales of 13.4 per cent. The second weekly RMA report, for the week of July 13, showed an increase of 16.9 per cent in parts sales to radio manufacturers and an increase of 12.4 per cent in jobber sales of the parts makers. Later reports were understood to show a similar trend.

The new RMA parts statistics were planned last June at Chicago, by a special committee headed by Leslie F. Muter of Chicago, Chairman, and Ernest Seering of Philadelphia and Victor Mucher of Brooklyn. The statistics are confined to comparative sales percentages, without reporting actual dollar volume. Over half of the RMA parts and accessory members are already contributing their weekly reports.

**Freed-Eisemann Is Back to Radio Set Field**

Firmly believing that FM sets will obsolete present receivers, and will release the radio business from a price complex, Joseph D. R. Freed has announced that Freed-Eisemann—a name famous early in radio—is returning to the set manufacturing field.

Mr. Freed, co-founder of the original Freed-Eisemann Radio Corp., is president of the new Freed Radio Corp., 39 W. 19th St., New York City, which will shortly present its new line to the trade. Max Adelberg is treasurer of the firm and Melvin Zalkin is secretary.

"Many factors can be controlled by FM that could never be controlled before," Mr. Freed points out. "Reception quality can be maintained and the dealer can be assured of a profit which has been lost to him under the present AM structure . . . a dealer won't have to talk fidelity . . . the customer can hear it himself."

The industry's new National Television Committee includes, left to right, bottom row: J. V. L. Hogan, consulting engineer; B. Ray Cummings, Farnsworth; A. N. Goldsmith, IRE; W. R. G. Baker, RMA; H. R. Lubcke, Don Lee; A. I. Lodwick, Hughes Tool; Dr. E. F. W. Alexanderson, GE. Back row: John R. Howland, Zenith; Adrian Murphy, CBS; E. W. Engstrom, RCA; F. C. Young, Stromberg-Carlson; D. E. Hartnett, Hazeltine; A. A. Oswald, Bell Telephone; D. B. Smith, Philco, and Allen B. Du Mont.

Wilcox-Gay execs plan more recorder features. Left to right, Warren Hasemeier, general sales mgr.; Paul Gay, v.p. and engineering head; Buck Dooley, Los Angeles jobber. We hasten to add that Wilcox-Gay makes recording blanks, too, a fact that was omitted from "Radio Today's" July listing of blank manufacturers.

**AUGUST, 1940**
The hard-fought presidential campaign draws many extra folks to radios. A GE portable in the thick of it.

CBS actress Barbara Luddy of "Fibber McGee and Molly" dramas, one of the big shows this fall.

H. V. Kaltenborn broadcasts the war reports for NBC—a "must" for millions of listeners.
Radio's strongest tide comes in this Fall and it promises to lift the dealer to his highest position. People have a terrific appetite for war news, the political air battles of the presidential campaign, and the new programs and dramas starting this Fall. All this means more servicing.

And as the nation "goes radio" completely, the public will be sharply interested in brand-new radio equipment for the home. The dealer steps in with new phonograph-radios, personal sets, consoles, portables, recorders, etc., and there's no stopping his sales program.

Look at the front cover of this issue, too, and remember the newer radio developments further out to sea; this is indeed a golden flood with the retailer on the crest of the wave.
RADIO’S ONRUSHING TIDE!

POLITICS
The hard-fought presidential campaign draws many extra folks to radios. A GR-portable in the thick of it.

DRAMA
CBS actress Barbara Luddy of "For Nighter" dramas, one of the TG sets shows this fall.

Consoles
Combinations like the phonoelectric, Phenix below and the improved automatic Stromberg, right, center, make Fall market news.

COSMO
Slopes automatic. Strombrho improved make Fall market news.

GOLDEN FLOOD WILL SOON POURED INTO DEALERS’ CASH BOXES

Radio’s strongest tide comes in this Fall and promises to lift the dealer to his highest position. People have a terrific appetite for war news, the political air battles of the presidential campaign, and the new programs and dramas starting this Fall. All this means more servicing.

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Look at the front cover of this issue, too, and remember the newer radio developments further out to sea: this is indeed a golden flood with the retailers on the crest of the wave.

"Personalals"
First-class sets are now everywhere. The RCA is shown here.

Recorders
Buying trend features radio recorders. Below, Stewart Warner.

PORTABLES
Parents in general have taken to these sets like this last has taken to her Crosley.

"Personals"
First-class sets are now everywhere. The RCA is shown here.
Emerson model 359 for $29.95 uses single-unit battery pack, and wired for AC-DC.

Retailers in Nebraska and Kansas are now in the promotion news with “Farmer's Day” announcements, complete with “Apple Pie” contests and band concerts by the local Hi-Y club.

In the New England agricultural areas, jobbers of farm radio products are saying that “the sales picture has completely changed.” They point to a new battery radio or to a new battery power pack, and they say “we can't keep them in stock.”

A manufacturer points out that, “never before in the history of the nation has the vote of the individual farmer been more important, more literally fought for than it will be in the 1940 Presidential Campaign... and candidates realize that RADIO will elect the next president.”

Thus the farm radio business gets more and more brisk, as the country gentlemen eye the economy, convenience and beauty of the new models and prepare to listen before they vote. New profits loom ahead for dealers who sail into radio's greatest unsaturated market.

CROPS AND PROFITS

In the Western areas the 1940 theme of the retailer is “Demonstrate all over the area, plug the political broadcasts because farmers are certainly interested in such things, and be sure to present a complete outline of the

At extreme left, the new Sentinel record player 244-G, plays thru battery sets, no extra drain.

Left, the Crosley Glamor-Tone 36AM, superhet with 1,000 hr. battery pack housed in cabinet.

Below is RCA's 14BK console with 4 low-drain tubes, battery-saver switch, and “Economy Blinker.”
THE FARM BUYER

Massive Motorola 40BK convertible for AC use.

A Philco with six tubes, directional loop aerial, push-button tuning. Gets short-wave. 110K.

General Electric JB-420 comes in mahogany plastic, with "Dynapower" speaker.

economical operation of the new farm radio jobs."

Returns from annual harvests are important in these sections, and that's the time when dealers exert selling energies to get cash payments for radio products. Farmers are frugal buyers and many of them have mail-order purchasing habits, but if a friendly, alert dealer is on hand with an enterprising account of what his products will do for the farmer in this new season, that dealer gets the gravy.

In other areas where products of battery set users are more diversified, dealers report different techniques. A retailer in Brunswick, Me., for instance, is going to town with a time payment plan and in one case at least he has sold practically an entire community the same battery set. When collections are being made for non-radio merchandise, the men take along a demonstrator model radio.

BUYING SPREE

M. H. Canfield, of Radio Service Labs, Portland, Me., does business with many dealers who are selling to farmers, and he reports that "Since the 1.5-volt tube caught on, the farm radio business is the best that it has been in five or six years."

This distributor has a $5 A-and-B battery pack which sells like hot cakes, and he's also featuring a new table model radio in the $25 price range which delivers the goods. This set competes nicely with the mail-order jobs, and nearby dealers are getting plenty of results with it.

UNSOLD MILLIONS

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total occupied farms</td>
<td>6,500,000</td>
</tr>
<tr>
<td>Farms without radios</td>
<td>4,000,000</td>
</tr>
<tr>
<td>Total electrified farms</td>
<td>1,786,000</td>
</tr>
<tr>
<td>Farm population</td>
<td>32,000,000</td>
</tr>
</tbody>
</table>

Mr. Canfield declares that farm folks can be depended upon for consistent interest in broadcasts of weather reports, political news, hill-billy music, and market news. They want all this to come in clearly and dependably, without too much cost to them, and they want a cabinet that is pretty close to those used by city cousins. They will shy away from a radio that looks too plain. These facts arise from this jobber's experience with dozens of dealers in the business.

MANY CHANCES FOR SALES

Certainly not all of a dealer's farm sales are straight battery sets. The Rural Electrification Administration now has loan funds available for the fiscal year which will permit the construction of 92,000 miles of rural distribution lines. And the newly electrified farmers will want radios; in the new utilization survey just made by REA, it was found that nearly nine out of ten farms of REA-financed electric lines have radios.

As for the change-over from battery power to high-line supply, which may have worried some farm radio buyers in the past, the manufacturers in the field have now solved the problem and have put dealers in a real sales-making position.

CONVENIENCES READY

One manufacturer outlines the situation as follows: "At nearly every stand of the REA Farm Equipment Tour, known as the REA Traveling Circus, you will find an aggressive jobber or dealer who is displaying and demonstrating our device which enables the farmer who has received electrification to operate his battery radio from the high lines.

"These radio men report great interest and extremely satisfactory sales, while the cost of their exhibition is comparatively low. Dealers make sales during the show, and secure many leads. Sometimes it is a question of the farmer's wife wanting a refrigerator and the farmer himself a new radio. By suggesting that the farmer buy the refrigerator for his wife, and put our device in his radio, all members of the family can be satisfied."

Many of the new farm models are already convertible for power line operation. These can be dramatically demonstrated by the dealer and many a farm person will decide that it's no good waiting any longer, before buying a new set.

(Continued on page 39)
Eye-filling beauty and dignity combined in Westinghouse's new automatic radio-phonograph, WR-484. Plays 10 and 12-inch records; Twelve-inch electro-dynamic speaker.

Admiral Magna-muse
* Model RS9-B11 11-tube automatic record changer, recorder, and radio has 5 band tuning from 545 kc. to 15.3 mc. with band-spread tuning of 19.25, and 31-meter bands. RF stage, 12-inch speaker are used. Continental Radio & Tele. Corp., 3800 Cortland St., Chicago.—Radio Today.

Sentinel radio phono
* Automatic combination phono-radio model 220V in Hepplewhite cabinet has 7-tube chassis, 535 to 1,600 kc. and 5,750 to 18,300 kc. Record player handles 10 and 12 inch records, crystal pickup. Model 221-F has 8-tube 3-band radio. Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.—Radio Today.

Motorola plastic model

Farnsworth 10-tube console
* Model BC-102, 3 wave-band console has Color-Tone control & Hi-Spot dial, shielded rotatable Bilt-in-Tenna with Tenna-Rotor and 12 in. speaker. Farnsworth Telev. & Radio Corp., 5700 Polaris Ct., Fort Wayne, Ind.—Radio Today.
YOUR PROSPECTS

Thousands of folks will want these to bring in the Fall broadcast fare

RCA Victor model 16T4

Emerson superhet

Rock-Ola model RA-4
* One of six new combination radio, recorder, automatic record player units priced at $99.95. Designed for home use; wide angle sound distribution and record storage space are featured. Crystal pick-up and cutting heads. Rock-Ola Corp., 800 Kedzie Ave., Chicago, Ill.—Radio Today.

GE "treasure chest"
* J-620, table radio in blonde mahogany includes dual beamascopes, 5 in. Dynapower speakers, 2 bands and a tone monitor circuit, and is equipped for a wired record player. Resembles 18th Century treasure chest. General Electric Co., 1385 Boston Ave., Bridgeport, Conn.—Radio Today.


Philco table radio

Autocrat elec. phono.
RECORD-MAKING PROFITS

Home recorders appeal to all members of the family and represent big-scale opportunity for dealers

Plenty of dealers are now thinking about the family unit, as a factor in the home recorder market.

Question is, what to say to the husband, to get him interested in the new instruments. And how to approach the wife, on the subject of making records that she needs. Then there’s the college and high school branch of the family. Not to mention the youngsters. All of them need recorders.

Every retailer has a string of families on his store lists. To dig them out and tell them about the exceptional talents of the handsome new record-makers is a profitable project as the Fall season for home entertainment gets under way.

Customers who have bought other products from the radio man, whether in the record, sound, musical or appliance departments, are on the lists. Newcomers to town are added. Names of more prospect families come from those who have already bought recorders. There’s a big job to do.

SELLING THE MRS.

The woman of the house can be sold on a number of ideas for the use of a recorder in her affairs. She may send invitations to her parties on records. Or she may make the recorder the center of some novel entertainment when she entertains her club.

If she belongs to musical clubs, she will want to make records of complete recitals, or particular performances of her friends. Or she may use the recorder to make a permanent record of her own musical progress.

Further, she may be searching for ideas on how to keep her children busy and entertained. The novelty and the fun connected with children making records of their own voices will solve a lot of problems of discipline and will get the youngsters involved in a project that is good for them.

WHAT THE MR. WANTS

The head of the family will like the suggestion that the home record-maker can be actually useful to him. He may record sales talks, business speeches, or he may practice up on his club talks.

Many gentlemen like the idea of taking broadcasts off the air. News reports, political speeches, or sports programs will be interesting to him, if he can make his own personal collection of records. Dealers have reported, too, that the Mr. likes to play around with the idea of making a mechanically perfect record of family events. For the same reason that he uses a camera, or takes home movies.

The young lady in the family will have dozens of ways to use recorders. She will find them to be gay fun-makers at her parties. She will be using records as birthday, holiday or vacation greetings. And of course if she is involved in any kind of voice or musical training, she will be making dozens of records to be able to hear her own performances. Perhaps more than any other member of the family, she is determined to be up-to-the-minute in “smart” practices, and will take to the idea of personal records as a fashionable trend in the alert younger set.

YOUNG MAN’S FANCY

Whether college or high school age, the young fellow in the family is the one to exhibit resourcefulness in the use of the recorder. He’ll be collecting the tunes played by his favorite dance band, and he’ll want to collect the remarks of broadcast comedians. The mechanical ability of the machine will appeal to him, just as it does to his father, and he’ll be trying to make better records than the disc factories turn out. Probably the lad will get interested in novel sound effects for use in home recordings (the manufacturers will help him with dozens of these) and will get deeper and deeper into the hobby.

Here’s a part of the family enjoying the RCA VHR-207 recorder, 9-tube instrument with convenient, divided lid.

The Federal recorder model 306 has push-button control for all operations, radio, phonograph, home broadcaster.
32 OUTSTANDING MODELS
HOT "PACKAGE PLAN" NUMBERS
COMPLETE JOBBER SERVICE

FIRST FOR 'FORTY-ONE! A once-in-a-blue-moon line—a COMPLETE in-demand line! Plastics, "Gems," wood table models, big console values, combinations, recorder, wireless players, electric phonographs, "CANDIDS," triple-play portables, farm radio, auto radio—SONORA has the right answer for every radio need! Yes, SONORA is "all there" for 1941—right in engineering, in styling artistry, in beauty of tone—right-priced, too, for today's market. And you can't beat the advantages of SONORA'S over-the-counter Package Plan and desirable jobber policy—they spell the outstanding Radio Profit Opportunity for 1941!


Model KT: The "Cameo"—a 1941 Radio! New, original, beautiful. Available in unusual duotone effect—tan front, brown back—or in ivory. 5-Tube AC-DC Superhet; 535—1712 K.C.; 5" P.M. Speaker; built-in Sonorascope; big new dial. Size: 6½" x 10½" x 6¼".

Model KNF-99: 5-Tube AC-DC Phonograph Radio. Tunes 535—1720 K.C. Built-in Sonorascope; 5" P.M. Speaker; big Airplane Dial; 9" turntable; Crystal pickup; automatic record stop; plays 10" and 12" records with lid closed. Walnut cabinet; 9½" x 14½" x 11½".

Model TT-128: 5-Tube A.C. Superhet. Tunes 535—1720 K.C. Has built-in Sonorascope; Slide-rule Dial; Push-button Tuning; 5" Dynamic Speaker. Presented in a distinguished table model cabinet of fine walnut woods with sweeping end design. Size: 16" x 7½" x 8¼".

Write for details covering the complete SONORA line for 1941.
SONORA—A Great Name Since 1914!
DOLLARS IN DISCS

A spotlighted waltzer attracts notice for the Columbia “Waltz Time” album, plus a handsome combination. A record corner at Schuster’s, Milwaukee.

RIGHT NOW IS IDEAL TIME FOR MORE PROMOTION OF RECORDS

Aggressive action is appropriate for the late weeks of August, if the merchandiser of records is to nab the exceptional profits of this season.

Immediately after Labor Day on Sept. 2, the buying habits of people change substantially, and the dealer in discs must be abreast of the trend. Vacations are over, and customers’ thoughts are turning to home entertainment. Week-ends are numbered, and approaching winter means that outdoor activity is about finished. Plans for the fall social season are on the way.

The youngsters will soon be returning to school, and the college folk are making plans for new terms.

If the dealer will breeze into this kind of a situation with a hearty promotion schedule on his records, radio-phonographs, players and accessories, the returns will be far more substantial than in previous years.

ADJUSTMENTS NOW

As for the folks who will be choosing their music at home, they will now have more time and more appetite for the entertainment of their choice. Buying of records will get more serious consideration, and will involve more of an investment. If ever there was a time when the exact musical tastes of customers should be studied by the retailer of the “command performance” music to be found on records, it is now.

Interest in recordings will be spurred by the autumn series of concerts and recitals which are commonly held in typical communities. The old favorite composers of classic selections return for another round of applause.

When certain composers are being played locally by these groups, the dealer must watch the calendar of musical events, and let all his prospects know exactly what is available on records in the same group.

Many of the top concert artists will go back on the air in the early fall, and will create a renewed interest in their art. Dealer tie-ups with special broadcast musical programs will be profitable.

The radio fan interest in popular records will likewise be boosted as big broadcast shows in a lighter vein open up in early September. Extra buyers will be coming to record counters for the newest releases of favorite radio stars and hit tunes which they heard over the air.

Now that automatic record changers have been engineered to practical perfection and attractive prices, the idea of playing a number of records continuously as a kind of selected program for home entertainment becomes a more important one.

Whether families make a practice of this for their own entertainment, or for the amusement of guests, the stunt involves a larger number of records, a good instrument to reproduce them, and therefore an excellent bet for the dealer.

Dance programs of this sort will be appreciated by the younger set, and the new albums available for children will fit in nicely. It is part of the dealer’s job to suggest interesting groups of records for this purpose, in cases where the customer has, or is considering, an automatic record-changing instrument.

This is one instance in which the regular record lists which come from the manufacturers may need to be studied and re-arranged. It will require some special alertness and resourcefulness on the part of the record man, to tailor the listings to the needs of individual customers.

COLLEGE MARKET

Sales-minded record men are now going to work on the fact that in the coming weeks the college students will decide what luggage will be taken back to the campus. Record players, albums, packs of popular records, and accessories are what they want.

Names of these students can be secured from old customers, from local university club leaders, and from newspaper stories. It is important that direct mailings and window displays directed at this group be streamlined and up-to-the minute and colorful in appeal.

If July was too early, and if September is too late for the dealer to undertake a special promotion of records, then these latter weeks of August are marked as a time of hearty activity.

Wax Worth Watching

MARCO ROSALES with guitar accompaniment singing Blueberry Hill—Varsity 8338.
SHEP FIELDS and his Rippling Rhythm playing Who’s Yehnafi? with VR by Mr. Fields, Dorothy Allen and Hal Dervin—Bluebird B10773.
BEN BERNIE and his orchestra playing The Gentleman Needs A Shawl with VC by Mr. Bernie and Halley Sisters—Vocalion 5615.
HORACE HEIDT and his Musical Knights playing The Voice in the Valley with VC by Larry Colton—Columbia 35514.
JIMMY DORSEY and his orchestra playing I Sang A Wooden Whistle, with VC by Helen O’Connor—Decca 3280.
CONNIE BOSWELL with orchestra singing Orchids for Remembrance—Decca 3277.
VAN ALEXANDER and his orchestra playing Jungle Joe with vocal by “Butch” Stone—Varsity RS720.
VINCENT LÓPEZ and his String Orchestra playing Charlie Was A Sinner, with VR by chorus—Bluebird B10751.
TOMMY DORSEY and his orchestra playing I’ll Never Smile Again with VR by Frank Sinatra and the Pied Pipers—Vocalion 36269.

I DOLLAR TODAY
FARNSWORTH DEALERS
GET THIS EXTRA PROFIT!

WITH THIS CAPEHART-FARNSWORTH AUTOMATIC RECORD CHANGER

This startling, new Capehart-Farnsworth Automatic Record Changer (Model BP-2) cracks the radio market wide open ... gives you an opportunity to make another sale—a profitable sale—to customers who have already bought a radio. It will increase sales in your record department. A dramatic home or showroom demonstrator, it gives you a chance to SELL-UP these record customers to a Farnsworth phonograph-radio.

FOR A BOOMING MARKET!
Realizing the promotional possibilities to the dealer of an Automatic Record Changer attachment, Farnsworth introduced this startling value at its June convention. It went over big—has continued to be a great sales producer, outstanding even in the broad Farnsworth line.

TYPICAL FARNSWORTH VALUE LEADERS

THEY TRY IT—THEY BUY IT!

Model BP-2 is the famous Capehart-Farnsworth Record Changer housed in a beautiful cabinet that will harmonize with the design of any quality radio receiver. It plays fourteen 10-inch or ten 12-inch records automatically. One of the quietest changers ever built, its mechanism is simple and fool-proof. A demonstration always means a sale.

ACT NOW!

The Capehart-Farnsworth Record Player, like the entire Farnsworth line, is priced to move. It's competitive ... and HOT! Get the profit-producing facts from your Farnsworth distributor this very week! Farnsworth Television & Radio Corporation, Fort Wayne, Indiana.

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

THE GAINSBOROUGH is typical of the style, performance, and value of the broadest combination line in the industry—Farnsworth.

DISTINCTIVE STYLES—Outstanding values in every console price bracket—providing real demonstrable, sales-making features.

Farnsworth also combines styling with performance and outstanding value in a complete table model line of both wood and plastic cabinets.

Another Farnsworth innovation—an Automatic Phonograph-Radio Combination in Chairsde model that has everything—including a low list price.

* TYPICAL FARNSWORTH VALUE LEADERS *

AUGUST, 1940
NEW SOUND PRODUCTS

P.A. equipment for your Fall season

Erwood portable amps.
* Two new mobile amplifiers, model 2428, a 28-watt unit with built-in turn-table (illustrated) and model 1414. Both units may be operated from 6 volts DC or 110 volts AC. 1414 is available with or without turntable top. Universal output impedances. Erwood Sound Equip. Co., 224 W. Huron St., Chicago.—Radio Today.

Mellaphone recorder

Amphenol mike switch
* No. MCIS crystal mike switch may be used as push-to-talk, or locked in "on" position. Silver plated switch parts. Has coupling ring for cable end, and threads to fit standard mike connectors. American Phonic Corp., 1250 W. Van Buren St., Chicago.—Radio Today.

Universal recorder
* Recorder kit includes medium power amplifier, precision cutting head, lead screw. All equipment designed to attach to any good phone turntable. Model KO. Universal Microphone Co., Inglewood, Calif.—Radio Today.

Selectar connectors

Webster pickups
* Four new items include two recording heads, R83 and R84 have frequency range from 30 to 8,000 approximately, input power of 1 watt, impedances from 1 ohm to 5,000 ohms on R83. Crystal pickup XS2A has range from 30 to 8,500, 80M ohms. XS2 crystal cartridge available in 5, 6, 8, and 10 thousand cycle ranges. 80M ohms. Webster Electric Co., Racine, Wis.—Radio Today.

Oxford small PM
* Model 32M-CA cased Permag speaker measures 4 1/2 x 4 x 1 1/2 inches Walnut bakelite case supplied with mounting bracket. Model 32M-CM is especially designed as dynamic model. Oxford-Tartak Radio Corp., 915 W. Van Buren St., Chicago.—Radio Today.

Jack chime unit
* Automatic chime timing unit pre-heats amplifier and strikes chimes every 15 minutes. A day-night clock is used to silence equipment during part of night. Complete amplifier and chime equipment is also available. Charles Jack Mfg. Corp., 27 E. Philadelphia St., York, Pa.—Radio Today.

Clarion portable PA
* Model CS-25 delivers 17 watts. Mike gain is 115 DB, frequency range, 50 to 10,000 cycles. Output impedences, 2 to 500 ohms. System includes 2 10-inch speakers, choice of one of 4 mikes, all cables, plugs, carrying case. List $111.57. Transformer Corp. of America, 69 Wooster St., New York, N. Y.—Radio Today.

Kirkland panel lamp

RCA recorder discs
* Phonogram is 6 3/4-inch disc, flexible paper core, slow-burning shavings, low surface noise. Blue and buff lable takes both ink and pencil. Convenient mailing envelopes are available. Retail price 7 for $1.05. RCA Mfg. Co., Camden, N. J.—Radio Today.
You, too, will give the new Utah Public Address Reproducers your vote when you see and hear them. They have won the immediate acceptance and approval of the industry.

Through these new reproducers, Utah engineering and precision manufacturing have again scored an outstanding triumph. They include the latest and most worthwhile refinements in sound equipment construction. They provide an easy means of profitably meeting the most exacting requirements.

**Utah's NEW BAFLEX REPRODUCER**

In the new Utah Baflex Reproducer, Utah engineering has incorporated all the latest developments and improvements of reproducers for public address systems, schools, colleges, taverns, dance halls, auditoriums, clubs, etc. They are available in four models.

These new Utah Public Address Reproducers are marked by a total absence of "back radiation." There is no distortion in the greatly improved bass response.

Two models are especially designed for television and Frequency Modulation receivers which require a wide audio frequency range. The frequency response has a range up to approx. 9500 cycles per second.

The cabinets are of sturdy, extra-heavy construction, scientifically designed to eliminate cabinet vibration and resonance. The cabinet design is strikingly modern, with an attractive, durable satin bronze finish.

**THE NEW Utah BI-DIRECTIONAL SPEAKERS**

The Utah Bi-Directional Speaker embodying the latest speaker design and construction features, has been especially developed and engineered for factory call and paging systems.

Their sturdy construction and improved design combined with their popular price make them ideal for factories, hotels, clubs, etc. The baffles are molded, non-metallic. There is no excessive low frequency response to distort intelligibility. A swivel joint bracket assures correct mounting.

**Utah's NEW WALL REPRODUCER**

The new Utah Wall Reproducer is the effective solution for sound systems that require a reproducer for music as well as voice. Its low price makes it an economical one as well. The finish blends with any decorative scheme.

The tone quality has been immeasurably improved by the molded, non-metallic housing. Ideal coverage of a given area is assured because of the scientifically engineered angle of this new Utah Wall Reproducer.

**AND 107 OTHER UTAH SPEAKERS**

In the balanced line of Utah Speakers there is a speaker to meet every requirement. Utah engineers will be glad to help you solve your speaker problems.

**WRITE FOR CATALOG**

Be sure to have complete information about Utah Speakers; write today!


**SPEAKERS**

VIBRATORS • TRANSFORMERS • UTAH-CARTER PARTS

AUGUST, 1940
Mobile public address systems are being "dolled up" for the local and national ballotings soon to get underway. Dealers the country over are organizing equipment, making contacts with campaign officials, and getting ready to claim their share of election funds.

Plenty of novel ideas have clicked in recent elections, the "Hill billy band campaign" of a southern state governor for instance. All of these stunts attract attention—and that is what PA is for—attract attention and put across a message. Sound men who can come through with a few suggestions for creating added interest with special effects are the ones who will "clean up."

SOUND MEN ACTIVE

David B. Dean, distributor of Taunton, Mass., has some good advice and methods for the election and general Fall sound business. He predicts a good PA market with unlimited opportunities.

For political PA business, Mr. Dean has found that campaign managers are the ones to contact. He points out that political campaign expenditures are often influenced by "pull" considerations beyond the control of any sound man, so that it is often wise to contact the whole group of executives connected with the event where the equipment is used. Also, sound men must tactfully convey the idea that they want prompt payment, whether the client wins or loses at the polls.

"Sound tracks and rentals are the most practical and valuable means for a sound man to use in advertising himself these days," is the opinion of Mr. Dean.

Many sound and servicemen are doing a double job of putting across both of their services through advertising on their mobile equipment.

ADVERTISING STUNT

For an average operator who may not wish to lay out large cash amounts for direct mail promotions, Mr. Dean says that a sound man should plaster his name on his sound truck, get in a plug on all the mikes used in front of crowds, and go after the rental business as a means of getting established among the local users of PA.

In cases where Mr. Dean has supplied mikes for well-known public speakers, he has used his name written vertically along the stem of the mike and the result is that the "Dean" name has appeared prominently in the newspapers. Now, when he bids for local jobs, he may have an edge on some of the others.

A certain emphasis on rentals will get the sound expert into a bigger variety of jobs, and will put him in contact with more prospects than can be met in making permanent sales. And each rental may become a link with other rentals, or with added sales of equipment. This is the "promotion" advice of Mr. Dean, who adds that it is also a very good idea to be listed in the classified section of the telephone directory.

The orchestra business is one of the clearest branches of the sound business, in the Taunton area, at least. New PA kits put out by the manufacturers are found to work best for these spots. Orchestra leaders or managers are the buyers; they take the equipment along with them, and they like packaged jobs. Good pay, year round demand, and few installation problems are the qualities of this market.

NEW MARKETS

New opportunities in selling sound in the New England areas also include the "auto theatre" jobs. Whether it is a matter of a single string of speakers at the top of the huge picture screen, or a job where the speakers are scattered among the cars, depends upon the local ordinances, but in either case the installation is a big scale affair. Most theatres accommodate about 1,000 cars; control booths are often underground.
Another sound dealer who is doing a grand job with mobile sound in election campaigning is Radio Nick Inc., Orlando, Fla. Besides the field of rental PA equipment, he finds the sale of complete sound trucks very profitable from initial installation, maintenance, and operating stand-points. Various alternatives of these services prove a broad field for all sound men.

**TYPICAL MOBILE PA**

The Ford truck has three model LH reflex trumpets driven by PAH permanent magnet 25-watt speakers. Speakers and trumpets are products of University Laboratories, New York.

The speakers are mounted on a wood frame shaped to fit the contour of the truck top. A center cross member carries the swivel mounting bracket. The trumpets are held securely to the front and rear of the frame by short metal straps screwed to the wood and bolted to the horn. Secure mountings will be a good investment—wind pressure at even moderate speeds may tear off lightly mounted equipment.

**INSTALLATION FEATURES**

Where the speaker leads pass through the roof of the truck or car, half-inch electrical conduit will provide the best water-proof feed-through. Thread back the conduit for a distance of about 2 inches; run on a nut, 1½-inch washer and rubber gasket. A nut and washer on the inside will pull up the conduit to a tight seal. Periodic inspection of the gasket will insure a good joint.

Billboard advertising is combined with sound-service in this truck of Robert F. Anderson, Jamaica Plain, Mass. Signs may be quickly removed and others put in their place for political campaigns, etc.

**NEW EQUIPMENT**

Much new equipment is coming from the manufacturers to make better mobile and portable systems. Efficiency of 6-volt DC operation is increasing, thus making the systems more economical to run. Built-in turntables are practically standard equipment with mobile and light portable amplifiers. These units make it simple to outfit a sound truck on short notice. Built-in AC power supply systems double up the duty possibilities.

Mounting of amplifiers in trucks is important to the life of the equipment. Road shocks should be absorbed by rubber or spring mounts. A good example of mounting the amplifier is shown in the safety campaign truck outfitted by Olsen Radio Supply, San Antonio, Texas. Roof-top speakers are two Jensen units in Atlas Sound Corp. projectors.

The Erwood model 1420 amplifier is mounted on a small stand. The top shelf extends above the sides for enough to act as stops for any lateral movement of the equipment. Note the neat wiring possible with standard fastening clips and also the wire reel cleat which keeps cables handy and out of the way.

**QUICK-CHANGE TRUCK**

Another sound man who has some novel ideas with regard to mobile equipment is Robert E. Anderson of Jamaica Plain, Mass. Bob's truck, which features strongly in the political campaigns, is regularly used in his sound business. The signs on the sides and back may be quickly removed and replaced with names of candidates. When not being employed for sound business, the "radio ambulance" idea is featured, and plenty of publicity results.

The truck was built around a sedan. A metal screen was built into the top for radio and PA tuner. Two speakers are mounted in front above the windshield, the trumpet unit in the rear has a red metal cross fixed on the bell.

In addition to this "moving" advertisement, Mr. Anderson uses the local newspaper, and distributed blotter cards to keep his name before the residents.

**ACT NOW**

The election campaigns are going to be "hot." The time is growing short for lining up your equipment—your job. Go after the campaign managers, the local politicians themselves, and sign them up for a "sound" program. Patriotic records, and recordings of the candidates' speeches can be used for real effectiveness. Concentrate your efforts now on plans for the greatest season for PA.
Radios that set New Standards of Performance and Value!

For 1941—the “hottest” line in Philco’s long history of leadership... that’s the universal verdict of the trade! A brand-new circuit... a New Kind of Overseas Wave-Band... more tubes for the money... bigger speakers... a complete variety of beautiful cabinets to suit every taste and price. Yes, in every bracket, the greatest values, the most saleable line in Philco history!
Radio-Phonographs that Play Any Record on a Beam of Light!

Philco offers the one and only NEW radio-phonograph on the market today. Music on a beam of light! No needles to change... record wear and surface noise reduced by 10 to 1... glorious new purity of tone. Tilt-Front cabinet; no lid, no dark, clumsy compartments. These are the features the public demands for 1941. Only Philco has them!

It's Philco again for 1941... get set to CASH IN!

PROFITS ALL YEAR 'ROUND
Radios that set New Standards of Performance and Value!

For 1941—the "hottest" line in Philco's long history of leadership . . . that's the universal verdict of the trade! A brand-new circuit . . . a New Kind of Overseas Wave-Band . . . more tubes for the money . . . bigger speakers . . . a complete variety of beautiful cabinets to suit every taste and price. Yes, in every bracket, the greatest values, the most saleable line in Philco history!

Radio-Phonographs that Play Any Record on a Beam of Light!

Philco offers the one and only NEW radio-phonograph on the market today. Music on a beam of light! No needles to change . . . record wear and surface noise reduced by 10 to 1 . . . glorious new purity of tone. Tilt-Front cabinet: no lid, no dark, clumsy compartments. These are the features the public demands in 1941. Only Philco has them!

It's Philco again for 1941 . . . get set to CASH IN!
New Emerson models with EP and EL chassis have a novel circuit of feedback to increase conversion gain in the 12SAT7GT converter tube. In the circuit diagram shown, signal energy from plate and screen circuit is inductively coupled to the loop antenna coil, thereby being fed back into the grid circuit to build up the output. As the loop is tuned to signal frequencies, the amplification through feedback will build up only the signal.

RF energy is coupled from plate circuit into grid circuit through loop antenna.

The oscillator grid of the 12SAT7GT is capacity coupled to the oscillator coil through a few dead-end turns on the coil. A resistance test through the coil from the grid connection will show "open." Most of the Emerson models are using this type of coupling. Other changes in some '41 models include an un-bypassed cathode resistor in the output tube and a small feedback condenser from the plate to the cathode. This combination tends to boost the highs.

**TRIODE MIXER TUBES**

Improved shortwave reception is being claimed for 1941 Philco sets using a newly developed triode, the XXL. The circuit of the oscillator and mixer in a typical model shows how loktal tubes are connected. The XXL has an amplification factor of 20-35, input capacity of 3.4 mmfd., output capacity, 2.6 mmfd. Plate voltage may be 100-250 volts with grid bias of 0 and -8 respectively. The plate current is 10 ma. at 100 v. while the plate resistance is 7,000 ohms and the gm is 3.600.

The oscillator voltage is injected in the cathode circuit of the mixer.

Special triode Loktal XXL tubes have less internal noise and give good performance on S. W.

Because of the simpler tube structure, a better signal to noise ratio results. Internal tube noise is less than single-grid tubes than for more complicated pentodes.

Other features of the new Philco’s are low plate voltages in the order of 150 to 200; fixed bias developed across a power supply load resistor, and bandspread tuning for the 9-12 mc. range. The range of tuning condenser is cut down by putting a fixed mica capacitor of about 85 mmfd. in series with it. Fewer kilocycles per degree on the dial results, thus, less critical tuning is required, and shortwave listening is more enjoyable.

An interesting audio output stage is used in models 41-280, 281, 285, and 287. The push-pull 41's are driven by a single 7C6 straight amplifier. The screen of the upper 41 is not by-passed, but its signal energy is fed to the grid of the lower 41, thus acting as a phase inverter. Fixed bias from the power supply is used for the grids of the 41's.

**RCA OVERSEAS BAND**

Easier shortwave tuning is the keynote of those models having the 31-
If you saw Simpson Instruments at the show you saw something that ordinary words can't describe. In Hollywood they call it "oomph"...today's fast way of saying "more of everything".

The Model 400 Tube tester (opposite) is typical of these Simpson Testers that have more of everything...more class, more precision, more engineering against obsolescence. We studied your right-now testing problem; then solved it all the way in an instrument as modern as tomorrow.

Right down the line Simpson Instruments have been designed by and for your needs. A few leaders in the 1940 Simpson hit parade are briefly described here. All are covered by the handsome new catalog.

Ask for your copy

SIMPSON ELECTRIC COMPANY
5216-18 Kinzie Street, Chicago, Illinois

MODEL 310
SIGNAL GENERATOR

- Reports from independent laboratories prove this to be the most stable and accurate direct-reading signal generator ever offered at a price you can pay...
  $37.50

MODEL 450
"TEST MASTER"
- Service men have called it more for the money than any all-service tube and set tester on the market. Has new Simpson 3-way switching as described above: sockets for 4, 5, 6 and 7-prong tubes, localts and batrants. As set tester has A.C. voltage ranges; 5 resistance ranges; 5 milliamp ranges; 5 Decibel ranges. Your price only...
  $39.75

See them at your jobber
1. First step in testing set is power supply check for normal voltage at output of filter. Filament supply is also checked. Bad shorts and "opens" show up here.

2. Signal tracing and signal substitution are then used to run down troubles to a particular portion of the circuit. Low stage gains mean poor tube, wrong voltage, or improper coupling.

3. When trouble is located in a particular stage, associated parts are tested. Here an electrolytic by-pass is checked on De Luxe Tel-Omike (Sprague Products Co., N. Adams, Mass.). Capacity tolerance chart appeared in March RADIO TODAY.
Resistor, power factor, leakage current, and insulation resistance of capacitors measurements give quick clue to trouble.

SERVICED MINUTES

RF coils and transformers are tested for open circuits, shorts, alignment with L-C Checker (Aerovox Corp., New Bedford, Mass.). If coil tunes at frequency above others with paddler at maximum, turns are shorted, or AVC by-pass capacitor is too small.

Speakers, output transformers, and audio stages get a range of frequencies and voltages from RCA beat-frequency generator when trouble is localized. Sweeping over frequency range rapidly shows up speaker rattles and resonance.

The set has been checked from "Ant." to speaker in 31 minutes. Since it is usually unnecessary to go through all of these steps, average sets will be repaired in shorter time. Six minutes more puts this set back in shape.
SPRAGUE TEL-OHMIKE DeLuxe

The editors of Radio Today are right! Time—sold on a profitable basis—is the essence of successful servicing. And when it comes to saving time in checking condenser or resistor troubles or doing a dozen and one other jobs around a service bench, the new DeLuxe Tel-Ohmike beats anything you've ever seen. It includes a built-in voltmeter and a milliammeter with switch and pin-jacks provided so that the meters may be used for measurements external to the instrument.

Tel-Ohmike makes it easy to make complete, accurate tests of all condenser and resistor characteristics. It indicates "opens" and short-circuits—even the hard-to-find intermittent "opens." It measures leakage current and power factor; measures insulation resistance up to 10,000 meg.; analyzes all condenser types at their exact working voltages; makes capacity measurements from .000010 mfd. to 10,000 meg. and resistance measurements from .5 ohms to 5 meg. Balance indications are given by a "magic eye" tube. Measurements are taken from large, direct-reading scale. See Tel-Ohmike at your jobbers, or write for folder.

DeLuxe Tel-Ohmike ...................................... $39.95 Net
Standard Tel-Ohmike (Without voltmeter or milliammeter, but with jack so you can plug in your own meters) ....................................................... $29.70 Net

SAVE HEADACHES!

After you've located a bad resistor with Tel-Ohmike—then play safe! Replace it with a Sprague Koolohm—and you know the job is done RIGHT! Koolohms cost no more than ordinary resistors, yet are outstandingly different in construction, amazingly superior in performance. Every bit of wire is insulated BEFORE it is wound with an exclusive heat-proof, moisture-resistant material. This permits layer-windings to give greater resistance in smaller size, faster heat dissipation, and permits use of larger, sturdier wire for safety. Then, to top off an already tip-top job, Koolohms are insulating from end to end and doubly protected with a peel-proof, crack-proof ceramic shell containing the famous Sprague Automatic Overload Indicator. Catalog free.

Koolohm Resistors

Cross-section view of 5-watt Koolohm showing large, durable wire and layer windings.

Cross-section of Koolohm wire with portion of insulation removed.

SAVE MONEY!

...and save time and space in the bargain. Follow the lead of hundreds of successful servicemen who use Sprague Atoms for all types of dry electrolytic condenser replacements—large or small. Atoms always fit. A small stock equips you for almost any job. They've got more "guts," are more dependable than many of the larger, old-style units they replace. All capacities—voltage—single and dual combinations. Two or more Atoms may be combined by using Sprague ST Mounting Straps to give you countless hard-to-get "special" replacements.

NEW! Atom Types for Vertical Mounting

Pacing the rapidly growing trend toward condensers with "feet" for vertical soldering to the chassis, or for bending through chassis holes, Sprague now brings you a complete new line of Atomtype dry electrolytic condensers known as Type LM. Don't miss them! Featured by foremost jobbers. Catalog free.

Use Atoms Universally

SPRAGUE PRODUCTS CO., NORTH ADAMS, MASS.

RADIO TODAY
SERVICE NOTES

Compact Uses Direct Coupled Audio Tubes

This 6-tube two band superhet has several interesting features from the serviceman's standpoint. The slight difference in the two models is shown in the circuit diagram. Model DP does not have the RF filter between the common B- and the chassis. This filter is made up of R8 and C25. The B- is ground directly to the chassis in DP and not in DPI.

The RF and oscillator coils are shown connected in the Broadcast position, No. 1, which covers 540 to 1730 kc. No. 2 is the short wave range of 5.6 to 18 mc.

A series wave trap in the antenna circuit tunes in the vicinity of the IF of 455 kc. This trap should be adjusted for minimum output indication at 455 kc., or to an interfering station operating near the IF. The signal generator should be connected to the antenna through 0.0002 mfd condenser, and its voltage adjusted to give some output indication even with the trap adjusted for maximum rejection. This will permit alignment to the "dip."

IF ALIGNMENT AT 455 KC

The first IF transformer is located on top of the chassis and is mounted with snap-on fasteners. The transformer may be removed by unsoldering the leads and pinching the clips together. The trimmers are located in the top of the can. The second IF transformer is mounted on the rear wall of the chassis and its trimmers may be adjusted through holes in the back.

Set the band switch for broadcast position and put tuning condenser at minimum capacity. Adjust the signal generator to 455 kc. and connect its output to the grid cap of the 6K8GT mixer through a 0.02 mfd. capacitor. The grid cap is not removed from the tube.

Start with the secondary trimmer of the second IF transformer and work back to the primary of the first IF transformer adjusting for maximum output indication in each case. The signal level used should be as low as possible and still give usable indication. The output meter should be connected across the voice coil.

RF ALIGNMENT

The trimmers for the antenna coil are mounted on the assembly behind and to the right of the variable condenser. The trimmer for the B-C band is in the middle and for the short wave range, it is on the bottom.

The oscillator coil assembly is mounted on the rear wall underneath the chassis. The series padder for the B-C band is located in the center of the assembly with the short wave trimmer nearest the end of the set. The trimmer on the end of the coil nearest center of the set is for broadcast range.

With the wave switch still in the broadcast position, set the tuning condenser at 1600 kc, and feed a signal of the same frequency through a 0.0002 mfd. capacitor. Adjust, first, the broadcast trimmer and second, the antenna trimmer (connected between the primary and secondary of the antenna coil) for maximum response. Set the signal generator and receiver at 500 kc, and adjust the series tracking padder for peak response while rocking the tuning condenser.

The short wave band is aligned at 16 mc. with the signal generator connected to the antenna through a 400-ohm carbon resistor. Adjust, first, the oscillator trimmer, and second, the antenna trimmer for maximum response. The voltages indicated on the schematic are for AC operation, 117.5 line volts.

DIRECT COUPLED AUDIO

The direct coupled audio amplifier stages using the 6AE5GT and 25AC5GT tubes is novel in its operation.

The normal grid current drawn by the 25AC5GT is the same as the plate current of the 6AE5GT.

The grid bias for the 6AE5GT is developed across the grid-cathode impedance of the 25AC5GT. Since the grid of the 25AC5GT operates in the positive voltage region, its internal impedance which is the cathode load of the 6AE5GT, is at any instance the grid voltage divided by the grid current. Since this impedance varies with the signal, a degeneration action takes place tending to reduce harmonic distortion. The same effect is sometimes obtained by using an un-bypassed cathode resistor which increases the negative bias on the tube when the signal current in the plate circuit increases.
Wireless Record Player Uses Grid Modulation

The new wireless record player introduced by the General Electric Co., (see page 32, May issue Radio Today) has an interesting circuit.

The accompanying diagram shows the grid modulated oscillator used in Model JN-25. The 6A8G, a common first detector-mixer tube, used in super, has the crystal pickup connected to the grid used in the oscillator section of a super, that is, the No. 1 grid. The RF oscillator will be recognized as a modification of the familiar TUN circuit. The 300-850 mmfd. trimmer gives a frequency range of approximately 1100 to 1500 kc.

Because of the capacity type, non directional antenna used, it may be difficult to tune the oscillator to a definite frequency with your hand resting on the case. Since the adjusting trimmer is reached through a hole in the bottom, the recommended tuning procedure is to pull the player beyond the edge of a table far enough to expose the opening. Adjustment can then be made without touching the cabinet.

The 75-RPM motor is lubricated and sealed at the factory. Under normal use, it will not require oiling. Power consumption is 30 watts on both 60 and 60 cycles and motors identified A5 and A6 respectively.

Headphone Installations In Demand

A great many people who live in apartment houses, work in busy offices, or operate radios where they are likely to disturb others would like to have headphone connections made on their receivers. For some unknown reason they don't seem to be able to get a satisfactory job done. Compact sets are the ones most often used as "personal" radios and the dealer should follow up their sale with the suggestion of providing for headphones.

The actual job is quite simple. Closed circuit jacks are the simplest and they get rid of separate switches. The diagrams show common types of sets having single ended and push-pull outputs. The push-pull circuit uses a...
Used Anywhere to Replace Larger Old-Style Controls

Don't confuse IRC Type D Controls with ordinary midgets! . . . . .

For IRC's are more than midgets. They are exact reproductions of the larger IRC Type C Controls, with exactly the same features, exactly the same design in smaller size and with the added convenience of tap-in shafts. They are large enough to be fully dependable; small enough to fit in any set; sturdy enough to stand up under the vibration encountered in auto radio use. You can use them anywhere, regardless of the size of the control being replaced. A small stock of IRC Type D (universal-size controls) plus a supply of the Tap-in Shafts will enable you to make quick, dependable replacements on almost any job.

IMPORTANT TO USERS!
The recent adoption of a new, improved switch for "D" controls necessitated a change in the drive arm in the control. This means that the new switches can be used only with the new controls, and the older style switch can be used only with the older controls. The new control has the rotational stop pin in the base instead of in the cover. Our distributors have identified their older style switches and "D" controls with a star on the box. The new style is not marked. In attaching switches to "D" controls, be sure to know whether the control requires a new or older style switch. The proper combination whether old or new will be perfectly good and dependable. Your jobber can supply either combination and will be glad to properly balance your stock.

The Only Small Controls with These Exclusive Features

IRC Type D's are amazingly smooth and quiet when you get them— and designed to stay that way after long, hard use. From the famous Metallized type resistance element, to the 5-Finger "Knee Action" Element Contactor, the Silent Spiral Connector which does away with one sliding, metal-to-metal contact and the Coil Spring Washer that eliminates end-play in the shaft, they are constructed for the utmost in long, quiet and trouble-free service.
shorting jack which mutes the speaker. One thing to do in all installations is keep DC out of the phones. Use an isolating condenser and prevent any possible shocks.

Discharge Tube in Fence Control Circuit

Electric fence controlling of live stock has become more popular in recent years and their design and installation is a good field for the rural serviceman. The circuit shown uses a Cetur CR-300 discharge tube made by Continental Electric Co., Geneva, Illinois. The 80 rectifier charges the 0.5 mfd. condenser to approximately 600 volts at a rate determined by the resistor R which may be about 500M 1/2 watt. The Cetur is a peak voltage discharge tube which only fires when its anode has potentials between 400-600 volts, thus as the capacitor builds up to approximately 400 volts, the tube permits the condenser to discharge through the primary of TH. This pulse of current causes a voltage to be induced in the secondary of TH and this is connected to the fence and ground. Transformer T should have windings for 5-volt 2-amp., 2-volt 8-amp., 850 volts no-load for 15-ma. max. load. TH has a turn ratio of 300/5000 with 20 kv. insulation. A word of warning. The Continental Electric Co. states, "this is a high voltage device, and suitable precautions must be taken. We are not responsible for infringement of any patents."

Auto Radio Typical Troubles

CHRYSLER 1608

Low sensitivity: Check the antenna connections on the primary coil and see that proper connections have been made. See plan of connections in following diagram.

Mallory Supplements Issued

Automatic Tuning is the title of the eighth of the series of supplements to the Mallory-Yaxley Radio Service Encyclopedia published by P. R. Mallory Co., Indianapolis, Ind. The new supplement covers the automatic tuning systems that have been introduced since the second edition of the Mallory Encyclopedia. Tables of the models covered in both issues are included to provide quick reference. Diagrams, and drawings explain the various mechanical, and electrical tuning systems, as well as capacity or inductance switching systems.

FM COVERED IN NO. 9

The ninth supplement covers frequency modulation in theory and practice. Complete theoretical explanations of FM circuits and schematics of present receivers are real aids to the serviceman.

ZEPHYR L-1760

Hum: Check and replace filter capacity if necessary. If hum remains, use either or both changes as shown. For 1, add plate decoupling 10M re-
sistor and .25 mfd. capacitor. For 2, replace the 1000-ohm filter resistor with 1500-ohm 10 watt unit and move the supply lead for output tubes to the other side of this resistor.

Engineer Tours With FM Lectures

Now on a tour of 17 major cities with illustrated lectures on "The Service Side of Frequency Modulation" is Ray Wilson, service engineer for Zenith Radio Corp. Mr. Wilson covers the economic side of FM, as well as the technical, in his talks to dealers and servicemen.
Stromberg Sales in 300% Lift

The news from Stromberg Carlson is that orders for radios and radio-phonographs are some 300 per cent greater than those signed after the showings of lines last year. These totals were announced by SC general sales manager Lloyd L. Spencer, who added that the boost in orders was due partly to the inclusion of the staticless FM band on a number of the new models.

Stromberg got the extra dealer response, too, on account of a wide variety of automatic radio-phonographs, and the plus styling of new cabinets, Mr. Spencer declared.

Philco Volume in Stout Increase

Sales of Philco products are strongly up, to the extent of a 30 per cent increase over a year ago for the first six months of this year, according to news from the firm's president, James T. Buckley. The report says, too, that following the debut of Philco sets and photo-electric phonographs, orders amount to $15,268,500 at retail prices, compared with about $10,845,993 a year ago.

"And the sustained higher level of retail trade makes us look forward to an even greater volume of business," concludes Mr. Buckley.

WAKING UP THE FARM BUYERS

(Continued from page 17)

New jobs also feature low battery drain and a number of battery-saving devices. Two-band reception and improved selectivity are likewise among the improvements. Record players, with spring-wound motors and sensible prices are now available to farm folks. New music-speech tone controls, single unit battery conveniences, radio-phonographs, and directional aerial improvements are ready to sell.

SALES OPPORTUNITIES

Wind chargers, whose fundamental economy as a source of power has a big appeal for farmers, have merged into a new perfection of engineering and there's many a non-electrified family that will be attracted to a lively demonstration by the dealer.

It's a year of super products, a time when the farmers are being courted by the political candidates, a year when market news looms with new import. And therefore a period when farm radio dealers can edge very profitably into the buying confidence of the millions of the country people who need a new receiver.

More owners of portable radios will tune in on news of the coming election than ever before. That is your cue to tune in on profits... by stocking enough "Eveready" "Mini-Max" 45-volt "B" batteries right now!

Here's the sensationally small battery that gives great performance. Combining minimum weight and maximum power, it delivers twice the service life of any other "B" battery of equal size.

Over thirty leading manufacturers have designed portable radio sets around the "Eveready" "Mini-Max." Your customers know of its long-life feature... will ask for it by name. To be sure of getting your share of the election-listening business, get your order in for "Eveready" "Mini-Max" "B" batteries today!

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

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<tr>
<th>ARVIN</th>
<th>GENERAL TELEVISION</th>
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<td>GENERAL ELECTRIC</td>
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<td>WILCOX-GAY</td>
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And Others!

NATIONAL CARBON COMPANY, INC.

General Offices: New York, N. Y. - Branches: Chicago and San Francisco
Unit of Union Carbide and Carbon Corporation

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

Opposite portable name and model number in lower table note code letters for A and B batteries. Figure preceding code letter is number of units used. Beside code letters in battery table directly below, find manufacturers' type numbers.

<table>
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Sales Managers, Credit Men in Annual Tourney

The annual golf tournament and outing of the Sales Managers Club, eastern group, and the R.M.A. Eastern Credit Committee, was staged July 25 at the Green Meadows Club, Harrison, N. Y. The event was complete with business meetings of the two groups, luncheon, prizes and dinner.

Members present included A. E. Akroyd, Raytheon; W. W. Jablon, Hammarlund; D. T. Mitchell, American Radio Hardware; John Rider; Sam Ruttenberg, Amperite; Sam Spector, Insulor Corp.; A. A. Berard, Ward Leonard; Victor Mucher, Clarostat; Dan Fairbanks, IRC; A. A. Parmet, Parmetal; Pete Bernoe, Alpha Wire; Wm. Oeml, Cordish Wire; Ken Tibbits, National Credit Office; A. E. Stevens, Hammarlund; Henry Pope, National Union; D. F. Reid, Raytheon; H. A. Schmid, IRC; Bert Clough, Hazelrite; M. Schecter, Quam-Nichols; R. Brewer, Quam-Nichols; Stagg, Cornish Wire; Bond Goddess, RMA; Arthur Moss, NRFD; J. H. Robinson, National Union; Ed Mezger, A. A. Lane; L. R. Schenck, mfrs. rep; Sam Roth and Phil Frieden, United Catalog; C. Stimpson, Citizens Radio Call Book.

Utah Meeting Has Note of Sales Success

At the latest meeting of the sales organization of the Utah Radio Products Co., Chicago, executives of the firm were ready with a review of progress during the last year, and an outline of new steps for volume and profit highs in the future.

That president G. Hamilton Beasley described the organization and policy changes and explained the reorganization and policy changes and general sales manager O. F. Jester reviewed the merchandising plans. Peter J. Jensen, vice-president, and J. M. Hume, sales engineer, appeared with explanations of the Batfax reproducer and the FM speakers which are now in the Utah line.

JFD Buys Star Auto Antennas

In a new expansion move the J.F.D. Mfg. Co. reveals that they have purchased all the moulds, dies, patents, raw and finished material, etc., for the auto antennas hereetofore manufactured by the Star Machine Manufacturers, Inc.

These antennas will be marketed by the J.F.D. organization under the name J.F.D. Star. Star type mounting assemblies or J.F.D. type will be supplied as preferred.

Radio Expert Guest of Ken-Rad

Guest speaker at the Scientec Club of Evansville, Ind., on Aug. 9th, was P. C. Sandretto, superintendent of the Communications Lab of United Air Lines. He spoke on radio's development in air navigation. Mr. Sandretto was, Aug. 9th and 10th, a guest of the Ken-Rad Tube and Lamp Corp., Owensboro, Ky.

Kahn & Sun

Sun Radio Co., 212 Fulton St., New York City, has a new staff member, Hyman Kahn, who was for many years associated with Leeds Radio Co. Mr. Kahn has had extensive radio experience in Eastern amateur circles.
**Sterling meters**

* A new line of pocket and panel meters for AC and DC, features loading-type portable battery tester which has plug-in tips mounted around the case for direct connection to socket. A and B units are tested at normal loads. Type 38A lists, $2.75. Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio. —Radio Today.

**Ohmite rheostat**

* Continuous winding rheostat for connection to rotary antennas and other equipment for direction indicating. Model DR-125 designed for DC up to 24 volts. Ohmite Mfg. Co., 4835 Flournoy St., Chicago, Ill. —Radio Today.

**Walco scratch remover**

* Designed like a fountain pen, new scratch remover tool has filler-stain in one end, and liquid stain in the other. Made of unbreakable plastic, device has usual pocket clip. Walter L. Schott Co., 5264 W. Pico Blvd., Los Angeles, Calif.—Radio Today.

**Hickok signal generator**

* Model 188-X wide band crystal controlled signal generator covers 100 kc to 133 mc. Electronic frequency modulation up to 750 kc, sweep at 400 cps. Variable audio output 50 to 10,000 cps. 100 and 1,000 kc crystal frequencies. For 110 AC. Hickok Electrical Instrument Co., 10614 Dupont Ave., Cleveland, Ohio. —Radio Today.

**GE test equipment**

* New line of radio service equipment includes two signal generators, oscilloscope, multimeter, tube tester, and capacity-resistance bridge. Bridge measures capacity from 2 mmfd. to 200 mf, resistance to 20 meg, power factor, transformer turn arcdos, etc. General Electric Co., Bridgeport, Conn.—Radio Today.

**Eicor small motor**

* Tiny motor weighs 11/2 lbs., is 2 5/8 x 2 1/2 long. Delivers 1/2 hp, at 8500 rpm. Designed for aircraft, handswitching, antenna reels or any type of remote control. Eicor, Inc., 515 S. Laflin St., Chicago, Ill. —Radio Today.

**Raytheon tubes**

* Types CK-506, and CK-506X pentodes for hearing aid use will voltage gain of 225 as resistance coupled amplifier with total B drain of 54 microamps, and A drain of 30 ma. at 125 volts (tubes in series). 506X type has tinned leads. Raytheon Production Corp., 55 Chapel St., Newton, Mass.—Radio Today.
**EQUIPMENT**

**Triplett oscillator**

* Model 1632 wide-range signal generator has heterodyne detector incorporated, coaxial output lead, 100 kc. to 120 mc., output voltage meter, internal or external modulation. Net, $79.85. Triplett Electrical Inst. Co., Bluffton, Ohio.—Radio Today.

**Advance relay**

* Midget relay for AC or DC operation will handle 200 watts non-inductive AC loads. Available in DP-ST or DP-DT contacts. Operation from as little as 0.1 watts. Advance Electric Co., 1260 W. 2nd St., Los Angeles, Calif.—Radio Today.

**RTL circuit tester**

* Model 300 multi-tester has 7-inch meter with DC voltages to 1,200 at 5,000 ohms per volt. AC/DC volts to 6,000. Current to 30 amps, ohms to 10 megs. V.T.V.M. ranges of 10 and 20 volts. DB and VU ranges. List, $44.50. Radiotechnic Lab., 1328 Sherman Ave., Evanston, Ill.—Radio Today.

**Eby photo alarms**

* Complete line of photo electric units for use as alarms, etc. Eight models from "beginner's" to "heavy duty" operate from 110 volts 50-60 cycles. Hugh H. Eby, Inc., 4700 Stenton Ave., Philadelphia.—Radio Today.

**Aerovox electrolytics**

* Independent section midget electrolytics measured 1 x 2½ for 450 v. 8-8 and 250 v. 16-16 mfd. Type PRR 150 for 20-30 mfd. is only 1 x 2½. Entirely independent sections permit circuit flexibility. Aerovox Corp., New Bedford, Mass.—Radio Today.

**IRC wire wound units**

* Complete line of non-inductive resistors from 10 to 200 watts power uses special type winding eliminating high capacity and potentials between adjacent turns. International Resistance Co., 401 N. Broad St., Philadelphia.—Radio Today.

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**DID you ever stop to wonder how some servicemen get more business and make more money than you? Here, perhaps, is the answer. The most successful men in any business are those who have learned never to pass up anything that will help them to accomplish an important job in less time.**

This practice of taking advantage of every aid to better work in less time is often the only thing that stands between success and failure. In the radio service business, the man who uses all the information he can get to make trouble-shooting quicker and surer is the one who forges ahead. He's the man who has always had a complete set of RIDER MANUALS. He knows how foolish it is to depend on his own memory or intuition when complete, authoritative data can be at his fingertips for only 3c a day.

RIDER MANUALS give you, in the most convenient form, complete data on every set you may be called upon to service . . . data on alignment, I.F. peaks, operating voltages, parts lists and values, voltage ratings of condensers, wattage ratings of resistors, coil resistance data, etc.

If you don't have a complete set of eleven RIDER MANUALS, you are overlooking one of the surest ways of speeding up your trouble shooting and increasing your profits.

**YOU NEED ALL ELEVEN RIDER MANUALS**

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**John F. Rider, Publisher, Inc.**

404 Fourth Avenue New York City

Export Division: Reck-International Elec. Corp., 100 Varick St., N. Y. C. Cable: ARLAB

**Volume XI Has Many New Features**

Includes data on FM receivers released up to press time.

New Index . . . cross-indexed for easy reference.

New "How It Works" section, with up-to-date information on the latest developments.

New Vest Pocket Supplement contains much useful information for on-the-spot reference.

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**AUGUST, 1940**

43
**SERVICE EQUIPMENT**


**Omlite rheostat**
- Continuous-winding rheostat for connection to rotary antennas and other equipment for direction indicating. Model DR-115 designed for DC up to 14 volts. Chartle Mfg. Co., 4830 Mlondon St., Chicago, Ill.

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**Sound X/Tra Tubes**

FOR HEAVY DUTY AUDIO WORK

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**Sterling meters**
- A new line of pocket and panel meters for AC and DC features including type portable battery tester which has plug-ins of mountable around the case for direct connection to sockets. A 240 units are tested at normal heads. Type 8A flats, $2.75. Sterling Mfg. Co., 2335 Detroit Ave., Cleveland, Ohio.

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**Wolfs scratch remover**
- Designed like a fountain pen, new scratch remover tool has stainless-steel blade, and liquid stain in the lid. Made of unbreakable plastic, design has usual pocket.
UTC varitran

* Design changes in regulating transformers include glass insulated wire, ballast coils in multi-contact units. Available in 115 or 230 volt models from 2 amps to 44 amps. United Trans. Corp., 150 Varick St., New York, N. Y.—Radio Today.

IRC plug-in shafts


Stromberg-Carlson 535-M


Emerson miniature tubes

* Replacement tubes for models 379 and 380 are the miniature 1R5, 1S4, 1S5, 1T4, 7-pin baseless types. Available in Emerson cartons. Emerson Radio & Phono Corp., 111 8th Ave., New York, N. Y.—Radio Today.

Webster-Chicago intercom

* Five new intercommunication systems from 2-station to 84 stations, uses the "mute" feature insuring minimum of crosstalk. Locking type illuminated buttons. Volume controls on in and out speech. Webster Co., 5622 Bloomingdale Ave., Chicago, Ill.—Radio Today.

Cole Instansolder


Browning 5-10 converter

* Converter for connection to any home or auto set uses 6K8 high gain mixer, electrical bandspread on 5-10 meter bands. 1500 kc. to 5 mc. IF frequency may be tuned in by any set. Net $24.50. Browning Labs, Inc., Winchester, Mass.—Radio Today.

Crosley Summer-Special

* Crosley 8 ft. Shelvador, $149.95 with famous Crosley features as the Freezorcold, Electro-Saver power unit, removable bottom section for tall bottles, etc., and oven-proof pottery. Crosley Corp., 1329 Arlington St., Cincinnati, Ohio.—Radio Today.

NEW THINGS

GE 6-ft. box

* Model PLBE-40 features vacuum sealed condensing unit, one piece inner and outer shells, Thermocraft insulation, Textolite door frames, porcelain enamel inside and out, 62 cubic feet volume with 11.7 sq. feet shelf space. Quick-trays, vegetable pan, water bottle. List $181.75. General Electric Co., Bridgeport, Conn.—Radio Today.

Alden fuse holder


Pilot portable


44
vicemen are holding their Annual Picnic August 18 at Idlewild Park, Ligonier, Pa. Tickets at $1 including water sports and eats, may be obtained from jobbers and members. The GE RSA television course started with the August 13 meeting.

**Ken-Rad Has New Radio Program**

Now under way on Station WLW is a new program presented by Ken-Rad to help dealers and servicemen sell more radio tubes. The show, which features William H. Hessler, well known editor and analyst of foreign affairs, replaces the 7-year-old "Dr. Konrad Unsolved Mystery" program.

**FM in Stromberg's Biggest Advertising Drive**

"The strongest and most extensive advertising campaign we have run in recent years" is announced by Warren T. Eastwood, ad manager of Stromberg Carlson, as the ads begin to appear in Saturday Evening Post, Life, Collier's, Time and The New Yorker.

"Ads will feature our all-purpose radios and remind the public that we are recognized by authorities as the leader in FM," said Mr. Eastwood. "Copy themes will be centered around the perfect music it is possible to enjoy on FM broadcasts when you have a Labyrinth and Carpinchoe speaker to reproduce the utmost of FM's musical range."

---

**PICK-UP CONTROL**

... you never dreamed possible

---

**Western Electric 639B 6-way mike**

Now you can have six mikes all in one unit. The 639B Cardioid offers six patterns at the turn of a switch.

You can tackle the toughest P.A. set-ups using the mike as non-directional, bi-directional, or cardioid, or with patterns 2 or 3 which reduce reverberation effect even more than the famous 639A.

You can shift the angle of minimum response to 150°, 130° or 110° to avoid reflections or feedback paths. It's truly the all-purpose mike.

---

**Western Electric 639B CARDIOID DIRECTIONAL MIKE**

GAYBAR ELECTRIC CO., Graybar Bldg., New York. Please send full details on Western Electric 639B Cardioid Mike.

NAME: 
ADDRESS: 
CITY: STATE: 

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**OHIO SALES EVENT**

R. L. Tripplett, left, of test equipment fame, shown with Jiggs Keene of firm's Chicago offices, at sales meet held at Tripplett farm near Bluffton, Ohio. Photogapher was H. A. Hutchins of National Union.

**National Union Executive Named**

S. W. Muldowdy has been re-elected president of National Union Radio Corp, at the organization meeting of the Board of Directors. The group named W. R. Wilson as treasurer and E. O. Sandstrom secretary and assistant treasurer.

At the NU annual meeting in Wilmington, Del., the following were elected to the Board of Directors: S. W. Muldowdy, NU president; Henry L. Crowley, president; Henry L. Crowley Mfg. Co.; Paul V. Galvin, president, Galvin Mfg. Co., Chicago; Penn Brook, Sears-Roebuck & Co., Chicago; W. R. Wilson, controller, Philco Corp., and Fred D Williams, assistant to the president, Philco Corp.

**IRE Conventions in Boston, Los Angeles**

Institute of Radio Engineers will hold their annual Western Convention August 28-30 at the Ambassador Hotel, Los Angeles, in joint session with the AIEE. On Aug. 31 a big combined convention of the Pacific and Southwestern divisions of ARRL opens at Long Beach Municipal Auditorium, so that thousands of radio men are expected on the Coast during the period.

IRE held an earlier convention at the Hotel Statler in Boston last month, with some 1,500 engineers at a 3-day session.

**Pittsburgh RSA Plans Picnic and Tele Course**

At the monthly meeting of the RSA chapter of Pittsburgh, held July 9, Ken Vaughn, National V.P., gave a report on Chicago convention. John Marshall discussed an important topic, "Costs in Radio Servicing." The Pittsburgh ser-
Distribs in Big Showings of SC Line for '41

A number of Stromberg Carlson distributors last month were hosts to dealers in their various areas, for the presentation of the SC 1941 line of radios and radio-phonographs. Dramatic demonstrations of the 7 FM models in the line, with the Labyrinth and the Carpinchoe speakers, were applauded.


Rissi Bros. in Expansion Move

A new and larger store has been opened at 1112 W. Warren St., Detroit, Mich., by the prominent distributors, Rissi Bros. The firm has a branch at 443 S. Division St., Grand Rapids, and is now ready to service every dealer in the Michigan area.

Rissi has just announced a 200-page net price catalog, which is free to those who write for it. Complete with thousands of illustrated items, conveniently indexed.

SW Names Lehr

Stewart Warner has announced the appointment of Lehr Auto & Electrical Supply Co., 16 W. 61st St., New York City, as distributors for SW radio in Metropolitan New York. Lehr will emphasize a complete warehouse stock and display of the line; prompt and efficient service to dealers.

Here's the annual "get together" of Spokane Radio Co., Spokane, Wash., with manager M. H. Willis at the helm. Spokane reps all the way from Alaska to Montana attended the 3-day event, as well as Raytheon execs Earl Dietrich and Don Burcham, and R. C. James, Jr., factory rep.

New Victrolas Get Applause From the Field

A new kind of reception from retail dealers has been given the new RCA Victrola, it was noted during the recent series of presentations by jobbers throughout the country.

Seven of the RCA Victor executives who attended a number of the meetings have returned to Camden and they report "unprecedented enthusiasm," Fred D. Wilson, sales manager of field activities, went to meetings in the Middle West and says that "never before in our history has such an enthusiastic reception greeted the new models in every market."

Million Gets Acceptance in Southeast

Unusual acceptance for the new Million test equipment and sound products is reported in the southeastern areas of the U. S., according to John W. Million, Jr., who recently took a car full of samples and made a trip through that territory. He was accompanied by Herb Erickson, Asheville, N. C., newest representative in that country.

The two executives took the popular-priced test equipment and sound units through North and South Carolina, Georgia and Florida, and got "a gratifying number of orders."

Farnsworth Jobber

White Hardware Company of Savannah, Ga., has been appointed distributor of Farnsworth radio receivers and radio-phonograph combinations. In announcing the new appointment, Pierre Boucheron, Farnsworth general sales manager, said that he felt they would take the jobserion in Savannah, Georgia to new heights. They now total 54.

JOBBERS GET BUSY

VELOCITY AMPERITE

2 GREAT MIKES!

AMPERITE VELOCITY
with exclusive ACOUSTIC COMPENSATOR

Actually a combination Velocity-Dynamic, having best features of both types.

Model RBHk, hi-imp. (RBMo, 200 ohms); LIST $42.00
Model RBShk, hi-imp. (RBSh, 200 ohms); LIST $32.00

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
361 BROADWAY
NEW YORK
"Twin Commode" Idea Catches On

"A real hit has been scored, according to distributors' orders, by our Twin Period Commodes," is the report from Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill. This was a highlight of a general statement pointing out that unusual acceptance has been forthcoming for the firm's "complete AC line, the sharply lower priced battery sets, and the full line of record makers, record changers and phonograph combinations in period models."

The "Twin Commode" idea gives dealers a chance to fit into modern home decorating schemes and sell two sets of Sherraton cabinets in handy-some mahogany. Model 220D is a 7-tube radio and may be sold separately; model RCD plays records through the radio and has an automatic changer.

Schott Names Group of New Reps

From Walter L. Schott, of the company of that name which makes "Walsco" products, comes the news of the appointment of new agents. The firm is now represented in all parts of U.S. and Canada.


Roburn Agencies, 11 Warren St., New York City, are sole exporters, and exclusive agent for Canada is Sudor Radiodictric, Ltd., Montreal, Quebec.

Clarion Has Trio of New Reps

Several sales representatives in the Michigan and Eastern seaboard territories have been announced by Transformer Corp. of America, makers of Clarion sound products.

The Michigan area will be handled by Art Adams of the R. A. Adams Co. in Detroit, Pennsylvania, Metropolitan New York City, New Jersey, Delaware, Maryland and Washington, D. C. will be covered by Harold WELLER. Mr. Hugh SNYDER has taken over the Clarion line in Virginia, West Virginia, the Carolinas, and Florida.

47 Teams in Ken-Rad's Big Transmitter Hunt

Another Treasure Hunt sponsored by the Ken-Rad Tube & Lamp Corp., Owensboro, Ky., has been held in the Chicago area, with 119 engineers competing in the highly successful event. The transmitter was hidden some 42 miles airline from a starting point, and engineers with directional receivers in their cars set out to locate it. Forty-seven teams were entered. Winners were Jeannel Lytle, Chet Lytle and Red Parr of the Wills-Gardner engineering department, who

found the transmitter after driving 73 miles in two hours and three minutes. Second and third places went to United Airlines teams, and fourth was won by Jones, Harrigan, Phalen and Altman of Radio Products Co., who were winners in a Hunt last October. The latter team used a unidirectional receiver built around the newest Admiral circuit.

Victor Jobber

The Strauss-Frank Co., San Antonio and Houston, Texas, is now distributor for all RCA Victor products in the South Texas area, according to Fred D. Wilson, RCA manager of field sales activities.

Freed Named by General Television

Announcement has been made by General Television & Radio Corp., whose new address is 1340 N. Homan Ave., Chicago, of the appointment of Arthur Freed as General's sales representative in the NY Metropolitan and northern New Jersey areas. The Freed Co. is located at 230 Fifth Ave., New York City.

Mr. Freed, who recently made an extensive tour of the entire General plant while on a Chicago visit, will maintain both offices and a show room for the complete line at the Fifth Avenue address; dealers are cordially invited.

NEW HICKOK WIDE BAND SIGNAL GENERATOR

Crystal Controlled

• Yes, manufacturer's servicing instructions specify the use of a wide band Signal Generator for alignment of F.M. and Television Receivers. As usual, HICKOK is prepared to offer new equipment to meet this need with this Electronic Wide Band Signal Generator with Crystal Control for servicing all F.M. and A.M. Receivers including especially these latest 1941 models.

AMONG THE 12 OUTPUT SELECTIONS (ALL FREQUENCY & AMPLITUDE LEVELS) OF THIS OUTSTANDING INSTRUMENT ARE THE FOLLOWING:

• Wide band frequency modulated R.F. output (350 KC sweep—600 cycles), 100 KC to 133 megacycles.
• Frequency modulated R.F. output (150 KC sweep—400 cycles), 150 KC to 116 megacycles.
• Frequency modulated R.F. output (30 KC sweep), 100 KC to 110 megacycles.
• Amplitude modulated R.F. output (400 cycles), 100 KC to 110 megacycles.
• Unmodulated R.F. output 100 KC to 110 megacycles.
• Audio frequency outputs of 400 cycles fixed and 50 to 10,000 variable.
• Crystal controlled outputs, modulated or unmodulated, with better than ±1% to 10 megacycles in 100 KC steps and to 150 megacycles in 1 megacycle steps.
• Synchronized sweep voltage for oscillograph use.


Complete information in new catalog $1.20.

MAIL THIS COUPON for Your Copy

AUGUST, 1940
NEW SALES HELPS

Election Angle in New Display

A sales-making display piece with the "Listen Before You Vote" appeal emphasized is now forthcoming to dealers from distributors for the Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill. This gold-and-blue fixture has room for nine sets and all of them can be plugged in through the back, for demonstration. The display takes less than three square feet of floor, but it can be used as a center of a group of Sentinel consoles.

PREPARE Now!
It's Easier to Keep Abreast Of These New Developments Than It Will Be To Catch Up With Them!

Your future in the servicing business will depend largely upon your knowledge of these new developments in radio. NOW is the time to prepare . . . if you expect to be able to compete successfully for the service that will soon be required. Don't put it off! Start now, by devoting a few minutes each day to study of these easy-to-understand books by John Rider. You can look them over at your jobber's. Do it today!

FREQUENCY MODULATION
by John F. Rider
The most talked of subject of the moment. Rider offers this introduction to frequency modulation with special attention to P.M. receivers and the problems they will present to the serviceman. Get this now—be ready! 136 pages—only $1.00.

SERVICING BY SIGNAL TRACING
by John F. Rider
Use the system of servicing which is proved and endorsed, fastest—most modern, the system you can apply to all receivers regardless of age, type or make. Servicing by Signal Tracing operates independently of every limiting factor heretofore encountered. In this new book you learn how all receivers are brought to a common servicing level. Learn how components receive a functional check! This is the most definite and positive form of trouble localization. Over 360 pages—hard covers—only $2.00.

OTHER RIDER BOOKS YOU NEED

JOHN F. RIDER PUBLISHER, INC.
404 Fourth Avenue New York City
Export Div.: Rock-Int. Elect. Corp., 100 Varick St., N. Y. C. Cable: "ARLAB"

Read RIDER BOOKS

New Radio Features in Color

One of Stromberg Carlson's new sales helps designed to tie in with the company's big new national advertising campaign is an easeled card in four colors. This handsome display lists the sales points of the new SC "all-purpose" radios, including FM, standard and short-wave reception; recorded music, Labyrinth, furniture design, finishes, etc.

Stromberg also has a new red-and-black counter card, an easeled one, featuring an explanation of the Labyrinth as given by the text book, "Applied Acoustics."

A Pair of Sellers From GE

A striking display for radio windows for floors is the new General Electric one with the giant size "maestro hands" which fit around a GE console with lively copy about the "Golden Tone" radio line. A spectacular musical theme is used throughout. GE is also ready with another card-board display piece, a salesmaker of the "X-ray back" type. To be thumb-tacked across the back of a console chassis, it brings interesting attention to 12 of the GE selling points.

Announcer Card from Warner

The Warner Products Corp., 1019 Lake St., Chicago, is ready with a new three-color display card featuring the Model 601 announcer, for use in windows, on counters or on walls. This card is being distributed to jobbers.

COLUMBIA COLORS

Flashing the story of Columbia Recording Corp.'s new needles is this card in four colors, 22" by 25". A lively display for record dealers.
Arvin Out With
Eye-Catcher

Interesting colors and sturdy build features of a new Arvin point-of-sale display, now being released as part of the firm's big sales drive on the line. It's 5 ft. high, 3 ft. wide, with "contact power" emphasized by the manufacturer, Noblett-Sparks Industries, Inc., Columbus, Ind. Free to dealers who order at least one each of any six Arvin Headliner models from the company's jobbers.

Colorful Group of
Motorola Displays

A variety of hard-working and colorful displays for window, counter, and floor use have been issued for Motorola dealers by Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago.
The novel revolving display shown herewith holds 8 table models, for window or counter.
Other lively pieces include a 3-unit "Money-Maker" which holds 12 table models and two consoles, suggested as a center attraction for a dealer's home radio dept. Also, there's a Motorola 4-set counter display, and a streamlined chairside stand for showing and demonstrating table model phono-radios.

Calendars Are
Business Builders

Art-mount calendars in full color, presented in a choice of five subjects are being prepared for dealers and servicemen, by National Union Radio Corp., 57 State St., Newark, N. J. These are for the 1941 season, available at reasonable prices from NU jobbers.
The calendars are suggested as an effective way to get the dealer's name, address and phone number permanently in the homes of prospects.

Political Campaign
Window Streamer

A 3-color political window streamer to help Sylvania radio servicemen and dealers promote the sale of tubes during the present political presidential campaign is announced by Hygrade Sylvania Corp. Caricatures of the Republican Elephant and the Democratic Donkey add interest.
The rousing American color scheme of red, white and blue gives the 36"x12" poster a patriotic, cheerful tone. Gummed stickers are furnished.

Okeh Records Benefited
by Sales Kits

Now available to dealers are complete promotion kits issued by Columbia Recording Corp., 1473 Barnum Ave., Bridgeport, Conn., as part of the CRC drive on the new 35c Okeh label which has replaced the Vocalion tag.
Kits include posters, streamers, window displays, artist photos, easel cards, and a string of point-of-sale materials to help dealers sell "the greatest array of talent on any 35c label."

Easy, Low-Cost
Home Recording

GETTING new business and plenty of it is simple with the new General Industries Home Recording Unit. Its simplicity, low cost and fine performance make it a joy eagerly welcomed in countless homes. Just as well liked by business executives—lawyers—musicians—drama, music and public-speaking teachers.
Up-to-the-minute pickup and cutting arms. Special design, powerful rim-drive motor. Weighted turtable with retractable record-driving pin. Complete unit, mounted ready for easy installation. Order one today for testing.

New, Light,
"LX" Rim-Drive
GI Motor

Lower in
cost, lighter in weight
and more compact in design. Amply powerful. Induction type. Silent. Fan-cooled—no overheating in small, enclosed, cases or cabinets.
Send NOW . . .
for new free catalog and prices

The General Industries Co.
4038 Taylor St. ELYRIA, OHIO

FOR BIGGER PROFITS!

Vote THE SENTINEL TICKET

- There's a landslide of values in the great new Sentinel line. It's a winning ticket from every angle. Brings new profit opportunity to the retailer with a line of receivers enjoying a 20-year reputation for quality and freedom from service. Get out your pencil now and vote by sending for full details of this winning line.

Sentinel Radio Corp., 2020 Ridge Ave., Dept. KT-8, Evanston, III.
RCA Announces Many-Featured Victrolas

A brand new group of console and table model RCA Victrolas with "many important advances which improve tone quality and performance to a degree never before achieved" have been unveiled by E. W. Butler, manager of the RCA Victor Radio, Phonograph and Television division. Advanced styling is featured throughout the models.

New instruments include three console grand models in the "Deluxe" series, four models in the "Anniversary" series (including two with home recording), four consoles in the "Master" series (including one with home recording), and two table sets. Also a new automatic record changing Victrola attachment that converts any radio into an automatic phonograph. RCA Victor distributors applauded the new line enthusiastically at previews in Chicago and Atlantic City.

List prices range from $30 to $300.

Queens Dealers at Gala Outing

A big event for radio and electrical dealers of Queens, N. Y., is the Third Annual Outing of the Electrical Appliance Merchants Ass'n. of Queens County, to be held at Karatsonti's, Glenwood Landing, L. I., on Aug. 14th.

There will be prizes, games, swimming, luncheon and banquet, boating, etc., and the election of officers. Reservations are made through Joseph D. Loculizo, 30-11 Steinway St., Astoria, N. Y.; Charles F. Revel, 39-34 Bell Ave., Bayside, N. Y.; or Alfred Richards, 96-07 Liberty Ave., Ozone Park, N. Y.

Petrie Names Three Sales Heads

R. I. Petrie, the new vice president and general sales manager, The Crossley Corp., has named three division sales managers to direct sales in the eastern, western and southern sections of the U. S.

N. C. MacDonald will be eastern sales manager with headquarters in New York City. B. T. Roe has been named western sales manager, with headquarters in Chicago. S. D. Camper has been appointed southern sales manager and will have headquarters at Atlanta.

Johnson Buys Bassett Firm

The E. F. Johnson Company, Waseca, Minn., has purchased all assets connected with the antenna and concentric cable business of the Bassett Radio Mfg. Co., Niles, Mich. The deal includes all material inventories, tools and equipment, patents, and engineering files. Equipment has been moved to Waseca, where the Johnson company will continue to manufacture and market through its jobbers, the flexible concentric cable, rotary beam antennas, and high frequency coaxial antennas.

NEW STERLING POCKET METERS

TEST "A" AND "B" BATTERIES OF PORTABLE RADIO SETS

YOU NEED THIS LINE NOW!

No. 42A STERLING Graphic General Tester for all "A" and "B" batteries of Portable Radio Sets. Designed especially for dealers and servicemen. Old type testers won't do.

DEALER'S NET PRICE. ...$3.60 Carried by All Leading Distributors Write for descriptive bulletin No. 515-

THE STERLING MFG. CO.
9205 Detroit Ave. Cleveland, O.
Sylvania Expert Reveals Export Trends

The new chairman of the RMA export committee is W. A. Coogan, foreign sales manager of Hygrade Sylvania Corp. Mr. Coogan is a widely traveled expert in markets abroad, and just recently returned from a tour of South America, Mexico, Canal Zone, Puerto Rico and Cuba.

Vitally new aspects of trade and business in these countries were reported by Mr. Coogan, who observed that heavy surpluses are piling up in South America because European nations no longer take their products. He found that South Americans were more keenly aware of the economic factors involved in the war, than people in the U.S., because of the impact on home business conditions.

Mr. Coogan reported that the radio parts business looks favorable abroad, although the buying of sets has waned because some countries have started their own manufacture and assembly, and because American firms do not make units appropriate for tropical climatic conditions.

Weinig Heads Wincharger Corp.

Robert F. Weinig, who has been in charge of farm radio sales for Zenith Radio Corp., has been named vice-president and general manager of Zenith's subsidiary, Wincharger Corp., Sioux City, Iowa, according to news from Zenith president E. F. McDonald, Jr.

W. W. Watts, who formerly held the Wincharger post, has resigned, and will come East to enter business.

Zephyr Has Line of Recorders

In the list of manufacturers of recorders and recording blanks, which appeared in Radio Today for July, page 19, the name of Zephyr Products Corp., 67 W. 47th St., New York City, should have been among those who make recorders. The Zephyr firm is a subsidiary of Sound Devices Co., 160 E. 116th St., New York City, makers of recording blanks.

Hudson Is Factory Rep for Du Mont

Appointment of G. W. Hudson, 3308 East Broad St., Richmond, Va., as factory representative in Eastern Tennessee, Virginia and the Carolinas, has been announced by the Allen B. Du Mont Laboratories, Inc., Pasaic, N. J.

Mr. Hudson is a specialist in engineering sales service to buyers of industrial cathode-ray tube equipment or television equipment.

Talk-A-Phone Expands

New and greatly enlarged quarters have been taken by the Talk-A-Phone Mfg. Co., makers of intercommunication systems, call systems and amplifiers, formerly located at 1847 S. Milard Ave., Chicago. The address is now 1219 W. Van Buren St., Chicago.

SELL MOBILE P. A.
TO THE POLITICOS
this year . . .

MR. JOHN ERWOOD
President

Says "Model 1420-K mobile system—designed by the originator of mobile equipment has plenty of power with ample reserve capacity."

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

Write for your free copy of new catalog hot off the press.

Be sure to enter the ERWOOD Slogan Contest, $350 in merchandise. Write for free information.

Erwood SOUND EQUIPMENT CO.

FOR THOSE WHO WANT THE BEST MONTHS AHEAD OF COMPETITION

Hytron with its Bantam* GT line was more than a year ahead of all competitors. The Bantam GT, originated and perfected by Hytron, is now the preferred tube type—recognized by all tube and radio set manufacturers—endorsed by the RMA as interchangeable with certain "G" types.

In 1939 Hytron developed the instant-heating beam-power tetrode for mobile communications, followed in 1940 by a companion twin-triode, thus revolutionizing police radio communications and thereby increasing protection to the public.

The new widely-publicized miniature pentode tubes were first conceived and perfected by Hytron. Today these miniature Bantam Jr. tubes have been in production for two years and are in use in tens of thousands of wearable vacuum-tube hearing aids. Illustrated at the right is the newest of Hytron's miniatures, the Super Bantam, setting a new record for small size and performance.

In short, Hytron is a leader—not because of its size—not because of millions spent in promotions, but because of the ability of its executives and engineers to see ahead—because of its important developments and contributions to radio.

1940—OUR TWENTIETH YEAR

HYTRON CORPORATION

23 N. DARBY ST.
SALEM, MASS.

1938 1940

1937

ABOVE—Bantam* GT receiving tube.
LEFT—Original Bantam* Junior miniature.
CENTER—Super Bantam* miniature.
Illustrations actual size
*T-M registered

AUGUST, 1940
NOW YOU CAN BUY THESE BETTER
AUTO RADIO VIBRATORS
AT NO PREMIUM IN PRICE

Countless thousands of James Vibrapower units have solved the Auto Vibrator service problem for those servicemen who replace with the best. They paid a premium for extra quality—but they did a better service job. Now these same James Vibrapower units may be had at no premium in price. No longer need the serviceman compromise quality in his quest for economy. These new lower prices on James Vibrapower units are made possible through increased manufacturing facilities—as well as to an ever increasing sales volume. In design—in engineering and in the many exclusive features they embody they stand head and shoulders above the field.

DeLuxe Push-pull non-synchronous James Vibrapower units, formerly $3.95 list, are now $2.95. Standard Units, formerly listing at $2.95, are now $2.25. The Push-pull synchronous type lists at $4.95. The universal unit that serves over 80% of replacement calls lists at only $1.75. There is a James Vibrapower unit to meet every replacement requirement.

WRITE FOR SPECIFICATION SHEETS.
LITERATURE ON REQUEST.

JAMES VIBRAPOWER CO., INC.
CHICAGO • ILLINOIS

Mr. Radio Serviceman:
RSA MEANS BUSINESS!

New business promotion plans and new member-helps spell increased profits for RSA members at the start of the new season. Watch for the RSA Replacement Parts Guide—New Broadcast Promotions—New Member Helps! Don’t be the last man in your neighborhood to join RSA. Send the coupon Today!

MAIL THIS COUPON NOW!

RADIO SERVICEMEN OF AMERICA, INC.
304 South Dearborn Street
Chicago, Illinois

I am interested in RSA Membership. Tell me about it.

Name ........................................................................
Address ...................................................................
City .............................................................. State .................................
Radio men try a lunch in the Wisconsin shade—R. Y. Fitzpatrick, left, of Radio Today's Chicago offices, and Gustav Marx, Milwaukee advertising executive.

Average Folks Can Now Buy Classical Discs for $1

A big impetus to dealer sales is seen in Columbia Recording Corp.'s dramatic announcement that Columbia Masterworks prices have been reduced as much as 50 per cent. Now, better records made by an imposing string of top artists, will be priced at $1 for the 12-in. size (formerly $2) and 75c for the 10-in. size (formerly $1.50).

In the announcement by CRC president Edward Wallerstein, it was revealed too that the NY Philharmonic orchestra, directed by John Barbirolli, and Leopold Stokowsky conducting the all-American Youth Orchestra, have been added to Columbia lists. Also an exclusive contract with the Budapest String Quartet has been signed.

Mr. Wallerstein pointed out that "After two years of preparation... we now put much of the greatest music in the world within the reach of everyone." The records themselves are described as superior because of recent manufacturing improvements.

Important symphonies in the Masterworks series include those of Cleveland, Minneapolis, Chicago, Pittsburgh, Columbia Broadcasting, Andre Kostelanetz, and many others.

The newly priced records will be backed by a $300,000 promotion drive, with coast-to-coast radio spot coverage from Sept. 3rd to Xmas. Two-page ads in Life magazine will run for the same period, and local newspaper ads are planned. Half-hour local recorded radio programs are set nationally, and new style point-of-sale materials include posters, streamers, display cards, etc.

The whole Columbia classical catalog is affected by the new prices, and dealer rebates will be arranged for discs stocked before the change.

Brooklyn Dealers in Outing

Dealers in Brooklyn, N. Y., got together July 28th for a big social event at Heckscher State Park, East Islip, L. I.—the second annual outing of the Electrical Appliance Dealers Association of Brooklyn, Inc.

Manufacturers and distributors representatives, in addition to the retailers, showed up for the games, refreshments and general fun.

Shadley to Sonora

Sonora Radio & Television Corp., Chicago, has a new comptroller, Ray E. Shadley, just appointed by Joe Gerl, Sonora president. The company is in the midst of an extensive expansion program.

SIGNAL ANALYZERS

Testing with Jackson Signal Analyzers is direct, positive and easy. Measures the signal itself, tracing its path through the receiver to the exact point of the trouble. It shows ALL results instantly on direct reading meters. Model 660. Price complete $79.50.

OSCILLATORS

Jackson Audio Oscillators operate on a new basic principle—audio frequency voltage is developed at its fundamental frequency. Sets new high standard for this type of instrument performance.

FREE! Write today for this vitally important folder—"Learn the Truth About Dynamic Tube Testers."

THE JACKSON ELECTRICAL INSTRUMENT CO., Dayton, Ohio

FORGING AHEAD

WILCOX-GAY!
NEW BOOKLETS


1940 list price catalog of Spokane Radio Co., Inc., 611 First Ave, Spokane, Wash., is devoted to a complete line of nationally advertised radio and sound equipment.

J.F.D. 1940 catalog includes data on auto antennas and installation accessories, home antennas, ballast resistors, recording discs, etc., among others in their complete line.

A manual on the characteristics and applications of Lumarith Protocols for the electrical industry, has just been issued by the Celluloid Corp., 180 Madison Ave., New York, N. Y.

New catalog, PS-404, incorporates complete listing of United Transformer Corp.'s entire 1940-41 line of transformer components. Address request to 150 Varick St., N. Y. C., or at your local jobber.

Four-page pamphlet on fluorescent lamp power-factor correction has been prepared by Aerovox Corp., New Bedford, Mass.


John Meck Industries offer much practical data in their new bulletin on speaker matching problems in designing public address systems.

Stromberg-Carlson's 1941 line of 30 new radio models is shown in a regular just off the press, and also an explanation of Frequency Modulation.

Technical bulletins covering 3 and 5 in. DuMont cathode ray tubes for oscilloscope applications are available by addressing Allen B. DuMont Labs, Inc., 2 Main Ave., Passaic, N. J.

No. 141, a 32-page catalog of GC's radio chemicals and products can be had on request. General Cement Mfg. Co., Rockford, Ill.

American Phenolic Corp.'s new 1941 catalog, No. 62, gives specifications, prices and illustrations of the most popular items in their line of sockets, connectors and accessories. Address 1200 Van Buren St., Chicago, Ill.

Ranco replacement thermostat controls for all makes of electric refrigerators are described in a folder issued by Ranco, Inc., 601 W. Fifth Ave., Columbus, Ohio.


OXFORD Scores Again!

NEW TINY PERMAG

MODEL 32M-CA

3" SPEAKER IN CABINET

Measuring only 4 x 4 1/2 x 2", Model 32M-CA PERMAG extension speaker will fit in any nook or corner at home, office, factory, store, where remote speakers are desired. List only $3.50.

Equipped with special shielded transformer a separate unit model 32M-CM is ideal for use as microphone in simple inter-communicating systems. List only $4.50.

Write Dept. RT3 for complete descriptive literature

NEW "TRIPLETT"

LEVER SWITCHING

Model 1620 Tube Tester lever switching permits individual control for each tube element. Switches shown above permits tests of 450 individually selected tubes without change of position of the tubes. Additional "quick change" anti-abolishment features include RED-BLUE Lifetime Guaranteed Instrument, Speed Chart, and New Socket Plot, all of which can be replaced shield un-electronically. (See Section 128, Address Drive, Bluford, Ohio. THE TRIPLETT ELECTRICAL INSTRUMENT CO.

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Ken-Rad's Recommended Tubes Get Wide Acceptance

A new indication of long-needed cooperation between manufacturers of radio sets, and tube manufacturers, is seen in a report from Ken-Rad Tube & Lamp Corp., Owensboro, Ky., whose efforts in reducing the number of tube types are now getting results.

Ken-Rad previously published a booklet listing 26 types of tubes recommended for new receiver design. This was intended to simplify manufacturing processes, servicing problems, and eventually reduce the tubes stocked by jobbers and dealers.

That this program was accepted by manufacturers using Ken-Rad tubes is revealed in the shipments made by the company. In December, 1939, before the program started, only 53 per cent of shipments were of the 26 recommended types. March saw the per cent go to 71, and by June, 90 per cent of the orders were for the recommended types.

Campbell Named by Worner

L. L. Worner, president of Worner Products Corp., 1019 W. Lake St., Chicago, manufacturers of photo-electric equipment, has announced a new general sales manager, Robert H. Campbell.

Mr. Campbell is widely acquainted in both the radio and electrical fields, having been active there for the past 15 years.

Crosley Picks Weissinger

Another advertising expert, F. H. Weissinger, has been added to the ad staff of Crosley Corp., according to news from Crosley advertising manager, L. Martin Krautter. Mr. Weissinger will be in charge of dealer cooperative advertising.

Gets New Tube Post

Walter R. Jones of Hygrade Sylvania Corp. has been named director of commercial engineering of the firm's radio tube division. He will now head up Sylvania's air-to-coast radio service schools, conducted by him and George C. Connor of New York.

**Crowe Automatic Cutout**

It's the **CROWE Automatic Cutout**. Every car, whether radio-equipped or not, needs one. It concentrates power for quick starting, and eliminates vibrator trouble.

**SAVES RADIO VIBRATOR**

No longer need car owners worry about radio vibrator trouble due to starting the engine while radio is playing. This complaint is eliminated with the Crowe Automatic Cutout. It shuts off radio to the instant motorist steps on starter. This prevents sticking or burning out of vibrator because of voltage drop.

**INSURES QUICKER STARTING**

There is still another use for the Crowe Automatic Cutout. It insures quicker starting. It not only shuts off radio, but also headlights, heater, light bulb and other accessories, concentrating power for the starting operation. This is particularly important for cars equipped with "Sealed Beam" lights. It restores circuit after engine is started.

Ask your Radio Parts Jobber about extra discount on special dealer package and free advertising material.

Ask for Folder S-2.

CROWE NAME PLATE & MFG. CO. 1771 GRACE STREET CHICAGO

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**Musical Convention Draws Thousands**

Some 3,700 music and radio men were guests at the annual convention of the National Association of Music Merchants, for the big 3-day event which set records at the Stevens Hotel, Chicago. There were 145 exhibitors, including many radio manufacturers with a handsome variety of radio-musical instruments.

An exceptional amount of business was done at the convention, in preparation for Fall buying. Speakers and entertainment were generously provided, and reached a lively climax when some 1,200 went to the main banquet event.

The National Musical Instruments Dealers Association voted during the session to merge with NAMM.


**Caphehart Shows Panamuse and Deluxe Lines**

Two new lines, a group of 12 Capehart-Panamuse automatic phonograph-radio models and a string of 9 Deluxe Capehart period-style combinations, were introduced last month at the convention of the National Association of Music Merchants in Chicago, by the Caphehart Division of Farnsworth Television & Radio Corp., Ft. Wayne, Ind. Following the show in Chicago, the firm held a special showing at the Waldorf-Astoria in New York City, Aug. 7-9, and I. C. Hunter, sales manager, has also scheduled similar events in Los Angeles and San Francisco for August.

The lines emphasize efficient record changers, tone quality, authentic period design cabinets, chassis of dual unit construction, large tube complements, 12" precision one speaker, and many other features. Featured also are FM reception and remote control.

**Rock-Ola Enters Recorder Field with Complete Line**

Early next month, the Rock-Ola Mfg. Corp., 500 N. Reddie Ave., Chicago, Ill., will be ready with a new and complete line of home recorders. The line will be all radio-recorders, except for a portable radio-phono-graph, with an automatic record changer; six models of recorders include four consoles, a portable and a table model, with list prices ranging from $59.95 to $149.95.

Rock-Ola officials say that "we believe that the familiar Rock-Ola slogan, 'the greatest phonograph produced in the greatest factory in the industry' sums up our qualifications to give retailers the kind of merchandise in the recorder field they can sell with confidence and in good volume." The firm is well known for an extensive background in the manufacture of commercial phonographs.

Consoles will be offered in traditional and modern designs, two of them with automatic record changers. The Rock-Ola merchandising program includes complete point-of-sale helps and mass advertising, presented as "particularly useful to dealers because it is all planned around a single type of instrument."

**Radiant Shift**

The plant and offices of The Radiant Corp., Cleveland, is now located at W. 62nd St. and Barberton Ave. The former Radiant address was 13229 Shaw Ave.

**Bakelite Moves**

The new quarters of the Bakelite Corp. and Halowax Corp. are in the Caribe and Carbon Building, 20 E. 42nd St., New York City. They were formerly located at 270 Park Ave.
Radio Dealers Can Now Offer Their Prospects a Saving of $15 on a Console Model Federal, a Great Big Added Advantage in Selling This Superlative Home Recorder.

**ONLY FEDERAL DEALERS CAN MAKE THIS OFFER!**

Here's your opportunity to turn these waiting prospects into cash customers quickly. Offer them a saving up to $15 on the purchase of a Federal Recording Radio,—if they buy Now. See for yourself what a powerful inducement you have in the exclusive Federal Deal. It is working magic everywhere. It will work magic for you.

**WRITE OR WIRE FOR DETAILS**

FEDERAL RECORDER CO., INC.
50 West 57th Street
Dept. 8111
New York, N. Y.

FEDERAL RECORDING RADIOS ARE THE WORLD'S GREATEST RECORDER VALUES. MOST DEPENDABLE PERFORMANCE. WIDEST RANGE OF MODELS

Federal Perma Disks
Non-inflammable, shovings will not burn, heavy metal-base, non-warped, non-slip. Hundreds of high fidelity playbacks; perfect recordings without surface noise. Priced 23, 30, 40, and 50 cents. Sell Federal Perma Disks if you want that sweet and lasting repeat business.

Portables, Table Models, Consoles with or without record changers, professional models too, all priced to yield the highest dollar value. Beautiful cabinets, finely designed and finished, distinguish the entire Federal line. Federal Performance in faithful recording, in fine radio reception and phonograph reproduction stands unexcelled, acknowledged the world’s best.

Help! Help! for Dealers
Folders to hand out or mail to prospects—colorful attention-getting window cards to bring passersby into your store—free newspaper ad mats... Use them all to boost your sales of Federal Recording Radios and Perma Disks!
And the Entertainment Miracle of the Year...

Motorola

WIRELESS AUTOMATIC RECORD CHANGER

Makes an Automatic Phonograph-Radio Combination of any Radio Regardless of Age, Make or Model

MODEL 23RC
Changes eight 10-inch or seven 12-inch records Automatically. Requires no connections, hook-ups or wiring to radio...just plug into any light socket.

$2995

MODEL 83K1

3-GANG CONDENSER TUNED R. F. STAGE

- 8 Tubes including Rectifier
- 3 Wave Bands—Powerful 10" Speaker
- 6 Electric Motor-Drive "Feather-Touch" Push Buttons
- Rich Radiant Concert Quality Reception
- Easily Brings in Far Distant Stations

$6995*

Nationally Advertised

SATURDAY EVENING POST
LIFE—2-COLOR FULL PAGE
CIRCULATION OVER 6,100,000

PRICE Slightly More In South and West

GALVIN MFG. CORPORATION
4545 AUGUSTA BLVD. • CHICAGO