Modernization
- start now!
- "Modernize All Listeners' Sets"
- get 'em ready for political excitement on the air

Radio Trade
sees big Spring, selling new sets, servicing old jobs

Service Tips
- latest circuits
- repairing midgets
- selling antennas
- business methods

Auto Radio
- reaching owners
- record start
- 1,600,000 auto-sets

Public Address
- extra profits from local political jobs

Finer Broadcasts
- use them to push better receivers
- how to "sell up"

RADIO Will Elect the Next President

MARCH • 1936 •
It's a proved fact—

talking up the finer radio programs helps to sell the finer sets!

"MY FAMILY HAS BECOME SO KEEN ON THE BEST PROGRAMS THAT WE SIMPLY HAD TO BUY A BETTER SET."

"WE'VE COME TO THE SAME DECISION, HELEN. AFTER ALL, THE FINEST MUSIC IS WASTED UNLESS YOU CAN HEAR IT AS IT IS PLAYED."

National Broadcasting Company's fine programs are a great sales asset

In the stiff competition for the better type of radio set business today, dealers are always searching for a new hook-up with the consumer's interest. And wise dealers are finding an extremely profitable one in NBC's splendid and widely-popular programs.

In the course of every sales talk, there comes an interval when everything seems to have been covered. Tone, features, finish, price—that's all over. And with a sale hanging in the balance, that's the time to mention the really fine programs—programs with which the prospect is already familiar.

Programs which come over the famous NBC networks are consistently good—customers know this as well as the dealers themselves. Mention of them strikes, in countless cases, a subtle yet powerful sales keynote which aids materially in the final decision.

Tell your customers this: "The finest programs are no better than their reception—give them the best you can possibly afford!"

The broadcasting system and the interests of the 15,000 dealers who contact and sell four to five million listeners a year are closely bound together. Use National Broadcasting Company programs to demonstrate receivers, and swing your sales to a better type of instrument!

NATIONAL BROADCASTING COMPANY, INC.

A Radio Corporation of America Service

NEW YORK • WASHINGTON • CHICAGO • SAN FRANCISCO
Your Toughest Competition
Can't Touch This Combination

DOUBLE-WINGED CHASSIS

METAL TUBES

HEADER, BULKHEAD OR SELF-CONTAINED SPEAKER

CUSTOM STYLED PANEL MOUNTINGS
TO FIT 1935 OR 1936 CARS

MODEL 736 — $5995
7 metal tubes . . .
Other models, $39.95 up to $67.95.

Selling idea #1: A new car-radio with a wing shaped chassis that achieves as much for car-radio as the Centromatic Unit did for American-Bosch Home Radio. Enriches its tone. Greatly reduces the wiring. Eliminates numberless soldered connections and shortens those that remain.

Selling idea #2: This year, the toughest nut that dealers have to crack is the matter of control panel mountings. American-Bosch has the answer — an attractive display kit containing panel mountings for every car on the road . . . at an investment that's hardly worth mentioning.

Selling idea #3: Be prepared for anything the customer wants and you'll never lose a sale. Does the customer want glass tubes or metal tubes? American-Bosch has it. Does the customer want the inbuilt speaker, overhead speaker or bulkhead speaker? American-Bosch has it. Does the customer want steering post control, under dash control or a panel mounting to match and harmonize with his car? With American-Bosch you can give him what he wants . . . with the minimum inventory.

Exceptional displays and advertising material . . .
write or wire for complete story.

UNITED AMERICAN BOSCH CORPORATION
SPRINGFIELD, MASS. NEW YORK CHICAGO DETROIT
North, East, West, South—from every section of the country comes the amazing news that dealer sales of Zenith Auto Radios are soaring to new heights, breaking all-time records! Dealers report doubled, tripled—yes, even quadrupled sales! They say the new Zenith, "America's Safest Auto Radio," is the easiest auto radio in the world to sell. Easy to understand why. Because Zenith has eight sensational safety features including: a dial light that goes on only while dialing . . . lighted pointer . . . big, black safety dial . . . true vision turn-table tuning . . . true dial reading from any angle. Never any glare to blind the driver. The line is complete . . . the prices are right . . . and the Zenith Auto Radio sells fast! Don't miss this opportunity to handle this great auto radio line. See your Zenith distributor now . . . become a Zenith dealer!

Beautiful INSTRUMENT PANEL MOUNTINGS ...to Match all Cars

Car owners are proud of the beautiful panel mountings Zenith provides for their cars. Another feature that makes the Zenith easy to sell.

ZENITH RADIO CORPORATION
3620 Iron Street, Chicago, Illinois
DISTRIBUTORS

ALABAMA
R. P. McDavid & Co., Inc.,
2104 First Avenue
Birmingham

ARIZONA
Tidmarsh Engineering Co.
P. O. Box 2425
Tucson

ARKANSAS
The Mills Morris Company
Little Rock

CALIFORNIA
Ray Thomas, Inc.
1224 S. Hope Street
Los Angeles
Thompson & Holmes, Ltd.
2701 Sixteenth Street
San Francisco

COLORADO
Intermountain Appliance Co.
1508 Cleveland Place
Denver

CONNECTICUT
Northeastern Radio, Inc.
181 Ann Street
Hartford
Plymouth Electric Co.
401 Chapel Street
New Haven

FLORIDA
Peaslee-Gaulbert Corp.
220 East 14th Street
Jacksonville

GEORGIA
Peaslee-Gaulbert Corp.
550 Glenn Street
Atlanta

ILLINOIS
Zenith Radio Dist. Co.
680 North Michigan Blvd.
Chicago

INDIANA
Rodefeld Company
96 West Main St.
Richmond
5 W. North Street
Indianapolis
Walker Electric Supply Co.
817 Ohio Street
Terre Haute
Wayne Hardware Company
Fort Wayne

IOWA
A. A. Schneiderhahn Co.
Des Moines
123 W. Third Street
Davenport

KANSAS
The S. A. Long Electric Co.
146 No. Market St.
Wichita

KENTUCKY
The Fergerson Co.
10th & Broadway
Paducah
The Otis-Hidden Company
529-35 W. Main Street
Louisville

LOUISIANA
Monroe Hardware Co.
204 N. Third Street
Monroe
C. T. Patterson Co., Inc.
800 S. Peters Street
New Orleans

MAINE
R. B. Dunning & Co.
54 Broad Street
Bangor
Radio Service Laboratory
34 Free Street
Portland

MARYLAND
Baltimore Gas Light Co.
111-113 E. Lombard St.
Baltimore

MASSACHUSETTS
Northeastern Radio, Inc.
281 Columbus Avenue
Boston

MICHIGAN
Republic Supply Corp.
421 Beaubien Street
Detroit
Soo Hardware Company
Sault Ste. Marie
Soo-Marquette Hdwe. Co.
Marquette
J. A. White Dist. Co.
219 Ottawa Ave. NW
Grand Rapids

MINNESOTA
Reinhard Bros. Co., Inc.
Minneapolis

MISSOURI
Electric Lamp & Supply Co., Inc.
1900 Washington Avenue
St. Louis
Federal Distributing Co.
2004 Grand Ave.
Kansas City

MONTANA
Midland Implement Co.
Billings
Great Falls

NEBRASKA
Major Appliance Co.
2059 Farnam Street
Omaha

NEW HAMPSHIRE
John B. Varick Co.
509 Elm Street
Manchester

NEW JERSEY
B & O Radio, Inc.
23 Sussex Avenue
Newark

NEW YORK
Colen-Gruhn Co., Inc.
387 Fourth Avenue
New York City
Ononda Auto Supply Co.
353 E. Ononda Street
Syracuse
Joseph Strauss Co., Inc.
25 High Street
Buffalo

NORTH CAROLINA
Southern Bearings & Parts Co.
315 N. College St.
Charlotte

NORTH DAKOTA
Reinhard Bros. Co., Inc.
Minot

OHIO
Appliance Distributing Co.
(Div. of Tracy-Wells)
163 N. Ludlow St.
Columbus

ARNOLD WHOLESALE
5209 Detroit Avenue
Cleveland

V. J. Mcgranahan Dist. Co.
135-17th Street
Toledo

Tafel Refrigerator Co.
530 Walnut St.
Cincinnati

OKLAHOMA
Peaslee-Gaulbert Corp.
203 Compass Street
Oklahoma City

OREGON
Electrical Distributing Inc.,
404 N. W. Tenth Street
Portland

PENNSYLVANIA
Trilling & Montague
24th & Walnut Streets

ADAMS & LACKAWANNA
J. A. Williams Company
401-433 Amberson Ave.
Pittsburgh

RHODE ISLAND
Ballau, Johnson & Nichols
128 Dorrance Street
Providence

SOUTH DAKOTA
Reinhard Bros. Co., Inc.
Aberdeen

TENNESSEE
Braid Electric Co.
143 Eighth Ave. North
Nashville
The Mills-Morris Co.
171-175 S. Dudley Street
Memphis

East Tennessee Electric Co.
612 E. Depot Avenue
Knoxville

TEXAS
Momsen-Dunegan-Ryan
& Company
El Paso

Peaslee-Gaulbert Corp.
Atlanta & Logan Streets
Dallas

152 S. Adams Street
San Antonio
2150 Winter Street
Houston

UTAH
Flint Distributing Co.
253 E. Third South Street
Salt Lake City

VIRGINIA
Thurman & Boone Co., Inc.
405 S. Jefferson Street
Roanoke

R. F. Trant, Inc.
12th & Monticello Ave.
Norfolk

WASHINGT0N
Brown-Johnston Co.
118-20 N. Lincoln Street
Spokane

Seattle Hardware Co.
501 First Avenue So.
Seattle

WEST VIRGINIA
Eskey, Smith & Cannon
Charleston

Persinger Supply Co.
Third Avenue
Williamson

WISCONSIN
John Pritzlaff Hdwe. Co.
333 N. Plankinton Ave.
Milwaukee

WYOMING
Lawer Auto Supply Co.
Riverton
Philco dealers have always been the leaders in unit sales of $100 and up! And, with The Radio Institute of the Audible Arts emphasizing fine programs and creating a real desire for fine tone, the big-set market is becoming greater and greater! Thousands of Philco dealers are cashing-in on this market... they are making extra profits by following through on the activities of the R.I.A.A.

It's so easy to identify your store with the R.I.A.A. and get a bigger share of the big-set market! Simply use the material which the Institute has made available. Become a part of this great movement now!

Your Philco distributor will gladly show you samples of the promotion material illustrated here. Ask him how you can obtain a supply... and learn how YOU can get more BIG-SET SALES through the R.I.A.A.
GENERAL BUSINESS UP; PRESAGES RADIO BUYING

* With the business index holding at 94 per cent and edging upwards, a strong background for lively radio buying is already manifest for the first half of 1936. Employment promises are good, with steel output at 56 per cent of capacity, compared with 48 per cent last year; carloadings at the highest level since the depression started.

Electric power production is at a new high; automobile manufacture has dropped back somewhat due to its early start last Fall.

General retail buying started up with new activity as the bad weather lifted.

FIELD DAYS FOR I.R.S.M., MARCH 27-29

* Gala announcements from the Hotel Sherman in Chicago promise great excitement for the 1936 National Radio Trade Show and the Fourth Annual National Convention of the Institute of Radio Service Men, March 27 to 29. Advices from Ken Hatheway, prime mover of the Institute, indicate that record floor space will be needed for display and lecture facilities, and an important group of hotel rooms for demonstration purposes.

Edgar C. Arnold, Institute President, will open the sessions at 2 p.m. on Mar. 27. Exhibiting manufacturers have planned special company meetings; the entire radio trade has been invited to attend the show, and sales managers, service men, distributors, etc., from all parts of the country are expected to be on hand.

An automobile trailer, fitted up as a traveling radio-service shop and laboratory, will be one of the features of the show.

Votes—And Radios—for Everybody

Politics is in the air—and in the blood of every member of the family. Both father and mother have votes to cast—possibly on opposite sides—so each needs a personal radio for personal political listening. The youngsters have their favorites in politics as well as entertainment. And the older generation finds that politics is the greatest game on earth.

And what a breathless spectacle of politics awaits the American public as 1936 progresses. First the sessions of Congress; then the great political conventions; then the speeches of the candidates, national and local; and finally the election itself.

To each great event, the broadcasters move a chair right up to the sidelines, for your prospect! They have taken all the trouble and expense to set up the show; your job is to keep your customers in touch—sell the sets and collect the money.

Republican convention begins June 9; Democratic, June 23.

Six Million Sets in 1935

* Official license-bureau figures at last reveal the record radio sales made during 1935. More than six million sets were sold, an all-time high that exceeded even Radio Today's conservative estimate of 5,700,000 sets. Other estimates made around Jan. 1, were as low as 5,575,000 sets.

Following are the 1935 totals by quarter, and computed retail values based upon factory selling prices equaling 42 per cent of retail prices:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Units</th>
<th>Retail Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1935</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st quarter</td>
<td>1,155,238</td>
<td>$ 56,600,000</td>
</tr>
<tr>
<td>2nd quarter</td>
<td>1,074,909</td>
<td>49,600,000</td>
</tr>
<tr>
<td>3rd quarter</td>
<td>1,176,884</td>
<td>81,000,000</td>
</tr>
<tr>
<td>4th quarter</td>
<td>2,367,000</td>
<td>117,100,000</td>
</tr>
<tr>
<td>Total</td>
<td>6,026,000</td>
<td>$304,300,000</td>
</tr>
</tbody>
</table>

For the preceding year 4,510,199 radio sets were reported sold. This indicates that 1935's increase over 1934 was about one and a half million sets, or 33 per cent.

The unit value per set went up 7½ per cent in 1935, over 1934—from about $16.00 per set, to $30.50 per set, both retail.

WHERE THE CUSTOMER'S DOLLAR GOES

* Cover photograph by Wide World.

March, 1936
Philco's J. M. Skinner and Larry E. Gubb look on as their 7,000,000th set rolls off production line and gets OK of Philadelphia's mayor, S. Davis Wilson.

SHIFT IN AIR BILLS—
POLITICS STRONG

* That mystifying matter of audience preference in air entertainment gets an occasional check. NBC has made an analysis of sponsored program content for one month, and when it is compared with an analysis of the same period last year, a trend in advertiser and listener choice shows up instantly.

Most notable jumps in amounts of broadcast time were found in operettas, classical music, and current topics. Latter item includes news and sports and probably registers the strong listener interest in politics at the moment, although part of the pick-up may be due to the fact that Lowell Thomas' talks were switched to that classification since last year.

Musical group as a whole, which also includes opera, semi-classical, light, and dance, declined in importance. Women's programs, juvenile features, novelty, and drama were on the increase.

NOW IT'S THE FOUR R'S

* Readin', 'ritin', 'rithmetic, and radio is the new schedule for the modern classroom, now that broadcasts are being assigned as a definite part of the course of study.

New York public schools, beginning late last month, made arrangements for required listening among high school seniors, adding the NBC feature, America's Town Meetings, to the official homework requirements. Two seniors from each of the 43 high schools in New York will attend the actual broadcasts in Town Hall on Thursday nights and will take sufficient notes to enable them to conduct similar meetings among their own student groups.

New York school system is the first complete one to OK radio listening as an item formally required as a part of the curriculum.

ONE QUARTER BROADCAST STATIONS PRESS-OWNED

* Sharp rises in all fields of activity relating to radio broadcasting are noted in the new 1936 Year Book edition of Broadcasting Magazine, which discloses that broadcasters of all classes sold a total of $87,523,848 worth of "time on the air" during the last year, a gain of 20 per cent over 1934.

The 310-page Year Book also discloses that nearly one-fourth of the broadcasting stations in the United States are now owned by or corporately affiliated with newspapers, which have been particularly active in recent months in seeking to acquire radio properties.

According to the report, the revenues of radio stations totaling $87,523,848 showed gains in the following classifications: national network advertising, $50,067,686, a gain of 13 per cent over 1934; regional networks, $1,110,789, a gain of 54.7 per cent; national non-network advertising, $17,063,088, a gain of 26 per cent, and local advertising, $19,251,735, a gain of 26 per cent.

MAY WINE

* Armed with an enthusiastic letter from the White House, Secretary C. M. Tremaine of the National Music Week Committee, reports to Radio Today that this year's event will be important to the radio business. Date for Music Week this time is May 3 to 9.

Observance of the Week promises to have a great bearing on what goes on the air during the period. During the 7-day celebration last year, one network alone carried more than 60 special features. Chairman of the National Music Week Committee is none other than David Sarnoff, RCA chief.

CASE OF THE COLD FEET

* Somewhere in New York City is a disconsolate radio serviceman who would enjoy having a wife, and recently took steps to get one. He presented his case to the directors of the "Husbands and Wives" program on WOR: said that he was 24 and sober, had his own radio shop, and didn't know many girls on account of being busy fixing people's radios. Heart-troaring appeal for a frau was to air Feb. 19.

The item seemed to deserve some
special publicity and the altar-minded radio man began to wonder whether there were not some less spectacular method of locating a mate. In the end, he withdrew from the whole business. Last reports have him brooding, cold-footed, over his work bench, no wife, no grocery bills.

NEW AIR BLANKET

* "In the heart of America," say the announcements from Samuel Insull's office in Chicago, a new network called the Affiliated Broadcasting Company is ready with coverage information and time rates. In general, the ABC web will cover Wisconsin, Illinois and Indiana, and has some 15 stations in those states signed up.

In a recent letter from Mr. Insull to Radio Today, the progress of the network was reported on; headquarters are in Radio Tower, Civic Opera Bldg., Chicago. Web was recently chartered by the State of Illinois with a capital of $100,000, and it makes its appeal as a blanket of the "fertile North Midwestest Market."

LADY ESTHER, SALES-GAL

* Sensational success story of a manufacturer who decided to use broadcast time almost exclusively in advertising is the account which the Lady Esther Company is able to give itself after five years of air ads.

Esther face powder jumped from fifteenth place to first place in sales among popular brands; company sold 1 per cent of all face powder in 1932 and in 1934 the figure zoomed to 17 per cent. Appropriation by the firm for radio facilities and talent went from $6,000 to $1,000,000, and the company saw that 96 per cent of its advertising went into broadcasting.

Small wonder that Lady Esther is now about the fourth biggest spender on the air, with Wayne King on CBS and Lady Esther Serenade on NBC.

AIR GREETINGS

* Friendly and refreshing device for welcoming new families to the city of Peoria, Ill., has been worked out by Station WMBD, of that city, with program director Clair Hull credited for the stunt. Station calls the local Retail Merchants Association every day and gets the names of newcomers, who are then called personally and asked for the dope on themselves. Data is then used in a special broadcast, and the gesture appears to make for good will no end.

TUNE IN, AND HAVE AN ALIBI

* From the Chicago criminal courts comes the curious report of how radio listening may be accepted as an alibi. Floyd Bond, 19-year-old negro, was convicted of robbery and got a one to ten-year sentence, although he insisted that he was listening to the program, "One Man's Family" at the time of the crime. He mentioned such an impressive number of details that the authorities checked with the author of the NBC radio serial and were convinced that he actually was at home with his radio.

Bond was positively identified by the woman whose purse he was accused of snatching, but his interest in "One Man's Family" saved him from prison.

75,711,000 TUBES IN YEAR

* Returns from radiotube manufacturers for the final quarter of 1935, just compiled, indicate the record character of radio sales during the year, far exceeding even the most optimistic expert opinions.

Nearly 25½ million tubes were made during the October-December period, a 25 per cent increase over the corresponding period for 1934. Tube sales for the year totalled 75,711,306, at a manufacturer's selling price of $36,464,197.

Following are the figures for the two years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Tubes</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1934</td>
<td>75,711,306</td>
<td>$36,464,197</td>
</tr>
<tr>
<td>1935</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-Mar</td>
<td>15,247,156</td>
<td>5,126,500</td>
</tr>
<tr>
<td>Apr-June</td>
<td>14,944,181</td>
<td>4,563,800</td>
</tr>
<tr>
<td>July-Sept</td>
<td>20,559,634</td>
<td>7,366,897</td>
</tr>
<tr>
<td>Oct-Dec</td>
<td>35,450,000</td>
<td>9,286,000</td>
</tr>
</tbody>
</table>

Radios and phonograph amplifiers for the blind. J. O. Kleber lays out models for 500 PWA workers, under auspices Blind Foundation. The pretty girl, heard on many "talking books," is herself sightless.
"MODERNIZE" LISTENERS' SETS

- fix up old ones — or better yet, sell 'em new 1936 receivers
- explain about politics and other features all along the dial
- foreign programs, aircraft, police, overseas news reports

* ERECT and equal to the needs of 1936!

We should be able to describe our 25,500,000 sets in that fashion.

But the fact is that three out of every four present listeners' jobs need to be modernized. In one way or another, they are not ready for the big political and world events ahead this Spring and Summer.

Thousands of sets are running on worn-out tubes, which should be replaced at once, to get good reception.

Antennas are in bad shape (probably they never were right in the first place). But even the best antenna installations suffer from winter ice and winds, and need overhauling.

Noisy reception conditions need to be eliminated, so that local electrical interference and clicks will be cut out.

And then the sets themselves need to be modernized. There are many things that the serviceman can do to bring an old set up to date. He can install a cathode-ray tube for accurate tuning. He can put in a photograph attachment. He can overhaul the set and replace faulty resistors, condensers, transformers, etc.

Sell a new set

But the best advice to be given the customer in most cases will be to "get a new set" — a modern all-wave receiver reaching down into the ultrahigh frequencies, and bringing in all the additional entertainment that fills the kilocycles all along the dial.

For the radio listener has had a new deal.

The "forgotten man" at the tuning dials now has new riches of broadcasting poured nightly across the ether at him. Yet he probably is unconscious of a large part of these new services that have been opened up to him. Too often "nobody has told him" about the shining new vistas stretching beyond the broadcast band. It is for the radio listener to go a' hunting once more for new worlds to tap. For him echoes anew the paraphrased maxim of Holy Writ: "Judge in and ye shall find; turn your wave-change switch and new worlds shall be opened up unto you."

Most radio men themselves are sadly unfamiliar with the new stretches of entertainment and information that fill the kilocycles and megacycles all the way to the ultrahigh frequency channels down to 5 meters and beyond.

It is time then that radio dealers, distributors, manufacturers, and servicemen get a clear understanding of the many points on the modern radio dial at which interesting programs can be picked up. The chart on these pages will help explain the location of broadcast entertainment all up and down the radio spectrum.

Guide listeners

And when the radio dealer, salesman, or serviceman understands how to tune in on all these supplementary programs outside the standard broadcast band, let him use this information as a friendly guide to the public.

For here is a new and powerful selling tool to interest the layman in modern radios and finer radios. The radio listener will want to own a set that brings in as much as possible of the fascinating spectrum that stretches across these two pages.

Here for the first time have been assembled in one continuous range of wavelengths all the radio bands on which entertainment and interesting features of one kind or another can be tuned in, as one progresses successively "up frequency" or "down wavelength."

In the long waves, above the broadcasting band, there are the United States weather reports. These channels correspond to the "long-wave broadcasting" band used in Europe, but never adopted in North America.

High-fidelity stations

Then below the regular broadcast band of 550 kc. to 1,500 kc., as we have known it for the past fifteen years, lies the new "high-fidelity" broadcast addendum (1,600-1,600 kc.)
in which several high-fidelity broadcast stations now operate on channels 20 kc. wide, double the usual 10 kc. separation between stations in the regular broadcast band. This means that these high-fidelity broadcasters can send out music up to 10,000 cycles without interference from adjoining channels. Already music-lovers are flocking to these high-fidelity stations.

The two police bands are always filled with interesting drama. Here the listener can tap in on news in the making; follow the first alarms of crimes and fires, and get advance peeks into the police news of half the continent.

Aviation channels also offer new thrills for the grounded listener. At a turn of his dial he can listen in on conversations between pilots and flying fields far away, hear reports of weather aloft, and eaves-drop on the dispatchers' instructions to the ships flying the line in regular service.

**International broadcasts**

The international broadcasts always offer rich entertainment. Music of great European orchestras usually comes through in surpassing quality and volume. Speeches by the statesmen who are making modern history abroad, can be listened to directly. News of world events is being continuously sent out on these channels. Last month's Radio Today presented a time-table of the principal news broadcasts originating in Europe and other parts of the world.

In sales territories having large foreign-language populations, these international broadcasts open up new merchandising appeals for short-wave sets. Foreign-born citizens who still enjoy listening to the language of the fatherland, can tune in and hear speeches in their own native tongue.

**Ultra-short waves**

And at the extreme end of the radio spectrum, as it now is known to us, are the ultra-short waves, those newly utilized channels which are now being opened up experimentally for "local" broadcasting. Already a dozen or so broadcasters, particularly newspaper publishers who missed getting wavelengths in the regular broadcast band, have installed transmitters in the ultra-short-wave region and are setting out to build programs and audiences here. Two-way police systems are also working on this band.

**Listener needs help**

These ultra-short waves, in the range from 7 to 9 meters (30,000 to 40,000 kc.) apparently go little beyond the horizon, and so the same channels may be used over and over again at different locations, without producing interference. Because of the wide-frequency bands available in this region of the spectrum, the full possibilities of high fidelity may be taken advantage of, and the quality of reproduction of music and speech is usually very fine.

Already a great deal of attention is being focussed on this ultra-short-wave region by broadcasters and set manufacturers, and an interesting future is assured for this part of the spectrum. A dozen home receivers, now on the market, cover this ultra-short-wave range, and others are now being designed, so that listeners' receivers of better quality will soon probably all be equipped to pick up programs in this part of the band.

A wide variety of entertainment services are now offered to the radio listener.

But before he can enjoy them, in most cases, he will have to have the help of the radio dealer or radio serviceman—either to provide him with a new set, or to bring his old receiver up to date.

**THIS "WAVELENGTH CHART"**

* This chart prepared by Radio Today, shows all the points at which broadcast entertainment and news features come in on an "all-wave" receiver reaching from 100 kilocycles to 72,000 kilocycles (or 72 megacycles, from the Greek word mega meaning "million").

Radio channels are designated by either wave-lengths in meters, or frequencies in kilocycles. For any given channel the wavelength multiplied by the frequency always gives a constant figure—300,000, the speed of radio or light, measured in meters per second.

---

Show this wave-chart to your customers to guide them in 1936 listening.
**RECEIVERS TODAY**

— first new "AFC" models soon ready for market
— sets tune automatically onto nearby program

* BY the last of April or the first of May, radio receivers of the new "automatic frequency control" type will probably be on the market. This new development makes the receiver tune automatically to any strong broadcast signal within five kilocycles of its actual dial position, and should the signal later drift, due to circuit heating or other causes, the set will automatically "follow" the signal, remaining tuned sharply on it throughout an interval of even 25 or 30 ke.

**Better tone for careless tuners**

Most of the leading manufacturers are experimenting with sets of this type for sale this season, although it is not yet definite whether these new sets will be "telephone-dial tuning," as was first proposed. Various methods of push-button or remote control are obviously well adapted for "a.f.c." sets, since the degree of tuning required is no longer highly accurate.

While the tuning-dial is being turned, the "a.f.c." feature will be automatically cut out, since otherwise the receiver would tend to "hang on" to some strong station — while intermediate stations, passed over by the dial, would be unheard.

Tone-quality obtained by the average casual listener is improved by the automatic tuning feature, since the tuning cannot be other than accurate. The new sets also adjust themselves to offset their own deficiencies or lack of adjustment, an advantage in servicing. Circuits now used are considerably simplified from those described in early Institute of Radio Engineers' discussions.

For short-wave use, the new tuning method eliminates the former razor-sharp tuning required, allowing the signal to hold at full volume over a perceptible dial interval.

One drawback, however, is cited in connection with fading. If the set is tuned onto a station which at times fades almost out of hearing, the receiver may "lose the signal" on one of its disappearances, and fail to pick it up again on the back-swing.

**GLOBE DATA**

* Attractive but complex job of pushing sales abroad of American radio sets goes to Pilot's S. T. Thompson, recently named chairman of the Radio Manufacturer's Association export committee. Bosch's Arthur T. Murray, RMA set division chairman, picked Mr. Thompson to succeed E. G. Hefter.

RMA recently got out the final dope for 1935 on the export biz, and found a new peak in dollar volume for radio apparatus exported from the U. S. during the year. Sales abroad mounted to $25,454,138, compared with $24,856,582 for 1934. Report includes the statement, based on Dept. of Commerce figures: "New modern short-wave sets apparently figure in the 1935 increase in receiving set exports to $15,472,291, as compared with $15,385,145 worth of sets exported in 1934, while the number of units in set exports decreased from 619,084 in 1934 to 589,209 in 1935."

**800,000 SETS IN JANUARY?**

* Sharp-eyed tax collectors from the U. S. Dept. of Internal Revenue have managed to get themselves $601,144.68 for the month of January, 1936, from the 5 per cent excise levy on the radio manufacturers. Last year for the same month they gathered up only $398,177.40, so the year started off with a 51 per cent increase in this respect.

From the 1935 figures, it can be computed that some 900,000 radio sets were made during the first month of this year; whereupon we rush to print with the sentence, "well begun is half done" and whatever other adages apply to fine starts.

**PICK-UP, CANADIAN STYLE**

* Slightly frosted, but nevertheless encouraging, come the figures on radio set sales in Canada for 1935. Radio Manufacturer's Association got them through the Canadian RMA: units sold during the year were 190,248, compared with 168,833 for 1934. Totals seem modest compared with the U. S. 1935 six million, but Canada has only about one-tenth as many people.

Sales of battery sets in the Dominion totaled 39,073; in U. S. there were 550,000 sold in 1935. The Canadians bought 13,483 auto radios during the period, while Americans were buying 1,200,000.

**NATIONAL SERVICEMEN'S WEEK**

* The National Radio Service Association has voted to set aside the fourth week in May of each year as "Radio Servicemen's Week," to familiarize the public with the work of all radio men and all radio men's associations. Information as to how other branches of the radio industry may participate and derive benefits can be obtained from the National Radio Service Association, 714 Anico Bldg., Galveston, Texas.
HOME SERVICE, PLUS

Six tips for servicemen, from the talking picture series, "As a Matter of Fact," created for RCA by AudiVision, Inc.

(1) Phone for appointment; arrive on time
(2) Display test equipment; mention neighbors' jobs
(3) Show patron tube tests; compare new tubes
(4) Ask for dust pan; brush out chassis
(5) Destroy old tubes — summarize your job
(6) Recommend new antenna; call back later

March, 1936
AUTOMOBILE RADIO

—metal tubes introduced; sets go left side
—noise eliminated; installation speeded up

* RECENT additions to this year’s line of auto radios indicate that numerous manufacturers of auto sets are going to utilize the metal-tube publicity of the past six months, as one of their talking points.

RCA has just announced three models—a five-tuber and two six-tube models, employing two and three metal tubes, respectively. All of them use the powertron synchronous vibrator-rectifier, which means that the sets are equivalent to those employing an additional tube in the form of a rectifier. Custom-type instrument panel controls are available for most cars.

Metal tubes

Compactness is one of the features of the Admiral set manufactured by Continental Radio and Television Corp.; it is only an eight-inch cube. For high efficiency, it employs an iron-core antenna coupling coil. In addition to the usual plate and filament filters there is a vibrator hash filter. Other features are single hole mounting and single connection for battery, and the usual line of custom type panel controls are available.

Among other manufacturers employing metal tubes are Allied Radio (Knight), Atwater Kent, Belmont, Fada, Galvin (Motorola), General Electric, Nobilt-Sparks (Arrin), United American-Bosch, United Motors and Westinghouse.

Elimination of suppressors in the ignition system will aid in selling the new sets, for there is no reason now why an auto radio should reduce the gasoline mileage and make starting more difficult on cold mornings. Noise from the ignition is made negligible by means of filters in the power-supply leads and the antenna system—incidentally the names coined to describe these filters will impress any car-owner.

This year has witnessed a change in the position of the chassis from the right to the left-hand side to allow for the use of a car heater. This feature will find approval with those drivers who use their cars all-year round.

Installation simplified

Several makes of sets are designed for mounting behind the instrument panel. A small panel fitting flush with and below the instrument board carries the controls. This type of construction presents a neat appearance and is low in cost since the flexible cable controls are eliminated. Both Halson and DeWald have recently announced this type of set.

With single-hole and universal mountings installation is greatly simplified. MacAdams Equipment Co., Inc., of New York City have found that the average time for a 1936 first-class installation is on the order of a couple of hours or less.

SAD TRUTH

* For dealers who are inclined to growl about lack of fresh sales opportunities, there is this item: a group of New Yorkers, one night in Times Square, had to search all over the place to locate a receiver.

Group was composed of the members of the cast of a new Broadway play, “Love On the Dole.” After the final curtain they wanted to hear what the WOR radio dramatic critic, Bide Dudley, had to say about the performance. There was no radio back stage; they rushed across the street to a restaurant—still no radio. They began stopping taxis, but the cabs didn’t seem to be radio-equipped. Finally, however, they found a taxi which had a receiver, so they paid the driver $2 to listen to the feature they wanted.

TELEVISION TESTS BEGIN

* Experimental television will be a reality in the New York area next month. A new RCA television transmitter is now being made ready on top of the lofty Empire State tower, 1,250 ft. above Fifth Avenue, being linked by short-wave radio with the television studio in NBC headquarters, RCA Building, Radio City.

Some fifty test television receivers are now being finished up for the use of officials and engineers of the Radio Corporation, and will be distributed around New York City and surrounding territory for experimental reception and study of the programs sent out from the Empire State television transmitter.

This program carries further the plan announced some months ago by David Sarnoff, president RCA, who now reports to RCA stockholders:

“This does not mean that regular television service is at hand. It will be necessary to coordinate a number of important elements before television on a regular basis of service can be established. For example, it will have to be determined how far the transmitter can send good television pictures; also with what consistency and regularity pictures may be transmitted with the system in its present state of development.

“It is, however, evident that, regardless of progress in this direction, the present system of sound broadcasting remains the fundamental service of radio communication to the home.”

Radio Today
SELLING PUBLIC ADDRESS

—PA service dealers go after political jobs by the series
—locate prospects from officials, caretakers, news stories, etc.

* VOICE after bellowing voice will need to be amplified as the politicians mount their respective stumps to convince people that somebody should be voted for.

Whatever madness they blurt out, whatever racket they represent, they have to pay, in the end, for the "public address" service. There's where radio servicemen and radio dealers step in for extra profit.

"Of course there'll be a big pick-up in this business during this year's Presidential campaign," said one dealer, "And we're getting ready for it." And a well known PA expert in Chicago remarks brightly that "the surface hasn't been scratched."

Tips in brief

Some merchandisers of public address service have exhibited a great deal of originality in locating prospects, establishing the rules of the game, and plugging their particular service.

It seems that when a client is served with a PA system, the dealer can often get from him the names of other possibilities in the same field. That is, if you fix up the amplification lay-out for a lecture given at a local factory (usually they are given for the harassed employees at some unearthly hour in the morning) you can often pick up the names of other factories where the same thing is likely to occur.

Notices in local newspapers, stories dealing with coming political events, will tip off the dealer, in many cases, on jobs which will require PA systems. To watch for these closely often means that alert dealers get the jump on others. Names of sponsors are usually included in the stories.

Caretakers in municipal buildings, if dealers will cultivate them (fix their home set a time or two) sometimes know in advance when an event has been scheduled.

In cases where sponsors of meetings must get a permit from the city officials, those fellows may be able to tell you what's coming up, before the items reach the newspapers.

PA jobs at county fairs, or at similar events, may be signed up if the dealer will make the suggestion that the service can be made to pay for itself. This can be done by the Fair committee's selling time to local advertisers — time on the amplifier just as the broadcasters sell time on their stations. Holders of fairs, it seems, are one class of prospects who are eternally eager to avoid extra expense.

Gilt-edged jobs

Wherever possible, particularly in cases where the first experience with a client has come off without a hitch, the suggestion may be made that the dealer would enjoy having a contract for a series of events like the first one. It has been pointed out that when any sort of a series is involved, the dealer should of course make a special effort to get and hold the client for the whole works. Special agreements can be drawn up in such cases which will be mutually welcome.

If a dealer has on his prospect lists some meeting-holders who are doubtful, for some reason, about the merits of the service, these may be invited to attend events staged by other clients. In that way the prospect gets a demonstration under actual working conditions. Of course this is only possible where the needs of the clients are quite similar.

When it's necessary to use extra salesmanship on reluctant prospects who are inclined to shop about, it appears that it is not wise to talk price at the top of your lungs. In this service, cheapness is pretty well identified with distorted voices, tinny sounds, and awkward failures. It seems wiser to use a tone which indicates that if the client wants a decent job, he'll have to pay for it.

Explain simply

If a technical explanation of the apparatus is to be used as part of a sales talk, it should be remembered that many of the high-sounding details mean practically nothing to most clients. Dealers have more luck with an outline of technical features when they are presented only in terms of performance.

Gadgets which from their very names may mean everything to sound engineers, often will not register at all on PA patrons unless they are able to gather that their beloved Mr. So-and-So, who is scheduled to delight thousands of listeners at Convention Hall on Friday night, will be heard by all those unhappy persons in the back row.

A somewhat unexpected angle on the PA business, too, is that patrons often look to the dealer to supply a person who can do part of the announcing. This is particularly true in smaller towns, and the demand can easily be taken care of by the dealer if he will simply send along an engineer who has a fairly civilized notion of what the English language is like.

When you put on a public-address job, invite "prospects" for future services to be present and test excellence of reproduction.

March, 1936
**PROFITS VS. EXPENSES**

**THESE DEALERS CUT EXPENSES AND MADE MONEY**

- **83 (cash) dealers**
  - making profit
  - Salaries of owners or officers
  - Miscellaneous expenses
  - Advertising
  - Light, heat, etc.
  - Employees' salaries & wages

- **24 (install) dealers**
  - losing money

**THESE SPENT TOO MUCH**

- **53 (install) dealers**
  - making profit

---

**COMPLETE REPORTS FROM 137 RADIO DEALERS WHO OPERATED AT A PROFIT**

**Operating averages of the 82 cash dealers**

<table>
<thead>
<tr>
<th>Net Sales Group</th>
<th>Number of Concerns</th>
<th>Net Profit %</th>
<th>Total Overhead Expenses %</th>
<th>Gross Profit</th>
<th>Cost of Goods Sold</th>
<th>Mark-Up</th>
<th>Inventory %</th>
<th>Salaries, Own. %</th>
<th>Rent %</th>
<th>Advertising %</th>
<th>Light Heat &amp; Cat. %</th>
<th>Taxes %</th>
<th>All Other Expenses %</th>
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<tr>
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**COMPLETE REPORTS FROM 47 RADIO DEALERS WHO OPERATED AT A LOSS**

**Operating averages of the 23 cash dealers**

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<th>Net Sales Group</th>
<th>Number of Concerns</th>
<th>Net Loss %</th>
<th>Total Overhead Expenses %</th>
<th>Gross Profit</th>
<th>Cost of Goods Sold</th>
<th>Mark-Up</th>
<th>Inventory %</th>
<th>Salaries, Own. %</th>
<th>Rent %</th>
<th>Advertising %</th>
<th>Light Heat &amp; Cat. %</th>
<th>Taxes %</th>
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**Operating averages of the 24 installment dealers**

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<th>Number of Concerns</th>
<th>Net Loss %</th>
<th>Total Overhead Expenses %</th>
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<th>Cost of Goods Sold</th>
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<th>Inventory %</th>
<th>Salaries, Own. %</th>
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WHAT GOES WRONG WITH RADIO SETS—AND WHY

Note that similar symptoms may result from many different defects

- **Antenna Ground Lightning Arrester**
  - No short wave
  - Intermittent reception
  - Poor reception
  - Lack of volume
  - Excessive noise

- **I-F Wave Trap**
  - Code interference
  - Intermittent reception

- **Radio Frequency Coils Intermediate Coils**
  - Intermittent reception
  - Poor selectivity
  - Lack of sensitivity
  - Poor fidelity
  - Fading

- **Tuning Condensers**
  - Noisy reception
  - Dead spots
  - Intermittent reception
  - Microphonic howls
  - Calibration of dial
  - Fading

- **Radio Cabinet**
  - Resonance
  - Tunny sounds
  - Rumbles

- **Alignment of Stages**
  - Lack of sensitivity
  - Poor tone quality
  - Oscillation
  - Code interference
  - Calibration of dial
  - Fading

- **Audio Transformers**
  - Noisy reception
  - No reception
  - Reduced volume
  - Intermittent reception
  - Poor tone quality

- **Filter Condensers**
  - Excess hum
  - No reception
  - Intermittent reception

- **Tubes**
  - No reception
  - Distortion
  - Hum
  - Lack of sensitivity
  - Microphonic
  - Intermittent reception
  - Fading
  - Noisy reception
  - Oscillation

- **Speaker**
  - Distortion
  - Tunny sounds
  - Scratching & grating
  - Excessive hum
  - Intermittent reception
  - No reception

- **By Pass Condensers**
  - Oscillation
  - Poor tone quality
  - Intermittent reception
  - Fading
  - Loss of volume
  - Hum
  - Noisy reception
  - No reception

- **Oscillator**
  - Lack of sensitivity
  - Excessive hiss
  - Distortion
  - Erratic operation
  - Dead spots on short wave
  - Frequency instability
  - Intermittent operation

- **Power Transformer**
  - No reception
  - Intermittent reception
  - Excess noise
  - Excess hum

- **Line Cord & Plug**
  - Intermittent reception
  - No reception
  - Noisy reception

- **House Wiring**
  - Intermittent reception
  - No reception
  - Noisy reception

- **Pipes in House**
  - Intermittent reception
  - Noisy reception

- **Atmospheric Conditions**
  - Fading
  - Noisy reception
  - Distortion
  - Lack of short wave reception

- **Volume Control Tone Control**
  - Noisy reception
  - No control of volume
  - No control of tone
  - Intermittent reception
  - No reception
  - Loss of sensitivity
  - Oscillation

- **Local Machinery and Appliances**
  - Noisy reception
  - Clicks

Based on experience records of service organizations handling more than 100,000 sets annually

Compiled by Radio Today
USE FINE PROGRAMS TO "SELL UP" SETS

—dealers find broadcasts aid in pushing quality receivers
—radio men cite need for daytime concerts to demonstrate sets
—political fanfare now a sharp tonic for listener activity

* BRISTLING with awakened sales power, radio dealers have waded heartily into the new interest in broadcast features as a device for selling more and finer sets.

Set manufacturers and studio mentors recently have begun to use direct and pointed methods to help the dealer get across the argument that program features are such that they positively must not be missed or distorted. Happily, the moment the broadcasters are program tastes are important list of these features that the dealer is fortified with sales angles of genuine value.

Work to do

Program-conscious dealers, however, are not without their problems as they go to work on the new campaign. They know that politics ranks high in listener interest at the moment, but they are forced to face the fact that reception advantages of 1936 models, in point of tone reproduction, are not as important as if they were talking about Philharmonic concerts.

Further, dealers have to search all over the dial for quality programs during store hours to use for demonstration purposes, unless they have a schedule for home demonstration in the evening.

Then, too, program tastes are mysterious and there is no accounting for them; dealers find that comedy fans worship Ed Currant but loathe other comedians which superficially seem very similar.

Personal reports

Dealers have picked up plenty of important cues on selling programs and report them at the top of their voices. At the Broadway Range Co., Yonkers, N. Y., for instance, it was noticed that people do buy better sets for the opera season. There is the feeling, too, at this shop that women are not so interested in politics as the men are, and they need to be given encouragement as voters in the coming election.

At the W. H. Clummers Music House there is the belief that popular orchestras on the air will stand talking up—popular interest in such music is enormous, say these radio men, and deserves an accent. View of this dealer is also that the public resents the notion that radio is unthinkingly cluttered with advertising.

Big-name parade

Radio men at the Orange Furniture Co., Orange, N. J., report that there is such a thing as the radio public being spoiled with an elaboration of program features. In such cases it is better to emphasize the nobility of the air, or to use short-wave as a talking point. Observation at this store is that the majority of folks are program-wise from reading the newspapers, so that to remind them that Ross Ponselle now sings regularly on the air is by no means news to them—they have to be told why the program is generally too interesting and too fine to be missed.

In St. Louis, the big Stix, Baer & Fuller store uses an ad line that may be adapted to radio programs in which top-flight stars are featured. During an important sport series, the store said in its ad: "Have your radio renewed for the ball games and other sport features."

Local appeals

Goldberg Sport Shop, Orange, N. J., takes the position that types of programs, rather than specific ones, should be talked up. Opinion there is also that program values may be presented with a station classification, using the glittering standards of the national webs as a background.

Inquiry among dealers reveals further that particular types of programs have special pulls in certain areas. Certain radio serials, to illustrate, have a huge following in Jewish communities and may be used to sell more and better sets to Jews if they are told about the feature in detail.

If local stations would go in for a community type of broadcasting, say more dealers, and make their airings a sort of house organ for the locality, more sets could be sold to that great group of persons who are very easily convinced that radio is certainly in position to scoop the newspapers right and left.

Star ballyhoo

At the Finley Furniture Shops, radio men look to the screen as an important publicizer of radio stars. This may mean that there is a powerful sales idea in hook-ups with local movie schedules. Attractive picture displays of radio-movie stars are an off-shot of this notion.

Timely suggestion from the Goran Radio Co., Yonkers, N. Y., is that the frequent appearances of important artists as guest stars on air bills leads to a general mixing up of musical leads and often gives listeners a taste of quality performances which they otherwise would not have tuned in on. That is, an opera star often appears as a guest on a program which features a popular orchestra, and the swing music fan thus gets a sample of higher-brow stuff.

Programs for men

L. S. Donaldson Co., Minneapolis, Minn., use announcements of sport events in their ads, neatly featuring the line, "If you can't be there in person, do the next best thing and be on the sidelines with a 1936 radio." There exists the idea, at the L. A. Danielson Co., Yonkers, N. Y., that men do most of the buying of sets. Program appeal under such circumstances needs a deft adaptation; the dealer needs to remember that the gentleman of the house likes his sports, and there is new evidence for the conclusion that he likes his mystery and crime serials.

Every attempt should be made to interest the man of the house in a serial or a series of some sort, because if he looks at his receiver for spectacular prize fights only, he cannot be classed as a regular listener and his interest is spasmodic.

1936 WINNERS

(Radio poll by R. Y. World-Telegram of 239 radio editors)


Radio Today
TRANSPIRED TALENT, ready to go to work for radio dealers in sponsored programs on local stations. These artists come from three different program services to which broadcasters may subscribe: World Broadcasting System and NBC in New York, Standard Radio in Hollywood.

March, 1936

Above (right) is Jeanne Dunne, Standard's popular soprano. Above (left), the famous Jimmy Allen, a WBS star. Above (center) Madeline Stern, another favorite from WBS. Below (left) are “Sons of the Pioneers,” Standard artists. Below (right) is Carol Deis, from NBC’s Thesaurus.
SELLING "COMBINATIONS"

* SCATTERED around through the mailing lists of record dealers are names which should be underlined. They are the people who can afford to have flexibility in their musical menus, or the folks to whom various moods are so important that they are willing to pay for equipment to satisfy them. Usually they are the genuinely serious music lovers, not necessarily the people "in the money."

This group of prospects will never be happy until they have a good radio-phonograph combination. Often they are unhappy with an old radio set and an outmoded phonograph in separate corners of the room, but they are not able to say just why. That's where the dealer comes in.

Sales angles involved

They may be told by sellers of combinations that (1) they may now hear their favorite music reproduced with all the ease and excitement and quality of the original performance.

That (2) if they wish to hear special or unusual musical instruments for some unexpected reason, they may do so daily and at their convenience, that (3) they may hear their best-loved compositions over and over at their leisure, that (4) their preference for one artist or one group of artists can at last have full swing in their homes, that (5) the musical needs of all members of the family can be taken care of on short notice, and that (6) they will have the chance to hear the performances of artists who are no longer active but still are regarded as having come through with epic recordings.

Dealers might remember that when this type of person wants the things listed above, he wants them passionately. Lively demonstrations in the home or in the shop will prove that.

A device

"Josef, at fourteen, gave Rosina, aged seven, a piano lesson one day and kissed her when the lesson was over because she was cute and played so well. "

"She slapped his face for his impertinence at the time and then, ten years later, married him. They are a stunning piano team, and their concerts always pack the house."

So runs the story of Josef and Rosina Llievna, the renowned pianists. And when a record manufacturer recently announced a new disc by the two artists, the story above was included in the descriptive notes sent to the distributors.

Point is, if record salesmen would pick up such colorful stories about the great artists, they might find it a valuable addition to their sales talks. They are easy to remember and it is very likely that the customer will get the idea that the salesman is an inspired expert.

Confidence game

Such an idea has struck various salesmen as a sort of superficial back-chat which has no place in serious selling. But patrons report that they are impressed by the device, and immediately felt a considerable confidence in the salesman. And if dealers can gain confidence, they are of course in position to suggest titles with some hope of being taken seriously.

In any case, the use of this method is a step toward more intelligent selling of masterworks by dealers who do not happen to be musically minded. Salesmen will be able to determine instantly whether the customer appears to be interested.

Some dealers bet the merchandising of high-class records because the salesmen on the floor don't know the first thing about it—it really requires a decent knowledge of the masters to get by with it. However, under the circumstances this fall, salesmen can easily and quickly educate themselves by a careful and intelligent perusal of musical catalogues and the mass of current lists which are now available. Some of the executives in the field believe that the added business would justify adding an extra salesman—a specialist who has the low-down on what's new in records.

Appearance of new and improved models in radio-phonograph combinations is obviously influencing the record demand, in cases where the specifications get around to the public in clarified and dramatic form. Features of the new models, which will mean a great deal to the lovers of recorded music, include larger dynamic speakers, increased power output, automatic tone compensation, tone control, and wide range audio amplifiers.

Best selling records, March

BRUNSWICK

Breakin' In A Pair of Shoes—Fox trot.

I Hope Gabrel Likes My Music—Fox trot YC by Jack Teagarden. Both with Frankie Trumbauer and his orchestra—7612.

I'd Rather Lead A Band—Fox trot. From the RKO picture, "Follow The Fleet!" with vocal and tap dancing by Fred Astaire. I'm Building Up To An Awful Let-down—Fox trot. Vocal by Fred Astaire. Both with Johnny Green and his orchestra—7616.

P'm All My Eggs In One Basket—Fox trot. Vocal by Fred Astaire. We Saw The Sea—Fox trot. Vocal by Fred Astaire with quartet. Both from the RKO picture, "Follow The Fleet!" both with Johnny Green and his orchestra—7609.

DECCA

Let's Face The Music and Dance—Fox trot with VC, from the RKO picture, "Follow The Fleet!" It's Been So Long—Fox trot with VC, from the picture, "The Great Ziegfeld." Both with Ted Fiorita and his orchestra—697.

Misty Islands In The Highlands—Fox trot. The Wheel of the Wagon Is Broken—Fox trot. Both with VC and both with Jan Garber and his orchestra—717.

Life Begins When You're In Love—Fox trot. From the Columbia picture, "The Music Goes 'Round and Around." Yo Greater Love—Fox trot with VC. Both with Isham Jones and his orchestra—704.

VICTOR


I'm Gettin' Sentimental Over You—Fox trot. I've Got A Date—Fox trot. Both with Tommy Dorsey and his orchestra—25236.

I've Got My Fingers Crossed—Fox trot. Savarin' Rhythm Around—Fox trot. Both with "Fats" Waller and his rhythm—25211.

Johnny Green, playing for Brunswick's "Follow the Fleet" discs with the inimitable Fred Astaire.
CUSTOM BUILT STYLE AT ATTRACTIVE PRICES!
Three NEW RCA Victor Auto Radios

RCA Victor Auto Radio Model 5M has 5 tubes, plus Powertron (synchronous vibrator), giving it 6-tube performance ONLY $39.95, f.o.b. Camden! Extra speaker available at small cost. Mounting illustrated, for Dodge.

THIS year in auto radio RCA Victor sets the style pace by offering 20 different custom-built panel mountings, harmonizing with the instrument boards of 1935-1936 cars. You get a complete kit of mountings on a new and liberal plan. With one exception, each can be installed on the dash without drilling or filing; just bolt it in where the car manufacturer has provided for it! And PRICES! $39.95, $49.95, $54.95 for 5 and 6 tube sets, each using a synchronous vibrator (Powertron) which makes them the equivalent of 6 and 7 tube radios using rectifier tubes... It's a great line, with Metal Tubes, extra speakers, many other features. Get the details from your nearest RCA Victor distributor.

Ask about NEW RCA auto antenna for both running boards—easy installation, remarkable signal pickup

Chevrolet mounting
Ford mounting
Plymouth Mounting

DeSoto mounting

Get money-making ideas at RCA Service Meetings, held monthly. Ask your local distributor for these dates.

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

March, 1936
SERVICEMEN GATHER TIPS

* One of the best sources for prospects is the radio service department. Gilchrist Company, Evansville, Ind., uses government permit return postcards which are distributed about the store, in the radio department, and in boxes in the elevators with the sign, "Take One." For a 50-cent fee the store offers to inspect the radio, test tubes, realign stations and check the aerial. Customer merely signs his name and address and drops it in the mailbox or leaves it at the store. This opens a lot of normally closed doors for the sale of new sets.

COUNTS ON TRAFFIC

* Alert suggestion from L. S. Donaldson Co., Minneapolis, is that for promotion of radio sales in department stores, sets should be arranged so that full advantage can be taken of store traffic which is normal and not necessarily radio-buying. Rather than stunts, says sales manager J. H. Keenan, department stores should keep this in mind and concentrate on a strong, even, and year 'round ad campaign. Donaldson's feature their ads with unusually large photos of receivers, and recently have included sport announcements suggesting that "If you can't be there in person, do the next best thing and be on the sidelines with a new 1936 receiver."

ALLOWANCES SUCCESSFULLY CUT

* One dealer on Flushing, Long Island, N. Y., goes easy on spectacular trade-in allowances and gets away with it. R. Genkins, at Michaels Bros., says that his salesmen take it for granted that the store's patrons know something about the theories of good business; prospects at Michaels are appealed to on that basis. Genkins points out that patrons will very easily become skeptical about the flashy offers made elsewhere, if they are encouraged a little, and if they are handled in a fashion which indicates that the salesman gives them credit for a certain amount of good sense.

Another important aspect of set selling at this point, according to Genkins, is that "the man is the mechanic of the family" and with all the late engineering developments in radio reception, this angle becomes more important.

ENSEMBLE SELLING

* A car set sold to every customer who buys a house set is the goal of the radio salesmen at the Western Auto Supply, Kansas City, Mo.

Large percentage of customers buying both sets is due to displaying a car radio just outside of the entrance of the store, placing house and car sets in adjacent displays in the store, and ensemble selling.

Passersby are attracted by the music of an automobile radio that is mounted on an inclined wooden rack. The dial and the box are both in full view and are held in place by means of steel braces. The wire is run through a small opening in the rack and grounded behind. In colorful letters is the advice to "Enjoy Your Favorite Radio Program While You Ride."

"This outside display and the coupling of car set with house sets in store displays aids greatly in ensemble selling," says J. L. Bryant, manager.

DEALER "SPOTS" DISPLAYS

* Simple business-building device for radio dealers is in use at Weston Radio, Inc., Jamaica, Long Island, N. Y. Store keeps on friendly terms with leading merchants in town, and if the latter does not handle radio sets themselves, Weston gets them to display one of his featured sets. Department stores and furniture companies are good places to "spot" the sets, but it can be done in any shop, including butcher shops and grocery stores.

L. Horn, Weston manager, prefers to get them into places where a great number of women shoppers will be attracted. Salesfolk of the chosen stores do not act as radio salesmen, but simply refer the prospect to the Weston company. If a sale results, a small commission goes to the salesman who sent the customer to Weston's.

Horn, who believes that the sales volume at his store is up to the 1927 level, always has one of his salesmen call on the shoppers who come to his store but leave without buying. Floor man gets the name and address before the customer leaves the store.

(To page 32)
Admiral
Auto Radio...

"SALES" THE PROFIT SEAS

with METAL TUBES

- The most compact 6-tube Auto Radio ever built... fits any car...
- Newly developed Antenna Circuit permits automatic adjustment to roof type, running board or under car aerial.
- The first auto radio built according to accepted principles of automotive construction. Withstands road shock and vibration.

Dealers!

Bring your profit ship home with Admiral Auto Radios. Priced for swift sailing at a liberal profit. Write or wire for details and discounts.

FITS ALL CARS
Control Mountings Motch All Instrument Panels

$39.50 LIST
TWIN SPEAKER
$6.50

Finest Reception
because of one stage of R. F. preceding first detector... rubber mounted 3-gang condenser... new iron core antenne coil... 175 K. C. double-tuned I. F. transformers... 1 microvolt sensitivity... 10 K. C. selectivity.

Noiseless Operation
because of new R. F. filament and plate filters... special vibrator "hash" filter... perfected motor noise filter... transformer hum eliminated by exclusive double shield diode transformer... double-shielded and impregnated power transformer.

Easy to Install
because of sturdy single hole mounting... mounts in any one of four positions... exclusive directional projection speaker... only 1 battery connection... only 1 aerial connection... jock provided for overhead or rear "twin speaker."

NO OTHER AUTO RADIO HAS ALL THESE OUTSTANDING FEATURES

CONTINENTAL RADIO & TELEVISION CORP.

325 W. HUBON STREET

Full 6½" DYNAMIC SPEAKER
Mounted at predetermined angle to eliminate resonance and undesirable microphonics. Gives home-radio tone quality.

TO INSTALL Your opportunity for additional service and profits. Easy to install in roof of car above windshield or in back of front seat. Just plug into secondary jack on set.

TWIN SPEAKERS
A sales stunt—that of signing bonus payees in advance for radio sets—must have worked for the Krug Music House, Yonkers, N. Y. Anyway, here are Mr. and Mrs. A. M. Krug vacationing in Florida.

SELLING IN SNOW
* Snowbound condition of Nebraska folk gave Glen Clark, of the Paramount Radio Co., Omaha, an idea for making extra sales. He hustled about to the families who were cut off from news and entertainment and offered them full contact with the outside world through radio. Surprising how readily people buy receivers under such circumstances.

SALES CLOSER
* When a prospect has a job, is getting along in the world, and still won't buy, what's holding him back?

H. M. Greene, manager of the radio department for Henderson & Company, Terre Haute, Ind., delved deep into psychology to find the answer. It came up classified under Fear—Fear of emergencies.

"We call it Henderson's Radio Club," Mr. Greene explained. "Anyone paying $5 extra above the price of his radio gets the following proposition:

1. Installation of all-wave aerial.
2. One year radio service.
3. Tubes guaranteed a year.
4. Guarantee of radio against defective parts or workmanship.
5. One year replacement guarantee for five, especially in home.
6. Instant replacement of radio tubes damaged by electrical disturbance in the home.
7. In event of death unpaid balance is cancelled, radio becomes heir's property.
8. Special protection in case of sickness or unemployment.
9. Privilege of exchanging radio for different models within 30 days of original purchase.
10. Foreign broadcast radio set.

LICENSES WITH AUTO SETS
* Offer of a free city license to every customer who purchased a car radio within a certain length of time increased the volume of the more expensive car radio sales at the Household Utilities, Kansas City, Mo., so that the cost of the license was more than covered.

"If this promotion only one $29.50 radio was sold, the others hovering around the $49.50 mark," says Gordon Buck, manager. "This free license simplified trading-up because the customer felt that the money he had saved might as well be invested in better merchandise."

Additional business for the service department is obtained also, for a complete record of all radios sold is kept and is referred to for service jobs. Both new customers, as well as repeat customers who traded in their old radio for a new radio were secured.

A month has been found the most satisfactory period of time to hold the contest, for this length allows everyone who is interested to take advantage of it.

SERVICEMEN GET CASH
* Turning service calls into profitable cash sales of new radio sets is helping the United Radio & Refrigeration Service, Baltimore, Md., increase its volume. This concern is converting a number of its service calls, averaging better than one out of every five, into sales of new radio sets, with the average sale amounting to $36. As all sales are cash propositions, this business is all the more welcome.

In responding to service calls, members of this firm note that, in a number of cases the sets are quite old, obsolete in comparison with the modern 1936 sets. They point out the wisdom and saving of money for the customer by buying a new receiver instead of paying a repair bill now and perhaps another in a short time, etc. In many cases the customers see the logic of the United men, and instead of having their sets repaired as originally intended, purchase new ones.

CUSTOMERS SELL AGAIN
* Lawrie Bros., Erie, Pa., have thought up a new sales stunt. Customers are asked to come in and select any set. The chosen receiver is delivered free of charge to the home, with the request from Lawrie's that it be shown and played for the prospect's friends. Names of the friends are to be sent to the store, and if any of them turn out to be sales, the one who sent them gets full credit.

In this way, a radio may be paid for with as few as three sales to friends, and a year is granted to pay in this manner. Offer is limited to 50 persons working at one time.

The pick of the parade—this eye-catching float was built by McMichael & Son, radio dealers of Shenandoah, Iowa, for a local street show.
Atwater Kent

THE RADIO WITH
Control-Room Reception

March, 1936
SERVICING MIDGET RECEIVERS

By F. L. SPRAYBERRY

TO be consistently successful in radio servicing in the long run, the serviceman must be able to adapt his work to the many conditions imposed upon him as the trade moves forward.

The repair of the midget receiver does not present a new problem, as similar trends have been witnessed in other fields.

The selling price of midget receivers is gauged on a large production scale. This psychologically leads the purchaser in the belief that the ratio of investment to repair should be somewhat the same as for any other set, or in fact, any commodity. Now it is the business of the serviceman to point out to his trade the fact that the purchase price of the receiver has not relation to the cost of repair whatever. If servicing could be done in a "belt conveyor" or automatic manner with all units similar, the cost of repairs might well be gauged on a production basis and in this way be made roughly proportional to the original price of the receiver. However, this is not, and cannot be the case.

Higher ratio of service charges

The serviceman cannot reduce the value of his time simply because of the low investment of the user of the receiver. This low investment is no saving to the serviceman (usually it is an expense) and certainly midget jobs are not made any easier to service than others. On the other hand, a costly receiver is no basis on which to make unearned profits. A legitimate profit should be made on all service jobs; and unless a profit can be made, do not take the job — drop it — let the other fellow take a loss if he must. A simple cost accounting system will enable any serviceman to determine what he must charge to continue in business.

Since the serviceman cannot well afford to refuse midget jobs consistently he must find some way to handle such jobs which will be satisfactory to the customer and yet will be in keeping with good business.

If we look at the problem more specifically, we can find several points in favor of the serviceman in connection with this work. In the first place, midget circuits are less complex, having on the average fewer parts and tubes than others. For this reason, stage-by-stage testing, complete continuity testing will consume less time. Secondly, more time is saved when the receiver must be removed to the shop for testing, as no dismantling of the receiver in the home is needed.

There is another important point which the serviceman can make favorable to him if he knows how. This lies in the fact that the very strict size limitations which the manufacturers have imposed upon themselves, as well as cost limitations, have served to standardize the parts and circuits to a considerable degree. The greater the degree of standardization, the simpler becomes the servicing problem as will be testified by any serviceman.

Circuits less complex

With even meagre practicing experience, the serviceman will find troubles which are characteristic of a large number of midget receivers of different makes and models. Moreover there are recurrent symptoms which may be readily identified as failure of certain units in a great many makes and models. In this way it is possible to service such sets in a very short time, thus maintaining the same hourly rate for all radio work.

Where it has been determined that the cost of repair will approximate the cost of the receiver (before the repair is well underway) the customer should be advised to this effect before going on with repairs. This situation cannot be overcome, and the customer who has gambled with cut-rate goods must simply realize that he has received all of his value from the set in question.

In the general case it does not pay to replace a speaker, a power transformer, a set of coils or a tuning gang in the lowest-priced midget receivers. Fortunately these units give a minimum of trouble. The majority of trouble will be found in power resistor units. Undersize resistors, filter and by-pass condensers. Replacements of this nature are inexpensive, and if the defective parts can be located definitely and quickly, such work can be made an additional business advantage.

Because of the congestion of parts, the possibility of high-voltage shorts are increased. Excessive emission of the rectifiers used in these sets usually means failure of the tube. The filter condensers also are subject to considerable trouble.

Voltage analysis

An analyzer method of servicing is not generally recommended because of the time required and the space limitations in the receiver chassis. A voltage analysis at the socket terminals and a resistance continuity test will usually point to the trouble quickly.

The mechanical structure of such sets is rather frail as a rule with single point or otherwise incomplete mounting of parts. This makes loose rivets and intermittent connections more prevalent than in the larger console receivers.

The emission of the "signal carrying tubes" being low for AC-DC models, tube replacements are not needed as often in larger models.

Because of the similarity of circuits, the symptoms of defects will be more uniform, and the source of trouble may be identified more easily. Circuit adjustments are less in number and can be handled more quickly for this reason and even more so because of their independent nature. One less adjustment for this reason may cut the time in half.

There is perhaps the most need for frequent adjustment in such receivers because of the fragile construction, mounting methods, and ineffective heat insulation. This presents a taughble means for the serviceman to convince his customer that the up-keep on midget sets will be more as compared to the original cost than for others.

* Servicemen—send in your experiences on service problems to "Radio Today." Data will be compiled and published in future issues — Editor.

How to handle unprofitable set-repair jobs.

Explaining prices to the customer.

Adapt methods to fit situations.
LOUDSPEAKERS TODAY

—new permanent-magnet reproducers for battery sets
—aluminum-steel alloys light, compact, permanent

* THE advent of new magnetic materials and new forms of speaker construction have resulted in marked improvements in radio reproducing equipment.

New magnetic alloys have been particularly responsible for recent permanent-magnet speakers which are especially valuable for battery-operated receivers.

Early permanent-magnet speakers were bulky, heavy and cumbersome. The new alloys permit compact construction, and the permanence of the magnetic field is assured.

Several of these new permanent-magnet speakers are now on the market and others are being made ready for commercial introduction.

High flux densities

How the research engineers of the Continental Motors Corporation, Detroit, Mich., developed both a new material and a novel magnetic circuit for their Perm-O-Flux speaker, is explained by Chief Engineer I. B. Serge:

“This new magnetic alloy material, composed of aluminum, nickel, cobalt and iron, has proved to be the most powerful yet known to metallurgical science,” writes Mr. Serge.

“Use of this material in Perm-O-Flux permanent-magnet dynamic speakers has permitted lighter construction, materially increased efficiency, and superior tone quality.

“In the electro-dynamic type of speaker, a minimum flux density of 10,000 lines per square centimeter has been considered necessary for proper operation to meet present-day requirements of the trade. Flux density of the Perm-O-Flux dynamic speakers varies from 10,000 to 14,000 lines per square centimeter.

“The accompanying chart shows the relation of the dimension ratio and residual magnetism for different types of magnetic material. The dimension ratio is represented by the ratio of length and diameter. This magnetic steel, having greater coercive forces, makes possible the use of smaller and lighter magnets.

“The permanency of the new magnetic alloy is quite unusual due to its micro-structure. This steel structure is stable, and there is no magnetic variation, even though the structure is subjected to temperatures up to approximately 600° C.

“A novel design of the voice coil with double suspension, on which patents are pending, insures continuous and trouble-free operation. The speaker has a permanent flux density in the gap, requiring no outside energy for field excitation, thereby reducing battery drain—a very important item on all automobile and farm sets.”

Quartz-silicate ribbon

Engineers of the Cinaudagraph Corporation, Stamford, Conn., headed by Sherman Reese Hoyt, secretary and director, point out that “the heart of a speaker is its voice coil. This coil must faithfully transform a complex electrical impulse into mechanical motion, including all its complex variations, without distortion and with a minimum of loss. To overcome present imperfections, a special quartz-silicate ribbon has been developed. Quartz, being extremely dense and non-elastic, when formed into a voice coil having a wall thickness of approximately 0.002 in. and an overall thickness, including voice coil, of only .006 in., weighs but a fraction of the conventional type voice coil.

“To overcome spurious tones a new diaphragm has been developed by Cinaudagraph engineers. This cone diaphragm has no voice-coil orphan, thereby preventing air circulation or ‘breathing’ around the voice coil at low notes, and also improving its efficiency at both the extreme high and low frequencies. It also prevents the infiltration of dirt to working parts. The voice coil fits snugly into a special recess on the cone, which allows for maximum coupling area.

“The Cinaudagraph speaker requires no electro-magnetic excitation. High magnetic densities, with small light-weight field structures are attained with the permanent-magnet alloy Nipermag.”

D. H. Wright, president of Wright-Decoster, Inc., St. Paul, Minn., points out that not only were the old-type permanent-magnet speakers very large, requiring deep cabinets or prohibitive space in radio housings, but they did not have any such sensitivity as do the new Nokoi speakers using Alnico magnets manufactured from aluminum, nickel and cobalt steel.

Compares commercial market

The Jensen Radio Manufacturing Company, Chicago, has been making permanent-magnet speakers since 1931, but recently has gone into production of speakers using the new magnetic alloys. Peter L. Jensen points out that there are few limitations for the new speaker, although it faces cost competition with the energized type in the standard AC receiver. On the other hand, a certain amount of hum is always present from rectified alternating current, which is altogether eliminated in the magnet type.

J. R. Scanlan, general sales manager, Utah Radio Products Company, Chicago, reports that his company will be in production on all sizes of magnet speakers from 6 in. to 12 in. by April 1. He comments that the general level of the selling price on this new type of speaker will be higher than the present electrodynamics. This will more or less limit the market, for the immediate future, although as the steel companies reduce their prices, this market will broaden considerably, believes Mr. Scanlan.

L. Golder, Rola Company, Cleveland, Ohio, reports that new permanent-magnet speakers in 6 in. and 8 in. sizes are being developed in the Rola laboratories, but date when they will be ready cannot yet be announced.

26

Radio Today
TODAY, there is a "Magic Magnet" Speaker. A group of engineers dared visualize it. They worked over it in the Cinaudagraph laboratories. For suspense-packed months, they combed the earth for materials: contrived new ones: tested all. They refused to be hurried. Now they give the "trade" the Cinaudagraph "Magic Magnet" Speaker.

THIS Speaker offers in combination five basic developments you never saw or heard of before—"Nipermag", the "Magic Magnet" alloy; Polyfibrous Cone Construction; Interlaced Spider Device; Quartz Silicate Voice Coil: the Infinite Baffle. With these, with many other developments, such as shallow cone construction, 18" models, simplicity of construction—the "Magic Magnet" Speaker sets absolutely the highest standard in speaker performance.

UNDER one roof, in one of the largest, most modern speaker plants in the world, our chief concern is to produce a splendidly engineered speaker, superbly built. For this reason, all parts required in the assembly of the speaker are completely manufactured by the Cinaudagraph Corporation. For this reason, cost of production is reduced. And for this reason we can give you the "Magic Magnet" Speaker at a remarkably low price.

Complete details on the 8, 10, 12, and 18 inch models will be supplied on request.
SERVICING NEW CIRCUITS

CURRENTLESS VOMETER
* Measurement of voltage in high-resistance circuits such as AVC and the like is ordinarily meaningless because the voltmeter alters the original voltage. Vacuum tube voltmeter is one solution to the problem but they are rather expensive.

Circuit shown in accompanying diagram is for a device that will permit the measurement of voltages up to 45 volts (voltage of battery) without drawing any current from the circuit. In engineering circles the device is known as a potentiometer.

The potentiometer shown should be a linearly wire-wound one from 20M to 100M ohms—exact value not important. International Resistance Co. have a resistance indicator that is a potentiometer—if you have one, it can be used. The meters can be those you already have.

In operation the test leads are clipped across the voltage to be measured—the tap on the potentiometer is varied until the current in the milliammeter reads zero. When the current is zero, the voltage in the circuit is equal to the voltage read on the voltmeter—that is why no current flows. Of course, it is necessary to consider polarity of the meters and the test leads. Positive terminals should be connected to positive voltages.

RCA VICTOR T7-5, C7-6, T8-18, C8-19, C8-20
* Newest 8-tube addition to RCA's magic eye line is similar to last fall's 7 tube model, except that an eighth tube in the form of the 6E5 tuning indicator has been added. The diagram of the set on page 25 shows the wiring and the values of the parts for the 8 tube model. The additional circuits required for the 6E5 are shown in heavy lines—eliminate those circuits and the chassis is the same as the 7-tube one including the position of component parts and the trimmer condensers.

EMERSON 19 AND 109 I. F. CIRCUITS
* Comparison of the circuit diagram for Emerson's new 109 with that of the 19 shows them to be the same. The i-f. stage and second detector circuits deserve special attention. The triode section of a 6F7 is employed as an i-f amplifier while the pentode section is utilized as the second detector resistance coupled to the output tube.

I-f. detector section of the circuit is redrawn to show the circuit more clearly. Note that the plate circuit of the triode amplifier is coupled inductively to its grid by means of a third winding on the i-f. transformer. This coupling is so phased and adjusted that feedback is sufficiently neutralized to prevent oscillation.

(To page 35)

I.F. amplifier of Emerson models 19 and 109 peaked at 456 kilocycles.
The Fountainhead of Resistor Development

Here in spacious, centrally located quarters, on the top floor of this huge building, is a new and greater IRC . . .

With new, modern labor-saving devices and equipment . . . highly efficient and economical straightline production . . . unique facilities for research, development work, manufacturing and shipping . . .

All in ample daylight quarters . . . all on one floor a city block long by half a block wide . . . all devoted exclusively to a furtherance of the work that has made IRC Resistors and Volume Controls famous throughout the world.

International Resistance Co.

401 North Broad St.
Philadelphia • PA.

March, 1936
### MULTI-RANGE METER COMBINATIONS—Compiled by Radio Today

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Net price</th>
<th>AC volts</th>
<th>DC volts</th>
<th>DG mV</th>
<th>DG Vols</th>
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<th>Sensitivity in mV/100 V</th>
<th>Scale length in inches</th>
<th>Accuracy in %</th>
<th>Range selection method</th>
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### Notes
- **NS**—Information not supplied.  **PTJ**—Pin tip jacks.  **RSW**—Rotary switches.  **BP**—Binding posts.  **TSG**—Toggle Switches.  **ND**—Having does not apply.
- The accompanying tabulations have been compiled from information furnished to the editors of RADIO TODAY by the manufacturers whose apparatus is described.
"WESTON Instruments put more money in my pocket"

"My '665' Analyzer has served me for almost three years (since it was first introduced) and it's good for years to come. I don't have to buy a new analyzer for the metal tubes. That saves me a good sum. And it's the most dependable instrument. Look how WESTON designs and builds."

The world-famed weston 361 Meter — sensitive and sturdy—stands the gaff and remains accurate.

Exclusive Socket Selector—saves time—and removes obsolescence factor from the analyzer.

Quality wire-wound resistors—insure accurate readings under all temperature and humidity conditions.

Full wave bridge type rectifier—accurate over wide frequency limits.

Exclusive open-circuiting pin jacks—permit quick insertion of meter for current measurements, without disturbing circuit.

And this name WESTON is on instruments used in laboratories the world over . . . the finest procurable.

The above statement from a WESTON owner merely confirms the reports from users everywhere. WESTON Instruments cost far less because they are built to serve for years. They don't have to be replaced for every tube or circuit change. And they maintain their dependability through years of steady, profitable service. One sure way to save more and earn more is to use WESTON'S for every need. Send for the WESTON Radio Bulletin . . . Weston Electrical Instrument Corporation, 597 Frelinghuysen Ave., Newark, N. J.

WESTON Radio Instruments

March, 1936
| Model No | Net price | Meter calibration | Scale length | Fused meter | Line volts ad/alt | Line volts reading | Power source | Test principle | No. of controls | No. of defects | Short tests | Leakage tests | Style | Dimensions | Wt. in lbs |
|----------|------------|-------------------|--------------|-------------|------------------|-------------------|--------------|---------------|----------------|----------------|-------------|-------------|-------------|--------|-------------|-----------|
| 35       | $39.50     | English           | 3½           | No          | TT               | Yes               | Mod Mu       | 3             | 6              | Yes            | Yes         | Port.       |             | 10               |
| 29       | $31.50     | English           | 2            | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 12±2x8±5        |
| 21       | $31.00     | English           | 2            | No          | TT               | Yes               | 110-25 cy     | 3             | 6              | Yes            | Yes         | Port.       |             | 12±2x8±5        |
| 247A     | $29.49     | English           | 2½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 5±1x10±4        |
| 45A      | $39.50     | English           | 2½           | No          | TT               | Yes               | Mod Mu       | 3             | 6              | Yes            | Yes         | Port.       |             | 6±5/12±4         |
| C111     | $25.63     | English           | 2½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 11±6x10±4       |
| 500      | $39.50     | English           | 4            | Yes         | TT               | Yes               | [110-230 AC]  | 3             | 6              | Yes            | Yes         | Port.       |             | 6±1x11±14±6      |
| 306C     | $61.95     | English           | 3½           | No          | SR               | Yes               | [110-230 AC]  | 4             | 5              | Yes            | Yes         | Port.       |             | 6±1x11±14±6      |
| 306P     | $61.95     | English           | 3½           | No          | SR               | Yes               | Mod Mu       | 3             | 6              | Yes            | Yes         | Port.       |             | 11±6x10±4        |
| 306PL    | $61.95     | English           | 3½           | No          | SR               | Yes               | [110-230 AC]  | 3             | 6              | Yes            | Yes         | Port.       |             | 6±1x11±14±6      |
| 39       | $31.75     | English           | 3½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 12±2x8±5        |
| 26       | $31.75     | English           | 3½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 12±2x8±5        |
| 27       | $31.75     | English           | 3½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 12±2x8±5        |
| 28       | $31.75     | English           | 3½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 12±2x8±5        |
| 430      | $12.96     | English           | NS           | NS          | NS               | NS                | NS           | Yes           | NS             | Yes           | Port.       |             | NS           | 10               |
| 431      | $12.41     | English           | NS           | NS          | NS               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | NS           | 10               |
| 89 Std   | $34.95     | English           | 3            | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 5±11±4±12±5      |
| 89 DL    | $34.95     | English           | 3            | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 5±11±4±12±5      |
| 89 SL    | $34.95     | English           | 3            | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 5±11±4±12±5      |
| 130      | $31.50     | English           | 0-15 Chart  | 1           | Yes              | TT                | No           | 110 AC       | 2-3            | Yes           | Port.       |             | 3±7±7         | 5               |
| 175      | $21.00     | English           | 1            | No          | TT               | Yes               | Power-Mud-Mu  | 4             | 6              | Yes            | Yes         | Port.       |             | 3±12±7         | 12              |
| 1210A    | $20.00     | English           | NS           | NS          | NS               | NS                | NS           | NS           | NS             | Yes           | Yes         | Ctr.        |             | NS           | 18              |
| 1310     | $30.00     | English           | NS           | NS          | NS               | NS                | NS           | NS           | NS             | Yes           | Yes         | Ctr.        |             | NS           | 22              |
| 1500     | $36.87     | English           | 110 AC       | 4            | Yes               | Power            | 2             | 8              | Yes            | Yes         | Port.       |             | 2±8±4         | 14              |
| 1501     | $46.87     | English           | 110 AC       | 4            | Yes               | Power            | 2             | 8              | Yes            | Yes         | Port.       |             | 2±8±4         | 14              |
| 1502     | $46.87     | English           | 110 AC       | 4            | Yes               | Power            | 2             | 8              | Yes            | Yes         | Port.       |             | 2±8±4         | 14              |
| 400      | $31.95     | English           | NS           | NS          | Special           | 110 AC           | Dy Mu-Gas     | 4             | 6              | Yes            | Yes         | Port.       |             | 10±4±15±10±4     |
| 30       | $31.95     | English           | 2½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 5±4±12±3        |
| 30A      | $31.95     | English           | 2½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 5±4±12±3        |
| 30L      | $31.95     | English           | 2½           | No          | TT               | Yes               | 110 AC       | 3             | 6              | Yes            | Yes         | Port.       |             | 5±4±12±3        |
| 400      | $31.95     | English           | NS           | NS          | Special           | 110 AC           | Dy Mu-Gas     | 4             | 6              | Yes            | Yes         | Port.       |             | 10±4±15±10±4     |
| 700      | $39.75     | English           | 2½           | No          | Special           | 110 AC           | Emission      | 6-13          | Yes            | Yes           | Yes         | Port.       |             | 6±9±11±15±14    |
| 681      | $33.88     | English           | 6½           | No          | Special           | 110 AC           | Mod Mu        | 5-7           | Yes            | Yes           | Yes         | Counter     |             | 16±11±4±15±14   |

The RCA Check-Up gets you into the home. It's what you do there that counts.

SEE THE NEW RCA SOUND FILM AND YOU'LL SEE THEM GO AROUND AND AROUND

The RCA Radio Check-Up Campaign isn't just an advertising man's brainstorm. It grew out of a need... 3856 dealers asked us for it. Then—we didn't stop at putting the idea on paper—we greased the wheels for Check-Up to make it go around and around... grind out profits for every dealer.

See the new RCA Sound-Film entitled "As A Matter of Fact" and you'll see how Check-Up works for you the easiest possible way. This film takes the Check-Up Campaign out of RCA headquarters and right into every dealer's shop—your shop—your customer's home. It is packed full of sales tips worth real money to you... shows you how to put them over—clearly, simply.

The Check-Up Film is now being shown by RCA Radio Tube distributors. Ask your distributor for the next date and GO!

RCA Radio Tubes

RCA Manufacturing Co., Inc., Camden, N. J.
A Service of the Radio Corporation of America
### RADIO SET ANALYZERS—Compiled by Radio Today

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<th>Model No.</th>
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<td>2%</td>
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### MILLION RADIO & TELEVISION LAB., 361 W. Superior St., Chicago, Ill.
- TA 3/8: 500 NS
- VM 0.05: 1000 NS

### RADIO PRODUCTS CO., (Dayton), 125 Sunrise Pl., Dayton, Ohio
- 54: $49.50 0.5/25/125/500/500
- 58: $37.50 0.5/25/125/500/1250

### READE RATIVE METER WORKS, 125 E. College Ave., Bluffton, Ohio
- 710: 0.10/10/100 2000 3 2 2
- 710A: 0.10/100 2000 3 2 2
- 720: 0.10/25 2000 3 2 2
- 720A: 0.10/25 2000 3 2 2

### SMALL CROSS MFG. CO., 290 Macedon Blvd., Collingdale, Pa.
- 511-A: 0.5/25 2000 3 2 2

### SUPREME INSTRUMENT CO., H. S. Smith, Greenwood, Miss.
- 339 Std: $39.95 0.5/25/125/500/1250
- 339DL: $39.95 0.5/25/125/500/1250

### TEF7 R. T. CO., Plymouth, Mich.
- 135: $10.50 Selective unit only.

### TRIPLETT ELECTRICAL INSTRUMENT CO., 122 Main St., Bluffton, Ohio
- 1140: $11.00 Selective unit only.
- 1220A: $8.33 Selective unit only.

### EARL WEBBER CO., 117 Washington Blvd., Chicago, Ill.
- 30A: $36.95 0.5/25/125/500/1250
- 30A: $36.95 0.5/25/125/500/1250

### WESTON ELECTRICAL INSTRUMENT CORP., 641 Feedinghouse Ave., Newark, N. J.
- 66-1B: $14.25 Selective unit only 0.5/25/125/500/1250

The accompanying tabulations have been compiled from information furnished to the editors of RADIO TODAY by the manufacturers whose apparatus is described.
CROSLEY AUTO EXPRESSIONATOR

* Again the familiar Wheatstone bridge circuit turns up in a radio set—this time Crosley is using it in its auto expressionator circuit, which is an automatic volume expander and tone compensator combined.

This circuit serves to increase the loud passages and diminish the low ones. The inductance-capacitance combination shown is the tone- compensator section which boosts the bass response of the set at low values of volume.

In the Wheatstone bridge if a voltage is applied to opposite points—in this case A and C—no voltage will exist across the other terminals (B and D) when the bridge is balanced. In Crosley’s application the bridge is always slightly out of balance because the resistors R1 and R2 are somewhat less than the old resistance of the bulbs. SW3 and SW4 are closed for expressionator operation.

At most frequencies the impedance of L1 and L2 are so low that they may be considered to be short circuited. The expressionator bulbs, B1 and B2, have filaments of such a nature that when the current (power

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S Y L V A N I A  A N N O U N C E S

THE NEW TECHNICAL MANUAL!

BIGGER — BETTER — MORE COMPLETE IN EVERY DETAIL, NO WIDE AWAKE RADIO MAN WILL WANT TO BE WITHOUT IT!

1. It's half again as big as the old one. A new index. New appendix. It's improved in a dozen different ways. Here are a few of the subjects covered by this valuable book:

1. A 50% increase in contents.
2. 141 tube types will be listed with important circuit application information given on each type.
3. Characteristics on all types will be the very latest. In other words, our book will be up to date including all the standard types of metal tubes.
4. A section on circuits has been increased to include 13 typical radio receiver and amplifier circuits which show proper use of the most popular types of tubes now being employed.
5. Curve data on ballast tubes for battery sets.
6. The convenient pocket size has been retained in spite of the large increase in material.

Send 15 cents for this new Technical Manual NOW! It will mean cash in your pocket. Hygrade Sylvania Corporation, makers of Sylvania Radio Tubes and Hygrade Lamps.

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S Y L V A N I A  T H E  S E T - T E S T E D  R A D I O  T U B E

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March, 1936
out of the set) in them increases, their resistance increases extremely fast.

At low values of output a small amount of the total power from the output transformer is delivered to the speaker. As the power increases the bridge becomes more and more unbalanced and a greater portion of the power is delivered to the speaker.

At frequencies around 40 cycles the combination of L and C resonate producing a high impedance—this high impedance at low volumes has the same effect upon the low frequencies (only) as an increase in the resistance of the bulbs has on all frequencies. In other words the bridge is thrown out of balance for low frequencies and a larger portion low frequency power is delivered to the loudspeaker. Thus, automatic tone compensation for low frequencies at low volume levels is obtained as well as automatic volume expansion.

When the auto expressionator is not desired SW1 and SW2 are closed and SW3 and SW4 are opened. Should any of the parts in the circuit become defective the set can be operated with the expressionator in the "off" position—the switches are yanged together.

If the bulbs need to be replaced identical ones should be used since the filament has special characteristics. At high volume levels the bulbs will become illuminated.

**HUM IN G-E A-65'S**

* Excessive hum in the General Electric A-65 receiver can usually be corrected by making the additions indicated in the diagram shown herewith. Lead between plate coupling resistor and plate supply is opened and a 50,000 ohm resistor inserted. By-pass resistor with a .01 or larger condenser.

The increase in voltage drop is negligible. The additional elements serve as a capacitance-resistance filter circuit thereby reducing the AC ripple
present in the DC voltage applied to the plate of the first audio stage. This same circuit can be applied to other receivers with resistance coupling.

ARVIN MODELS 18 & 28

Service diagram of Arvin model 18 shown on page 25 is practically the same as that for the model 28 — main difference is that the 28 has a condenser-variable resistor combination (tone control) across the primary of the output transformer. Also control grid return of 78 1-f. amplifier is to midpoint of R44 diode load resistance instead of to ground. Cathode and plate voltages in the model 28 are some 10 to 15 per cent greater.

KADETTE 66 AND 666 BAND-SWITCHING CIRCUITS

In the models 66 and 666, Kadette employs an unusually simple circuit for short-wave reception. In the short-wave position an inductance is shunted across the oscillator coil to reduce the effective inductance, and tuning condenser in the grid section of the 6D6 first detector is removed — the coil alone serves to make the stage broadly resonant over the short-wave band.

On the broadcast band the manufacturer recommends alignment at 1400, 1000, and 600 in the order named. Intermediate frequency is 448 kc. Note that the plate supply for 6D6 detector-oscillator first feeds through the oscillator tickler coil.

VOLUME CONTROL REPLACEMENT GUIDES

Clarostat Mfg. Co., 585 N. 61st St., Brooklyn, have issued a replacement guide for volume and tone controls. All available service data and manufacturers' orders during past ten years have gone into making this large-sized 80-page manual. Available to servicemen from Clarostat by writing on business letterhead.

New and revamped edition of a Replacement Volume Control Manual and Service Guide, 159 pages long, has been released by Yaxley Mfg. Div. of P. R. Mallory & Co., Inc., Indianapolis. Servicemen and technicians may obtain a copy of this 1936 booklet by addressing the company, which has spent two years in preparing it.

Pick up the phone. It will pay you to send the above wire immediately. We'll have full details of the new 'CORONET' METAL TUBE for replacing glass tubes in your hands by return mail. 'CORONETS' will put your TUBE SALES on a paying basis! Here's a perfected Metal Tube which will modernize and rejuvenate glass tube sets made during the past 5 years — the tube 25 million radio owners have been looking for. Send that wire TODAY! Don't let the other fellow beat you to it. Get in on this easy, highly profitable replacement business RIGHT AT THE START. The volume is BIG — the margin GENEROUS. Competition is NIL — for Arcturus, and only Arcturus OFFERS your customers a metal tube for their glass tube radios. Act now! Send that wire! Get full particulars of this unusual opportunity to increase your profits in 1936!

At the Show

See Arcturus at the I.R.S.M. Convention, Chicago, Mar. 27, 28 and 29.

ARCTURUS 'CORONET' METAL TUBES

ARCTURUS RADIO TUBE CO.
NEWARK, N. J.

March, 1936
CONVERSION RESISTOR PLUG

Converts 2-volt dry battery sets into "Air Cell" Receivers

TWO-VOLT receivers equipped with ballast tubes for dry "A" battery operation now can be converted into "Air Cell" Receivers by means of a simple, inexpensive conversion resistor plug. Simply remove the ballast tube, plug in the conversion resistor plug in the ballast tube socket, and the receiver is ready for Eveready Air Cell Battery operation. Unlike the ballast tube which it replaces, the conversion resistor plug is inexpensive and it does not wear out. On a 2-volt dry battery set drawing 6/10 ampere "A" current, the cheapest dry "A" pack will give about 320 hours of service for a cost of $3.20, or 1c per hour. On the same receiver, with a conversion resistor plug, the Air Cell Battery will give at least 1000 hours of service, over three times as much, for a cost of only $5.95, or less than 6/10c per hour. In the life of one Air Cell Battery costing $5.95, three dry "A" packs, costing $9.60 would be used. Changing to Air Cell Battery operation not only saves money, it does away with the bother of frequent "A" battery purchases, and it eliminates the weakening reception which takes place as the dry "A" pack's voltage runs down.

Conversion resistor plugs are made and sold by most resistor manufacturers. Only seven types required to convert over 50 different makes and models of ballast tube receivers. Send the coupon for data sheet giving complete information.

SEND FOR FREE DATA SHEET

NATIONAL CARBON CO., INC., P. O. Box 600, Grand Central Station, New York, N.Y.

Please send me the Conversion Resistor Plug Data Sheet.

Name ____________________________

Street ____________________________

City ____________________________ State ________ (RT3)

This ad pinned to your letterhead will bring you complete data on the great Baldwin line of Replacement Speakers.

CONSOLIDATED RADIO PRODUCTS CO., 361 W. SUPERIOR ST., CHICAGO

200 BROADWAY, NEW YORK, N. Y.

WHOLESALE

* Brown-Dorrance Electric Co., Pittsburgh, have been named by Stewart-Warner Corp. as distributors for radios and refrigerators. An Akron, Ohio branch, under the direction of H. L. Baleh, will be maintained by Brown-Dorrance.

* Chanslor & Lyons Stores, of San Francisco and Los Angeles, Cros- ley distributors in California, finished last month a series of dealer meet- ings in those cities and in Fresno and Sacramento. More than 700 dealers attended the four meetings, according to the reports of Paul W. Hies, sales manager for the Pacific coast.

* The Front Co., Wheeling, West Virginia, has been selected by Stewart-Warner Corp. as distributors in that territory for radios and refrigerators. S. S. Front is present of the West Virginia company and A. K. Clifford is sales manager.

* Corona Radio and Television Corp., Chicago, has issued a list of sales representatives of the Corona line: Kraft Distributing Co., 17 W. 17th St., New York City; W. E. Dau, 164 Oliver St., Boston; M. J. Wilkoff, 517 S. Oglesby Ave., Pittsburgh; Mar- vin Reesler, 8324 Woodward Ave., Detroit; J. Rosenthal, 420 N. Sacra- mento Blvd., Chicago; R. T. Boyle, Finance Bldg., Kansas City, Mo., and J. Leo Jolley, Miami, Okla.


* True & Blancheard, Inc., New- port, Vermont, distributors of Fairbanks-Morse radios, refrigerators, washers and irons, recently held a 2-day open house for their dealers; on third day the display was opened to the public.

* W. E. Thinus Radio Corp., Cros- ley distributors of Oklahoma City, Okla., have a new sales manager in the person of Herndon Thomas, who has been with a Crosley distributor in the East for several years.

* John O. Olenc, Pittsburgh, re- cently appointed Ken-Rad representa- tive in western Maryland and northern West Virginia, has been given the additional territory of western Pennsylvania. New area includes Pittsburgh, Altoona, Johnstown, and other key distributing points west of Wes-Barré.

* Marshall-Weiss Co., Crosley distributors of Spokane, Wash., were hosts to the 3-day meeting of the In- land Empire Hardware Association last month. Paul W. Halkowsky, Crosley's Pacific Coast manager, was on the program, along with the Mar- shall-Weiss chief, Seth Marshall, and J. T. Elson, also of the Spokane company.
**Eshelman Supply Co., Lancaster, Pa., has been named by Fairbanks, Morse & Co. as distributors for their radios, washers and irones, and Conservador refrigerators.**

**W. E. Titus Radio Corp., Ken-Rad distributors of Oklahoma City, Okla., had four representatives visiting recently at the Ken-Rad plant at Owensboro, Ky. They were H. H. Wall, J. G. Taylor, L. C. Boyd, and A. V. Riggs.**

**A. K. Sutton, Inc, Philco distributors for the two Carolinas, who recently made an event out of the production of the seven millionth Philco set, has announced that the company is now the distributor for Philco auto radios in both North and South Carolina.**

**Crosley Distributing Corp., 345 Madison Ave., New York City, has two late additions to its sales staff: Wallace H. Vermilya, to contact dealers in parts of New York State and Connecticut, and Martin Kluhs, to operate in Brooklyn.**

**H. Jappe Co., Boston, Mass., one of the vet wholesale organizations of New England, has taken on the distribution of Fada radios. Jappe Co. has a branch at Worcester, Mass.**

**For distribution in Northern New Jersey and metropolitan New York, Dale Parts, Inc., 29 Murray St., New York, has taken on the Trav-Ler line of radio receivers.**

**Valentin V. Rivero, general manager of Radio Electrica, Mexico City distributor of Crosley products, recently made a visit to Cincinnati and made a report that radio fans in his country are increasing steadily in number and interest.**

Rivero added, however, that the great set-back to the refrigerator biz in Mexico is the presence of many independent power companies who furnish voltages and frequencies of such a wide variation that the effect is confusing.

**Second of a series of “ham-fests” sponsored by the Wholesale Radio Service, New York City, was staged at the Hotel Pennsylvania. More than two thousand guests listened to a series of speeches, won prizes, and inspected special exhibits by manufacturers.**

**Philco dealers of the southern Texas area, 250 of them, were guests of the Crumpacker Distributing Corp., Houston, recently with Harry Boyd Brown, national merchandise manager for Philco, as guest speaker.**

**New distributors at Reading, Pa., for Grundy radios and refrigerators are Bright & Co., an organization which is 76 years old and is headed by Stanley G. Howard Bright. Other exes of the Bright Co. are Chas. Runkle, C. Leinbach, and Robert Anewalt.**

**Tydings Co, distributor of Tung Sol radio tubes in western Pennsylvania, have moved to new and larger quarters in Pittsburgh. According to E. J. Tydings, president, parts business is due for further expansion at the new address, 114 9th St.**

**Third expansion move in two years is under way at the Crosley Distributing Corp., Chicago. C. S. Tay, manager, reports that display space will be doubled, office space enlarged, and a new space provided for an expanded radio service department. Latter is under the direction of Paul Block.**

**Robert Schmid, formerly of sales promotion department at CBS, is now the new sales promotion manager for the Mutual Broadcasting System.**

**Burus & Collins, 2540 Cottage Grove Ave, Chicago, Ill., have been appointed distributors for American-Bosch Radio in that city. They will distribute both American-Bosch Centricomatic Home-Radio and American-Bosch Skylark Car-Radio.**

**Atwater Kent sales staff has added H. J. (Jack) Helliswell, to supervise activity in Minnesota, Nebraska, North Dakota, and South Dakota. Helliswell is a vet AK man, but has recently been with Leonard Co. in the West. New divisional sales manager for Atwater Kent is Floyd Reid, promoted to that position after 3 years of vigorous sales and technical activity with the company.**

---

**Here is the NEW 206 FE "Magic Eye!" Connector, Bezel, Holder and Cable!**

Here is the ideal complete "Magic Eye!" Outilt for quick installation. Put it on any receiver in a few minutes. Mounting screws easily reached from rear. Shusle knurled slieet nut rigidly clamps tube and connector in place and can be replaced in a few seconds. Same not allows adjustment of angle of inclination target, target and forth length adjustment. Collar of connector made to protect electrical shock. Mounting and wiring are made by 1 megohm resistor connected across target and plate contacts to connector.

Spare of mounting and connector the smallest possible to avoid pilot lights, dial and tuning condensers. Small foot that fastens holder can be rotated.

Furnished with scientifically engineered escutcheon that shades the end of the tube to sharpen the contrast in the indicating sector yet provides the widest possible angle of vision of this center. Escutcheon also comes out of tube excluding light from pilot or tube.

**206FE "Magic Eye" Connector**…List Price 25c

**206FEC 206 FE with Cable**…List Price 5c

**2081H "Magic Eye" Holder**…List Price 25c

**208H "Magic Eye" Bezel**…List Price 15c

**208FECHI "Magic Eye" Outilt**…List Price 1.15c

If you want the finest 8 -spring Analyzer Plug Outlet it is possible to make, get our NEW 9070PCA KIT with the toggle latch. Supplied with 5 feet of 9-wire cable attached to 8 -point cable plug, socket and 5 associated adapters. List Price 60c

If you want the cheapest Analyzer Plug get our NEW 9070PCA KIT with specified Turn -On Lock. Supplied with 5 feet of 9 -wire cable attached to 8 -point cable plug, socket and 5 associated adapters. List Price 25c

For the finest instrument sockets we use Na-Ald "TF" series. List Price 40c

For the quickest, easiest, most efficient method of testing radio units, look into our Na-Ald tubes. List Price 15c

Replace glass tubes with metal tubes using our new adapters listing at 50c.

Modernize your tube tester for metal tubes with Na -Ald adapters. Write for catalog sheets.

Na-Ald dimensions to Jobbers as to insure that getting the fullest possible value for your money.

Here are the genuine Na -Ald products. If unable to obtain them from your supplier, we suggest ordering direct.

**Alden Products Co.**
Dept RT-3
715 Centre St.
Brocton, Mass.

**Dealers!**

**Sell Pioneer Portable Gas Engine Gen.**

It's easy to sell these sturdy, efficient power plants. Enjoy a complete line of plants for every applications - and earn large profits on each. Write for catalog and prices. Works for everything from small engines to farm power systems.

**Pioneer Gen-E-Motor Corp.**

462 W. Superior St., Chicago - Cable address: SIMONTRIC, NEW YORK

Mail this coupon today.

**Pioneer Gen-E-Motor Corp.**

462 W. Superior St., Chicago, Ill., U.S.A.

Mail this coupon to-day for your sample driver.

**March, 1936**

39
TRADE NEWS

* P. V. Galvin, president of Galvin Manufacturing Corp., Chicago, III., manufacturer of Motorola auto-radio sets, attended recently several interesting meetings sponsored by Motorola jobbers in various cities, including a meeting at the Hotel Edison, New York, Feb. 26, sponsored by the York Automotive Distributing Co.; a dinner held at the Detroit-Leland Hotel in Detroit Feb. 15, and a two-day meeting held Feb. 12 and 13 at the Hotel Graemere by the Jackson Distributing Company, Chicago. Each of these meetings drew a far greater attendance than in 1935 and the new Motorola 1936 auto-radio line was enthusiastically received by the dealers present. The high note of the meeting was the introduction of the Magic Eliminode, an exclusive Motorola feature which won the approval of the dealers because of its distinctive merits and simplicity.

* Sayre M. Ramsdell, Philco’s vice-president, has announced sailing dates for the three cruises to Havana arranged for winning dealers in sales contests sponsored by the company. All trips will be made on the S.S. Monarch of Bermuda on May 15 to 22, May 24 to 31, and June 1 to 8.

* A traveling caravan recently completed a journey of several thousand sand miles in behalf of the new Zenith auto-radio line. E. A. Tracey, vice-president in charge of sales of the Zenith Radio Corp., headed this “caravan,” which included in its itinerary Chicago, Pittsburgh, New York and Atlanta. Zenith jobbers from various parts of the country assembled at the various cities to become thoroughly acquainted with the distinctive merits of the 1936 Zenith auto radio line. Each meeting proved an outstanding success and orders received far exceeded Mr. Tracey’s expectations.

* Matthew DeForest, well known in radio and engineering circles, has joined the engineering staff of the Triumph Manufacturing Co., Chicago, manufacturer of analyzers and testers.

* R. B. Smith, general manager of Consolidated Radio Products Co., Chicago, Ill., manufacturer of loud-speaker products, announced recently the appointment of Carrington H. Stone, formerly connected with the Stewart-Warner Corp., as export manager of the company; Stone’s headquarters at the factory, 365 W. Superior St., Chicago, Ill.

* A. B. Dicu, for many years advertising manager of the Stewart-Warner Corp., and more recently associated with Blackett, Sample and Hummert, Inc., has joined the advertising agency of Hays, MacFarland Co., 333 North Michigan Ave., Chicago, Ill., as account executive. This agency was recently appointed to handle all the advertising activities of the Stewart-Warner Corp. and Mr. Dicu, who is thoroughly familiar with Stewart-Warner merchandising policies, will work in close cooperation with this organization as well as its jobbers and dealers.

* Lee McCune, secretary and newly appointed radio sales manager of the Stromberg-Carlson Telephone Mfg. Co., reports that sales of radio sets by the company have shown an increase of 184% in units sold since the 1933 low point, as against an industry average of only 53%. Stromberg’s dollar volume during the same period has increased 37%.

* Platt Music Co., Los Angeles music store chain, with branches in Hollywood, is headed back to the position it occupied before its affairs came under the jurisdiction of the local courts. Plan for reorganization submitted by trustee E. S. Steel was accepted by the local Federal court.

* Fuda Radio & Electric Co., Long Island City, N. Y., has announced a new Midwest sales manager in the person of Joseph Gerl, who will have headquarters in Chicago and cover surrounding territory.

* Newly formed Atlas Sound Corp., 1451 Thirty-ninth St., Brooklyn, has already increased its factory facilities and the company is headed by Robert C. Reinhardt, president, and Carl L. Hummelth, secretary and treasurer; both were formerly with the Macy Engineering Co. Atlas Co. produces sound reproducing equipment.
NEW THINGS FROM THE MANUFACTURERS

AUTOMATIC BALLAST TUBE

* Universal type ballast tube for AC-DC sets. Model DUR 45 for standard 4 and 5 tube sets. DUR 6 for 6 tube sets. May be used with sets using from zero to four 6.3 volt dail lamps of 150 or 250 mil rating. Ballast automatically adjusts itself so that tube will work at normal voltage even if pilot light burns out. Mounted in metal container on oval base. Durite tubes interchangeable with many standard types. World Bestes Corp., 62 Courtland St., Paterson, N. J.—Radio Today

TWO-BAND TABLE RECEIVER


AUTO RADIO CONTROL


RECORDING MACHINE

* Machine for recording on aluminum blanks up to 12 inches at either 78 or 33 1/3 r.p.m. Professional cutting head—response, 30 to 8,000 cycles—impedances, 15, 50, 200, 400 ohms. Balanced and weighted turntable provided with removable lead screw cutting 98 lines per inch. Volume indicator, volume control, and on-off switch. Operates on 110 AC, 50-60 cycles. New Model 12 —list $74. Universal Microphone Co., Ltd., Inglewood, Calif.—Radio Today

COMPAK AUTO SET


FARM RADIOS

* Latest addition to Fada’s line are a 2-volt, 6-volt, 32 volt battery chassis. Dual-wave—$3.5-1740, $789-18500 kc. R.f. preselector—total of 12 tuned circuits. Metal tubes in 6-volt model. Class B output of 1.5 and 3 watts respectively in 2 and 6 volt sets. Dual radio tuning—automatic volume control—phone jack—variable tone control. Permo-dynamic speaker—10 inch diameter in console models—8 inch in car phone. Model 1696—6 volt (illustrated) —list $94.95. Fada Radio & Electric Co., 39-39 Thomson Ave., Long Island City, N. Y.—Radio Today

ALL-WAVE ANTENNA


LOW-COST AC-DC RADIO


TYPE 950 TUBE

* Battery (2 volt) type output pentode with filament consumption about one-half of that of type 33. Plate and screen currents are also somewhat lower as is the power output. Type 950. Ken-Rad Corp., Owensboro, Ky.—Radio Today

PORTABLE P. A. SYSTEM

* Portable amplifier system with dual-speed 12-in. turntable with crystal pickup-up. Two position mixer for phone and crystal mike inputs. Four stage amplifier with 12 watt A prime output—97 db. gain. Amplifier power consumption—90 watts at 110 AC. Fabrioid covers carrying case—23 x 17½ x 9 inches. Lafayette model 539-P—net $57.50. Wholesale Radio Service Co., 100 Sixth Ave., New York City—Radio Today

March, 1936
NEW THINGS

(From page 11)

METAL-TUBE AUTO RADIO


VIBRATOR TESTER


CATHODE RAY OSCILLOGRAPH


AC-DC TABLE SETS


SHADOW TUNING METER

* A shadograph tuning meter kit for any set with AVC has been introduced by Philco. Kit contains bracket, by-pass condenser, bezel, and meter. Simple installation requires cutting small hole in panel. Meter is connected in plate lead of t-f tubes. Adjustment for various currents. Philco Radio & Television Corp., Tioga & 6 Sts., Philadelphia, Pa. — Radio Today

MASTER ANTENNA SYSTEM

* Antenna system for multiple operation of sets in apartment houses and hotels. Doublet aerial with transmission line and receiver couplers. Conduit or exposed wiring with suitable fixtures. Effective for broadcast and short-wave reception. One aerial with transmission line will feed up to 25 sets. Technical Appliance Corp., 17 E. 16th St., New York City — Radio Today

WASHER-CHARGER

* Battery charger that is driven by gas engine in washing machine. Battery can be charged while running washing machine or separately. Fits Briggs-Stratton and Maytag washers. Will deliver 10 amperes to 6-volt battery. Flexible drive shaft connects to washing machine. Generator has protective cut-out. List $29.95. Midwest-Timmermann Co., Dubuque, Iowa — Radio Today

CRYSTAL SPHERICAL AND LAPEL MICROPHONES

* Lapel type microphone employing crystal soundcell principle — extremely small, weighs less than one ounce. Internal cushioning and exterior rubber jacket insure quiet operation — output level of minus 72 db. — model BR 1.

Spherical mikes with non-directional characteristics and wide frequency range-designed for public address use and general pick-up. Output level of minus 66 db. — model BR 2. Brush Development Co., E. 40th St., Cleveland — Radio Today

SYNCHRONOUS VIBRATOR AUTO RADIOS


Other models: 5M 5T single unit, $39.95; 6M 6T single unit, $49.95. RCA Mfg. Co., Front & Cooper Sts., Camden, N. J. — Radio Today

2-VOLT BATTERY SETS


Radio Today
COMPACT PERMO-DYNAMIC SPEAKER

★ Dynamic speaker employing Nipermag alloy magnetic structure for light-weight and high-flux density. Inverted construction provides extreme compactness — voice coil and field magnet in front of cone. Quartz silicate ribbon voice coil. Elimination of electrical excitation does away with hum. Model AZ-87 illustrated. Available in diameters of 8, 10, 12, and 18 inches and in high-fidelity types. Cinsadograph trademarked.

LOW-FIDELITY SETS


LOW-COST CARBON MIKES

★ Double-button carbon mikes designed for use with low-cost public address installations. Model 3B for spring suspension in standard ring — 3-inch cast frame with protective grill. Weight ½ pound — list $5.50. Model 10B a convertible hand microphone which is adaptable for stand mounting. Equipped with 6 feet of 3-wire conductor — weight ½ pound. List $10. Shure Bros., 215 W. Huron St., Chicago, Ill. — Radio Today

MICROPHONE SHOCK ABSORBER


PORTABLE RADIO PHONOGRAPH


PERMANENT-MAGNET DYNAMIC SPEAKERS

★ Permono-dynamic speaker employing Alnico magnetic alloy to produce a high flux density. Nokoil speakers are compact in size and need no exciting power. Six-inch reproducer weighs 1.95 pounds — 6-inch 210 pounds. List — model 700-6, $7—760-8, $7.60. Wright-DeCoster, Inc., 2235 University Ave., St. Paul, Minn. — Radio Today

ALL-WAVE TEST OSCILLATOR

★ Battery operated oscillator with 90 to 6000 kc. range calibrated on large dial. Accuracy on I.F. and broadcast bands is one-half per cent. Audio modulation of 400 cycles at 35 per cent. Jack for frequency modulation. Three step ladder type attenuator with vernier. Housed in one-piece cast aluminum casing. Model 20 — list $29.95 without batteries but with dummy antenna, tubes. Earl Webber Co., 1217 Washington Blvd., Chicago, Ill. — Radio Today

110 AC AND 6-VOLT RECEIVER

★ Portable six tube set for operation on either 110 AC lines or from 6 volt storage battery. Full-vision vernier dial provides easy tuning. For use in automobile, vacationing, travelling. Housed in a leatherette case. Auto-electric model 6. Automatic Bee-Less Radio, 3006 13th Ave. S., Minneapolis, Minn. — Radio Today

EXPONENTIAL HORN

★ Scientifically designed exponential horn for use with a special cone type trumpet unit for PA work. Constructed of fabricated acoustic material — weatherproof and waterproof. An improved type of speaker for replacement in receivers has also been developed. Oxford-Tartak Radio Corp., 915 W. Van Buren St., Chicago, Ill. — Radio Today

March, 1936
NEW CROSLEY
SAVAMAID
FOOT-CONTROL IRONER
(Model 60)
Handles everything from laciest frills to heaviest garments in a minimum of time. No personal instructions needed, it's so simple. An effective as most expensive ironer. Just guide the garment through...it comes out with perfect satiny sheen. A marvel to demonstrate.

$99.95
With Pump $139.95

THE CROSLEY
SAVAMAID
SPE-DRY
(Model 64)
Improved spinner-type washer. You can wash, blue, rinse, dry right in the washer itself. Possible, even, to do a complete washing without wetting the hands. More than a washing machine, a complete new method and routine for washing that enables the housewife to cut the thirteen tiresome things she does when washing clothes to five simple things. Highest quality, handsome appearance. A crowd collector when demonstrating.

(Prices slightly higher in South and West)

CROSLEY
Now FIRST in Home Laundry Equipment Value!

More than a million and a half washing machines will be sold during 1936. Home laundry equipment is a tremendous business, one that has suffered less from unfavorable conditions than any other home utility. Crosley now enters this field with a sensational line of washing machines and ironers, containing features that lift them clear out of competition...priced to meet all comers; styled for today. Models to meet every purse and viewpoint.

This decision gives to Crosley dealers a new contact with their market, a new opportunity for year-round profit, a new point of interest to bring people to the store, a new possibility for increased sales of Crosley radios and Shelvadors, as well as home laundry equipment, a new kind of crowd-collecting store demonstration.

Match washing machines or ironer against anything, and you will realize that, from now on, your customers need not pay high prices for the best laundry equipment that can be made.

Savamaid Models 61, 62, 63 equipped with gas engine assembly at additional cost.

THE CROSLEY RADIO CORPORATION
POWEL CROSLEY, Jr., President
CINCINNATI

Radio Today
TECHNICAL DATA

* Cash in on popularity of electron-eye tuning in modern radio sets.
* Install this tuning indicator in any A.V.C. set, new or old.
* Provides for visual, razor-sharp tuning for maximum sensitivity, selectivity, fidelity.
* Sells for only $1.50 list (less 65¢ tube). Easily installed.

DATA Send for descriptive bulletin as well as display material on this fast-selling tuning indicator. Meanwhile, ask your jobber for demonstration.

TECHNICAL APPLIANCE CORP.
Pioneers in Noiseless Antenna Systems
17 East 16th St., New York City

WRIGHT DECOSTER Port-A-Case

Model 1440

Port-A-Case complete with large Model 790—2-inch Wright-Decoster Speaker— FOR ONLY $14.40 LIST

Our low prices for the different model Port-A-Cases, complete with speakers, enable users of Wright-Decoster Reproducers to obtain this handsome, strongly built Port-A-Case at a price far below what a much inferior Case would cost.

There is plenty of room in the Port-A-Case for a small Wright-Decoster field supply and any medium sized amplifier.

Write for catalog giving full description and our astonishing prices for the Port-A-Case complete with the different 12-inch Speakers.

Buy through Wright-Decoster distributors. They are always anxious to cooperate.

WRIGHT DECOSTER, Inc.
2205 University Ave. St. Paul, Minn.

Export Dept.—M. Simon & Son Co., New York
Cable Address: "Simfrocks"

Canadian Office, Wright-Decoster, Inc., Guelph, Ont.

TRADE NEWS

From page 40

* The Webster Company, 3825 W. Lake St., Chicago, has completed negotiations for a license to manufacture sound systems under patents of Electrical Research Products, Inc., subsidiary of Western Electric Company, Inc., and American Telephone and Telegraph Company. The Webster Company now manufactures a complete line of public-address systems, sound equipment and accessories.

Webster-Chicago announces satisfactory solution to combination 6 Volt DC-110 Volt AC operation in its new Model MP-120. Changing from one supply to the other is simplicity itself. Simply pull out 6-volt plug pack and plug in 110-volt pack. Can be purchased with either pack or both. Desirable for sound systems when conditions may vary. Adequate volume for large indoor or out-of-doors installations serving from 50 to 10,000 people. System includes high-grade Webster phono pickup and electric phonograph turntable.

* Louis J. Chatten has rejoined his former firm, Andrea, in the capacity of general sales manager of F. A. D. Andrea, Inc., makers of Andrea radios. Company operates exclusively in the export field, and Mr. Chatten is now sailing around Cuba and Mexico on the S.S. Oriente, developing Andrea distribution in those areas.

* Announcement has been made by the General Electric Co., Bridgeport, Conn., of the appointments of H. W. Bennett and C. W. Griffin as district radio managers, with headquarters at Minneapolis and Los Angeles, respectively, and R. A. Huescher and John Klenke as district radio representatives, with headquarters at Cincinnati and Portland, Ore., respectively.

* Ivan R. McKinnon, who has been with the Stewart-Warner Corp. for the last 5 years, has been appointed as District representative for the Emerson Radio and Phonograph Corp., New York City. McKinnon's headquarters will be in Chicago; Emerson dealer and jumper activity in surrounding states will receive his attention.

* Pioneer Radio & Sound Equipment Co., Wichita, Kan., recently had exceptional success with a special display featuring Arcturus tubes, exhibited at a local builder's show and also at the Annual Southwest Farm and Tractor Show. Display was an elaborate diorama on the Century of Progress in miniature, depicting the light of the star Arcturus opening the fair.

* J. W. Kennedy, executive of the Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., has been advanced to the post of sales promotion manager. Kennedy was formerly merchandise manager; A. O. Stigberg now takes that position.

(Top page 45)
FOR RADIO-REFRIGERATOR DEALERS

— manufacturers to startle industry with new promotional plans
— consumers with modest incomes regarded as big buyers this year
— dealers turn to spot broadcasting as plug for 1936 features

* THERE'S an air of fine excitement about the current activity among radio-refrigerator dealers.

Makers of "boxes" have fixed up their plots and plans for the coming season; elaborate campaigns, unexpected stunts, and new advertising appeals are outlined, and the gossip is that sales for 1936 will run nearly to 2,000,000.

7,670,000 refrigerators in use

The Norge refrigerator organization has recently completed a survey of the number of electric refrigerators in use, and arrives at a total figure for the United States of 7,670,000. Other estimates of the number of electric refrigerators have placed the present total somewhere in the vicinity of seven and a quarter millions.

Compared with the above, following are the numbers of other facilities in American homes. As of the beginning of 1936:

- Bath tubs (and showers). 16,000,000
- Washing machines. 10,000,000
- Vacuum cleaners. 10,000,000
- Telephones. 11,000,000
- Home radios. 25,500,000
- Auto radios. 3,000,000
- Total radios. 28,500,000

High points of market

Much of the 1936 promotional activity will be aimed at consumers of the small income brackets, for a number of reasons. Activity in rural electrification, the Supreme Court's recent encouragement of the TVA, payment of the bonus, and continued progress of federal housing plans will all tend to make refrigerators an attractive buy for folks with modest incomes.

To reach this group and others, several leading refrigerator manufacturers have announced that they will spend from 30 to 100 per cent more on advertising their boxes during 1936. It seems likely that much of this campaign will be aimed at those who live in compact homes, and will emphasize the sort of ice box features which are appropriate.

Spot broadcasting

No small part of the money spent for plugging "boxes" in 1936 will be for spot broadcasting. Recent statement from the National Association of Broadcasters lists "household equipment dealers, principally electrical appliances" among those cited for "significant increases in retail broadcast advertising." Cross time sales for this group of retailers in 1935 were 57 per cent over their expenditures in 1934.

* Harry G. Sparks, general manager of the Sparks-Withington Co., Jackson, Mich., has issued the announcement that Sparton All-Fault refrigerators are now protected by a 5-year warranty bond. Protection is optional to the purchasers of 1936 models, and is offered for five dollars above the list price. Sparton's one-year guarantee still applies to those who do not accept this offer.

* In Milwaukee last month, Westinghouse dealers of Wisconsin and Michigan held a meeting with H. M. Hutzeloff, Westinghouse sales manager for the northern area, heading the activity.

GE HOTPOINT REFRIGERATORS

Features include sliding shelves, temperature control, defroster, foot pedal door opener, stainless steel, superfreezer, interior light. Hotpoint Refrigerator Division, General Electric Co., Nela Park, Cleveland, Ohio.

NEW FRIGIDAIRE MODELS

* Line for this year includes 16 models, headlined with the "Meter Miser," food-safety indicator, sliding shelves, automatic interior light, automatic reset defroster, automatic tray releaser, Dulux exterior finish, touch latch door opener.

- Master models: 7-36, 7-36 cu. ft., 59 3/16" x 31 1/2" x 25 1/6"; 6-36, 6-36 cu. ft., 58 3/16" x 29 11/16" x 25"; 6-36, 5.1 cu. ft., 54 9/16" x 28 1/16" x 25"; 4-36, 4.1 cu. ft., 50 3/16" x 24 3/16" x 25".

- Super models: 9-36, 9.1 cu. ft., 60 3/16" x 32 1/6" x 27 9/16". Four other supers, 7-36, 6-36, 5-36, and 4-36 have the same specifications as Masters having the same numbers.

- Model D3-36: 3.1 cu. ft., 44 5/16" x 22 7/16".

- Koldchest: 2.1 cu. ft., 36 x 23 15/16" x 20 7/16".

- WP models: 12-36, 12.1 cu. ft., 63 11/16" x 30 7/16"; 15-36, 15.1 cu. ft., 64 1/6" x 29 3/4" x 20 7/16"; 18-36, 18.3 cu. ft., 71 7/16" x 46 7/16" x 23 1/16".

- DeLuxe Models: Premier, 10 cu. ft., 63 11/16" x 36 1/16" x 30 7/16"; 23-36, 15.1 cu. ft., 64 1/4" x 36 1/16" x 30 7/16"; 18-36, 18.3 cu. ft., 71 7/16" x 46 7/16" x 29 1/16".

* H. E. Richardson, Crosley's general sales manager, has announced detailed plans for the company's 5-year protection plan on all Shelvador refrigerators, optional at an added charge of five dollars to the suggested list price. Guarantee applies to both open and sealed type compressor units, and is retroactive to 1936 models already sold.

* Stern & Co., Inc., Grunow refrigerator distributors of Hartford, Conn., held an open house last month for dealers interested in the 1936 Grunow models. Francis E. Stern presided at the showing.

* Frank Hiter, vice-president and sales manager of Stewart-Warner, has made the announcement that purchasers of the company's 1936 refrigerators may, by the payment of five dollars in addition to the regular selling price, obtain four years of protection in addition to the one-year period covered in the standard guarantee. Offer is retroactive to include sales of 1936 models already made.

* When the $100,000 modernization project at the Fairbanks-Morse plant in Indianapolis, Ind., is complete, the home appliance division of the company will be moved there.

* Howard E. Blood, president, Norge division, Borg-Warner Corp., has called attention to a new extended protection plan on Rollator refrigerators, in effect since Mar. 1. Besides the company's regular one-year warranty covering parts and service, Norge now provides a 5-year warranty on important mechanical parts, together with a warranty on the Rollator compression unit.
DEALERS OFF TO A BIG HEAD START FOR 1936!

HOTPOINT ELECTRIC REFRIGERATOR dealers are away to a head start this year. January—with unusually cold weather—was a big month. Sales were 209 per cent of the same month last year. February sales moved along at increased pace. Now watch March and the rest of the year! With a most comprehensive advertising campaign—and a complete line of 12 models—Hotpoint dealers are selling to families of all incomes. New deluxe models with distinctive styling and convenience features have quick sales appeal. Standard models at lower prices. Thrift-type Refrigerators for homes of low income. Easy time payment extension plan gives you good display for small investment. Write for complete franchise details. Hotpoint Refrigerator Division, Appliance and Merchandise Department, Section RT3, Nela Park, Cleveland, Ohio.

ELECTRIC REFRIGERATORS

March, 1936
**TRADE NEWS**

(From page 45)

* H. Alveys, president of the Emerson Radio and Phonograph Corp., New York City, announced this week the augmenting of his engineering staff by the appointment of Donald D. Israel as chief engineer of the company. Mr. Israel is widely known in engineering circles, having been formerly chief radio engineer of the Columbia Phonograph Corp.,

* Harold W. Haywell, vice-president and director of the Columbia Phonograph Corp., Stamford, Conn., has announced that the company's new equipped plant will start supplying speakers to the radio industry at the rate of 5,000 per day, starting about Mar. 15.

* Other officers of the new corporation are John S. Hoyt, president and director; C. Beaman, treasurer and director; Sherman R. Hoyt, secretary and director; Lionel F. Carowell, research and engineering head; and R. P. O'Brien, sales director.

* H. C. Semmel, for the past 8 years a representative of either RCA or the General Electric Supply Co., is the new buyer and merchandise manager of the electrical appliance division of the H. C. Kahn & Son department stores, Philadelphia. Kahn Co. has branches at Norristown and at Chester, Pa.

* Paul S. Wise is now director of sales for the Masterworks division of the Columbia Phonograph Co., Inc., with temporary headquarters in New York City. Prior to his connection with the Columbia Co., Wise was with RCA-Victor for 7 years.

* Group of some 20 retail furniture stores have formed a company called the Associated Buyers' Corp., Inc., organized for the purpose of syndicated buying, merchandising, advertising and promotions, etc. Headquarters are at the Hadley Co. Furniture Stores, 1350 Main St., Springfield, Mass., under the management of W. L. Robertson. President is Alvin Lindeburg; vice-president, Fred Dreifus; treasurer, Ruben E. Aronheim.

* WOR's sales manager, Walter J. Neff, has resigned and will organize a radio station representative and consultant bureau in New York City. Mr. Neff has been with WOR for 8 years, during which period he established himself as a widely appreciated expert in the field.

* Oxford-Tartuk Radio Corp., makers of Oxford speakers and accessories, has moved to new and enlarged quarters at 915 W. Van Buren St., Chicago.

* Henry C. Forster, veteran expert in the speaker field, announces the organization of Radio Speakers, 135 S. Michigan Ave., Chicago, to manufacture permanent dynamic and electro dynamic speakers.

* E. H. Vogel, whose connection with the radio division of the General Electric Co., was announced some time ago, has now been named sales manager of the division, according to R. J. Cordine, manager. Previous to his GE connection, Mr. Vogel spent 6 years with the RCA Mfgs. Co.

* Reiss Advertising Agency, formerly located at 67 W. 44th St., New York City, has a new address in Manhattan: 1276 Sixth Ave.

* Edgar H. Felix Co., which specializes in field intensity surveys, coverage determinations, allocation studies, and location investigations, has a new home at 32 Rockland Place, New Rochelle, N. Y. New quarters will give the concern better facilities for coordinating offices, laboratories, shops, and recording sites.

* Newly formed Associated Cinemas Studios, Hollywood, headed by Mark L. Gerstein, recently bought Freeman Lang's sound studios of that city. Interesting to radio dealers is the fact that the new studio will operate transcription labs for radio production.

* Going to 5,000 watts, WHN celebrated its new position among independent stations in the Metropolitan area with an elaborate, weekend schedule of inaugural features. With the new wattage, WHN coverage is announced as including, besides the Atlantic seaboard, States of Connecticut, Rhode Island, Maine, New Hampshire, New York, New Jersey, Pennsylvania, Maryland, Virginia and both Carolinas. L. K. Sidney is WHN's managing director.

* Mayor LaGuardia opened the ceremonies and also on the program were salutes from Washington, featuring Anning S. Prall of the FCC, governors and senators galore. Festive week had the form of an open house at WHN studios, with Lou Little, Jack Dempsey, Grover Whalen, Ed Sullivan, Mark Helinger, Will Hay, Ted Husing, Governor Lehman and others among the guests.

* Radio Booster Club, composed of manufacturers' agents' of radio, held a meeting last month at Los Angeles for the southern California section and elected officers: J. J. Perlmann, president; Lew E. Sperry, vice-president; Harry A. Lasure, secretary and treasurer. Directors elected include these officers and in addition J. T. Hill and Glen Shaver.

* Howard F. Smith is now the director for the entire Eastern sales area of the Universal Microphonograph Co., Inglewood, Calif. His territory includes New England and New York state, offices are at 553 West 14th St., New York City. Mr. Smith plans to maintain a complete factory branch in New York City, as well as an advisory service for clients.

* Gardner Metal Co., makers of Flux-Filled tubes, have appointed David M. Kasson & Co., 264 Canal St., New York City, their eastern representative. Kasson Co. will watch a stock of sales and contact radio set and accessory manufacturers and general industrial trade.

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**A HOT IDEA**

I'm a Funny Duck I Guess . And I Run A RADIO Store, Too . But, Anyway, When He Came in to See Me . . . And Said, Would I Write A Column . . .

About Why I FEATURE G-E RADIO . . .


That I Never Gave G-E Much of a THOUGHT . . . Then I Got To Figure How Much MORE I'MIGHT Have Made . . . If I Had Put The BANDMASTER Out in FRONT . . .

And I Called up the G-E FELLOW . . . And Said, I WAs SORRY . . . And I Had A HOT Idea For His COLUMN And Was Going to WRITE About It . . . And I Told Him What It Was . . .

Then He LAUGHED And Said, "It Looks Like We're BOTH Going to Make MORE Money FROM on" . . . And You KNOW . . . I Think He's RIGHT Enough!

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**"IT'S G-E RADIO"**

Radio Today
GENERAL ELECTRIC

Announces
A New Sensational ALL METAL-TUBE AUTO RADIO

Outstanding in Engineering... in Design... in Sales Appeal

SOME OF THE OUTSTANDING FEATURES
6 METAL TUBES
AUTOMATIC VOLUME CONTROL
6-1/2-INCH DYNAMIC SPEAKER
CONTINUOUS TONE CONTROL
4 WATTS OUTPUT
STEERING POST OR INSTRUMENT PANEL CONTROL
EASILY INSTALLED IN ANY CAR
List Price $49.95

OVER 19 MILLION CAR OWNERS NEED AUTO RADIO

This new General Electric Auto Radio will put new life into your spring and summer radio business. It opens up an enormous market full of sales and profit possibilities. If you want to ride the highway of profits — if you want to get your share of sales opportunities — get the details of the new G-E Auto Radio today! It's a real sales and profit leader.

Ask Your G-E Radio Distributor for Complete Information

GENERAL ELECTRIC

THE ORIGINAL METAL-TUBE RADIO

APPLIANCE AND MERCHANDISE DEPARTMENT, GENERAL ELECTRIC COMPANY, BRIDGEPORT, CONN.
YOUR KIND COOPERATION and ORDERS HAVE PUT the 1936 MOTOROLA OVER with a BANG!

Motorola has Again Taken America by Storm

Dealers all over the country have responded heartily to the new 1936 Motorola—flooding our factory with orders. These profit-wise men are cashing in on the marvelous reputation Motorola has earned with car owners. Motorola must be good to merit such enthusiastic acceptance.

4 STAR MODELS Meet Every Demand

FEATURES that Make EASY SALES—BIG PROFITS

Revolutionary improvements that insure outstanding listening quality and performance. Motorola's unrivalled features insure your profits and make selling easy.

MATCHES THE DASH OF ALL CARS
Fits Perfectly and Harmoniously ... Overhead Ear-Level Speakers Where Required.

ONLY MOTOROLA HAS THE "MAGIC ELIMINODE"
Newly Improved ... This Patented Feature Guarantees Motor-Noise-Free Reception ... Positively NO SPARK PLUG SUPPRESSORS.

MATCHED TWIN SPEAKERS
Give even distribution of sound to passengers in both rear and front seats. For combined Under-Cowl and Overhead Installation—or else Combined Under-Cowl and Rear Seat Installation.

Tie-In with Motorola Leadership Learn About the New 1936

ASK YOUR COMMUNITY MOTOROLA DISTRIBUTOR FOR DETAILS

GALVIN MFG. CORPORATION • CHICAGO