

# RADIO TODAY

\$1 Yearly

Caldwell-Clements, Inc., 480 Lexington, Ave., New York City

June, 1936

FOREIGN TUNING

MAGIC VOICE

PHANTOM CONDUCTOR

FOCUSED TONE

TIME TUNING

PRECISION EYE

TARGET TUNING

AUTOMATIC MAESTRO

FLYWHEEL TUNING

MAGIC ELIMINODE

TUNING BEACON

RHYTHM RADIO

TRI-FOCAL TUNING

ROBOT CONTROL

STREAM-LINE RADIO

TURRET SHIELDING

TELL-TIME RADIO

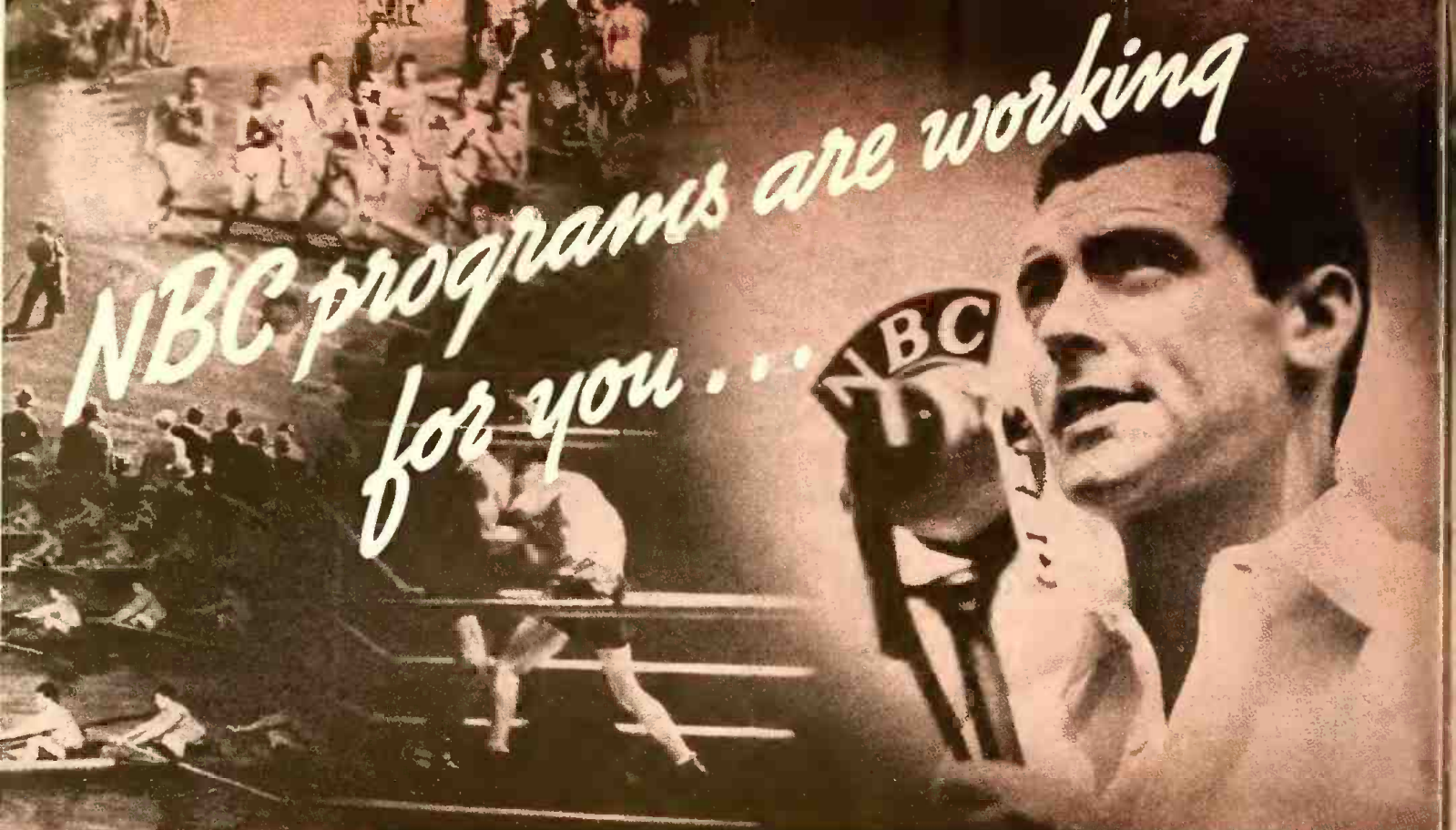
TELEDIAL TUNING

OUTDOOR RADIO

For key to these names of new offerings—see page 52

**SELL THE NEW  
FEATURES OF THE  
1936-37 RADIOS**





## Are you using them?

**NBC All-Star Programs  
deserve the finest radio  
sets your customers can  
afford — tell them so!**

The alert dealer never forgets the one big reason which brings a prospect into his store. It's PROGRAMS. Drama . . . comedy . . . music . . . variety . . . news.

And in NBC Programs, radio entertainment hits the peak in talent and showmanship. Most prospects know this, and so should you, for your sales' sake! Fine pro-

grams sell fine radios. Many a sale has been clinched by the mention of popular NBC stars and programs. It strikes a warm spot, a familiar note, in the interest of radio listeners. It puts the final extra ounce of **SELL** behind the finer sets whose points have been covered already. Try it!

This summer, radio interest reaches new heights, with Olympic Games, Baseball and the National Political Conventions at hand. These great summer features on NBC will help you sell more and better sets!

★  
*Tune in the RCA Magic Key Program every Sunday, 2 to 3 p.m., E.D.T., NBC Blue Network*

**NATIONAL BROADCASTING COMPANY, INC.**

A Radio Corporation of America Service

**NEW YORK • WASHINGTON • CHICAGO • SAN FRANCISCO**



**STEWART-WARNER RADIO—WITH  
SPECIAL NEW FINANCE PLAN—  
COMING JUNE 29th!...  
*You Bet I'll Wait!***

*"We've gone to town with  
Stewart-Warner Refrigerators  
... and believe me,  
I want their radio, too!"*  
—SAY DEALERS EVERYWHERE



**Sensational New  
Radio Finance Plans**

You know how Stewart-Warner led the way with a dealer finance plan in refrigeration. Well, something equally sensational in non-recourse and limited recourse finance plans for Stewart-Warner Radio dealers will be announced at the national distributors' convention in Chicago, June 29th and 30th. You'll be interested — get the facts!

5,000 Dealers who have cashed in on the sensational sale of Stewart-Warner Refrigerators this year know what Stewart-Warner engineering means. They have chalked up a sales record 127% above last year's sales! And they know that the reason was simple—Stewart-Warner engineering gave them what the public wanted, and what *they* wanted—in spectacular features and in honest value that keeps products sold!

That same kind of engineering has gone into the new Stewart-Warner Radio Line. We've been working on it for months. We were determined not to release it until we *knew* it was absolutely *right!*

It is right! Full details will be released at our national distributors' convention in Chicago on June 29th and 30th. Take our word for it,

that the new Stewart-Warner Radios will be worthy running mates for the 1936 Stewart-Warner Refrigerators! And this great line will be backed by a great merchandising program—including a national network broadcast.

In fine appearance, these new Radios will exceed your highest expectations. In spectacular performance they are the absolute "tops." And inside you'll find the kind of engineering you'd expect—knowing the 1936 Stewart-Warner Refrigerator Line!

Sit tight for a few days. Then go to town with the new Stewart-Warner Radio Line! Get in touch with your distributor now, and tell him you want the whole low-down just as soon as he gets back from Chicago!

**STEWART  
WARNER**  
CHICAGO, ILLINOIS

# ZENITH America's again

## New Line Proves Smashing Success!

**M**ANY and enthusiastic are the dealer and distributor comments on the new 1937 Zenith line now coming in from all over the country. At the recent Zenith Convention in Chicago, distributors placed more than five times as many orders for immediate delivery as last year. Read what important Zenith distributors say about their dealer meetings: "I have never witnessed a more enthusiastic acceptance of any radio line" wires one . . . "More thrilled than ever before in my radio career" telegraphs another . . . "Booked largest amount of radio business in entire history of this company" says a third. These are but a few of the many. Zenith is going places and doing things. Why not you? See your Zenith Distributor.

ZENITH RADIO CORPORATION, CHICAGO, ILL.



ZENITH  
STRATOSPHERE

25 tubes. Cabinet dated by basic principle of acoustics. Tunes American, foreign stations, police, amateur, aviator ships at sea. One Dynan High Frequency Speaker. 2 Concert Speakers. 50 high. Price \$750.00.



ZENITH  
8-S-154

8 tubes. Tunes American and foreign stations, police, amateur, aviator ships at sea. Auditorium 12-inch Electro-Dynan Speaker. 41 inches high. Price \$89.95.



ZENITH  
7-D-127 (AC-DC)

7 tubes (including ballast tube). Tunes American, and foreign stations, police, amateur, aviator ships at sea. 6-inch Dynan Speaker. 19 inches high. Price \$49.95.

## 1937 ZENITH FEATURES



**Acoustic Adapter**  
The only device now made that adjusts for different size rooms, different ceiling heights—adjusts for perfect performance in any size room.



**Big Black Improved Dial**  
With the "Squared Circle" and "Tell Tale" Controls. Zenith's most imitated feature again improved. Easy to read—easy to tune. Sets the set everytime.



**Lighting Station Finder**  
Twirl the control and the pointer speeds to the station you want. No more slow, laborious knob twisting.



**Improved Overtone Amplifier**  
The secret of Zenith's rich, full tone-depth. Preserves the natural overtones of music and voice. Just like a piano sounding board.



**Target Tuning**  
You tune with the eye as well as with the ear. When the shadow bullet is nearest center circle of the target, you're tuned in perfectly.



**Metaglas Tubes**  
1937 Zeniths are designed to use either Metaglas or Metal tubes. They are newer than the metal tube itself.

**Split-Second Re-Locater**  
Only means yet devised to re-locate short wave foreign and domestic stations. Enables you to return to them easily and accurately.



**Voice-Music-High Fidelity Control**  
Voice control adjusts for natural speaking voice. . . High Fidelity for startling realism. Bass for soothing effects. Foreign for best tone results with foreign stations. normal for a normal balance of frequencies.



# Most Copied Radio a year ahead!



**ZENITH STRATOSPHERE  
16-A-63**  
16 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea; long wave and U. S. weather receiving. Auditorium 12-inch Electro-Dynamic Speaker. 43-in. high. Price \$295.00.



**ZENITH  
12-U-159**  
12 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea, ultra short wave. 12-in., 6-in. Electro-Dynamic Speakers. 44 in. high. Price \$175.00.



**ZENITH  
12-U-158**  
12 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea, ultra short wave. Auditorium 12-inch Electro-Dynamic Speaker. 43 in. high. Price \$149.95.



**ZENITH  
10-S-160**  
10 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. Auditorium 12-inch Electro-Dynamic Speaker. 42 inches high. Price \$139.95.



**ZENITH  
10-S-130**  
10 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 12-inch Electro-Dynamic Speaker. 22 inches high. Price \$84.95.



**ZENITH FARM RADIO  
6-B-164**  
Superheterodyne. Tunes American, foreign stations, police, amateur, aviation, ships at sea. 12-inch Zenith Dynamic Speaker. Operates on six-volt storage battery. 43-in. high. Price \$89.95.



**ZENITH ZEPHYR  
6-S-147**  
6 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 10-inch Electro-Dynamic Speaker. 23 inches high. Price \$84.95.



**ZENITH ZEPHYR  
6-S-157**  
6 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 10-inch Electro-Dynamic Speaker. 40 inches high. Price \$79.95.



**ZENITH  
6-S-152**  
6 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 10-in. Electro-Dynamic Speaker. 40 inches high. Price \$69.95.



**ZENITH  
5-S-150**  
5 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 8-inch Electro-Dynamic Speaker. 38 inches high. Price \$52.95.



**ZENITH ZEPHYR  
6-S-137**  
6 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 8-inch Electro-Dynamic Speaker. 23 inches high. Price \$64.95.



**ZENITH  
7-D-126 (AC-DC)**  
7 tubes (including ballast tube). Tunes American and foreign stations, police, amateur, aviation, ships at sea. 6-inch Electro-Dynamic Speaker. 11 inches high. Price \$44.95.



**ZENITH COMPACT  
6-D-117 (AC-DC)**  
6 tubes (including ballast tube). Tunes broadcast stations, police, amateur, aviation. 5-inch Electro-Dynamic Speaker, Tone Control. 8 1/4 inches high. Price \$34.95.



**ZENITH COMPACT  
6-D-116 (AC-DC)**  
6 tubes (including ballast tube). Tunes broadcast stations, police, amateur, aviation. 5-inch Electro-Dynamic Speaker, Tone Control. 8 1/4 inches high. Price \$29.95.



**ZENITH BOAT AND TRAILER RADIO 6-B-107**  
6 tubes. Tunes American, foreign stations, police, amateur, aviation, ships at sea. Separate 8-inch Dynamic Speaker. Cabinet 13 1/2 in. high. Price \$69.95.

Prices Slightly Higher in West and Southern States

## A few of the new models





# America's Most Copied Radio again a year ahead!

## New Line Proves Smashing Success!

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The only device now made that adjusts for different size rooms, different ceiling heights—adjusts for perfect performance in any size room.



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With the "Squared Circle" and "Tell Tale" Controls. Zenith's most imitated feature again improved. Easy to read—easy to tune. Sets the set everytime.



**Improved Overtones Amplifier**  
The secret of Zenith's rich, full tone-depth. Preserves the natural overtones of music and voice. Just like a piano sounding board.



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You tune with the eye as well as with the ear. When the shadow bullet is nearest center circle of the target, you're tuned in perfectly.



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Only means yet devised to re-locate short wave foreign and domestic stations. Enables you to return to them easily and accurately.



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**ZENITH STRATOSPHERE**

25 tubes. Cabinet dictated by basic principles of acoustics. Tunes American, foreign stations, police, amateur, aviation, ships at sea. One Dynamic High Frequency Speaker, 2 Concert Speakers. 50 in. high. Price \$750.00.



**ZENITH STRATOSPHERE 16-A-63**

16 tubes. Tunes American, foreign stations, police, amateur, aviation, ships at sea; long wave tuning U. S. weather reports. 1 Auditorium Dynamic Speaker, 1 6-inch High Frequency Reproducer. 43-in. high. Price \$295.00.



**ZENITH 12-U-159**

12 tubes. Tunes American, foreign stations, police, amateur, aviation, ships at sea, ultra short wave. 12-in., 6-in. Electro-Dynamic Speakers. 44 in. high. Price \$175.00.



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**ZENITH 10-S-130**

10 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 12-inch Electro-Dynamic Speaker. 22 inches high. Price \$84.95.



**ZENITH 8-S-154**

8 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 12-inch Electro-Dynamic Speaker. 41 inches high. Price \$89.95.



**ZENITH FARM RADIO 6-B-164**

6-tube Superheterodyne. Tunes American, foreign stations, police, amateur, aviation, ships at sea. 12-in. Zenith Dynamic Speaker. Operates on single 6-volt storage battery. 41 in. high. Price \$89.95.



**ZENITH ZEPHYR 6-S-147**

6 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 10-inch Electro-Dynamic Speaker. 23 inches high. Price \$84.95.



**ZENITH ZEPHYR 6-S-157**

6 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 10-inch Electro-Dynamic Speaker. 40 inches high. Price \$79.95.



**ZENITH 6-S-152**

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**ZENITH 5-S-150**

5 tubes. Tunes American and foreign stations, police, amateur, aviation, ships at sea. 8-inch Electro-Dynamic Speaker. 38 inches high. Price \$52.95.



**ZENITH 7-D-127 (AC-DC)**

7 tubes (including ballast tube). Tunes American and foreign stations, police, amateur, aviation, ships at sea. 6-inch Dynamic Speaker. 19 inches high. Price \$49.95.



**ZENITH ZEPHYR 6-S-137**

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**ZENITH COMPACT 6-D-117 (AC-DC)**

6 tubes (including ballast tube). Tunes broadcast stations, police, amateur, aviation. 5-inch Electro-Dynamic Speaker. Tone Control. 8 1/2 inches high. Price \$34.95.



**ZENITH COMPACT 6-D-116 (AC-DC)**

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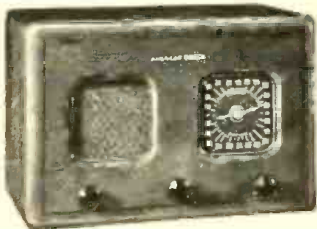
## A few of the new models

# AMERICAN BOSCH

... assures your **SUCCESS IN THE RADIO BUSINESS** with this new market-measured line

**YOU** can't help but be a "bull market" success with this dazzling new American-Bosch Radio line. Featuring the "Automatic Maestro," radio engineering triumph of the day... featuring metal tubes... featuring Super-Size Dials... featuring Semaphore Tuning... featuring the exclusive Band-Stand Baffle... featuring a combination of 24 all-star advantages in a market-measured line that is carefully calculated and priced to embrace every type and class of customer.

**MODEL 604**—5 tube 2 wave band improved superheterodyne Personal radio for AC-DC operation. Range: 530 to 1500 Kilocycles, 1500 to 3600 Kilocycles.



Cabinets are deliberately designed to captivate the woman. Here are radios with flash and finesse... radios with dash and go... radios that fill the eye... radios so elegant in line and finish that they will make any woman's pulse quicken at the prospect of having one in her own living room.

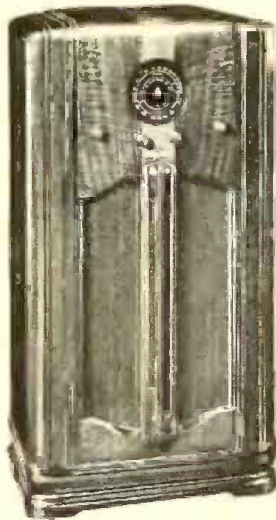
Mail coupon at lower right for "Success in the Radio Business," our new booklet that tells the whole story of the excellence in engineering, styling, pricing and planning of the greatest American-Bosch Radio sets ever made!

**UNITED AMERICAN BOSCH CORPORATION**  
 SPRINGFIELD, MASS.      NEW YORK      CHICAGO      DETROIT  
 American-Bosch Radio is licensed under patents and applications of R.C.A. and Hazeltine Corp.

**MODEL 515**—5 tube, 8 tube performance 2 wave band improved superheterodyne Personal radio for AC current. Range: 540 to 1500 Kilocycles, 1500 to 3600 Kilocycles.

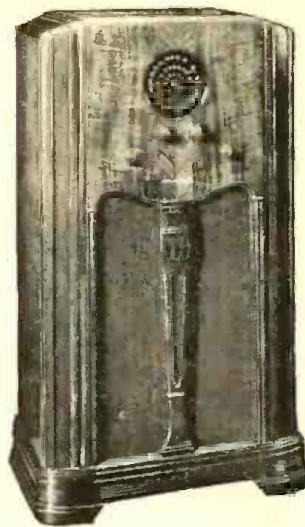


**MODEL 605C**—5 tube, 8 tube performance American-Foreign-Police improved superheterodyne Console. Range: 540 to 1700 Kilocycles, 2000 to 7200 Kilocycles. Super-size full vision black illuminated airplane dial; with scales of different color for each wave band. Perfect automatic volume control. High Fidelity Modulator. Beautiful Console Cabinet.

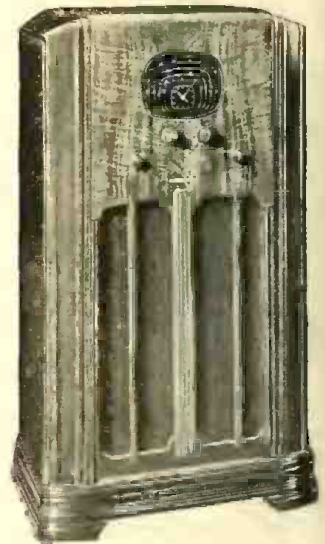


**MODEL 650**—6 tube, 9 tube performance Console for AC operation. American-Foreign-Police 3 Band improved superheterodyne. Range: standard broadcast 540 to 1500 Kilocycles; police and short wave 1500 to 4500 Kilocycles; short wave 5500 to 16500 Kilocycles.

**MODEL 625**—7 tube, 10 tube performance Console for AC-DC operation; otherwise same as Model 650.



**MODEL 660C**—"Automatic Maestro" model; 7 tube, 10 tube performance, All-Wave American, Police and Foreign improved superheterodyne Console. Range: standard broadcast and police 525 to 1800 Kilocycles; police and short wave 1800 to 6000 Kilocycles; and short wave 6000 to 18500 Kilocycles.



**MODEL 670S**—"Automatic Maestro" model; 9 tube, 11 tube performance, All-Wave American, Police and Foreign, plus U. S. weather band, improved superheterodyne Console. Range: standard broadcast and police 540 to 1800 Kilocycles; police and short wave 1800 to 6000 Kilocycles; short wave 6000 to 18500 Kilocycles; and long wave U. S. weather band 150 to 375 Kilocycles.



# THE AUTOMATIC MAESTRO



*Centromatic*  
**UNIT**

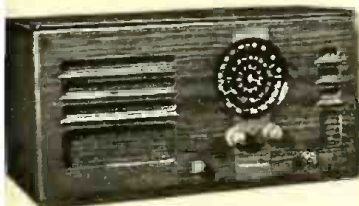
**ONLY AMERICAN-BOSCH HAS IT**

# 24 Reasons

why you can make a "bull market" success selling American-Bosch Radio

- ★ Automatic Maestra
- ★ Metal Tubes
- ★ Band-Stand Baffle (Patent Applied For)
- ★ Super-Size Dials
- ★ Split-Second Tuning Indicator
- ★ Semaphore Tuning—Automatically Flags the Station with Electrical Precision; and Signifies the Wave Band with a Colored Beam
- ★ 90% Less Wiring
- ★ Over 100 Less Soldered Connections
- ★ Every Set Multi-Wave
- ★ More American and Foreign Programs
- ★ Noise Suppression on-the-Station
- ★ Noise Suppression between Stations
- ★ High Fidelity Modulator
- ★ In-Built Wave Trap—suppresses interference from code
- ★ Perfect Automatic Volume Control
- ★ High Fidelity
- ★ Iron Core Coils
- ★ Multiplied and Reduced Speed Station Selector
- ★ Anchored Construction
- ★ Market-Embracing Line—Meets Every Price Class
- ★ Buy-Appeal Cabinets
- ★ American-Bosch Dependability
- ★ Recognized Value
- ★ Full-Sized Acoustically Correct Speakers

*American-Bosch is the only radio line that offers this complete combination of up-to-the-minute features in radio performance, radio styling, radio standards.*



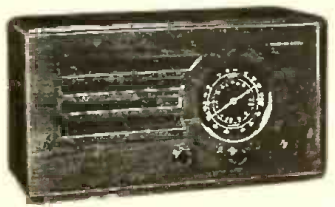
**MODEL 660T**—"Automatic Maestro" model; 7 tube, 10 tube performance All-Wave American, Police and Foreign improved superheterodyne Personal radio. Range: standard broadcast and police 540 to 1800 Kilocycles; police and short wave 1800 to 6000 Kilocycles; and short wave 6000 to 18500 Kilocycles.



**MODEL 640**—6 tube, 9 tube performance Personal radio for AC operation. American - Foreign - Police 3 Band improved superheterodyne. Range: standard broadcast 540 to 1500 Kilocycles; police and short wave 1500 to 4500 Kilocycles; short wave 5500 to 16500 Kilocycles.

**MODEL 620**—7 tube, 10 tube performance Personal radio for AC-DC operation; otherwise identical with Model 640.

**MODEL 605**—5 tube, 8 tube performance Personal radio for AC operation. Range: 540 to 1700 Kilocycles, 2000 to 7200 Kilocycles.



Also: New battery-operated models for 6-volt storage battery; and far air cell, dry cell, or 2 volts of storage battery. Mail coupon at right for information and prices about these and all other sets illustrated and described here.



**MODEL 670C**—"Automatic Maestro" model; 9 tube, 11 tube performance, All-Wave American, Police and Foreign, plus U. S. weather band, improved superheterodyne Console. Range: standard broadcast and police 525 to 1800 Kilocycles; police and short wave 1800 to 6000 Kilocycles; and long wave U. S. weather band 150 to 375 Kilocycles.



**MODEL 680**—"Automatic Maestro" model; High Fidelity 12 tube, 15 tube performance, All - Wave American, Police and Foreign, plus U. S. weather band, improved superheterodyne Console DeLux. Range: standard broadcast and police 525 to 1800 Kilocycles, police and short wave 1800 to 6000 Kilocycles; short wave 6000 to 18500 Kilocycles, and long wave U. S. weather band 150 to 375 Kilocycles.



**UNITED AMERICAN BOSCH CORP., Dept. RT-6  
SPRINGFIELD, MASS.**

Please send copy of "Success in the Radio Business" containing complete information about the new American-Bosch line.

Name.....  
Address.....

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**Brand New! . . . From Chassis to Aerial!**



**PHILCO  
FOREIGN  
TUNING  
SYSTEM**



**. . . and again "Only Philco has it!"**

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*Sales Manager*

# RADIO TODAY

ORESTES H. CALDWELL  
*Editor*

M. CLEMENTS  
*Publisher*

480 Lexington Ave.  
 New York City  
 Tel. PLaza 3-1340

Vol II, No. 6

## GENERAL BUSINESS BRISK

★ The business index continued to climb all through May, and for the opening weeks of June stood at its highest since the recovery began. Consumer income continued to increase, indicating a continuation of strong retail buying power.

Aside from international troubles abroad, and the internal situation in France, the only unsettling condition in the American picture has been the outbreak of several strikes.

In certain parts of the radio industry, accompanying record re-employment with pay-rolls the largest in all history, there are evidences that labor is somewhat on edge and that labor disturbances may interrupt production programs.

## RMA SEEKS CHANNELS FOR FACSIMILE AND TELEVISION

★ J. M. Skinner, chairman of the RMA committee on the radio industry's recommendations, was to appear before the Federal Communication Commission hearings at Washington, the week of June 15, proposing future allocations as follows:

*Megacycles*

- 0.5 to 1.6 Standard broadcasting
- 37 to 42 Continuous band for ultra-high-frequency broadcasting and facsimile
- 42 to 56 Television, 2 channels
- 60 to 90 Television, 5 channels
- 120 & above Space for television research

It was further recommended that all assignments to aural broadcasting be made eligible for commercial facsimile broadcasting as an adjunct service for midnight-to-morning operation. In the 37-42 mc. band above, it was proposed that aural assignments be made at the higher end of the band, the division between aural

and facsimile broadcasting to be made as future needs indicate.

Other members of Mr. Skinner's committee are E. F. McDonald, Jr., Chicago, Powel Crosley, Cincinnati, and R. R. Kane of Camden, with a special engineering sub-committee consisting of L. C. F. Horle, New York, A. F. Murray, Philadelphia, and Dr. C. B. Jolliffe, Camden, N. J. Dr. W. R. G. Baker of Bridgeport, Conn., is chairman of the RMA's special allocation committee. Co-operating also is the National Association of Broadcasters, which has retained Dr. Charles B. Aiken of Purdue University as special consultant on allocation matters.

## OUT-AND-OUT GROWTH

★ Handsome twist in the production and sales of sets and tubes is noted in the figures for the first quarter, 1936. Truth is that production of sets is up 11.5 per cent in the number of units and up 9 per cent in

dollar value over same items for last year.

Current trend in the tube biz is even stronger: production up 21 per cent in units and up 15 per cent in dollar value. Here's how things piled up for the first quarter of 1936:

(Units and Value)

Sets ...	1,287,463	\$25,954,200
Tubes ..	18,475,077	6,066,462

## PUSH BETTER LINES FOR FALL

★ In the general merchandise field, there is a distinct recognition of demands for better-quality items this Fall, and the higher-priced brackets will be pushed in various luxury lines. This gives the radio man a clue as to what to expect his customers will want, as cooler weather comes.

Early date for the Automobile Show this year, will change usual Fall production schedules in all related lines, advancing the season one



To Crosley sales battalions at Crosley convention, Cincinnati, May 8, President Powel Crosley, Jr., introduced Vice-President Powel III (center, left) and Sales Manager Tom Berger (center, right). At extreme left stands Vice-President J. P. Rogers.



Larry Gubb, J. M. Skinner and Tom Kennally, Philco executives, seen with a group of Philco boosters on the first cruise of the "Monarch of Bermuda" to Havana, Cuba. Some 2,500 happy, prosperous Philco dealers were guests on the three convention cruises, from May 15 to June 8.

or two months. Meanwhile the possibility of labor shut-downs in radio-set production, has led cautious radio distributors and dealers to get their commitments in early to insure having stock on hand.

### NETWORK TOWER

★ Studios of the century, built as needed by the Columbia Broadcasting System, will rise on a million-dollar-plus site in midtown New York during the coming months. Company has purchased a location worth \$1,735,000 at 59th St. and Park Ave. and will make a later announcement about start of construction and building plans.

New radio center will be fashioned in the latest broadcast pattern, and is described by Columbia as the first structure in America planned specially to headquarter the heated commerce of a major net.

### SALUTE THE MAJOR

★ "SATURDAY, FORMERLY A SLACK DAY, NOW A BUSY ONE—PEOPLE CHECKING UP AGAINST FAULTY RECEPTION OF YOUR PROGRAM."

This is a sample sentiment wired to Major Bowes by groups of service men from five different states at the opening of National Service Week, May 24. Messages exclaiming that the Amateur Hour had substantially boosted servicing were sent by representatives of the Radio Technicians Guild and the National Association

of Radio Service Men, and were acknowledged by the Major on the air May 24th.

Wires declared that listeners were determined to have their sets in good working order for the Sunday night Bowes feature. They came from Mitchell, S. D.; San Antonio, Tex.; Kalamazoo, Mich.; Hibbing, Mont., and Boston, Mass.



A million-dollar order signed during the RCA-Victor convention at Chicago by Charles Sonfield, president Bruno-New York. At his left is Irving Sarnoff, vice-president. Others looking on are RCA's J. W. Griffin, L. W. Teegarden, J. H. Harris, Judson S. Sayre and W. Kelly.

## REPUBLICANS START BIG AUTO-RADIO CAMPAIGN

★ An army of taxicabs saved Paris in 1914. An army of radio-equipped automobiles may save the Republican party at the November elections, if the plans of the Radio Division of the Republican National Committee are carried out.

Announcing that "nearly 5,000,000 automobiles in the U. S. are radio-equipped" (We put it nearer 4,000,000—Editor) the GOP Radio Division proposes to use such auto-radios for "a Republican Rally on Every Street Corner."

Quoting placards exhibited at the Cleveland convention: "Help us organize motor squads in your community. These radio-equipped autos can help local political leaders to get people to register, get people to vote, distribute campaign literature, put color and life into political parades, and increase attendance at political meetings. Get word to all owners of radio-equipped autos to listen to all broadcasts."

Groups to be particularly reached by auto-radio are factory-workers at noon-hours, by-standers at popular street-corners, family parties on picnics, and young people parked on sequestered country roads. "Don't forget the youth of America. They must be reached!"

"Radio captains" are being appointed to stimulate listening.



With "Radio Today's" candid camera on the General Electric cruise to South America, in May. Earl Poorman, GE merchandise boss at New York, and Mr. and Mrs. R. L. Hanks of Hartford, Conn.

## ATWATER KENT QUILTS RADIO

★ The Atwater Kent Manufacturing Company, one of the pioneer manufacturers in radio, has announced to its distributors its decision "less actively to promote its radio line." Less than 100 employes would be affected, the statement declared, adding that the company was not in a position to state what new lines of activities are planned for the future.



H. J. Shartle, Grunow salesman, hears a new one from Francis Stern of Hartford, during the General Household convention, Chicago, June 5.

It is said Mr. A. Atwater Kent, president and owner of the manufacturing company, has disbanded his production and sales organization, and will make no more radio sets this year. In earlier seasons the production of Atwater Kent sets reached 800,000 annually, but schedules had been greatly curtailed in recent years, awaiting improved conditions in the radio industry and general business. The decision to close shop came as a great surprise, since the company had conducted a half-million-dollar advertising campaign in magazines, newspapers and broadcasting only during the past year.

## SALES CONVENTIONS CONTINUE

★ Manufacturers have been holding their 1936 conventions far ahead of 1935 schedules, in order to get early starts on the Election Year market for receivers. Crosley, RCA-Victor, Philco, Zenith and General Household Utilities meetings are over, but a number of other set-makers have dates ahead with their sales organizations to introduce their new radio lines:

Fairbanks, Morse & Co., Indianapolis, Ind., June 11-12.

United American Bosch Corporation, Waldorf-Astoria, New York City, June 22.

Sparks-Withington Co., Jackson, Mich., June 25-27.

Stewart-Warner Corporation, Chicago, June 29-30.

## FARLEY'S CASH CUSTOMERS

★ Tumbling into the mail rooms at NBC, thousands upon thousands of posted sentiments from the radio audience pile up almost three times as fast as last year. Letters were counted at the end of April; the total was 3,084,308, which was almost equal to the full year of 1933.

Letter people at NBC tore open 5,100,000 in 1934, a record among yearly figures, but since more than half of that number have been received in four months of 1936, it appears this year will set a new high.

## PORTABLE RADIOS ATTRACT SUMMER BUYERS

★ Portable battery radio sets, long popular in England, seem to have the call this year on this side of the Atlantic. Retailers report requests from customers for "a radio I can carry with me to the country."

During the past month some 250 inquiries have been received by RADIO TODAY from dealers asking where they can purchase battery portables.

Several manufacturers are already producing such portable receivers for personal use. These include the portables made by Ansley, New York City, International Radio Corporation, Ann Arbor, Mich., and Simplex Radio Co., Sandusky, Ohio.



At the Zenith sales convention, Paul M. Bryant, assistant to President E. F. McDonald, rejoined old associates.

# PREVIEW OF 1937

★ MORE than ever before, the new 1937 radio sets give the radio dealer an opportunity to break all previous sales records. There are features which enable him to sell sets to families who do not at present own a radio—other features provide a basis of showing that old sets are now obsolete and should be replaced.

These new features are more than descriptive phrases—they are real ideas that can be shown and demonstrated to the customer. This year the trend in new developments has been to produce features that the customer can see and touch—no longer must the dealer talk about some improvement that is hidden under the chassis.

## Automatic tuning

Perhaps, the most outstanding developments as far as the public is concerned, have taken place in tuning systems. As early as the middle of June two manufacturers have announced sets with automatic tuning. Philco's more expensive sets are tuned by turning a small dial lever to the space having the name of the desired station. Grunow with its "Teledial" tuning utilizes a giant-size dial operating similarly to a telephone dial. In contrast to various automatic devices introduced several years ago, the new systems work without a miss, owing to the new circuit development of AFC or automatic frequency control.

Dials this year have increased in size so that they can be easily read. The white-on-black idea has been adopted by many manufacturers. General Electric has the "Colorama" dial which operates on a color scheme similar to a traffic-light system. When the set is out of tune the dial is colored red—as the condenser is tuned to a station the dial turns green. In addition there are markings of the station names below the dial scale.

The Arvin dial with clock type tuning has a spotlight illumination which travels with the main pointer making station finding extremely easy. It is a small bulb that travels behind the dial to spot the stations on whatever band that is in use. The cathode-ray tuning indicator is also part of the dial.

Philco has a dial on which the

names of the various foreign stations are printed—it shows the user where to look for the important foreign stations.

## All-in-one dials

Zenith has taken the set controls and made them part of the dial—the position of the wave-change switch, tone and volume controls is indicated on the dial. The tuning indicator known as "Target tuning" is also combined with the dial. Fairbanks-Morse uses a similar idea in its "Semaphore dial"—in the manufacturer's own words, "Visual indication of band, tone, and volume."

Emerson has a dial that presents a very fine appearance—on the all-wave jobs a clock scale is incorporated for ease in logging. The dials have a distinctive aspect reminding one of the face of a fine watch, particularly the dials having only two wave-bands.

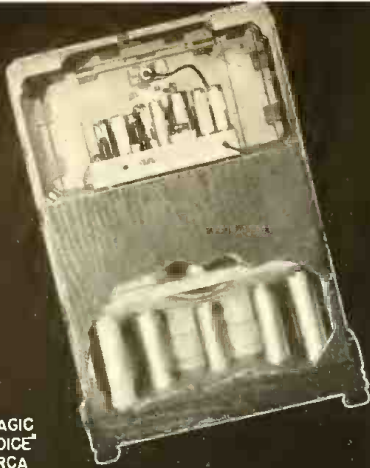
While new dials will help sell sets, the dealer can talk and demonstrate AFC to the customer on several sets. Among those having this latest circuit development are Crosley, General Electric, Grunow and Philco. It is easy to show the poor tone quality obtained when the set is out of tune—then a turn of the AFC knob and perfect tone results. AFC will find wide acceptance, particularly with those who do not take the trouble to tune properly. Also AFC makes tuning on short-waves easier.

## Better tone

Each year finds the manufacturers giving the public better tone quality—the 1937 sets surpass those of previous years. On the basis of tone practically every past set is now obsolete. Not only can the customer hear the improvement, but in many cases it is possible to show him the device which is responsible for the excellent reproduction. The importance of having a set which will reproduce both the high notes and the low ones is shown in the chart on page 17, "Tone ranges in radio."

"Magic voice" is the name given by RCA-Victor to its new tone development. A series of open tubes are mounted on the bottom of the console connecting to the outside. These

"MAGIC VOICE"  
-RCA



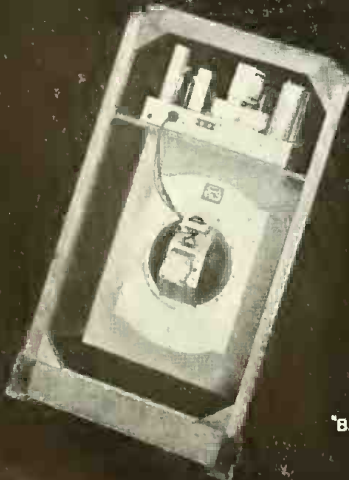
"GEMLOID DIAL"  
-EMERSON



"COLORAMA DIAL"  
-GENERAL ELECTRIC



"TELEDIAL"  
-GRUNOW



"BAND-STAND  
BAFFLE"  
-AMERICAN  
BOSCH

# RECEIVER FEATURES

pipes have the characteristic of giving bass response without resorting to extremely large baffles.

Special baffle construction is utilized by American-Bosch and Crosley. "As resonant as the shell in the band stand" is the way American-Bosch describes its development. Crosley has a "Vibracoustic sounding board" which eliminates fuzziness and diffuses the high notes. The solid section left by the perforated construction has a tendency to prevent vibrations of the cone from continuing after the electrical impulses have ceased.

The Fairbanks-Morse "Tone projector" is a bowl-shaped device mounted between the speaker and the console—it deflects and diffuses the higher frequencies, thereby providing more faithful reproduction.

In order to provide "the best seat in the house" effect, Zenith has an "Acoustic adapter" which adjusts the set for different ceiling heights, varying wall angles, and different sized rooms.

## Circuit details

Foreign reception is increased in most sets through the use of a built-in antenna tuning system or compensator for use with doublet antennas. Some of the sets using this idea are Arvin, Crosley, Grunow, Philco, and Zenith.

Iron-core i-f. transformers are finding greater acceptance. RCA-Victor uses permeability-tuning at the i-f. frequency—air-type trimmer condensers are used in the r-f. and oscillator circuits, thereby providing greater circuit stability.

The octal-base tube has been adopted as standard by most manufacturers in all but their lowest price sets. Two notable examples of companies using the "G" type tubes (glass on octal base) are Philco and Zenith.

"Turret shielding" is the Fairbanks-Morse key sales appeal. Each set is shielded with a metal screen fitting over the top of the set and a plate covers the bottom. In this way stray signals are kept from producing squeals and interference.

Volume range expansion is found in the Crosley sets under name of "Phantom conductor." An "Automatic volume governor" is used on the Zenith line—it permits the

owner of the set to limit the maximum volume of the set; unauthorized persons or children then cannot exceed this maximum regardless of how they twist the volume control.

This year the dealer has many new cabinet styles to sell in numerous finishes. RCA-Victor has table sets in white. Zenith will supply certain of its models in maple, white, or black—walnut is standard. Grunow also has white and black finishes.

## Cabinet design

The Admiral console has a sloping front panel and specially curved dial which permits tuning of the set while one is standing up—this convenience feature should find wide acceptance.

Practically every manufacturer has taken advantage of various grain effects to beautify the designs. Pencil stripes and inlays are being used to great advantage. RCA has gone modernistic and introduced what it calls "Tubular steel" sets. These cabinets use chromium-plated steel tubes as decorative trim and as legs. For clubrooms, modernistic apartments, and similar places, they should find much appeal.

Emerson has some striking models using small amounts of metal trim—striking, but conservative wood inlays are found in many of the models.

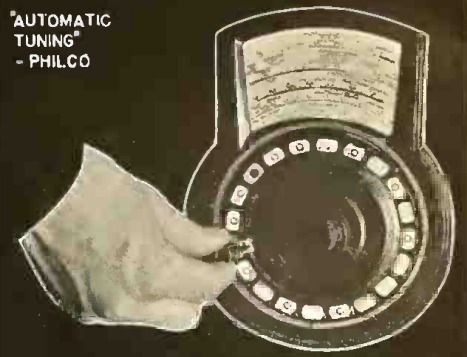
"Zephyr" styling is the modernistic design of Zenith. A table type Zephyr receiver is shown on page 13 of this issue. This design is used with certain consoles and chair type receivers. The latter are sets designed to be placed next to a chair. Controls are found on the top of the instrument.

With these features, which are but a few of the many, the dealer should have no difficulty in making the 1936-7 season a record year for radio—particularly with the stimulus of the presidential campaign.

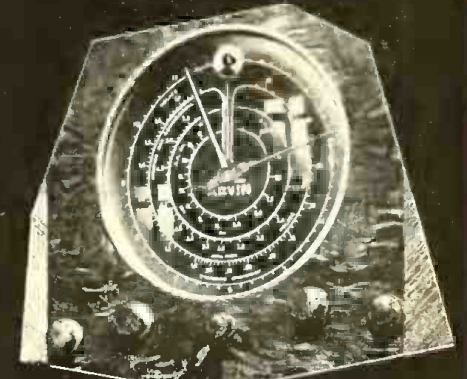
For never has the public received so much for its money as in these new 1936-37 sets. Here are new advances in styling which will attract feminine as well as masculine buyers. Sell the women on cabinet style.

And the engineering advances of the new receivers include more new features than ever before, more automatic gadgets, more conveniences of control. In short, the public's radio dollar was never worth so much as it is going to be this summer and fall.

"AUTOMATIC TUNING"  
- PHILCO



"TELL-TALE CONTROLS"  
-ZENITH



"SPOTLIGHT DIAL" - ARVIN



"VIBRACOUSTIC SOUNDING BOARD"  
-CROSLY



"TURRET SHIELD"  
-FAIRBANKS MORSE

# BRAND NEW CREDIT PLANS

- finance companies go to work on radio sales
- collection and checking all done for dealers

★ TERRIFIC number of radio prospects are privately fretting throughout sales presentations, about whether they can conveniently make payment for the new receiver. They may decline to admit it, and they may give another reason for their reluctance to buy, but all the time they are inwardly concerned about the question of payment.

Many a buyer has stomped out of a radio store muttering about "looking around," not because he was not pleased with the merchandise, but because he hadn't the ready cash to make the buy.

## CCC steps in

This may happen even after the dealer's ads and his window placards have screamed out generalities about attractive time payment plans. Point is that the patron never quite knows how the scheme will work out in respect to the set of his choice, as to down payments and periodic installments. Obviously the best cue for the dealer is to have a sound, simple credit offer to make any prospect who may be worrying about such matters.

Commercial Credit Co., Baltimore, actively supporting its statement that "the most important radio market is the time payment market, because the great majority of radio receivers are sold on time" has presented a plan whereby dealers may work out formal and convenient credit schedules.

To hook up with Commercial Credit, dealers supply their distributor with a financial statement, and sign an agreement. When these are OK'd by the Baltimore concern, dealers may then receive financing service from the 156 branch offices of the firm.

## Collection simplified

Maximum number of months in which CCC interests itself is 12, and the minimum amount financed is a home set selling for \$49.95. The service also requires a minimum down payment of 10 per cent. Commercial Credit buys only paper which it considers, after it investigates, a good risk, but where the purchaser lives within telephone range of one of the CCC offices, decisions can be made within a few hours.

Once CCC takes over an account, the dealer must clear out of the col-

lection business. Finance company sends a payment coupon book to the purchaser and takes over the whole thing.

Suppose a dealer sells a console to Mr. Smith for \$100. Smith forks over a down payment of \$10, so that the unpaid cash balance is \$90. Dealer takes a look at the CCC rate chart and finds that the amount of the contract must then be, under the charge schedule for 12-month periods, \$100.20. Thus Mr. Smith agrees to pay \$8.35 monthly for that period. All this provided Commercial Credit finds Mr. Smith to be a reasonable risk.

If Mr. Smith happened not to be easily accessible to CCC, the dealer could hurry up things by having some local credit bureau make a report on the Smith status in advance. This report could be attached to the retail contract when sent to Commercial, who in most cases would be satisfied with just that.

## C. I. T. confidence

Another healthy step-up in financing service offered to the radio dealer is seen in the doings of the Commercial Investment Trust, Inc., headquarters at New York, Chicago, San Francisco. Here's the story, with its newsy climax: four years ago CIT had an 8 per cent plan, two years ago it was a 7 per cent plan, and now its

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## "Summer Business" Finance Plan

To stimulate sales this summer, Philco with CCC has developed a floor-stock plan for dealers by which the dealer pays 10 per cent down and interest at rate of one-half per cent per month.

The balance of the price of his stock comes due in September, but the dealer can then get 30-day renewal by paying 10 per cent of balance due. This plan can be entered into during June and July with payments as low as \$50.

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a 6 per cent plan, with certain fixed minimum charges for lower balances and for shorter maturities.

CIT's radio project has just become effective. As a result, qualified radio dealers the nation over have plastered in their windows and on their walls, the company's flashy but attractive announcement to the effect that "the new 6 per cent budget plan reduces time payment costs." The organization has highly localized aspects, with branch offices in 145 cities. It is easy for the dealer to connect with the outfit, and to get accounts checked.

The much-discussed 6 per cent plan is available only to those dealers who can establish their standing with CIT, and can convince the company that their credit paper is decent and bona fide. Many radio men have already used the service on household mechanical appliances handled elsewhere in the store.

Among the dealers whose credit procedures are substantial, though, CIT will offer financing service on any acceptable household radio; provisions are revealed on a rate card which is fixed, definite and easy to get at. What the company means by "6 per cent plan" will be clear when these rates are noted; a fixed minimum charge is substituted in the chart in specific cases of low unpaid balances or short maturities.

## Radio's terms

Specifically, this company will finance unpaid balances on household radios up to \$75 for 12 months, balances from \$76 to \$125 for 14 months, \$126 to \$175 for 16 months, and over \$175 for 18 months—all this via the 6 per cent plan. However, CIT requires a down payment of \$10 or of 10 per cent of the delivery price, whichever is higher.

For instance, suppose a dealer sells a RCA console on time for \$80. If he has established himself with CIT, and wishes to interest the company in the case, he must ask a down payment of \$10. The unpaid cash balance is then \$70, which CIT will finance for 12 months, and the rate chart reveals that the total amount of the contract will be \$78. Thus the dealer's customer signs a contract to pay \$78 in 12 equal monthly payments of \$6.50 each.

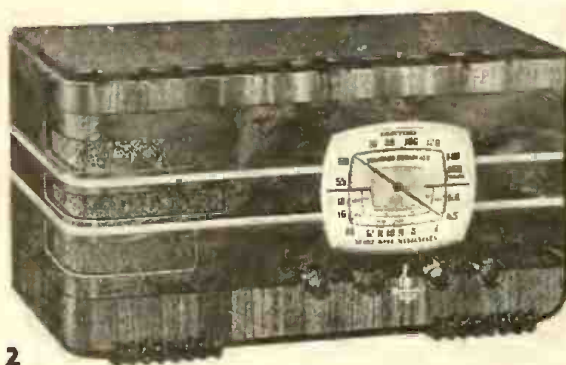
Besides the localized service which the company maintains direct to radio dealers, CIT has important hook-ups with many of the leading radio concerns, including RCA, Atwater Kent, Stromberg-Carlson, Stewart-Warner, Grunow, Crosley, Sparton, Graybar, Emerson and Arvin.



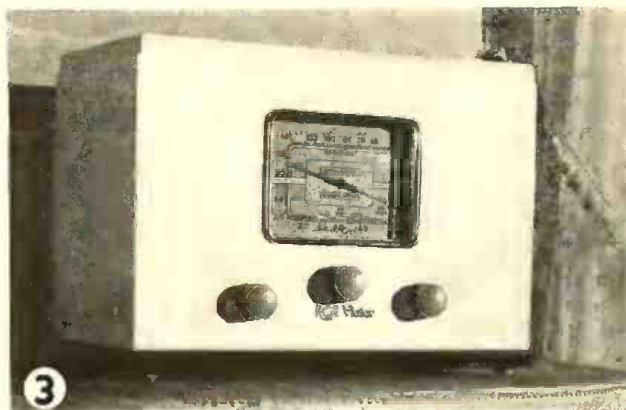
# NOVELTY, BEAUTY, MARK 1937 CABINETS



1



2



3



4



5



6

1—"Place it in the corner" is the feature of this modernistic cabinet designed by Grunow.

2—Stripes and grained inlays make this Emerson unusually attractive. The dial derives beauty from its striking simplicity.

3—White for the nursery or the kitchen—a creation by RCA-Victor.

4—The ace of all Philcos a console with full-length doors of matched, highly figured butt walnut.

5—A dial mounted on the sloping front makes this Admiral set easy to tune from a standing position.

6—The Zenith Zephyr bears the influence of European cabinet design.

Two million dollars' worth of these radio-speaker organs were sold during the past twelve months.



# THRU THE LABORATORY KEYHOLE

## RADIO-TUBE MUSICAL INSTRUMENTS SEEN AS COMING INDUSTRY

\* IN the average radio set, tubes are used to reproduce music. But similar tubes and circuits can be used as original sources of musical tones, so that a performer may sit before a keyboard and create music from such electrical oscillations.

For centuries people have delighted in creating their own music. Prior to the advent of the phonograph and radio broadcasting, nearly all music was individually created in this way. This universality of musical interest suggests that large market opportunities exist for individually played, creative musical instruments employing electrical oscillations instead of vibrating strings or air columns.

Already a number of such radio-tube musical instruments have been developed, and some are being offered on the market. So far, however, radio-receiver manufacturers have not gone into this field (with the exception of RCA's entry into Therman production several years ago).

### Opportunities missed

That radio-set makers have not gone into the musical-instrument business is, however, not surprising. The telephone was not developed by the telegraph interests. Electric lights were not pioneered by the oil-lighting magnates of the day. Railroads did not promote airplanes. Instead, in each case it was left for an entirely

new group to develop the innovation and carry it to the point of commercial use.

If this history is repeated in the electrical-instrument field, radio-set makers will be overlooking a logical extension of their own business that is already bringing in many hundreds of thousands of dollars yearly, declared Benjamin F. Miessner, radio inventor and experimenter of Millburn, N. J., who already has a number of important radio-receiver inventions to his credit.

### \$2,000,000 sales

Speaking before the Institute of Radio Engineers at New York last month, Mr. Miessner presented demonstrations of several new electronic music instruments, whose recent commercial development has set a phenomenal first year's sales record exceeding \$2,000,000. Over 1,500 Hammond organs have been sold, retailing at \$1,250, he said. Electrically-amplified guitars, banjos, ukuleles, violins, and other portable instruments have also been produced in considerable numbers.

"It is regrettable that the radio industry has given such scant attention to this the youngest member of the electronic family," commented Mr. Miessner. "We are seeing a revolution in the methods of generating and controlling musical tones, and the future of this infant industry is exceedingly promising. All indications point to a considerably larger business this coming year."

Miessner, a pioneer inventor in this field with 32 patents of his own —

traced the evolution of electric tone production, pictured the important developments, and demonstrated a number of the new instruments.

He stated that the U. S. patents alone in this field already number about 300, and that these are rapidly increasing; that the normal incubation period of forty years for radically new inventions has already transpired, and that commercial activities are now well under way.

### New instruments

Among the instruments demonstrated were the Hammond electric organ, the Telefunken Trautonium, the Rickenbacher guitar, and a new electronic organ developed by Mr. Miessner, using air-blown harmonium reeds as the original vibration sources and fitted with electrostatic pickup devices for converting these vibrations into electric voltages.

As a guide to other inventors and research workers, Mr. Miessner tabulated the various methods which can be applied to the development of individually played electrical musical instruments as follows:

#### I. Pure electrical sources of oscillations

- (a) Oscillating arcs or any device with negative resistance characteristics such as dynatrons, crystal contacts, etc.
- (b) Relaxation oscillators
- (c) Vacuum tube with feed-back
- (d) Thyatron oscillator
- (e) Condenser-inductance discharge
- (f) Magnetostriction oscillators
- (g) Radio-frequency beat system
- (h) Electrolytic

#### II. Rotary (scanning) devices

Variable area, distance, impedance, or intensity

- (a) Magneto - electric: generators, modulators, etc.
- (b) Electro-static: generators, modulators, etc.
- (c) Photo-electric
- (d) Acoustic siren
- (e) Phonographic: mechanico-acoustic-electric, mechanico-magneto-electric, mechanico-electrostatic-photoelectric, magneto - electric, mechanico-piezo-electric, etc.
- (f) Impedance contact interrupters and modulators

#### III. Vibratory

- (a) Self-interrupter
- (b) Telephone howler (acoustic or mechanical feed-back)

- (c) Microphone hummer (electromagnetic feed-back)
- (d) Vibrators with any type of pickup and any type of feed-back
- (e) Any type of vibrator with any type of excitation and with any type of pickup with electrical output such as:

### Vibratory generators

- | <i>Vibrator</i>     | <i>Excitation Methods</i> |
|---------------------|---------------------------|
| (1) Strings         | (1) Striking              |
| (2) Reeds           | (2) Plucking              |
| (3) Rods:           | (3) Bowing                |
| (a) Transverse      | (4) Blowing               |
| (b) Longitudinal    | (5) Resonance             |
| (c) Torsional       | (6) Attraction            |
| (4) Forks           | (7) Repulsion             |
| (5) Bells           |                           |
| (6) Tubes           |                           |
| (7) Clock chimes    |                           |
| (8) Membranes       |                           |
| (9) Sounding boards |                           |

#### *Pickup Methods*

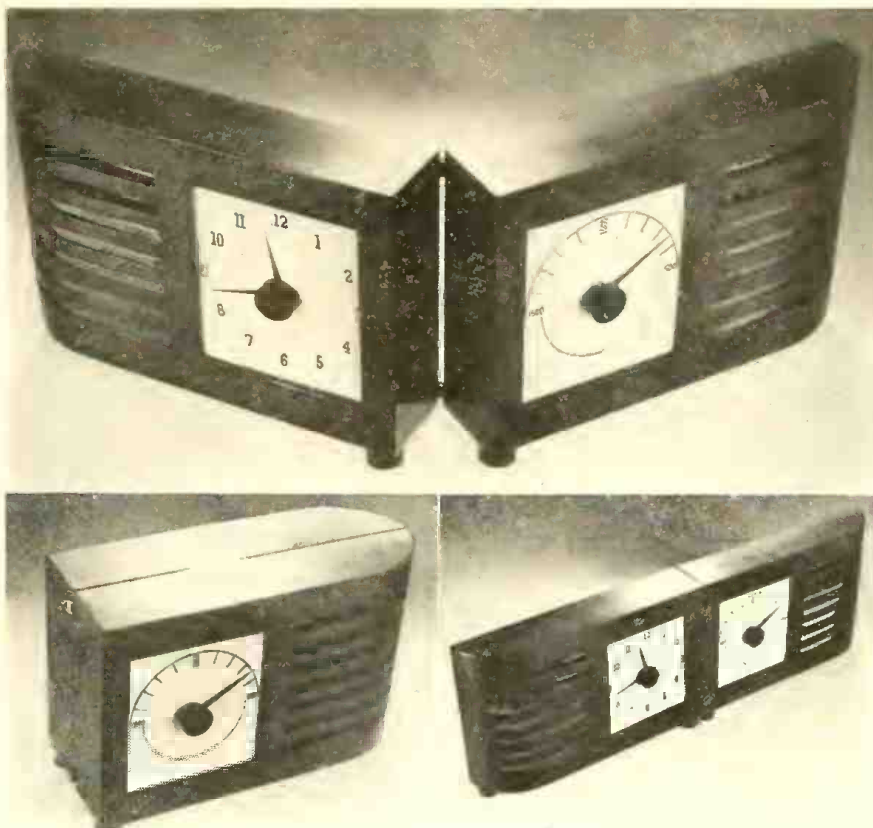
- (1) Magnetic
- (2) Electrostatic
- (3) Electrodynanic
- (4) Interrupted Contact
- (5) Modulated Resistance:
  - (a) By Pressure
  - (b) By Temperature
  - (c) By Area
  - (d) By Length
  - (e) By materials in ion streams
- (6) Piezo-electric (vibrator and translator may be combined as one device)
- (7) Photo-electric
- (8) Magneto-strictive
- (9) Microphonic (air waves or mechanical)
- (10) Thermo-electric
- (11) Magneto-electronic
- (12) Magneto-resistive

### Acoustic vibrators

- (a) Pipes or horns
- (b) Reed pipes
- (c) Sounding boards variously driven
- (d) Membranes
- (e) Bells, bars, strings, tubes, reeds, forks, chimes, and other sounding bodies

### Timbre-control methods

- (1) *Synthesis*: adding together pure or relatively pure desired partials
- (2) *Separation*: subtracting undesired partials from a source very rich in partials
- (3) *Multiple Quality Generation*: using a separate complex-wave generator for each desired timbre, and mixtures of these
- (4) *Formants*
- (5) *Frequency-Amplification Control*
- (6) *Envelope Control*



It's flat and it folds—this tricky study of slender radio receiver design comes from Design Engineers, Inc., New York City, pioneers in this new style trend.

### METAL-TUBE OUTLOOK REVIEWED BY EXEC

★ Last month in these columns, the glass-tube policy of Philco was stated by Sayre M. Ramsdell, vice-president.

Below, Elmer T. Cunningham, president of RCA Manufacturing Company, Camden, N. J., reviews his company's policy with respect to metal tubes for the remainder of this year.

"One year's experience in the manufacture and use of all-metal tubes convinces us more than ever that this new design was a big step in the right direction. The advantages of the all-metal construction compared to a glass construction are definitely such that their value will appear increasingly important, particularly in the field of reliable short-wave reception.

"The all-metal construction is the only type that permits of inexpensive, uniform and definite shielding. The reduced size of the metal tube is already resulting in the development of smaller components, which will mean lower-cost receivers. Certain types of construction are possible only in the metal construction because of the more accurate dimensions obtainable in metal work.

"The high initial cost of metal tubes with respect to glass was a temporary handicap, but the relation of metal to glass cost is rapidly closing in and will thus overcome the most serious

obstacle to the broader use of metal tubes. Our own company (RCA), the General Electric Company, and many other prominent radio manufacturers are using metal tubes in nearly all of their production this season."

### UPROAR TO ORDER

★ Writers of radio scripts are supremely unconcerned about how much trouble they cause the sound effects experts. Their sketches demand everything from the slight peep of a just-hatched chick to the ghastly throb of an electric chair. If soldiers are involved, they can't march along the street—they traipse wearily through difficult mud, and the sound men get grayer and grayer trying to get a decent slop-slop.

Electrically transcribed sound effects are in general use, but somebody has to create them to start with. Al Sinton, chief of the department at World Broadcasting System, has been doing it for nearly 10 years and surrounded as he is by several dozen uncanny gadgets, now gets the real McCoy into World's programs. Airplanes idle, take off, and are followed in flight; gold fish are heard to bubble, and tap dancers perform to rhythm. But if a script calls for smashing glass, Mr. Sinton hauls off and smashes it.

# BUYING, SELLING "SOUND"

- survey by "Radio Today" shows where equipment sales going
- local opportunities limited only by radioman's ingenuity
- complaints against cut-price equipment sales by jobbers

★ WITH the public becoming "sound conscious" to a new degree, and with business men and community leaders awakening to the possibilities of sound amplification for mass address, a rich new field is opening up for the radio dealer and the radio serviceman. The distributor also is feeling the effect of this new activity, as calls come in for "PA" and portable sound equipment for rush jobs which his retail customers are called upon to install.

RADIO TODAY has just completed a survey among radio men who are doing an active business in this new sound field, and from its reports obtained from communities both large and small, is able to present an up-to-the-minute picture of this "sound" business and where it is going.

The variety of applications for sound equipment in any community is in fact limited only by the ingenuity of the radio serviceman or public-address expert in meeting local situations. One radioman reports to RADIO TODAY the installation of public-address speakers in a swimming-pool. He did a waterproof

wiring job and waterproofed his speakers, so that swimmers can now hear musical selections and radio programs loud underwater, although from the sides of the pool the sound is barely audible. As a novelty advertising feature, this "underwater sound" installation has well justified the amount paid to the installer.

## Servicemen tops

Servicemen are proving to be the best class of customers for sound installations, according to various reports reaching RADIO TODAY from distributors. These servicemen usually sell direct to schools, garages, race-tracks, stores, restaurants, skating rinks, etc. Where the matter of installation and wiring becomes a factor in the sale, the serviceman proves the best type of installer.

Amplifiers of 12-watt and 30-watt ratings seem to be the most popular numbers, along with 12-inch dynamic speakers. The new permanent-magnet speakers are attracting the interest of sound installers, and undoubtedly will become an important factor in

this field because they obviate extra wiring.

Complaint is general against retail sales at wholesale prices by jobbers and by mail-order houses. "The competition we legitimate dealers have from the cheap mail-order houses is a daily headache" is the way one supplier puts it.

## Dealers report on sales

In answer to RADIO TODAY'S question "Where are most of your sound systems sold?" the applications listed in the replies tabulate as follows:

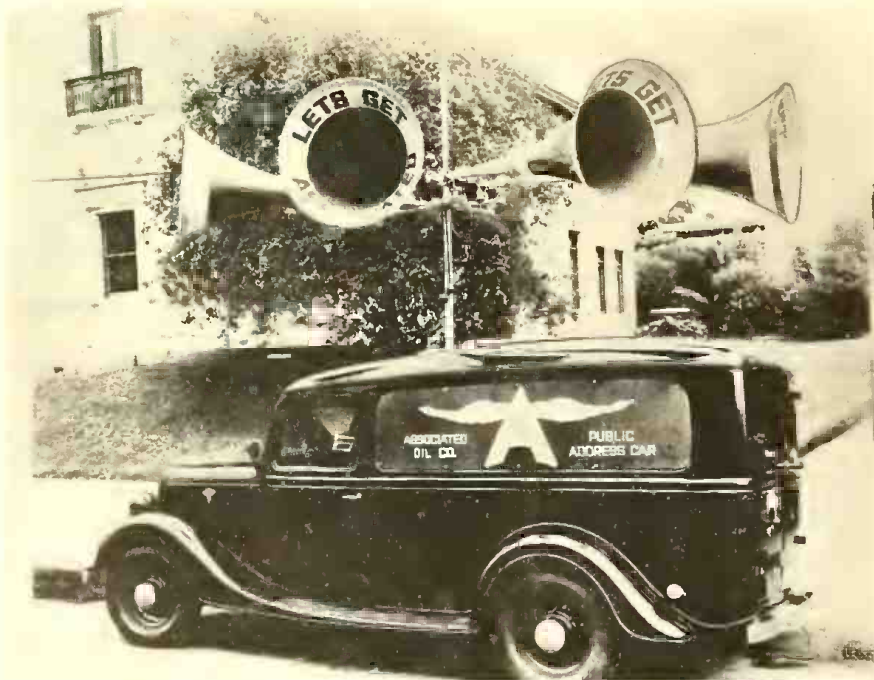
	Per Cent
Schools .....	21
Hotels .....	17
Fairs .....	8
Orehestras .....	7
Dance halls .....	5
Restaurants .....	4
Churches .....	4
Rentals .....	4
Night clubs .....	4
Parks .....	3
Beer gardens .....	2
Industrial .....	2
Dance bands .....	2
Sound trucks .....	2
Other servicemen .....	2
Cabarets .....	2
Clubs .....	1
Department stores .....	1
Stores .....	1
Auditoriums .....	1
Taverns .....	1
Theatres .....	1
Political .....	1
Miscellaneous .....	4

## Complete systems favored

Complete systems seem to be purchased in the majority, according to the reports received from sound men. Thus about one-third of the sound suppliers interviewed reported 90-100 per cent complete purchases. One quarter reported 51-90 per cent complete outfits. Twenty-two per cent reported 10-49 per cent complete equipment, and 15 per cent of the sound men responding said that their purchases were half complete.

Four fifths of the sound men interviewed bought standard manufacturers' lines.

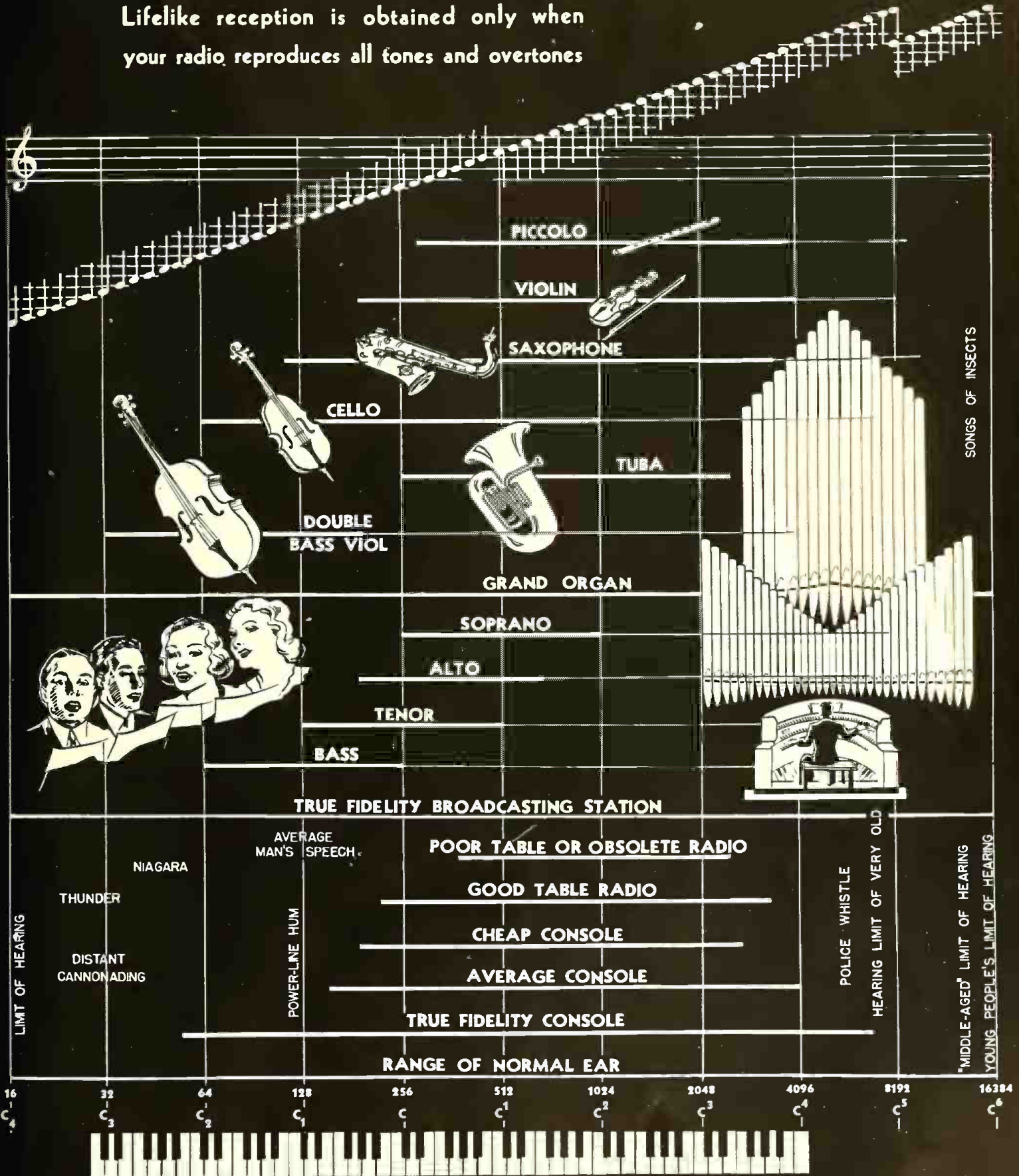
Names of manufacturers of sound equipment mentioned by sound men as being particularly helpful and cooperative in the sale of sound and public address equipment were Webster-Chicago; Webster Elec. Co. (Racine); RCA; Operadio; Western Electric; Bogen; Wright de Coster; Thordarson; Turner; Brush; Jensen; Amperite; Shure Brothers; Toledo; Magnavox; Rola; Brush; etc.



New opportunities are opening for "sound" in every community. Such applications seem limited only by the radioman's resourcefulness and ingenuity.

# TONE RANGES IN RADIO

Lifelike reception is obtained only when your radio reproduces all tones and overtones



HEAVY LINES REPRESENT FUNDAMENTAL FREQUENCY RANGE  
 LIGHT LINES REPRESENT NECESSARY OVERTONES FOR LIFE-LIKE REPRODUCTION  
 FREQUENCIES ARE GIVEN IN CYCLES PER SECOND

COPYRIGHT 1936

**RADIO  
 TODAY**

# SET SALESMEN MIX WITH ACTION

How dealers and servicemen are hiking summer volume.

## CITY DEALER WORKS RURAL AREA

★ To reach outlying rural sections within a 50-mile radius, the Bloomington Radio Shop, Bloomington, Indiana, selected the most frequented stores throughout the territory, and with the consent of the proprietors, put up signs reading: "Expert radio repairing. All makes and models. Leave orders in this store."

The storekeepers receive 20 per cent on charges over \$5 and 50 cents on those under \$5. Tuesdays and Fridays are pickup and delivery days. (Radios picked up on Tuesdays are delivered Friday and vice versa.) It is not unusual for the serviceman to collect \$100 worth of servicing in one trip. He gets the names of set owners desiring service from the stores acting as agents, then goes directly to their homes for the radios.

Some stores receive as much as \$10 weekly for acting as agents. Service charges are higher for this rural service, and the increase readily absorbs the additional selling expense entailed.

## MISSES NO BETS

★ When the newspapers of Jackson, Miss., home of the Balling Electric Company, radio distributors, refused to carry radio news and schedules, William H. Davis began his own radio publication which is

distributed free to dealers who in turn distribute it free to their customers. The publication which is called *The Air Journal* carries a cross section of "all the good programs on all the good stations." It also carries pictures and news about radio stars.

The publication has become so popular that additional copies are being furnished other lines of business, such as laundries, bakeries, filling stations, etc. All lines distribute it free with their products.

## 1300 SERVICE CALLS; 800 JOBS

★ Records of servicing operations kept by one of the large servicemen's groups indicate that the average radio serviceman makes from 1,300 to 1,400 calls per year. Out of this number of calls, however, he obtains jobs numbering only 800 to 900 per year.

Above are average figures. The limits run between the exceptional radio man who can make 3,000 service calls a year and the small man who succeeds in getting only 300 to 500 repair jobs a year.

Authorities differ widely as to the total number of radio servicemen in business—counting full-time men and part-time men who work at other jobs. But it seems fairly well agreed that the 15,000 servicemen who have telephones and places of business control 85 per cent of the buying power.

## NAMES FOR RADIO SERVICE BUSINESSES

★ If anyone imagines, in his innocence, that radio servicemen lack originality, a glance at the list of the names they have selected for their shops will indicate otherwise. Servicemen realize that lively labels for their businesses are desirable, and they have done plenty about it.

Look at these from Chicago: A Better Radio Service, Delight Shop, Radio Cave, Radio Doctors, Servall Radio, Cinderella Radio, Tune-In Radio, etc. In Philadelphia, names are both melodramatic and streamlined: Air-Sho Radio Service, SOS Radio Repair, Sta-Fix Radio, While-U-Wate, New Deal Radio, Pep Boys, Apt Radio Co., etc. In New York there are several Radio Shacks and Clinics, besides New Era Radio, Dynamic Service, Uneeda Radio Shop, Your Radio Shop, Smitty's Radio, etc.

Elsewhere we hear about Night Hawk Service, Sky Pilot Radio, Radio Den, Thrifty Radio, Ray-De-Do Co., Uncle Dave, Uncle Sam, etc.

## TRICKY DISPLAY PLUGS RECORDS

★ Surprise display for record dealers' window is the new device featuring a cross section of a miniature of the Metropolitan Opera House. Neatly designed to depict the curtain period of an actual performance, it includes audience, house lights and footlights, overture, curtain, applause, and the appearance of a lead singer. All this is done electrically and with sound effects on the applause, overture, and aria; street traffic stands agape at the convincing performance of the tiny human figures.

With this tricky set-up, Wm. Knabe & Co., New York City, managed to stop hundreds of indifferent New York pedestrians and thus to register an effective plug for opera records. It was created for RCA by The Displayers, New York City, makers of animated and itinerant displays; it uses a standard unit and it is portable. As for the legal angle on using sound effects on the street, the voice itself does no advertising and must be regarded as "cultural."



Not exactly transfixed but definitely interested, hundreds stopped to watch and hear this animated opera scene, went away record-conscious

## TRACING WALKOUTS

★ Occasionally the serviceman will be up against the wall because a customer moves, leaving behind a bill of several dollars and no new address.

The new address can often be obtained through the Post Office Department by sending a registered letter to the party in question at the old address and requesting a return receipt with address of delivery. Post Office will forward letter and the receipt will give the address (new) to which the letter was delivered as well as the name of the person signing it.

## DR. MORGAN, SPECIALIST IN SICK RADIOS

★ Consistent use of this phrase by James W. (Jimmie) Morgan, proprietor of the West End Radio Company, Birmingham, Ala., has been quite a factor in enabling him to build up one of the largest radio repair businesses in the city. Morgan uses all forms of advertising, but especially billboards to remind the public of the service end of his business.

"In my advertising I try to get away from the commonplace," said Mr. Morgan. "Just to say the West End Radio Company repairs radios means nothing. But to show a picture of a 'bandaged-up radio' and refer to myself as 'Dr. Morgan' creates an impression the public doesn't forget. As a result we get the call when the radio gets a headache and refuses to perform."

## PLACARDS BRING IN BUSINESS

★ Charles W. Hackenyos, 4233 N. Darien Street, Philadelphia, Pa., makes use of several interesting plans for getting more radio service business.

A special design of business card made up in red and blue ink is used for distributing in the neighborhood by simply slipping one in the letter slot on the front door or under the door. The words "Radio Service" in red ink attract the reader and arouse his interest. The first hundred of these distributed by Mr. Hackenyos brought in four service calls. The cards were made up inexpensively by a local printer.

A number of cardboard signs, 13 inches high by 8 inches wide, with the words "Reliable Radio Service" and the serviceman's name, address and phone number attractively printed in yellow and blue, were made up.

## Send Us Your Best SALES IDEA

RADIO TODAY invites readers to send in letters telling about sales ideas that have been successful. Address Editor RADIO TODAY, 480 Lexington Ave., New York City.

Permission was obtained of the local merchants from whom Mr. Hackenyos buys food, drugs, notions, etc., to hang these signs in their store windows or on walls behind the counters. If a customer inquires about radio service, the merchant immediately gets in touch with Mr. Hackenyos and arranges for the service call. A small commission is paid to the merchant for each call resulting from this card. The cards were made up locally, hand colored, at a cost of about 50 cents each.

## UTILITY DIGS UP PROSPECTS

★ Birmingham Electric Co. (Alabama) is one utility as much interested in stimulating the use of existing sets in the home as in selling new ones. So the outside sales force calls attention to interesting programs on the air and distributes copies of the *Southern Radio News*, which lists programs of the leading stations in detail. The radio paper is glad to supply free copies for the free

advertising obtained in the distribution.

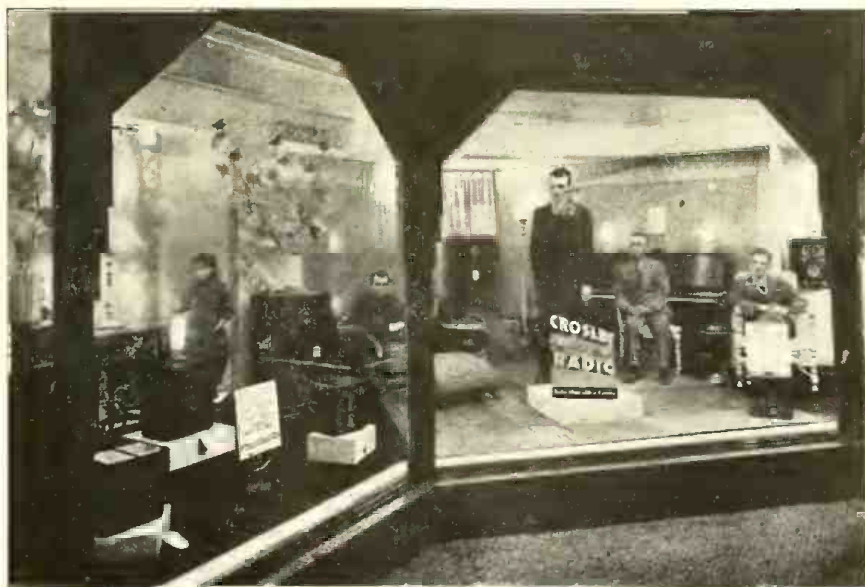
The utility sells no radios directly of its own account, but turns the names of prospects over to dealers according to the size of their respective sales force. In case a dealer sells one of the prospects, utility's salesman gets a commission. Plan enables the utility to get the load and the dealer the sale, and it creates a good feeling between the two. Utility sales force also encourages customers to have their radios repaired.

According to a survey made by the utility only 70 per cent of the homes in the city have radios, leaving a field yet for solicitation, not to mention replacement sales and sale of extra room sets. It is estimated that 9,615 sets with a merchandise value of \$673,000 will be sold in the city in 1936, an increase of some 15 per cent over last year.

## POLITICAL AID

It is a lucky thing for radio dealers, points out an exec at the Krug Piano and Radio House, that listeners violently dislike having a speech, particularly an important one that concerns the coming presidential election, interrupted or spoiled by poor reception. This is certainly one way in which listeners become actively impatient with an old set.

This dealer has faith in the effectiveness of pictorial displays of radio stars, to be used in shops or in windows, and has the view that radio concerns should cooperate to give the dealer a really sensational sales help in this respect.



Free for the watching, actual broadcasts took place in this window. Radio men at Herbst Dept. Store, Fargo, N. D., displayed receivers amid the studio set-up.

# TUBES UP; PRICES DOWN

- new models make total of 155 tubes in current use
- price-list changes show stiff cuts all along line

★ WHITE flag never needed more waving than it does in today's tube business.

This is the agonized opinion of radio dealers all over the land, as they see more and more tube types popping above the horizon, accompanied by price changes and price-cuts to make an Ethiopian holiday!

But this much is certain. If you want to keep abreast of the 1936 tube business—(1) have your carpenter build a hundred or so extra stock shelves, (2) pore over book after finely printed book of prices and specifications, and (3) buy a supply of throat-lozenges to keep yourself from getting hoarse trying to explain the tube situation to your customers.

For the painful fact is that right now between 150 and 180 tube types are required to take care of current tube-replacement needs. Any minute a customer may walk in off the sidewalk and ask you for any of 150 different tubes for radio models now in regular operation.

[This does not mean that he may ask for any of the some 300 total tube types which have been made since the beginning of broadcasting, for many of these are now regarded as so obsolete as not to be worth stocking in 1936. The accompanying chart shows only the number of tube types required each year for current models in regular and widespread use!]

Of course the engineers and manufacturers who have introduced all

these new tube types, had a good reason in each case. Every new tube model thus brought out was intended to effect some improvement which seemed worth while. Undoubtedly many of these changes were needed, and progress has resulted. But when the dealer stands and looks at his bulging shelves and realizes all the multifarious types of tubes—glass, metal and metal-glass—it is surprising that more ambulances with white-coated internes are not making swift runs to dealers' business addresses than now happens.

## Go slow

From the dealers' and trade standpoint, this type-changing and price-revising picnic has resulted only in laying a grade A basis for common distress. Retailers dislike the arrangement, and lose time and money every day, because the whole business has a deadly structure. Wildly changing types and prices must be explained to the public. It would be interesting to learn how much of a dealer's daily grind is spent in explanations, trying to make up for the unfortunate intrigue among competitive tube companies.

Servicemen find their business ridiculously complicated by the variety of tube types which they must provide or carry in stock, in order to keep up with manufacturers who are trying for transient advantage.

This whole trade situation, in which retailers, servicemen and dis-

tributors are now involved, should get the careful consideration of the manufacturers and engineers, as they compare the advantages of new tube types with the havoc unnecessary tube duplication may cause in distribution channels. Of course progress must not stop; new tubes and new circuits must be introduced to keep radio advancing. But along with the wild dance of novelties and innovations, it is time to give a thought to what happens in the retail channels through which the goods finally must reach their buyers.

## June prices

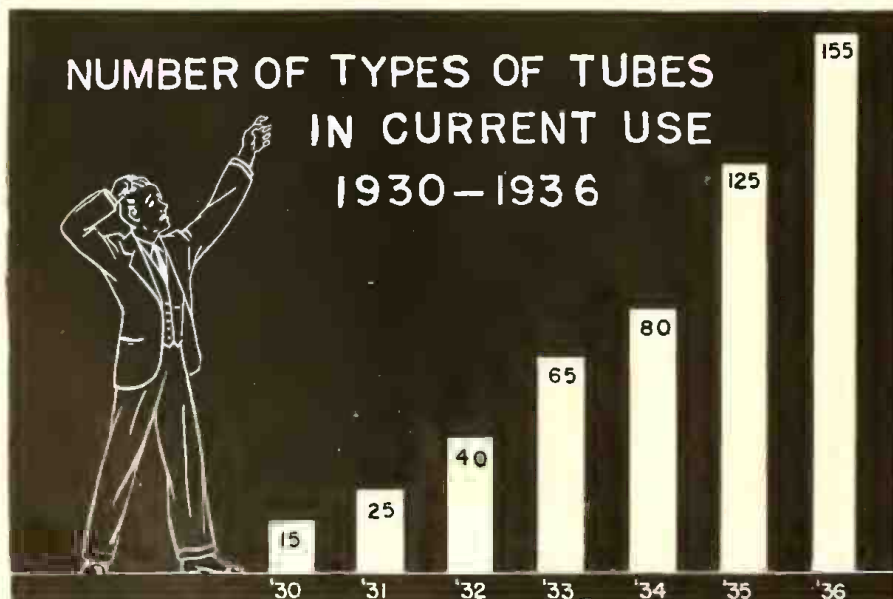
A price cut on metal tubes came through June 1, and was shared by the principal manufacturers, so that the metal-tube schedule for leading makes now stands as follows:

5Z4 .....	\$1.25
6A8 .....	1.25
6C5 .....	1.00
6F6 .....	1.00
6H6 .....	1.00
6J7 .....	1.25
6K7 .....	1.25
6L7 .....	1.50
6Q7 .....	1.25
6R7 .....	1.25
6X5 .....	1.25
25A6 .....	1.50
25Z6 .....	1.25

Meanwhile this leaves prices of some of the octal-base glass tubes (G type) actually higher than the equivalent metal tubes. Compare, for example, the 6ASG at \$1.60 and \$1.50! And the 6F6G priced at \$1.30 and \$1.25. It was expected that these G-tube prices would shortly be reduced, to make them competitive with the metal-tube prices, and as we go to press it seems likely that such a price change may come through before this issue reaches the reader's hands.

## FTC stipulation

Radio tubes in which a glass envelope encloses the vacuum, this glass being externally enclosed by metal, have been questioned by the original promoters of metal tubes, as not justifying the "metal-tube" classification. This position has been upheld by the Federal Trade Commission at Washington, and in a stipulation entered into by the Commission with Triad, the latter has agreed to cease representing in its advertising or printed matter that certain tubes it makes are "metal tubes," without qualifying words to indicate clearly that the tube is not one where the elements are sealed in a vacuum enveloped in steel or metal.





# SELL THEM WHERE THEY LIVE

Dramatic evidence of how home demonstrations lead directly from the doorbell to the dotted line



**A**greable greeting by sales and service man



**B**ringing in the new set, tooting its features



**C**areful placing and hook-up of special serial



**D**emonstrating tonal charm, new reception reach



**E**ncouraging prospect to test tone for herself



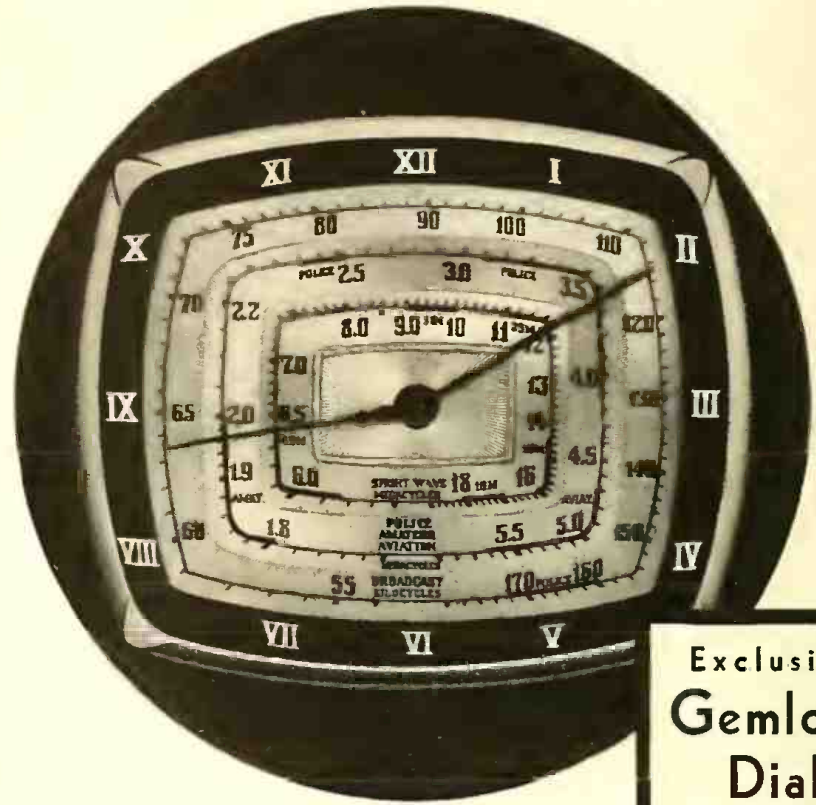
**F**illing out the contract for radio happiness

*Photos from Philco's talking picture, produced by Vocafilm, Inc.*

**Emerson** "RE-CREATES THE ARTIST" **Radio** IN YOUR HOME"



By all Odds . . . the 1937 Line  
**LEADS**  
 In **STYLE • FEATURES • VALUE**  
 and **TRADE OPPORTUNITY**



**Exclusive Gemloid Dial**  
 Radio's most beautiful illuminated dial.  
 Strikingly rich cloisonne metal — exclusive with Emerson Radio and Chrysler automobiles. New simplified tuning features for all models.

This is not a mere CLAIM—it's a FACT, already ENDORSED by all of America's foremost radio distributors and dealers who have had a pre-view of the new Emerson line!

In irresistible eye appeal, exclusive performance features, outstanding value (10% to 30% greater than ever before) it surpasses everything Emerson has ever produced.

In public and trade acceptance—in merchandising flexibility—it has everything which favors success in 1936-37—radio's biggest year!

**MOST POWERFUL PROMOTION EVER**

More cooperative and national advertising—more striking displays and other sales promotion—more PROFIT than ever before—these are additional FACTS which YOU should investigate NOW!

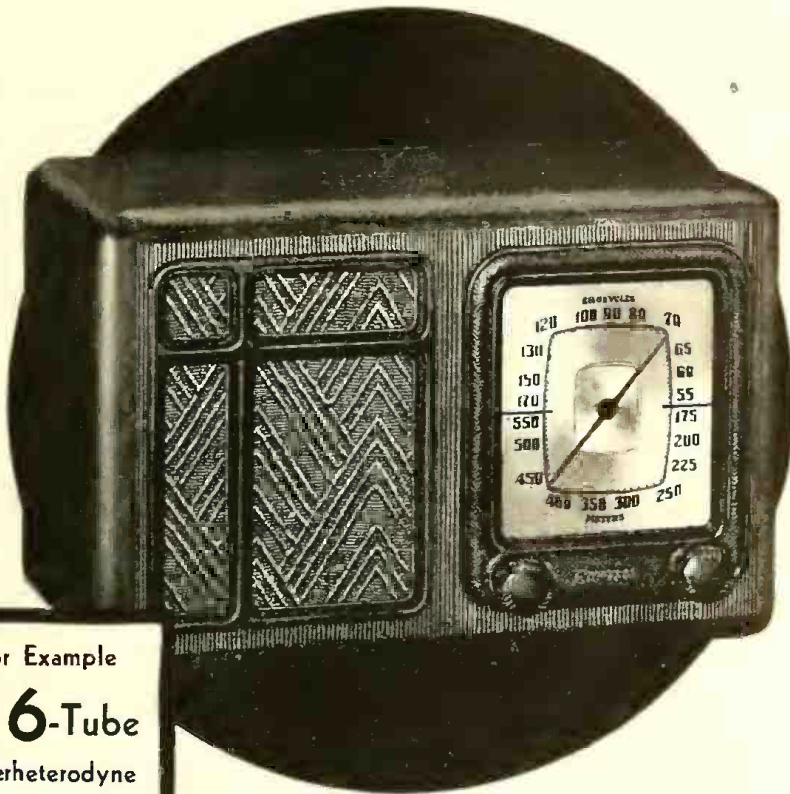
First showing being held at CHICAGO—Stevens Hotel, June 15th—20th inclusive.  
 First Showing at NEW YORK—Waldorf-Astoria Hotel, June 30th, July 1st and 2nd.

**EMERSON RADIO AND PHONOGRAPH CORPORATION**  
 World's Largest Maker of Small Radios  
 111 EIGHTH AVENUE NEW YORK, N. Y.

25 Sensational Models

**\$14<sup>95</sup> to \$99<sup>95</sup>**

**CONSOLES • COMBINATIONS  
COMPACTS • BATTERY • AUTO**



For Example  
This **6-Tube**  
Superheterodyne  
(Standard Broadcast  
and Police Bands)  
**\$19<sup>95</sup>**

A 10-Tube All-Wave Console, \$99.95  
Combination Radio and Phonograph Console, \$69.95  
Foreign and American Console, \$44.95  
5-Tube Compact, \$14.95

The COMPLETE Emerson line of 25 models includes sets for EVERY market, EVERY purpose—EVERY purse. A Portable Battery set for \$39.95—an All-Wave Compact for \$44.95—and many other sensations as radio promotion features.

**DISTRIBUTORS—DEALERS—WRITE OR WIRE**

Emerson's 1936-37 proposition is geared to the best merchandising turnover and profit interests of the trade everywhere. For quick action write or wire for details now.

**EMERSON RADIO AND PHONOGRAPH CORPORATION**  
*World's Largest Maker of Small Radios*  
111 EIGHTH AVENUE NEW YORK, N. Y.

June, 1936

RE-CREATES THE ARTIST  
**Emerson**  
Handwired Unit  
IN YOUR HOME  
**Radio**

# "HAND-PICKED" JOBBERS

★ THE article "Too Many Parts Jobbers" in RADIO TODAY for May, pointing out the recent rapid growth in the number of radio firms claiming wholesale discounts, produced wide comment in the radio trade. As a result, some interesting communications have reached RADIO TODAY's editors, explaining the precautions which individual manufacturers take, in attacking this problem as it affects their own distribution situation.

These manufacturers, desiring to work constructively in a confusing situation, are appointing distributors with the greatest of care, and granting distributors' discounts only after severe scrutiny of the applicants' qualifications.

## Tests for "jobbers"

"We as a company have a strict sales policy" explains Harry Kalker, sales manager of Sprague Products Company, North Adams, Mass., "that before a distributor can obtain our merchandise he must list the names of at least six recognized non-competing parts manufacturers from whom he is purchasing parts on a jobber's basis. He must give us the number of dealers and servicemen who are his customers, the territory he covers, and his financial set-up. I am glad to state that we have only a few hundred jobbers in the country, but everyone of them is a Grade A distributor."

"We feel that we have solved the problem with minimum difficulty and maximum accuracy" comments W. C. Harter, sales manager of Solar Manufacturing Company, New York. "We have 19 district sales managers, covering the U. S., each one intimately acquainted with his territory. With a few exceptions, these men have all been selling radio parts for many years. We will not open a new jobbing account until our district manager has personally investigated. And generally we have found that we can entirely count on his good judgment and recommendations, covering any jobber prospect. In our opinion, the problem is a very complicated one if a firm is not set up to give inquiries this same type of personal attention."

"Several years ago we instituted our policy of 'selective distribution,' and by reducing the number of our accounts to one-half, we more than quadrupled our business!" explains

L. L. Adelman, sales manager of the Cornell-Dubilier Corporation, New York.

"Our policy precludes the possibility of our selling direct to the consumer, the serviceman, or the radio dealer. It also restricts the distribution of our condensers through the channels provided by our own authorized franchised distributors.

## Selective distribution

"Before appointing a distributor, we first of all ascertain whether his business is actually a purely wholesale one. We do not approve of a wholesale-retail proposition. Once we ascertain whether an account is a legitimate jobber, we find out how many competitive lines are carried in stock, how many other nationally known, well-advertised lines are represented, whether or not the moral character of the organization is such as to warrant the extension of credit, and of course, whether or not the financial rating of the organization would mean a worthwhile connection for us.

"We also stipulate that we don't dictate all the lines a jobber should or should not carry, but that our line is available to a jobber, provided he doesn't carry more than one other competitive line of condensers. This is only fair to ourselves, since our policy of selective distribution vests a distributor with the full franchise of representing Cornell-Dubilier in a given territory. Sometimes more than one jobber is required and we look to establish two or three outlets which will work harmoniously and cooperatively in conjunction with one another.

"We feel that we have successfully met the growing menace of 'rush-room distributors' by decreasing the number of our accounts. Naturally this is withering competition to the

---

—Manufacturers tell how they select distributors

—"Wholesale only," and financial responsibility cited as requisites

---

unfair tactics of competitors who strive to add more jobbers as well as dealers to their distribution set-up.

"List prices and jobber discounts have ceased to be the howling joke of American business," comments Charles Golenpaul of Aerovox Corporation, Brooklyn, N. Y. "Although here and there may be found isolated instances of loosely-guarded trade discounts and the woeful breakdown of resale prices, for the most part the radio trade today can well hold up its head among businessmen at large.

"For years past Aerovox Corporation has selected its jobbers with utmost care. A questionnaire calling for many pertinent facts, must be answered by the prospective jobber. Among other things, we want to know whether the applicant is really a jobber, serving as a wholesaler in a given territory, and not a retailer or service organization seeking additional discounts. References are demanded. Finally, the applicant must be ready to stock a representative line of our products, for only unless the applicant can render a genuine service to local dealers and servicemen, is he required in our sales setup.

## Jobber must serve dealer

"Aside from an adequate stock, a recognized jobber should issue some sort of catalog featuring those lines and items which he is in position to supply locally. Also, the jobber must not only maintain a store and stock, but he should travel salesmen in the territory covered, since most servicemen and dealers are best contacted at their places of business. The good jobber is also expected to keep in close touch with the manufacturer, noting new products, changes in prices, engineering data, and so on. He is, after all, the bridge that spans the gap between distant manufacturer and local buyer.

"The jobber is expected to safeguard his discounts. A legitimate jobber works on a small enough margin, and unless he gets that margin for himself, he can hardly expect to stay in business. If the jobber attempts to sell at retail, this fact soon gets back to the manufacturer who is positively lax if he continues to sell such a jobber.

"There is no problem involved in the matter of the jobber who sells at retail. We simply refuse to ship him goods. He may sell other goods on that basis, but not Aerovox! But good lines today insure their recognized jobbers full protection in the matter of discounts and limited competition in the given line."

FAIRBANKS-MORSE PRESENTS

# TURRET SHIELDED RADIO !

Plus

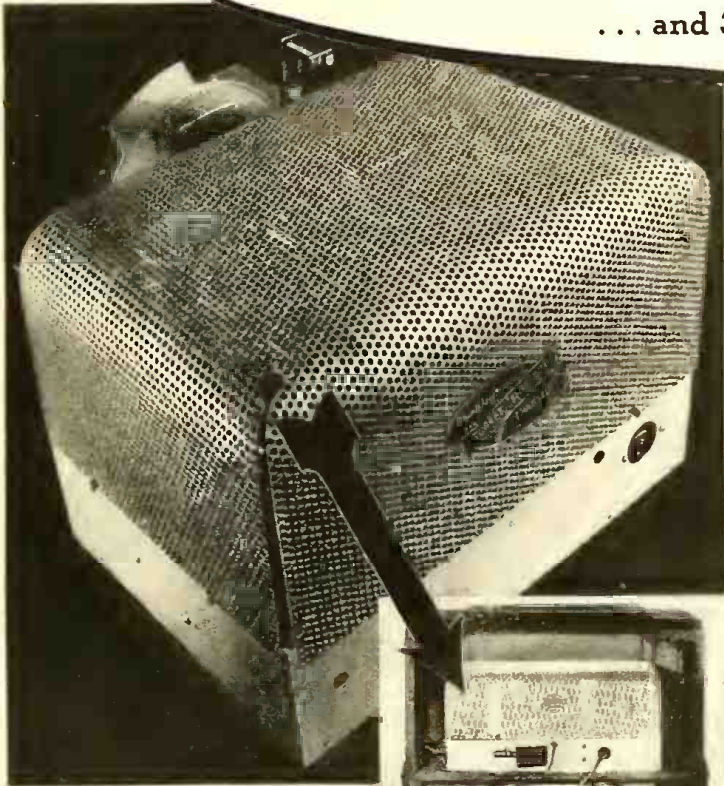
NEW • TONE PROJECTOR • • •

NEW • VOICE CONTROL • • •

NEW • SEMAPHORE DIAL • • •

NEW • BALANCED PERSPECTIVE CABINETS

... and 37 other salable features!



**QUIET!** Here is shielding that really shields the entire chassis top, bottom, and all four sides. Turret shield (an exclusive feature) easily and quickly removable for replacing tubes. And does it make a difference in blocking out interference! Just listen! Literally a "turret"! Keeps out prying fingers, gives appearance to the chassis.



Rear View

Features *sell* radio receivers. Engineering features that achieve better reception. Convenience features that make station-finding easier. Beauty features that stand out from the rank and file. Features that the floor salesman can point to. Features that the public can see and understand.

Look at all of the new radio receivers for 1936-37. Listen to all of them. Then see and hear the new Fairbanks-Morse line. Just put them on the scales of your own judgment. You know *performance* when you hear it. You know *salability* when you see it. And you see it *all* in the new F-M line. Fairbanks, Morse & Co., Home Appliance Div., 2060 Northwestern Ave., Indianapolis, Indiana. Other Fairbanks-Morse Products: Conservador Refrigerators, Washing Machines, Ironers, Automatic Coal Burners.

# FAIRBANKS-MORSE



## RADIOS

# CURING THE "CANCER"

Comment pours in from radio trade on sales abuses and retail conditions

★ FROM the instant uproar following RADIO TODAY's publication of the dope on price-cutting, in its April article—"New York—Cancer Spot of Radio"—there emerge a number of remedial wrinkles figured out by experienced dealers.

Radio retailers express irritation, of course, at the fact that individual dealers are the ones who conduct the sales campaigns and build up public acceptance of radio merchandise, only to have some price-shearing outfit step in and offer such come-on prices that the patron's cash is finally rung up in undeserving registers.

## Protect community dealer

The radio dealer uses his local friendships, his service contacts, and his community standing to introduce a new receiver and to seize general public interest. But sales volume dodges him because shoppers are naturally interested in spectacular savings on what is obviously an identical product. True, there is a group of sober buyers who are disturbed at price-slashing because it does have that cheapening aspect. These will depend upon their community dealer through peace and panic, but there are not enough of them to offer the independent dealer a decent volume.

The trade generally feels that some method should be devised by which the retail dealer would be able to cash in on his years spent in creating radio buying judgment in his community, and could be reasonably certain that his patrons will not be snatched by those in position to handle prices.

To this end, C. W. Purdue, Montclair, N. J., proposes a plan that manufacturers agree to offer to community dealers a cabinet line specially adapted to his patronage and not available to price-cutters. Chassis could be the same as in standard models, so that the maker's end of it doesn't become too involved, adds Mr. Purdue. But from the appearance of the job, the dealer should be able to say, "This is specially designed for my type of store and you will not be able to find it elsewhere."

Other comments from the field follow:

## Who's asleep?

"Don't let them talk you out of it—keep kicking them in the shins until they wake up to the . . . condition of what was once a very profitable business. I challenge our manufacturers and distributors to reply to this indictment and would be interested in their reaction to the truth as exposed in your interesting publication."

P. R. BOWERS,  
The Rudolph Wurlitzer Co.,  
New York City.

## From the Commander

"We give no free ocean cruises or railroad trips, no PM's and no secret rebates. We do not believe that cruises, PM's, or secret rebates bring any more people into dealers' stores, nor do they put more money into the pockets of prospects to spend with dealers, nor do they send customers away better satisfied. It is Zenith's ambition to help stabilize the radio industry with superior products and sound policies that protect the customer's purchase and the dealers' profits."

E. F. McDONALD, JR., President,  
Zenith Radio Corporation, Chicago.

## War on jobbers

"The jobber is my worst competitor. They distribute catalogues to anyone without discrimination and sell tubes without labeling them at retail."

GEORGE VON ZOUNER,  
New York City.

## Legal teeth

"We need a fair trades act, or contracts signed between dealer and jobber agreeing not to cut price. An agreement must have legal sanctions with teeth in it."

Service Radio Engineers,  
Bronx, N. Y.

## Monument

"The entire radio world should erect a monument to RADIO TODAY if it can accomplish the elimination of this evil . . . it is costing the public thousands of dollars daily in money thrown away."

A. E. RHINE,  
Radio Engineering Service,  
New York City.

## Worry 'em

"The best cue for the independent dealers is to accent the matter of service and so put themselves in a different class of stores from those who are dramatically emphasizing reduced prices."

Temple of Music,  
Freeport, N. Y.

## Price is not all

"Long-time attention to radio service of a friendly, sound and straightforward type will eventually net the sales for the legitimate dealer, in spite of differences in price."

Whildin Radio Service,  
Bayshore, N. Y.

## Boycott weapon

"If there were only one manufacturer with the courage of his convictions, selling a good, well-advertised set, we for one would handle his product exclusively. The way to discourage manufacturers allowing cut-throat competition would be for dealers to organize and propose a boycott."

Village Electrical Service,  
New York City.

## New laws

"Here in California we have a fair-trade law, and any manufacturer who wants to protect his good name and give the retailer a profit, can do so by operating under this act."

"I suggest that your readers get in touch with their Senators and Representatives and tell them to get behind the Robinson-Patman bill. This bill will stop these secret discounts to anyone."

LA MOTTE G. STINSON,  
Arbuckle, Calif.



Constructive auto-radio advertising to New York's motoring public. Thousands of drivers go through the Holland vehicular tunnel daily and see these signboards.

# TELEDIAL IS HERE!

(PATENT PENDING)

Distributors, Dealers, Call Grunow's  
NEW TELEDIAL Hottest Radio  
Sensation in Years!



FIRST IMPROVEMENT  
IN YEARS CUSTOMERS  
CAN LOOK AT AND  
PLAY WITH!

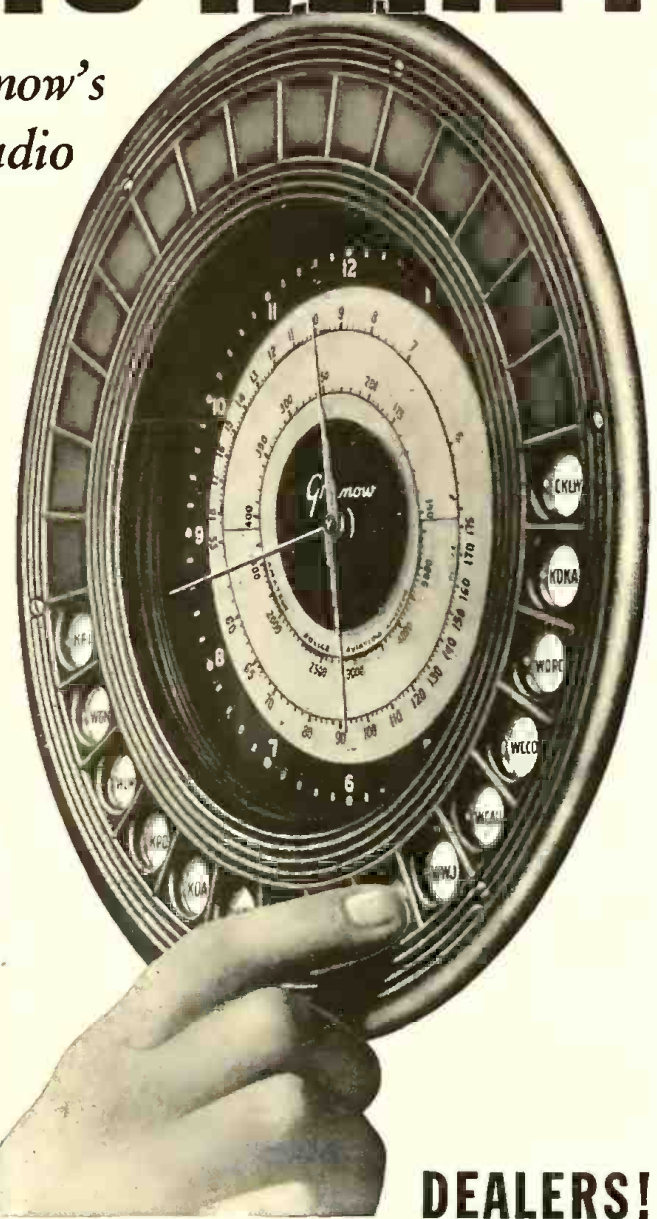
HOW THAT "FINGER-  
TOUCH" TUNING  
WILL DEMONSTRATE!

These pictures were snapped at the convention where Grunow introduced TELEDIAL to its dealers and distributors. Many distributors asked us to double their June allotments when they saw this amazing advancement! You'll see why when you get the full TELEDIAL story. Write for it today.



GRUNOW ALWAYS  
GIVES YOU BETTER  
MERCHANDISE  
THAT SELLS!

THAT AND THE  
BIG ADS WILL  
DOUBLE OUR  
FLOOR TRAFFIC



**DEALERS!**

TELEDIAL is here and automatic radio tuning, that brings in stations with a flick of a finger, is a reality! And with TELEDIAL come half a dozen features, in the new 1937 Grunow radios, second only to TELEDIAL itself in drama—sensation—selling value.

New "violin shape" cabinets that utterly ban cabinet resonance! The new Aladdin Color-Flash Dial, with clock-type tuning that gives twelve times more accuracy in tuning short-wave stations! New "Tone

tested" Resonator, with a new kind of utterly pure tone! Automatic Frequency Control that makes detuning impossible!

Features like these really demonstrate! We don't have to tell you how they will swell floor traffic and sales. Why not get the whole story. Write, and let us put you in touch with your nearest Grunow distributor today. Act at once.

**GENERAL HOUSEHOLD UTILITIES CO.**  
CHICAGO, ILLINOIS      MARION, INDIANA  
Manufacturers of Grunow Super-Safe Carrene  
Refrigerator • Grunow Household Radios •  
Grunow Automobile Radios

**Grunow** LIST PRICES  
**\$19.95**  
AND UP  
All-Wave Radio for 1937 F. O. B. FACTORY

**WRITE NOW! BE STOCKED  
WHEN TELEDIAL ADS APPEAR!**

**USE THIS COUPON**

GENERAL HOUSEHOLD UTILITIES CO.  
2644 North Pulaski Road, Chicago, Ill.

Send me the full facts about the new TELEDIAL today and put me in touch with the nearest Grunow distributor today.

Name.....

Address.....

Town..... State.....

# SELLING MORE DISCS

NOT our idea, but still a pretty valid thought, is the record dealer's suggestion that "selling up" records deserves an emphasis in summer business.

It has been noticed that record fans who are originally interested in swing music can be urged along the way to appreciation of better music and higher-priced discs. Plan is to intrigue them with lighter salon music first (Victor Herbert, Sigmund Romberg selections) and start the taste upward.

Plenty of jazz fans, if they have any sort of a romantic flair at all, will respond to a stirring arrangement of Herbert's "Ah Sweet Mystery of Life." Then you may go on to such items as the Waltz Song from "Romeo and Juliet" and first you know, you'll have a self-made opera fan.

## Current aids

Columnists, commenting on recordings in magazines and newspapers, are feeling themselves strongly supported by wide reader interest lately. Part of this is due to the fact that such paragraphs are often the place for people to find out whether they may buy a record of some selection they heard on the air. Prospects should be encouraged to watch these columns, and to remember that recordings, presented by dealers in demonstrations (perhaps in several different arrangements) are always



"Sweetest music this side of Heaven," by Guy Lombardo and Royal Canadians graces both the ether and the record lists.

more exciting than when they are described in the press, or perhaps when heard on the air.

Dealers may also remind customers in advance that certain selections will be played on the air at a certain time, suggesting that they should listen in and hear that version of the number. Merchandisers of records have reported that new arrangements of selections by well-known composers are often broadcast in an entirely new form, stirring up the music lovers in a great fashion and putting the number back on the fast-selling lists.

## LOAN OF RECORDS

★ Current merchandising of records at French's, Inc., Montgomery, Ala., includes an important agreement with the local radio station. Latter uses French's records on sustaining periods, and announces that they are from that store. After the copyright angle has been figured out, station and store find the plan mutually satisfactory.

## EXIT MOTHER HUBBARD

Several large retail organizations have given up the old idea of shelving records so that they are not easily available to the public. They use instead of shelves attractive displays placed at strategic points in the record department, and in some instances, in other departments of the store. These displays not only attract attention, but have proven vital sales stimulants in developing record business.

## BEST SELLERS AS WE GO TO PRESS

### BRUNSWICK

Stompin' at the Savoy—Fox trot. Doing the Prom—Fox trot. Both with Ozzie Nelson and his orchestra—7659.

Organ Grinder's Swing—Fox trot. You're Not the Kind—Fox trot. Both with Hudson-DeLange orchestra—7656.

Is It True What They Say About Dixie?—Fox trot. Streamline Strut—Fox trot. Both with Ozzie Nelson and his orchestra—7651.

### DECCA

Welcome Stranger—Fox trot. VC. Is It True What They Say About Dixie?—Fox trot. Both with VC and both with Jimmy Dorsey and his orchestra—763.

The Best Things in Life Are Free—Fox trot. VC by Dan Grisson. Jealous—Fox trot. VC by Henry Wells. Both with Jimmie Lunceford and his orchestra—783.



Bing Crosby's discs for Decca get acceptance at the record counter.

Christopher Columbus—Fox trot. Froggy Bottom—Fox trot with VC. Both with Andy Kirk and his 12 Clouds of Joy—729.

### VICTOR

Star Dust—Fox trot. Benny Goodman and his orchestra. Star Dust—Fox trot. Tommy Dorsey and his orchestra—25320.

All My Life—Fox trot. It's No Fun—Fox trot. Both with "Fats" Waller and his Rhythm—25296.

The Glory of Love—Fox trot. You Can't Pull the Wool Over My Eyes—Fox trot. Both with Benny Goodman and his orchestra—25316.

## "SOUND IN CELLOPHANE" NEWEST IN RECORDING

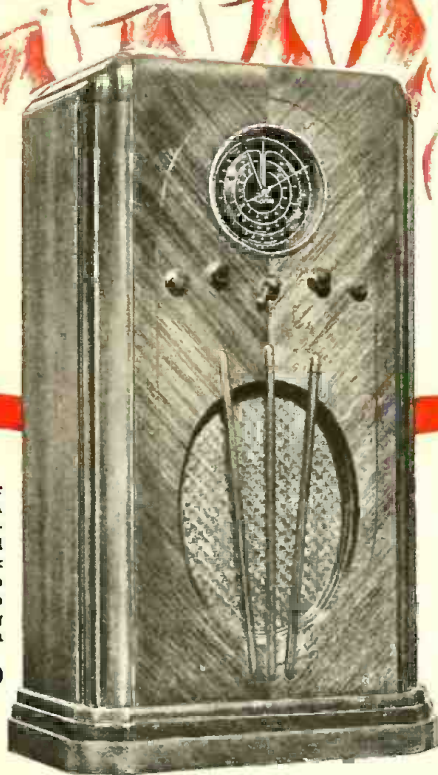
★ Utilizing a new European development by which "sound-tracks" can be recorded on and "in" cellophane, which is fireproof, non-deteriorating, and stronger than nitrate film, the Freeman Lang Studios, Hollywood, Calif., are now producing transcriptions for broadcasters. The new cellophane film, known as "Cellaphilm," carries six parallel sound-tracks, in this way fully utilizing the film area.

The cellophane stock occupies only one-fourth the space needed for nitrate film. Therefore, it is a comparatively simple matter to handle 4,000 feet of Cellaphilm, which provides more than four hours of sound recording. Such a transcription can be reproduced without interruption, or it can be reproduced in part—the reproducing machine being stopped at a predetermined point and later started to complete the program.



# THEY'VE GOT

# Sales Rhythm!



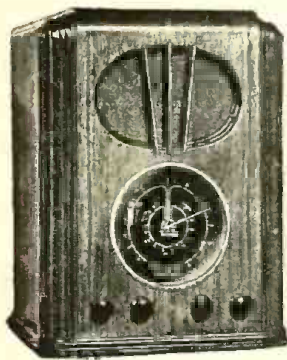
**Rhythm Master Model 627**— A genuine masterpiece of styling and performance. Six octal base "G" type tubes, all-wave dial, Traveling Spotlight Station Finder.

**List: \$74.50**



**Rhythm Queen Model 927**— A "blue blood" of radio royalty, with rhythmic performance that amazes everyone. Nine octal base "G" type tubes, all-wave dial, "Electric Eye".

**List: \$99.50**



**Rhythm Junior Model 517**— A smartly styled big table model. Five tubes, standard and foreign short wave bands, Traveling Spotlight Station Finder.

**List: \$34.95**

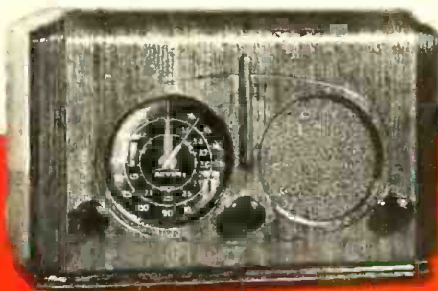
**Look at 'em! There's sales rhythm in every detail** of the new 1937 Arvin Radios! The two consoles pictured here typify the rhythmic beauty of every model and indicate the "family resemblance" of design that unifies the *complete* Arvin line. Fourteen models in all, designed to anticipate every customer desire. Consoles from \$54.95 to \$150.00. Four splendid battery models—two consoles and two table sets—for unwired farm homes and summer cottages—a rich market! Snappy little bedroom models, beautiful big table models. Sleek little AC-DC portables. All beautifully styled with big, handsome, reverse-lighted dials, and perfectly engineered with Traveling Spotlight Station Finder and many other new developments. You'll profit with Arvin sales rhythm. Get complete details early from your jobber or write us.

**NOBLITT-SPARKS INDUSTRIES, Inc., Columbus, Ind.**

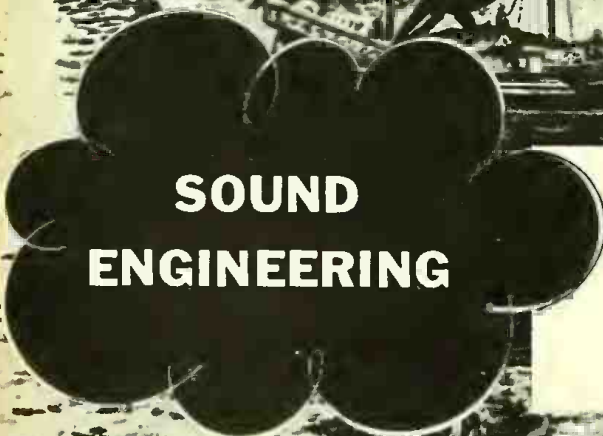
*Also Makers of Arvin "Tailor-Fit" Car Radios  
(Prices slightly higher west of Denver)*

**Rhythm Belle Model 467**— At right. A modern design and a grand little bedroom radio. Four tubes, standard and police bands.

**List: \$24.95**



# Beacon



**SOUND  
ENGINEERING**

The awe-inspiring Colossus of Rhodes, one of the ancient world's seven wonders. Astride the picturesque Harbor of Rhodes, in the blue Mediterranean, it was not only an engineering masterpiece, but an unflinching guide to sea-tossed mariners seeking haven... as today, research guides RCA's scientists and engineers along the hazardous lanes leading to great accomplishment... sound engineering.

**RADIO CORPORATION OF A**

EVERYTHING IN RADIO FOR SERVICE IN CO

# of Radio Research

**I**N EVERY PROGRESSIVE INDUSTRY, first must come careful, patient research. So it is in radio. For instance, from RCA laboratories shone the beacons of research that led to the first power-operated dynamic-type loudspeaker for the home . . . the first practical superheterodyne receiver for home use . . . the first AC tubes and radio operated from the light socket. More recently this organization has given the world such wonders as the "Magic Brain," the "Magic Eye," the Magic Voice.

Indeed, much has been accomplished as the years have swiftly marched by. And these forward steps in radio foretell a great future for the industry and for RCA. Some day, these RCA laboratories will engineer *sight!*

America's millions, aware of RCA's long tenure of worthy service, have unbounded *confidence* in any product bearing the RCA trademark. This confidence increases sales. It explains why dealers make more money when they identify themselves with RCA—the *only* organization engaged in every phase of radio!

RCA Manufacturing Co., Inc. • RCA Communications, Inc.  
National Broadcasting Co., Inc. • RCA Institutes, Inc.  
Radiomarine Corporation of America



*These are some of RCA's Radio Firsts:*

First AC Tubes and radio operated from light socket.	First to develop and market combination phonograph-radio.
First power-operated dynamic-type loudspeaker for the home.	First to achieve round-the-world radio communication.
First practical superheterodyne radio for home use.	First to introduce radio combination, including home recording device.
First commercial marine vacuum tube transmitting apparatus.	First to introduce "Magic Brain," "Magic Eye," Magic Voice radio sets.
First to commercially introduce electrical phonograph reproduction by use of magnetic "pick-up."	First to manufacture RCA Metal Tubes.

—plus the initial development of scores of important, far-reaching radio advances made available to the entire radio industry.

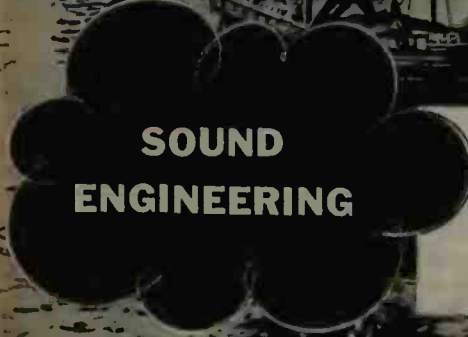
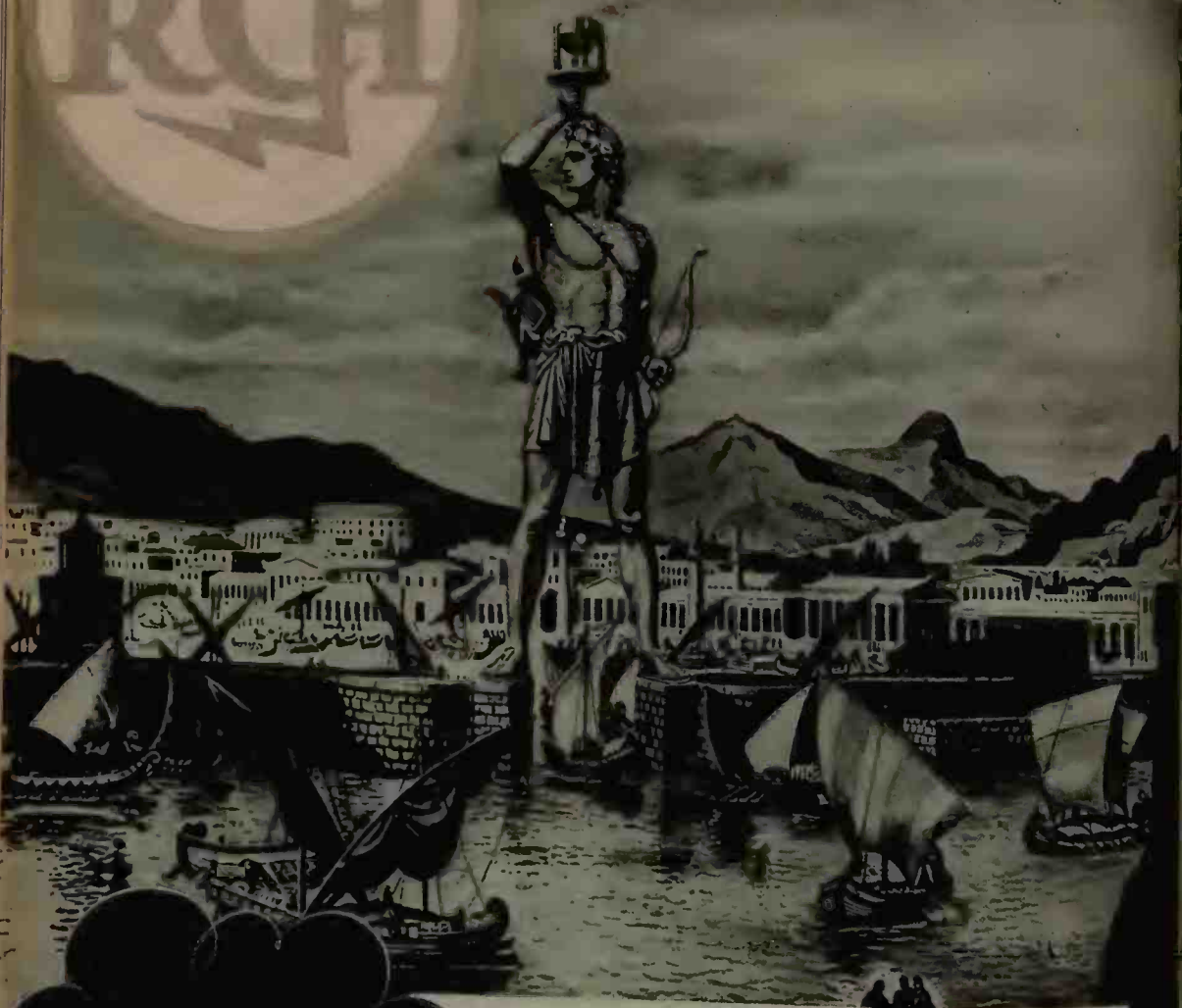
*Listen to "The Magic Key of RCA" on NBC Blue Network every Sunday, 2:00 to 3:00 P. M., E. D. S. T.*

**ERICA • Radio City • NEW YORK**  
COMMUNICATIONS . . . BROADCASTING . . . RECEPTION





# Beacon of Radio Research



**SOUND  
ENGINEERING**

The awe-inspiring Colossus of Rhodes, one of the ancient world's seven wonders. Astride the picturesque Harbor of Rhodes, in the blue Mediterranean, it was not only an engineering masterpiece, but an unflinching guide to sea-tossed mariners seeking haven... as today, research guides RCA's scientists and engineers along the hazardous lanes leading to great accomplishment... sound engineering.

**I**N EVERY PROGRESSIVE INDUSTRY, first must come careful, patient research. So it is in radio. For instance, from RCA laboratories shone the beacons of research that led to the first power-operated dynamic-type loudspeaker for the home... the first practical superheterodyne receiver for home use... the first AC tubes and radio operated from the light socket. More recently this organization has given the world such wonders as the "Magic Brain," the "Magic Eye," the Magic Voice.

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**RADIO CORPORATION OF AMERICA • Radio City • NEW YORK**  
EVERYTHING IN RADIO FOR SERVICE IN COMMUNICATIONS... BROADCASTING... RECEPTION



# WESTON

price reductions  
save you up to

# 25%

DON'T DELAY...  
ORDER THROUGH  
YOUR JOBBER, OR  
RETURN COUPON

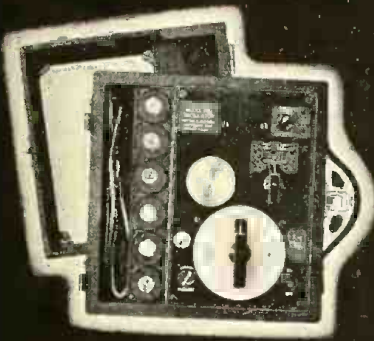
Increasing demand for these standard,  
precision test units makes these big  
savings possible:

Model 692 ALL-WAVE OSCILLATOR  
Was \$60<sup>00</sup> net **Now \$45<sup>00</sup> NET**

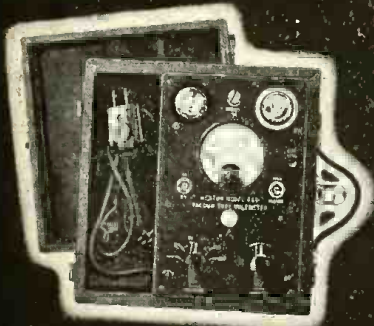
Model 669 VACUUM TUBE VOLTMETER  
Was \$59<sup>63</sup> net **Now \$45<sup>00</sup> NET**

Model 780 CAPACITY METER  
Was \$29<sup>25</sup> net **Now \$22<sup>50</sup> NET**

Model 687 OUTPUT METER  
Was \$15<sup>00</sup> net **Now \$11<sup>25</sup> NET**



Model 692 - All-Wave Oscillator



Model 669 - Vacuum Tube Voltmeter

Weston Electrical Instrument Corporation  
597 Frelinghuysen Avenue, Newark, New Jersey

Send full data on these and other WESTON test instruments.

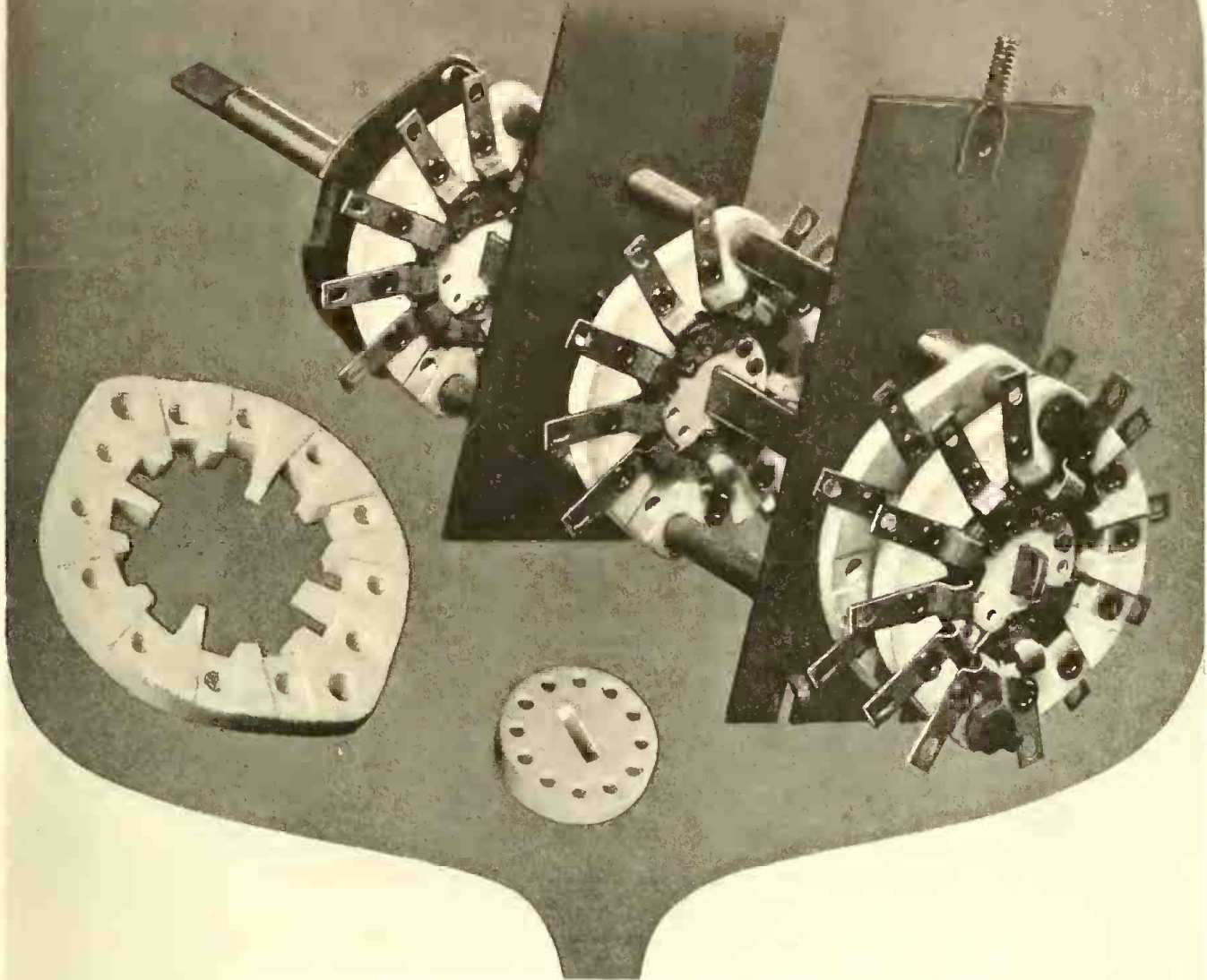
NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_





# Another Contribution



ISOLANTITE has helped to improve many pieces of equipment and now makes another contribution to this CENTRALAB wave change switch.

ISOLANTITE may also be the means of helping to improve your product.

ISOLANTITE INC. 233 Broadway, N. Y. C.

Factory at Belleville, N. J.



**Isolantite**  
**CERAMIC INSULATORS**

# PORTABLE RADIO TAKES THE FIELD

A brand new radio market is rapidly opening up with the introduction of important developments in modern, portable radio equipment.

New, portable receivers now on the market bring radio to listeners far from the power lines and will bring profits to wide-awake dealers in all parts of the country. To get in on the ground floor of this great, new development, call your suppliers right away and get set to make money from portable radio *this* summer.

Major factors in this new development are Eveready Batteries. National Carbon Co. supplies a complete line of high-efficiency, low-weight batteries designed for installation in portable equipment. Of course, it stands to reason that the pioneer battery maker for forty years supplies the finest batteries available for this service...EVEREADY.

**NATIONAL CARBON COMPANY, INC.**


General Offices: New York, N. Y. Branches: Chicago, San Francisco  
UNIT OF UNION CARBIDE  AND CARBON CORPORATION

PHOTO COURTESY OF  
ANSLEY RADIO CORP.



## PORTABLE BATTERIES

BY

# EVEREADY

TRADE MARK



# NEW CIRCUITS—SERVICING

(From page 34)

indicated in heavy lines. When the line voltage goes positive the top condenser of C19 is charged positively—when the line voltage is negative the bottom condenser is charged negatively. Since the two condensers are in series, twice the voltage is obtained across them. The ripple is 120 cycles.

The small diagrams show the circuit arrangement (minus extras) for AC operation and DC operation. The switch automatically takes care of bias adjustments. I-f. frequency is 456 kc.

## CARE OF SERVICING INSTRUMENTS

★ Electrical measuring instruments are the serviceman's eye, whereby he can see the exact electrical conditions of the circuit under test. The service and satisfaction received from any instrument will depend upon the user's interpretation of the meter readings and his care of the instruments. This article will explain some of the common misuses of servicing equipment.

How much overload the meter will stand the factory must leave with the user. This is a question that cannot be adequately answered, because a meter is designed to give accurate results under various conditions of temperature, weather, etc., when not abused. Providing a meter is properly designed, a slight overload will not harm an instrument any more than a slight jar will harm a watch. In finding the exact overload an instrument will stand without harm depends entirely upon how this overload is applied.

If the overload is applied gradually

## WHY WE DO IT

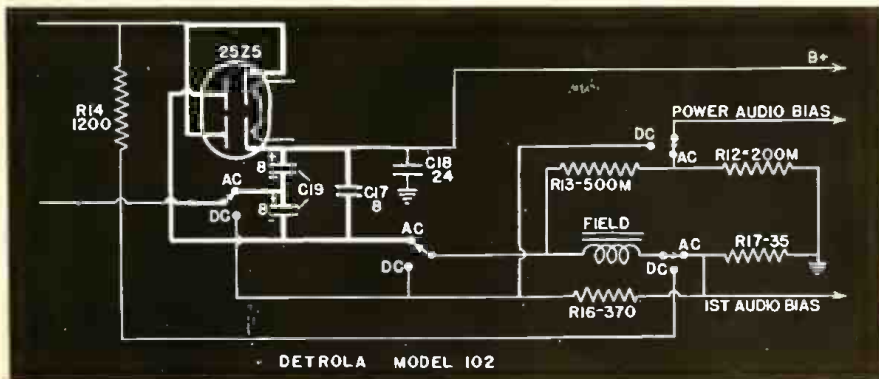
Radio Today's diagrams are checked and revised or redrawn so that:

1. Circuits can be clarified and readily interpreted.
2. Unusual features can be emphasized by heavy lines.
3. Circuits can be portrayed consistently in the same style.
4. Material can be presented as briefly as possible.

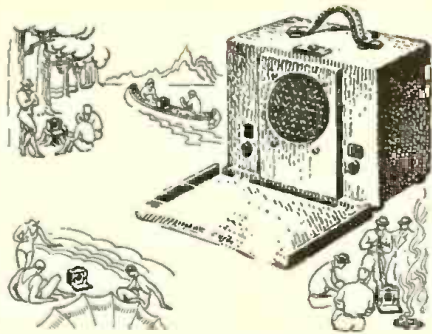
so there is no violent swinging of the moving element and needle, the instrument will stand considerable overload, up to 100 per cent or more. However, if the overload is applied suddenly, so the moving element moves violently against the full scale stop, there is danger of dulling the pivots or pitting the jewelled bearings which, while not apparent from a visual examination of the meter, will cause the movement to be laggy or sticky so the manufacturer's guarantee of tolerance is no longer true.

In the care of instruments, the user must be cautioned against allowing his instruments to drop, as this can easily upset the magnetic relation between the moving coil and the magnet within the meter and dull the pivots, causing the aforementioned troubles; it can crack the jewel bearings or it can knock the meter out of balance, causing a corresponding lack of accuracy.—F. E. WENGER, Engineer, Triplett Electrical Instrument Corp.

(Continued on page 41)



Complete circuit of the power supply of Detrola's AC-DC set. Note change in circuit when set is used on AC—a 25Z5 is used as a voltage doubler.



## You Can Sell OUTDOOR RADIO This Summer

▼ This compact portable battery radio with 4 tube superheterodyne circuit weighs only 20 pounds, complete with six-inch speaker. Batteries plug in—no wires to connect. Attractive cabinet, choice of finishes.

Write for special Authorized Dealer Franchise covering portable radio and famous Ansley Dynaphone phonograph combinations.

ANSLEY RADIO CORPORATION  
240 West 23rd Street New York, N. Y.

# ANSLEY PORTABLE BATTERY RADIO

## PUBLIC ADDRESS SALES PROMOTER With List Prices

### JUST OFF THE PRESS!



Another Radolek "Profit-builder" for you! A complete "Public Address Salesman." All prices are shown at your list selling prices. Show this book to your customers—it clinches the sale and protects your profits. Beautiful illustrations—complete descriptions. 5 to 60 watts. Everything in P.A.

### REPAIR PARTS PROFIT GUIDE

The new Radolek 1937 Radio Guide is completely revised—right up to the minute—everything in radio—at the right prices. Over 10,000 Repair Parts—a complete selection of Receivers, Amplifiers, Tubes, Tools, Books, Instruments—always in stock—ready for speedy shipment to you. You need this big Radio Parts Catalog. It's Free! Send for it.



## MAIL THIS COUPON!

**RADOLEK**  
607 W. RANDOLPH ST., CHICAGO

Send the Radolek Profit Guide Free   
Send the P. A. Sales Promoter Free

NAME .....

ADDRESS .....

Serviceman?  Dealer?  Experimenter?

★ FOR THE GREATEST RADIO

The Greatest  
Radios  
Ever Built

**A**N exciting year, this! Presidential election, international moves of tremendous import, great expositions, the Olympic Games. Without doubt we are face to face with the greatest radio season of all. People want a ringside seat; they want to know what happens when it happens. And into the midst of all this Crosley projects a new-type radio receiver. Different from anything ever heard. It transmits the thrill and the feeling with the voice and the deed. It brings music into the home as music has never before been heard over the radio. Until you have heard this new radio, you can have no idea of what truly modern reception really is. For this is radio *plus* the Phantom Conductor, *plus* the Mystic Hand, *plus* Multi-vox Control—*plus* 7 other great features. The new line is briefly described here (except the extended and complete new Battery line). Study the features, compare the performance, and you'll realize how inadequate all previous reception has been in the light of what Crosley makes available now. With Crosley you are face to face with the greatest selling opportunity in radio.



**CROSLLEY FIVER** Five Glass Tubes, Two Bands . . . 540-1570 Kc. and 1570-4000 Kc. . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Tone Control . . . Triple-Twin Output Tube . . . Full Floating Moving Coil Electro-Dynamic Speaker. The cabinet front panel is of walnut veneer. Decorative lines on front and top panels. Dimensions: 11 1/4" high, 11" wide, \$19.99 7 1/2" deep.



**CROSLLEY MODEL 250** Five Glass Tubes, Two Bands . . . 540-1570 Kc. and 1570-4000 Kc. . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Tone Control . . . Triple-Twin Output Tube . . . Full Floating Moving Coil Electro-Dynamic Speaker. Cabinet front panel is of stump walnut veneer. Cabinet finished in two-tone. Dimensions: 13 1/4" high, 11 1/4" wide, 7 1/2" deep. \$25.00



**CROSLLEY MODEL 295** Features and tubes same as Crosley Fiver. This beautiful cabinet has striped walnut veneer on front panel and also on one end panel. Other end panel is decorated with flutings. Dimensions: 10 1/4" high, 16 1/4" wide, 7 1/4" deep. \$29.95



**CROSLLEY MODEL 251** Five Glass Tubes, Two Bands . . . Octal-Base Tubes . . . 540-1550 Kc. and 1500-3450 Kc. . . Operates on any 110-volt A. C. or D. C. Circuit . . . Attached Antenna . . . No Ground Required. . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Full Floating Moving Coil Electro-Dynamic Speaker. This compact, portable radio is ideal to carry along while traveling. Easy to carry and easy to connect. The front panel of stump walnut veneer is attractively decorated with Prima Vera. Dimensions: 7 1/4" high, 10 1/2" wide, 5 1/4" deep. \$25.00 Also available with metal tubes at . . . \$26.25



**CROSLLEY MODEL 299** Features and tubes same as Crosley Model 251. Radio entertainment can be enjoyed anywhere with this remarkable A. C.-D. C. model. Ideal for use while traveling, at the office, or at home in the den, sun parlor, bed room or elsewhere. Cabinet front panel is of diamond matched pin stripe walnut veneer. Pin stripe walnut veneer on back of cabinet. Sides and top panel are fluted. Dimensions: 8 1/4" high, 11 1/4" wide, 5 1/4" deep. \$29.95 Also available with metal tubes at . . . \$31.20



**CROSLLEY MODEL 349** Five Glass Tubes, Two Bands . . . Octal-Base Tubes . . . 540-1710 Kc. and 2350-7000 Kc. . . Illuminated Full Vision, Magna-Ceramic Dial . . . Automatic Volume Control . . . Tone Control . . . Triple-Twin Output . . . Full Floating Moving Coil Electro-Dynamic Speaker. An exceedingly beautiful and exceptionally well-performing radio for standard and foreign broadcasts. Also receives police, amateur, aviation broadcasts. The cabinet front is of stump walnut veneer. Pilasters are reeded. Dimensions: 13 1/2" high, 11 1/4" wide, 7 1/2" deep. \$34.95 Also available with metal tubes at . . . \$36.20



**CROSLLEY MODEL 495** Six Glass Tubes, Three Bands . . . Octal-Base Tubes . . . 540-1800 Kc. and 1800-6000 Kc. . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Triple-Twin Output . . . Automatic Volume Control . . . Full Floating Moving Coil Electro-Dynamic Speaker. A beautiful cabinet housing a marvelous six-tube, three-band receiver. Cabinet front panel is of stump walnut veneer. The recessed speaker grille panel is of maple. Corner post is reeded. Dimensions: 12" high, 19 1/4" wide, 8 1/4" deep. \$49.95 Also available with metal tubes at . . . \$51.20



**CROSLLEY MODEL 449** Six Glass Tubes, Three Bands . . . Octal-Base Tubes . . . 540-1800 Kc., 1800-6000 Kc., 6000-18,000 Kc. . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Triple-Twin Output . . . Automatic Volume Control . . . Tone Control . . . Full Floating Moving Coil Electro-Dynamic Speaker. Brings in American, foreign, police, amateur, and aviation broadcasts. The cabinet front and top panels are of walnut veneer. Pilasters are reeded. Dimensions: 20" high, 14 1/4" wide, 9" deep. \$44.95 Also available with metal tubes at . . . \$46.20



**CROSLLEY MODEL 395** Features and tubes same as Crosley Model 349. Styled for today is this attractive new radio cabinet. Equally as outstanding is the performance of the five-tube, two-band chassis it houses. The cabinet front panel is of stump walnut veneer. The corner posts and base are reeded. Dimensions: 10 1/2" high, 16 1/4" wide, 7 1/4" deep. \$39.95 Also available with metal tubes at . . . \$41.20



WHATEVER

THE CROSLLEY RADIO CORPORATION - - CINCINNATI

POWEL CROSLLEY, Jr., President

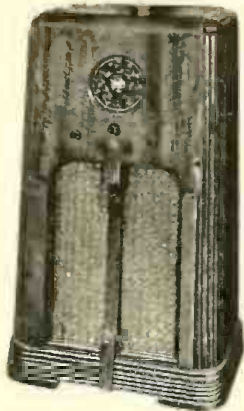
(Home of WLW—The World's Most Powerful Radio Station—70 on your dial)

(Prices slightly higher in Florida, Texas, Rocky Mountain States and West.)

# SEASON IN HISTORY . . .

## CROSLLEY MDDLE 699 CONSOLE

Six Glass Tubes, Three Bands . . . Octal-Base Tubes . . . 540-1800 Kc., 1800-6000 Kc., 6000-18,000 Kc. . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Timeloc Tuning . . . Band Indicator on Dial . . . High Fidelity . . . Triple-Twin Output . . . Tone Control . . . Vibracoustic Sounding Board . . . Full Floating Moving Coil Electro-Dynamic Speaker. The cabinet front and top panels are of California Claro walnut veneer. Dimensions: 41 $\frac{1}{2}$ " high, 28 $\frac{1}{2}$ " wide, 12 $\frac{1}{4}$ " deep. **\$69.95**  
Also available with metal tubes at . . . . . \$71.20



## CROSLLEY MODEL 899 CONSOLE

Eight Glass Tubes, Three Bands . . . Octal-Base Tubes . . . 540-1900 Kc., 1900-6500 Kc., 6000-19,000 Kc. . . Phantom Conductor . . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Timeloc Tuning . . . Band Indicator on Dial . . . Shadowgraph Tuning Indicator . . . High Fidelity . . . Triple-Twin Output . . . Tone Control . . . Automatic Volume Control . . . Vibracoustic Sounding Board . . . 10" Full Floating Moving Coil Electro-Dynamic Speaker. Receives American, foreign, police, amateur, aviation broadcasts. The cabinet front panel and top are of striped walnut veneer. Speaker grille has striped walnut veneer at sides and top. Dimensions: 42" high, 27" wide, 13 $\frac{1}{4}$ " deep. **\$89.95**  
Also available with metal tubes at . . . . . \$91.95



## CROSLLEY MOEEL 117 CONSOLE

Nine Tube (Metal), Three Bands . . . Octal-Base Tubes . . . 540-1900 Kc., 1900-6500 Kc., 6000-19,000 Kc. . . Cardiamatic Unit . . . Phantom Conductor . . . High Fidelity . . . Triple-Twin Output . . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Band Indicator on Dial . . . Shadowgraph Tuning Indicator on Dial . . . Timeloc Tuning . . . Multivox Control . . . Vernimatic Dial Drive . . . Tone Control . . . Automatic Volume Control . . . Vibracoustic Sounding Board . . . 12" Curvilinear Speaker. The cabinet front and top panels are of matched pin stripe walnut veneer. Dimensions: 42 $\frac{1}{4}$ " high, 26 $\frac{1}{4}$ " wide, 14" deep. **\$117.50**



## CROSLLEY MODEL 499 CONSOLE

Five Glass Tubes, Two Bands . . . Octal-Base Tubes . . . 540-710 Kc. and 2350-7000 Kc. . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Automatic Volume Control . . . Tone Control . . . Triple-Twin Output . . . Full Floating Moving Coil Electro-Dynamic Speaker. Beauty and performance reach new heights in this marvelous new Crosley console radio. Receives standard and foreign broadcasts. Also police, amateur, aviation. The cabinet front panel and top is of walnut veneer. Pin stripe walnut veneer on sides of the speaker grille. The platters are roeded. Dimensions: 39 $\frac{1}{4}$ " high, 24" wide, 10 $\frac{1}{2}$ " deep. **\$49.95**  
Also available with metal tubes at . . . . . \$51.20



## CROSLLEY MODEL 167 CONSOLE

Thirteen Tube (Metal), Three Bands . . . Octal-Base Tubes . . . 540-1800 Kc., 1800-6000 Kc., 6000-18,000 Kc. . . Cardiamatic Unit . . . Phantom Conductor . . . Mystic Hand . . . High Fidelity . . . Triple-Twin, Push-Pull Output . . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Band Indicator on Dial . . . Vernimatic Dial Drive . . . Timeloc Tuning . . . Fidelity Control . . . Automatic Volume Control . . . Vibracoustic Sounding Board . . . 15" Curvilinear Speaker. The cabinet front and top panels are of striped walnut veneer with maple inlays. Dimensions: 44 $\frac{1}{2}$ " high, 28" wide, 13 $\frac{1}{4}$ " deep. **\$167.50**



## CROSLLEY MODEL 137 CONSOLE

Ten Tube (Metal), Three Bands . . . Octal-Base Tubes . . . 540-1900 Kc., 1900-6500 Kc., 6000-19,000 Kc. . . Cardiamatic Unit . . . Phantom Conductor . . . High Fidelity . . . Triple-Twin Output . . . Illuminated, Full Vision, Magna-Ceramic Dial . . . Band Indicator on Dial . . . Shadowgraph Tuning Indicator . . . Timeloc Tuning . . . Multivox Control . . . Vernimatic Dial Drive . . . Tone Control . . . Automatic Volume Control . . . Vibracoustic Sounding Board . . . 15" Curvilinear Speaker. The cabinet front and top panels are of striped walnut veneer decorated with maple inlays. Dimensions: 43 $\frac{1}{4}$ " high, 27" wide, 14" deep. **\$137.50**

## UNPARALLELED FEATURES MAKE UNBELIEVABLE RECEPTION POSSIBLE



**PHANTOM CONDUCTOR** The Phantom Conductor (auto-expressionator), introduced for the first time in radio receivers by Crosley earlier in the year, has been further developed and refined, so that it now embodies a full size radio tube instead of two small bulbs. The Phantom Conductor not only restores the volume and expression range of music that in the case of crescendos and fortissimos must be monitored out, or suppressed by the orchestra leader in broadcasting, but it amplifies the expression to the fullness with which the composer intended the music should be played.



**MYSTIC HAND** By means of this almost unbelievable feature it seems as if an unseen hand did the tuning—and that is really what it amounts to, for the Mystic Hand automatically tunes the receiver to the exact frequency. It does not merely indicate the correct tuning, the Mystic Hand actually does the tuning. With this feature, the operator of the receiver turns the dial to within 20 kilocycles on either side of the station setting and the Mystic Hand completes the tuning with absolute precision. In addition, this feature reduces interstation noise and compensates for frequency drift of the oscillator circuit.



**AUTOMATIC BASS COMPENSATOR** This corrects a peculiarity of the human ear which, as music becomes softer and softer, will cease to hear the lower notes while the middle register will be heard quite clearly. To compensate for this the volume controls of the new Crosley 6, 8, 9, 10 and 13 tube console models are so constructed that, as the volume is turned down, the middle range of the music is reduced at a rapid rate than the bass tones. The result is fuller and more pleasing tones when volume is reduced to room requirements.



**MULTIVOX CONTROL** This feature permits the listener to select the type of audio response desired. There are 4 positions: (a) Normal; reception unmodified by Phantom Conductor; (b) Expander position; reception restored to full expression volume by Phantom Conductor; (c) Auditorium position; additional volume for auditoriums; (d) DX noise reducing position; reducing noise and increasing sensitivity, thus affording practically noise-free short-wave reception.

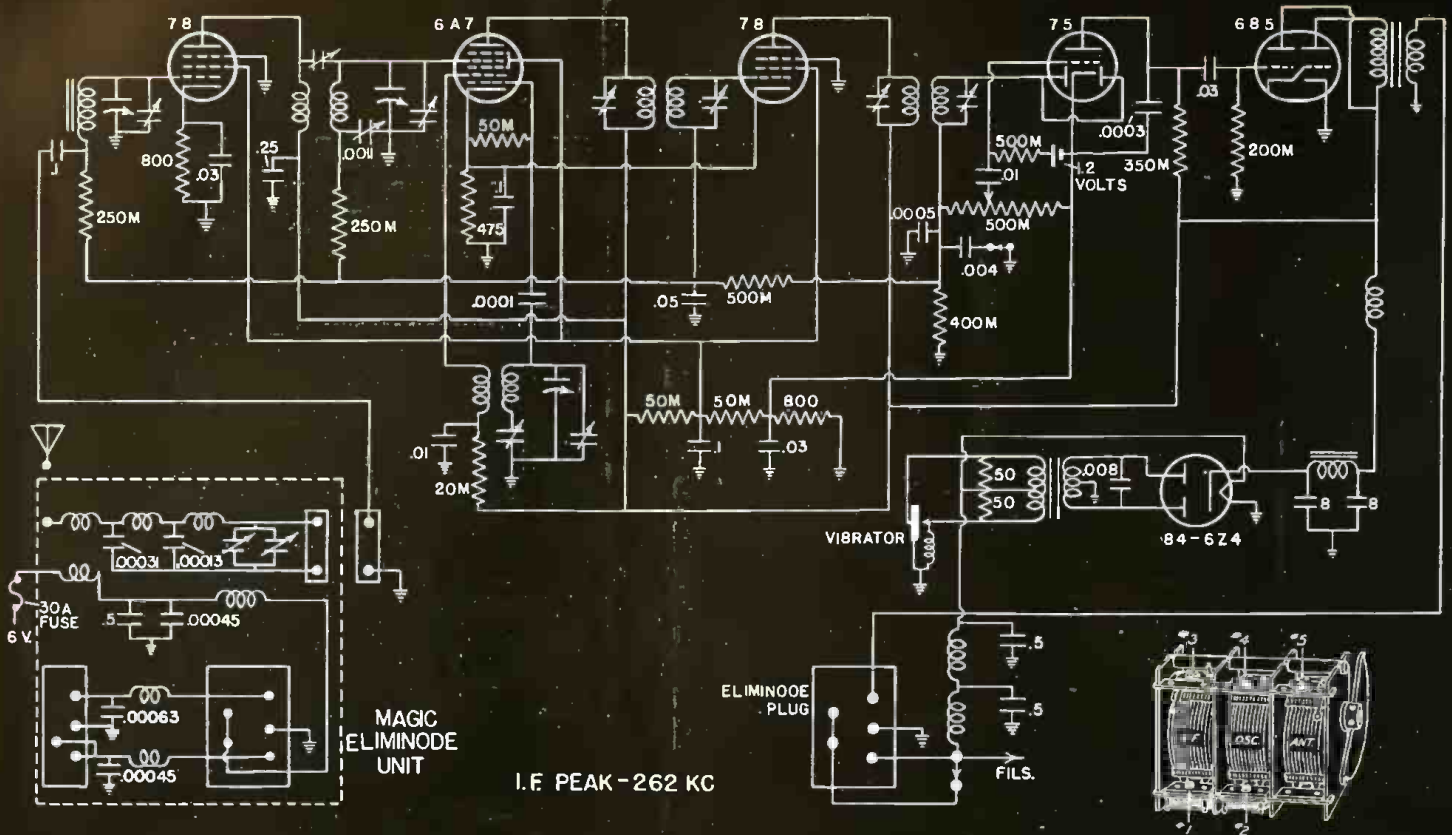


**FIDELITY CONTROL** This has three positions: Bass (left), high fidelity (middle), noise-reducing (right). Enables the user to restore balance of the relation of high and low frequencies, also improves reception in several other directions. Among the other important features are: VIBRACOUSTIC FLOATING SOUNDING BOARD AND GIANT CURVILINEAR SPEAKER; HIGH FIDELITY; NEW MACNA-CERAMIC DIAL with Timeloc Tuning, Vernimatic Tuning Control, Band Indicator; CARDIAMATIC UNIT—a floating sub-chassis separately mounted on 4 live rubber sleeves; DUAL TRIODE OUTPUT TUBES; METAL TUBES—The 9, 10 and 13-tube Crosley models have metal tubes. Most of the other A. C. receivers available with metal tubes if specified when purchased so that proper adjustment may be made.

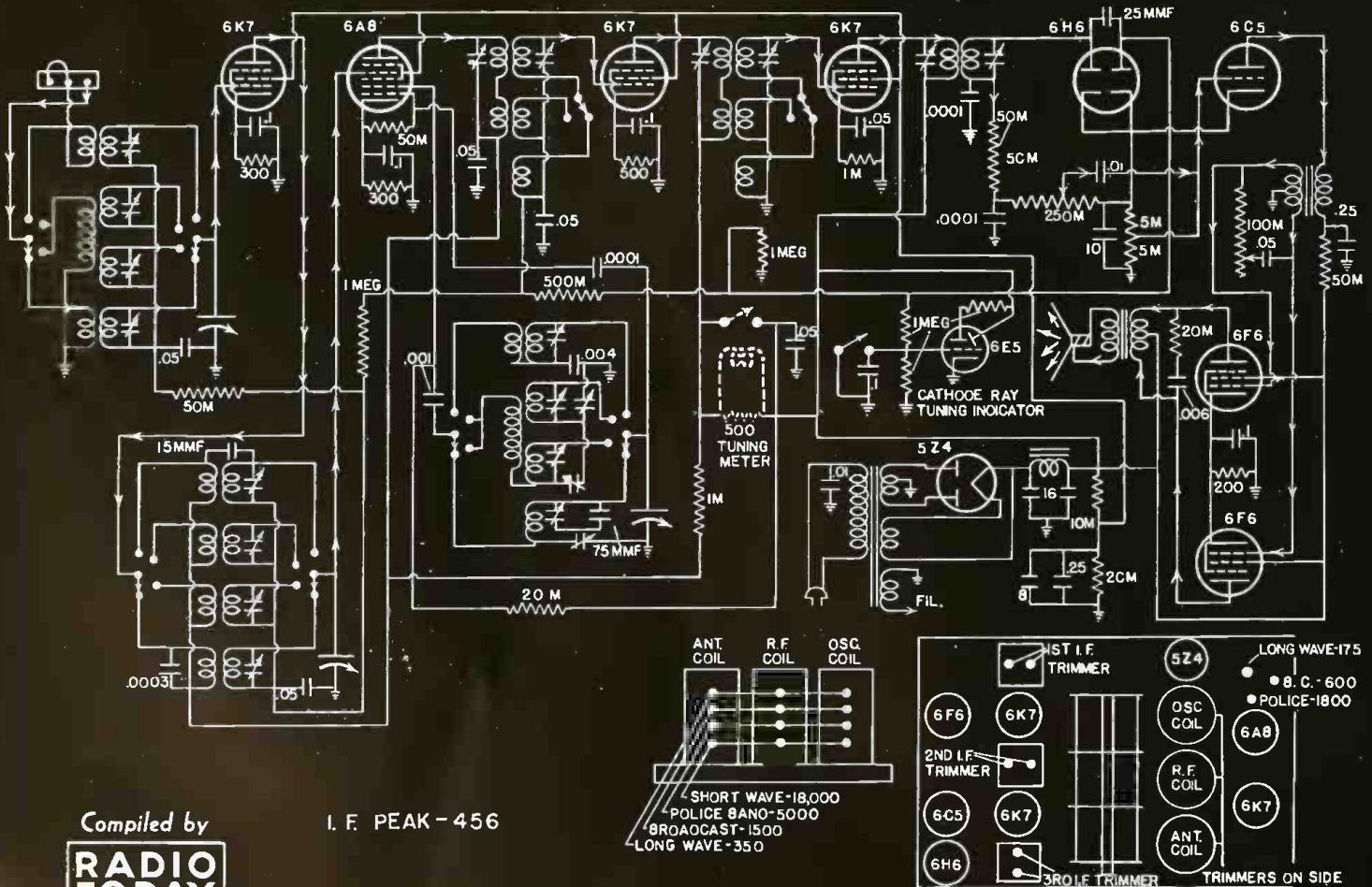
HAPPENS . . . YOU'RE THERE WITH A CROSLLEY

# CROSLLEY RADIO

# MOTOROLA MODEL 60



# FAIRBANKS-MORSE MODEL 90



Compiled by

**RADIO TODAY**

# SERVICING NEW CIRCUITS

## FAIRBANKS-MORSE MODEL 90

★ Two different chassis are found bearing model 90. Early model uses tuning meter resonance indicator—shown in dotted lines in center of diagram. Later model employs the 6E5 cathode ray tuning indicator for resonance indication.

In both types the tuning indicator is shorted out with a switch when the set is used in the hi-fi position. I-f. band width is varied by using closely-coupled i-f. coils for hi-fi response. When aligning the i-f. of the set (456 kc.) the i-f. should be set for maximum selectivity. The tuning indicator can be used in place of an output meter for alignment.

High frequency circuits aligned in following order: police band 5,000 kc., 1,800 kc.; broadcast band 1,500 kc., 600 kc.; long-wave band 350 kc., 175 kc.; short-wave band 18,000 kc. See chassis layout for position of trimmers.

Circuit is quite conventional—arrowheads indicate path of radio signal through the set.

## MODEL 60 MOTOROLA

★ Schematic on opposite page shows values of parts used in the Motorola 60. Circuit at left inclosed in dotted lines in the magic eliminode which serves to eliminate ignition noise.

At the right the various trimmers on the gang condenser are numbered. No. 1 is set at the factory for exactly 1.100 mmf. and should not be adjusted unless the serviceman has proper equipment to measure its value.

With a signal of 535 kc. fed into the r-f. tube rotate condenser to closed position and adjust the oscillator series condensers No. 2 for maximum output. Next set oscillator to 1,600 kc. and with condenser unmeshed adjust oscillator parallel trimmer No. 4 for maximum output.

Set generator at 600 kc. rotating variable condenser till signal is heard—adjust No. 2 for maximum output while rocking gang back and forth. With generator set for 1,400 kc. adjust r-f. trimmer No. 3 for resonance.

Couple oscillator output through 1,100 mmf. dummy antenna plugged into antenna receptacle—adjust antenna trimmer No. 5 for resonance.

A 1.2 volt bias cell is used for biasing the grid of the 75 audio amplifier

—cell ordinarily has life of two or three years. Check by replacement only—voltmeter indication means nothing.

## VOLUME CONTROL GUIDE

★ Offered by Electrad is the 1937 edition of their volume control guide. Free to servicemen who send complete cartons from two volume controls to Electrad, Inc., 175 Varick St., New York City.

## SPARE PARTS REDUCE P. A. FAILURES

★ PA servicemen should remember that news of any sort of failure in their systems travels too bad, very swiftly indeed. The entire arrangement has to be checked to the last detail, and provisions must be made for all possible emergencies.

Spare parts should be dragged along in great heaps, and it seems that the more gadgets there are on the ground, the more impressed the client is likely to be, anyway. One dealer reports that he keeps a record of each piece of equipment used in his system, so that he knows when the time approaches for some section of it to develop a weakness.

## TWO NEW SERVICE INSTRUMENTS NEEDED

*Service Editor.* RADIO TODAY:

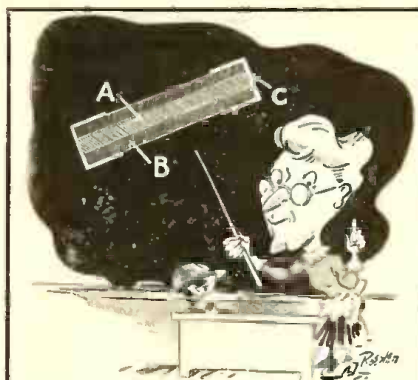
There is today a demand for two instruments, and I believe all publications should feature these two instruments until the radio service industry uses them. One is an all-wave grid-dip meter and the other a vacuum tube voltmeter that really works and does not cost a fortune to construct. The coil manufacturers should be alert to the possibilities of a kit of all-wave coils for the grid-dip meter, having a range of 20 mc. or higher to 100 kc. or lower. However, if you really want to know how much coil manufacturers are interested ask them for a kit of such coils.

Yours very truly,  
HOBART I. HALL

1661 Thirteenth Avenue  
Huntington, W. Va.

Servicemen, what are your ideas concerning test equipment? What devices do you feel that the manufacturers should add to their present lines?  
—*Service editor.*

(Continued on page 46)



## The ABC of Sturdy Resistors

You'll go to the head of the class if you stick to CENTRALAB Fixed Resistors for your Replacement jobs.

You'll get A1 marks and earn special distinction as a fellow who "knows his stuff." Take teacher's good advice and always use CENTRALAB Fixed Resistors (and Volume Controls).

A. Center core of resistance material is surrounded by a dense shock-proof ceramic, providing strength and protection against humidity.

B. Core and jacket are fired together at 2500 degrees F. into a single, solid unit, hard and durable as stone.

C. Pure copper covers the resistor end for wire lead contact. Contact to the resistance material is at the extreme ends only, providing uniform resistance and Load distribution over entire length. End contacts do not short circuit part of resistance as in other types.



*Every Radio Service Man should be a member of the Institute of Radio Service Men.*

## Centralab

Milwaukee, Wis.

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FIXED RESISTORS  
SOUND PROJECTION CONTROLS

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Volume Control Guide  
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THOUSANDS of dollars and thousands of hours of painstaking work have gone into the making of this new Electrad Volume Control Guide. Service men who have found the previous editions a valuable trouble-saver and dollar-maker will find this edition even more complete, more helpful. And in addition, every service man on our list to receive the Guide, will now also receive the regular issues of the Electrad Contact, a service magazine edited exclusively for service men.

### How to Get a Copy Free

This present issue of the Guide, because of the expense involved in producing it, is limited. Prompt application for copies is urged. Simply send us two complete Electrad Volume Control cartons and we'll send you the Guide free and also send you the Electrad Contact regularly as issued. Act now! Address Dept. RT6.



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Truvolt Resistors  
Power Rheostats

# TODAY'S TRADE TOPICS

- Ira Owen becomes president Utah Radio Products
- J. J. Kahn buys up outstanding stock of Stancor

★ Ira J. Owen, well-known industrial engineer, has been named president of Utah Radio Products Company, to succeed J. W. Caswell, who continues as a director.

Mr. Owen is a graduate of Cornell University, from which he received a degree of Mechanical Engineer. He has specialized in administrative and industrial engineering, having served many of the large companies, including the Western Electric, Cutler-Hammer, Bissell Carpet Sweeper, Pepsodent and many others. In his capacity as consulting engineer he made a survey for Utah Radio Products Company last February, which resulted in his being asked to become president and place in effect his ideas for improving operating conditions.

★ J. J. Kahn, president of the Standard Transformer Corp., Chicago, manufacturer of Stancor transformers, electric fans and power devices for the electrification of pin games, is now the owner of all Stancor stock, having purchased several weeks ago all outstanding stock. Mr. Kahn has been the active head of Stancor from its beginning, and is accredited with being responsible to a large degree for the present merchandising plans on replacement parts, having introduced the "exact-duplicate" idea to the industry. He has, for many years, been a leader in the transformer industry, organizing the Standard Transformer Corp. in July 1930.

★ New department of the Cinaudagraph Corp., has been formed at the Stamford, Conn., plant, to be known as the Magnet Steel division, head of the new department is Halton H. Friend. For the company's midwestern district, where Roy W. Augustine has recently been appointed sales manager, headquarters for the Magic Magnet speaker line have been established at 160 East Illinois St., Chicago.

★ Radio concerns who may have a "Chinese" puzzle to solve, are invited to talk it over informally with Robert L. Stewart, general manager of the American Radio Equipment Co., Shanghai, China, who will be in New York early in July. Stewart makes this trip to America after 7 years in China and India; mail will reach him care "Radio Today."

★ Statler Hotel people recently decided that C. G. Pyle, supervisor of sales for Hygrade Sylvania Corp., was the champion traveler among the members of the Sales Executives Club of New York. Pyle covered 60,000 miles, through 28 states, in a year's time, which is the record. Prize is a free stay at any Statler Hotel, two persons for a week.

★ H. Leigh Gerstenberger, sales manager, Weston Electrical Instrument Corp., Newark, N. J., has announced a change in the company's merchandising program which will bring test instruments within the "mass market" price range.

★ President A. G. Hoffman, of the Midwest Radio Corp., Cincinnati, has been using a plane to contact his retail stores in New York and Detroit. Mr. Hoffman is a licensed pilot; has over 500 solo hours to his credit.

★ D. A. Andrews, manager machine products division of the Continental Motors Corp., announced this week the appointment of G. S. Mann to represent the company in Chicago territory. Mr. Mann, who was formerly identified with the Hudson Motor Co. in charge of radio development, will cooperate with manufacturers and jobbers in stimulating sales for the various products recently introduced by the Continental Motors Corp., including the Fern-O-Flux speaker and the new "Tiny Tim" power plants.

★ V. A. Kamin, president of Corona Radio & Television Corp., manufacturer of Corona sets, has announced the addition of the following to the Corona sales staff: R. N. Swanson, Denver; W. N. Waters, New Castle, Ind.; J. C. Pope, Jr., Minneapolis; J. O. Russell, Little Rock, Ark.; Warner Jones, Cleveland.

(To page 44)



W. S. (Pat) SHAW  
who leaves RCA to become Southwestern district manager for Fairbanks, Morse & Co.



**MORE SENSITIVITY THAN A DYNAMIC!  
MORE VOLUME THAN A MAGNETIC!**

*The* **New QUAM**

# Chromatic

## **SPEAKER**

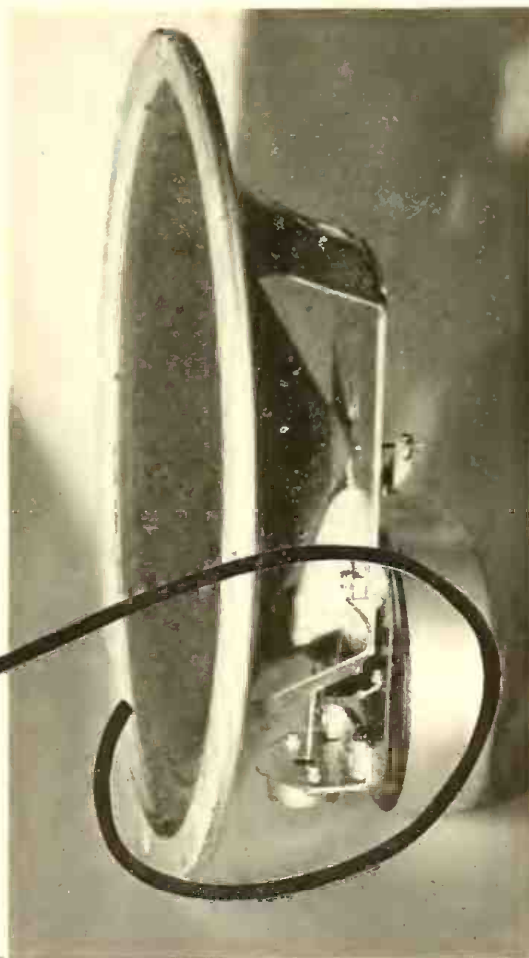
*A new speaker, revolutionary in design,  
amazing in performance, that gives you  
better sensitivity than a dynamic, and more  
volume than a magnetic — at less cost!*

**AN ALTOGETHER NEW PRINCIPLE  
IN SOUND REPRODUCTION**

It's **NEW** — with a patented snubbing feature that permits the speaker to reproduce exactly the tones of normal volume, but will absolutely prevent rattling on high amplitude notes. It gives you all the fine sensitivity and response of the magnetic speaker and the full volume of the dynamic in clear, unmarred tones.

It's amazing in performance! You'll hear high notes and bass notes that are not reproduced by speakers at **TWICE** the cost! It will startle you with its lifelike fidelity over the entire audible range!

Hear it! Test it! Write or wire at once for samples!



Every radio manufacturer should know about this phenomenal new speaker development! Don't delay! Complete information and samples gladly furnished on request!

**QUAM-NICHOLS CO.**  
1623 W. 74th ST., CHICAGO, ILL.  
"America's Largest Speaker Manufacturers"

## -- and so we had to Move!

• We couldn't help it! When our business expanded beyond the capacity of our plant there was nothing else to do! We had to get new quarters with sufficiently increased facilities to take care of our customers in the prompt manner to which they have been accustomed. So, please note our new address — and, by the way, stop in to visit us when you're in town. We'll be glad to see you!

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COILS**  
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**NEW ADDRESS 400 SO. PEORIA ST.**

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**SELL Both and a RADIO**

IT'S a NATURAL combination deal, exclusively for Franchised Corona dealers. All over the country they are preparing to "go to town" with it!

An efficient Corona Gas Engine Plant (6 volts—150 watts) and the finest American—Foreign—Police—battery radio ever built—with plenty of profit for YOU! There has never been an offer like this in radio history. It's the greatest opportunity farm radio and appliance dealers ever had!

And it has a powerful national advertising campaign behind it!

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**NATIONALLY ADVERTISED TO  
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Rush me full details on the Exclusive Corona Radio and Farm Lighting Plan.

Store .....

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By .....

## TRADE NEWS

(From page 42)

★ Radiobar has completed plans for a big display at the Texas Centennial for the 6-month exposition period which began June 6 at Dallas. Huge exhibit was arranged in conjunction with the local Dallas firm, Dreyfuss & Sons.

★ Newcomer to the sales promotion department of Crosley Radio Corp. is G. Earle Walker, who is perhaps best known as the former sales promotion manager for Prima Mfg. Co., Philadelphia.

★ Roy Augustine, representing Cinaudagraph speakers in Chicago territory, has just opened offices at 160 E. Illinois St., Chicago, in order to have suitable headquarters and display rooms.

★ Managers of the Texas Centennial Exposition, Dallas, have issued the statement: "We have decided to designate Fairbanks-Morse as the official radio of the Exposition."

★ Hygrade Sylvania Corp. has purchased the Economic Lamp Co., Malden, Mass.

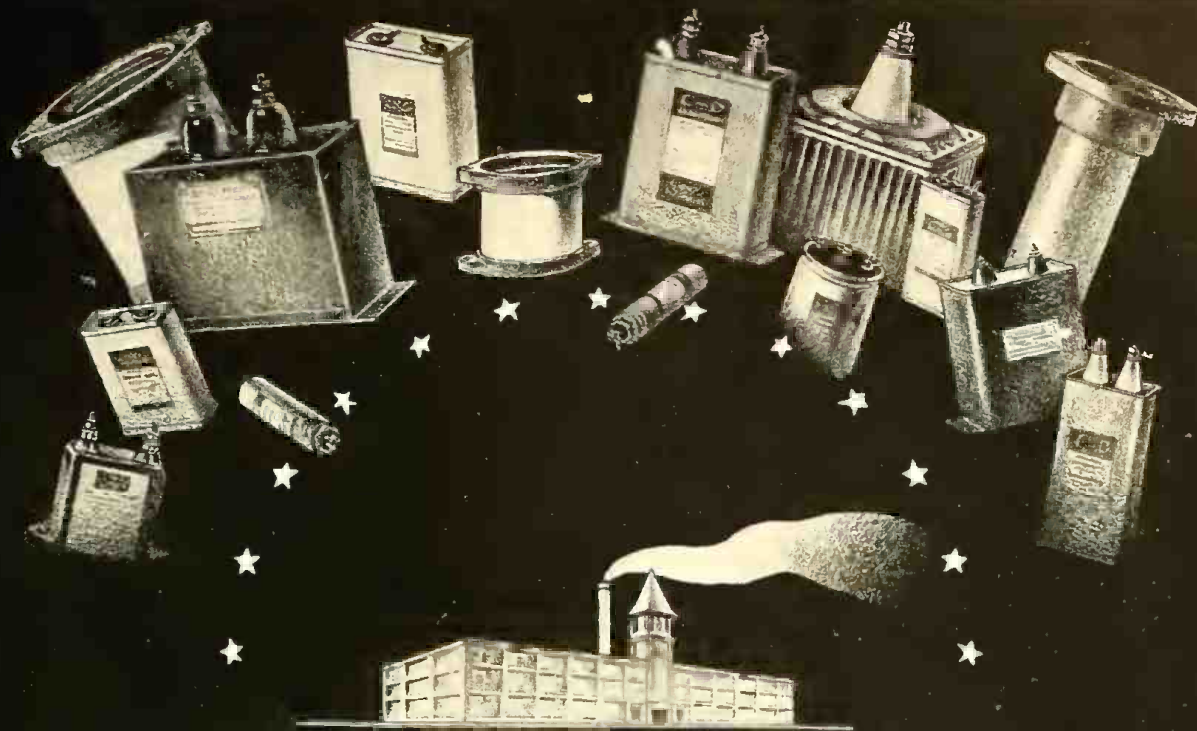
★ Extra busy sales convention was staged early this month by Stromberg-Carlson in Rochester, N. Y. Three-day meet was crowded with company's officials, representatives, distributors, all involved in sales plans for a banner year for Stromberg.

★ Cornell-Dubilier Corp., 4377 Bronx Blvd., New York City, reports that one type of its transmitting condensers dramatically became an important link in the emergency communications sent from Addis Ababa when that city was sacked by marauders. The CD gadget, one of those designed by William Dubilier, was being used in the U. S. naval transmitter when the American Legation in Ethiopia radioed for assistance through London and the British Ministry.

★ Walter A. Coogan, foreign sales director for Hygrade Sylvania Corp., Emporium, Pa., makes the report that the countries of Liberia, Tangier and the Balearic Islands have been added to the list of foreign buyers of Hygrade tubes. Coogan has been on a trip through Mexico and the West Indies.

★ There is lots of happiness these days around the Solar factory at 599 Broadway, New York City, for eight boys and two girls working in the Solar plant decided some time ago to buy a ticket in the sweepstakes. They drew "Thankerton" which finished 3rd and gave these ten Solar workers \$50,000 to spend. Latest reports indicate that they are all on the job at the present time, turning out Solar products.

(To page 50)



**CITED FOR DISTINGUISHED  
PERFORMANCE IN THE  
RADIO INDUSTRY**

## **CORNELL-DUBILIER CONDENSERS**

**N**O citation could be more impressive than the acceptance of Cornell-Dubilier condensers by the radio engineering fraternity. In the electronic field and in the field of physio-therapy, in broadcasting and in high tension systems, in radio receivers and in special applications for the many phases of the radio engineering art, engineers have come to the realization that C-D condensers serve their purpose best.

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# UNIVERSAL

## Velocity and Carbon Microphones



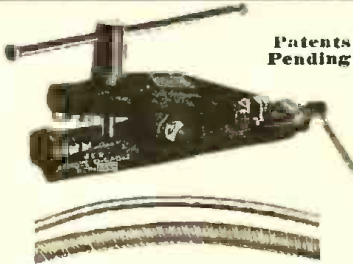
• Universal's latest achievement — Ideal for stage use—Not affected by temperature or humidity—Flat frequency response curve from 40 to 10,000 c.p.s.; Output—63 db; Low impedance or direct to grid types. Compact, 2¾ x 4¾ in. by 1½ in. thick—Weight, less than 18 oz.—Head swings to any desired angle—Beautifully finished in black enamel and artistic chrome plate—Ask for new catalog sheet describing Models RL, RP, RH and CB—List \$22.50—Latest model music type sectional stand for above microphone—List \$10.00.

**Universal Microphone Co. Ltd.**

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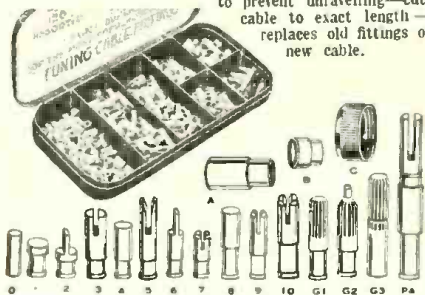
## REMOTE-O-CABLE REPLACER

The ONE MACHINE that DOES IT ALL!



Patents Pending

Designed especially for auto radio work, the REPLACER easily and quickly removes old fittings — swedges cable to prevent unravelling — cuts cable to exact length — replaces old fittings on new cable.



Auto radio control cable and housing, same as originally used by leading set mfrs. 50, 100 and 200 ft. lengths. Plain and gear-type fittings and housing-ends. Exact duplicates of size and quality. Equips you for 95% of all jobs. Write for 5-page catalog now ready.

**J. F. DISTRIBUTING CO.**  
5024 Fort Hamilton Parkway  
Brooklyn, N. Y.



# SERVICE NOTES

(Continued from page 41)

## WHAT IS NEEDED

★ “Modern servicing methods require complete test equipment which is universal in its application to all types of radio receivers,” states R. F. Herr, in charge of Philco's parts and service division.

Serviceman's equipment should enable him to do all types of service work on both home and automobile radios, including accurate and complete tube testing in the customer's home. An all-wave signal generator permits easy trouble shooting by feeding a constant signal into the circuit upon which work is being done.

Also it should have a continuity meter of the highest sensitivity with several meter-ohm ranges, a multiple voltmeter with a number of AC and DC ranges and an output meter that is accurate and dependable at all times. With such equipment the serviceman can turn out more work in a shorter time, and better work, easier. The obvious result is an increased income.

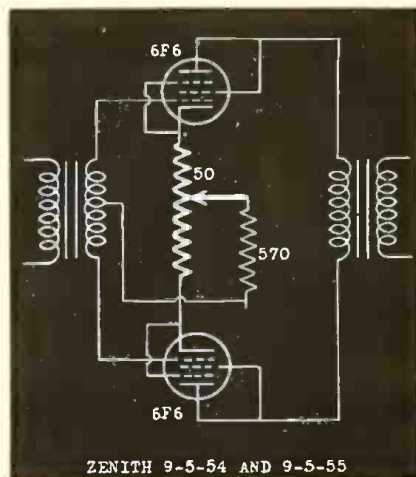
## HUM ELIMINATION IN ZENITH 9-S-54

★ Novel method of eliminating hum in the push-pull amplifiers of Zenith 9-S-54, 9-S-55 has been advanced by John Eklof, technician at Republic Supply Corp., Detroit.

Circuit shows addition of a 50-ohm potentiometer (heavy lines) between the cathodes of push-pull tubes. Bias resistor connects to tap on potentiometer. Hum is balanced out by adjusting tap on resistor. No other changes are made in existing circuit.

This same method can be used in other sets with push-pull cathode type amplifier tubes — potentiometer

(To page 48)



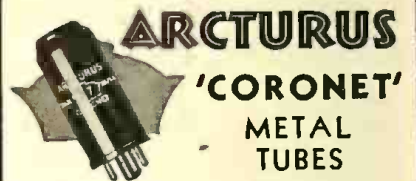
Check any other line against Arcturus

TYPE OF TUBE	ARCTURUS	OTHERS
GLASS	✓	
"G"	✓	
METAL	✓	
METAL (TO REPLACE OLD GLASS TUBES)	✓	

## ONLY ARCTURUS gives you ALL 4

The most complete tube line in the industry—ARCTURUS—gives you 4 separate avenues to sales and profits. Unless you stock Arcturus Tubes, you're missing those additional profits that should be yours.

For full details of the 4-WAY Arcturus line and the new 'Coronet' Metal Tubes write: ARCTURUS RADIO TUBE CO., NEWARK, N. J.



Send for Both

1936

FREE

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2 136 PAGE CATALOG

RADIO'S LEADING SUPPLY GUIDE

Send for both! A punchy, sales-promoting Political P.A. Bulletin timed for the coming campaigns—and a great 136 page Radio Catalog featuring everything in Radio—sets, parts, books, tools, etc. Send for both—they're FREE and they're Hot! Write today.

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*'Cub'*

POWERED by "SMOOTHFLO"  
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FOR 45 YEARS, A LEADER IN  
THE QUALITY GAS ENGINE FIELD

Portable, light weight—sturdily built—furnishes compact, reliable power or gas-electric plants, washers, water systems, power lawn mowers.  $\frac{5}{8}$  H.P. engine operates 16 hours on one gallon of gas. Counter balanced crankshaft—air cooled—ball bearings—quality construction throughout!

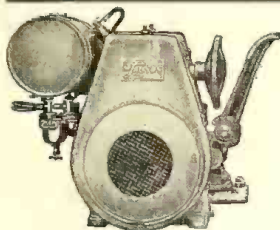
Wherever *dependable, economical, portable* power is required—specify the **LAUSON** gas engine.

Here's a NEW way to BIG profits! Sell the *lowest priced gas electric plant ever offered!*

200 watts, 6 or 12 volts—the new PIONEER "Cub" is a *REAL VALUE!* And every farmer wants electricity on his farm! It will operate a lighting system—charge radio, auto and truck batteries. It will drive small machinery mechanically! The first *practical LOW COST FARM LIGHT PLANT!*

#### OTHER PIONEER PRODUCTS

"Baby Junbo" Gas-Electric Plants with magneto ignition: 6, 12 volts—150 watts DC; 6 volts—200 watts DC; 12, 32, 110 volts—250 watts DC. "Blue Diamond" 300 watts 110 volts AC. "Gold-Crown" 32 volts 800 watts DC; 110 volts AC 600 watts, 1000 or 1500 watts AC or DC. Complete line of PIONEER Dynamotors, converters, and Gen-E-Motors.



**LAUSON ENGINES  
ARE IDEAL  
PRIME MOVERS**

There's a myriad of uses for these unique Lauson Engines. They're made in a variety of sizes and types—an efficient design for every need! Air cooled models from  $\frac{1}{2}$  to

3 H.P.; Radiator cooled models from  $2\frac{1}{2}$  to 5 H.P. (all vertical) and the horizontal types ranging from  $1\frac{1}{2}$  to 18 H.P. All of them are efficient and economical to operate and have a **LOW FIRST COST!** Write for full information TODAY! Send in the coupon NOW!

300 WATT 110 VOLT AC PIONEER

**'Blue Diamond'**  
GAS-ELECTRIC PLANT

**\$79.95**  
LIST

The Lowest Priced "City" Light Plant *ever offered.* Operates standard AC "City" Appliances. Also has DC winding for charging 6 volt batteries. Amazing economy—rock bottom price—yet a big profit for dealers! Write for full information TODAY!

Cable Address  
"Simontrice" New York



THE LAUSON COMPANY  
No. 8 Monroe St., New Holstein, Wis.  
Send me complete information on the  
LAUSON Gas Engine Line.

Name .....

Address .....

City .....

State .....

**MAIL THIS  
COUPON  
TODAY**

**MAIL THIS  
COUPON  
TODAY**

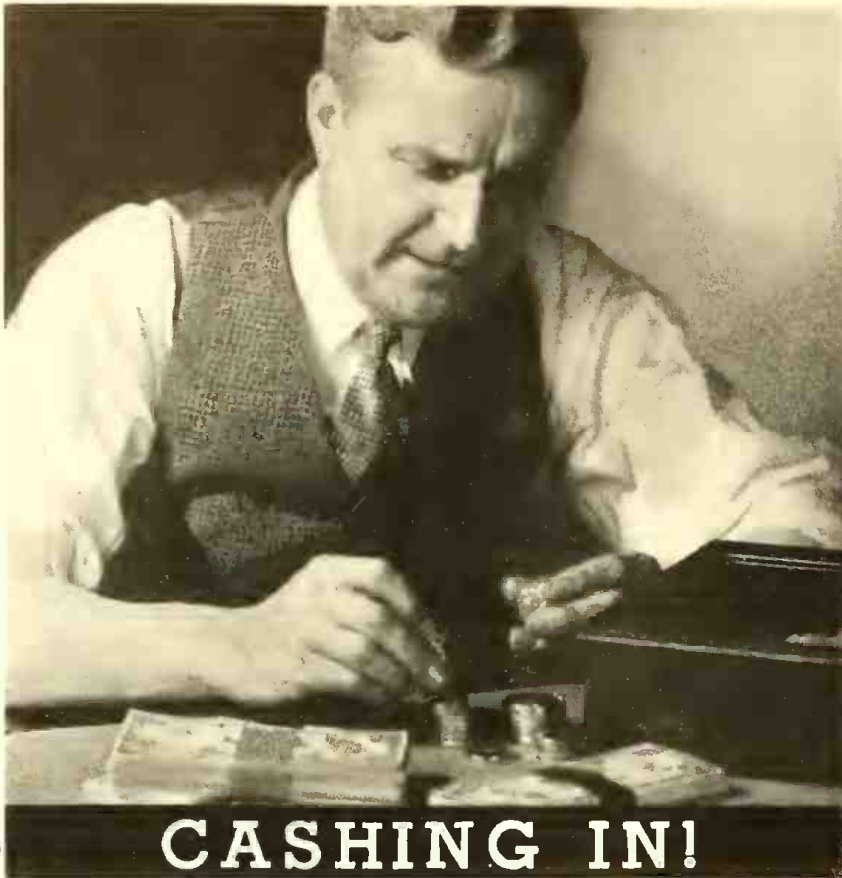
PIONEER GEN-E-MOTOR CORP.  
464 K West Superior St., Chicago, Ill.  
RUSH FULL INFORMATION ON  
PIONEER "CUB" AT ONCE!

Name .....

Address .....

City .....

State .....



## CASHING IN!

*A bigger tube business with bigger profits . . . read how he did it!*

● He put in a line he could guarantee 100%. Tubes that have received 80 separate tests before they left the factory! He sold his customers the best tube money could buy . . . Built himself a reputation for *quality*, a reputation that brought new customers in and old ones back!

He sold tubes that brought him a *bigger* margin of profit. A line whose list prices were always fair . . . tubes backed by a definite written guarantee.

He put his tube business on a safe, profitable basis with Sylvania! You can do the same. For full sales and technical information, write to the Hygrade Sylvania Corporation, Emporium, Pa.

# SYLVANIA

THE SET-TESTED RADIO TUBE

UTAH RADIO PRODUCTS CO.

ORLEANS ST. CHICAGO, ILL.

## TITON FLASH

URPC 820 RT-6 Chicago, Illinois  
NEW AND UP-TO-DATE REPLACEMENT VIBRATOR  
GUIDE NOW READY FOR DISTRIBUTION STOP WHERE  
SHALL WE SEND YOUR COPY ADVISE.

UTAH RADIO PRODUCTS CO. - CARRINGTON  
P. S. NEW SPEAKER CATALOG JUST CAME IN STOP  
HAVE COPY OF THIS RESERVED FOR YOU ALSO.

TEAR OUT THIS AD—PIN TO YOUR LETTERHEAD AND MAIL TO DEPT. R. T.  
FOR COMPLETE DETAILS AND FREE CATALOG

## SERVICE NOTES

(From page 46)

allows for matching of tubes by slight changes in bias. Additional resistance introduced in circuit is negligible.

### TUBE DATA AIDS SERVICING

★ Leading vacuum tube manufacturers offer technical data on their tubes which make it easier to service modern sets. Charts giving diagrams of base connections, characteristics of tubes, and other valuable information are available from your favorite tube manufacturer free or at a slight cost. Following is a list of currently available material which can be obtained by writing to manufacturer on your letterhead and mentioning RADIO TODAY.

Offered by Arcturus Radio Tube Co., 720 Frelinghuysen Ave., Newark, N. J.—characteristic charts of glass, "G," Coronet metal tubes (free); "Broadcast receiving tube list" with periodical supplements (10 cents).

Champion Radio Works, Lynn, Mass., publish a technical data chart on radio tubes and resistance tubes which have base wiring diagrams (free).

A technical manual (15 cents) is published by Hygrade-Sylvania Corp., Emporium, Pa. Other helps (free) are: tube base wiring chart, average characteristics bulletin, tube interchangeability chart, ballast tube interchangeability chart.

Ken-Rad Corp., Owensboro, Ky., have a technical data chart with base wiring diagrams (free).

"Official handbook of characteristics" (free) issued by National Union Radio Corp., 570 Lexington Ave., New York City, gives data on characteristics, interchangeability and base connections.

Philco Radio & Television Co., Tioga and C Sts., Philadelphia, Pa., have a tube characteristic chart (free) which also shows the base connections.

The technical data chart (free) offered by Raytheon Production Corp., 420 Lexington Ave., New York City, gives tube characteristics and base connections.

RCA Radiotron, Harrison, N. J., offer RC-12 technical manual covering glass tubes with base connection chart (25 cents) and metal tube booklet (10 cents). Both are free by mentioning RADIO TODAY.

Triad Mfg. Co., Blackstone St., Pawtucket, R. I., issue technical bulletins (free) on: 2B6, 6B5, metal shielded series, ballast, electron ray, "G" series tubes.



# FLASH!

"GOLD MEDAL"

**CHOOSES FAIRBANKS-MORSE  
RADIOS AND REFRIGERATORS  
FOR BIG CONTEST PRIZES!**

39 Columbia broadcasting stations, full-page 4-color *American Weekly* advertisement, 35-station baseball broadcasts, and 125,000 grocery store displays feature F-M Radios and Refrigerators.



**THE AWARDS**  
Fairbanks-Morse Conservador  
Refrigerator and DeLuxe Table  
Model Radio.



For the Gold Medal \$29,500\* Nomination Sweepstakes Contest, we chose Fairbanks-Morse DeLuxe table model radios and Fairbanks-Morse Conservador refrigerators. Starting June 22, a Columbia hook-up of 39 stations will tell the housewives of America how to win a Fairbanks-Morse radio or Conservador refrigerator through the purchase of one or more General Mills products—Gold Medal "Kitchen-tested" Flour, Bisquick, Softasilk, or Wheaties.

We want you to know that this publicity means dollars in your pocket. Fairbanks-Morse is supplying its dealers with plans, etc. for tying up with and making profits out of this contest—write them today. It will help us—and you can cash in on Gold Medal publicity.

*\*Delivered retail value of prize awards.*

## GOLD MEDAL FOODS, INC.

of GENERAL MILLS, INC.



*Man!*  
*what a*  
*difference*

*Unit-Matched* OPERADIO  
*made in my* EQUIPMENT  
 PROFITS!

I make money on P.A. Installations . . . and I find that by buying OPERADIO Unit-Matched Equipment I not only make more money but give my customers a better job. There is never any comeback or dissatisfaction when you buy UNIT-MATCHED Public Address Portable Units, Amplifiers, Microphones and Speakers from OPERADIO . . . the house that stands behind its products and always gives you a square deal.

Address Dept. RT. for Catalog No. 10

Ask About Our Convenient Time Payment Plan

**OPERADIO**  
 MANUFACTURING COMPANY

Unit-Matched P. A. Equipment at its Finest

ST. CHARLES, ILLINOIS

Export Division

347 Madison Avenue, New York, N. Y.



**NATHANIEL BALDWIN**  
 CONTROLLED RESONANCE  
**BEAKERS**

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  
 60 E. 42nd STREET, NEW YORK, N. Y.

*"The World's Best Value"*

**KADETTE RADIOS**

INTERNATIONAL RADIO CORPORATION, ANN ARBOR, MICHIGAN, U.S.A.

## TRADE NEWS

(From page 44)

★ Originally to have ended June 30, Radiobar's \$1,000.00 National Window Display Contest has been extended, according to B. S. Tucker, national sales manager. Rules of the contest call for Radiobar with Philco windows to be installed sometime before August 15. Stores are to furnish the company with one 8 x 10-in. glossy photograph of the exclusive Radiobar window display, plainly marked on the back with name and date of entrant. All entries must be postmarked not later than August 15, 1936, and prizes totalling over \$1,000 in new Radiobars will be awarded by the company by August 30. Entries should be sent to 7100 McKinney Ave., Los Angeles, Cal.

★ Stanley Walters, graduate engineer of the Massachusetts Institute of Technology, comes to the Cornell-Dubilier Corp. with many years engineering experience in the radio and electrical industry. Mr. Walters was previously chief engineer of the Tobe Deutchmann Co., for many years.

★ Edwin I. Guthman & Co., manufacturer of Guthman coils, moved a few weeks ago to a new factory and executive offices at 400 S. Peoria St., Chicago. In its new home the company has twice as much space as heretofore, giving it adequate facilities to accommodate its fast-moving business.

★ W. Keene Jackson, General Sales Manager of the International Radio Corporation, Ann Arbor, Mich., reports a group of central and western Kadette salesmen will have their headquarters during the R.M.A. Convention at the Blackstone Hotel.

★ It was "Radio Today's" pleasure to receive a recent visit at our New York offices from the Rama Brothers, Radio House, Karachi, India. They are India's largest radio distributors.

★ Universal Microphone Co., Inglewood, Cal., has a new factory representative in southern California, S. E. Shapiro, who will specialize in recording machines and equipment.

★ Wincharger Corporation of Sioux City, Iowa, announces through E. W. Ferguson, traffic manager, new low freight rates effective July 6. Winchargers will now be billed as battery chargers at the second class rate instead of at 1½ times the first class rate as at present.

★ Edward B. Lyons, identified with the radio-music industry for upwards of 25 years, died suddenly on June 6th at New Castle, Pa., from a heart attack. Mr. Lyons was widely known throughout Ohio and Pennsylvania, having called upon the trade in that territory for over two decades as a jobber and as a representative of well-known manufacturers. He is survived by his wife, a daughter, two sons, and George Lyons, a brother, who has also been associated with the radio-music industry for many years.



## COMPLETE ELECTRIC PLANTS



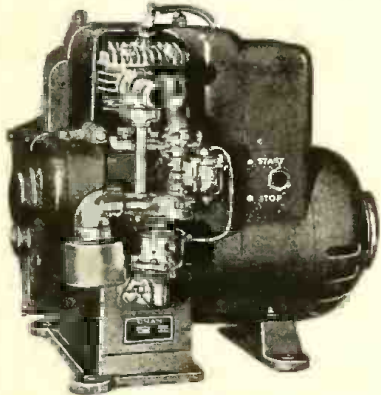
**ONAN ALTERNATING CURRENT PLANTS OPERATE A. C. RADIO, PUBLIC ADDRESS SYSTEMS, SOUND CAR EQUIPMENT, MOTION PICTURES.**

**Can Be Used Anywhere**

Supply Electricity for Camps, Cottages, Farms, Boats, Commercial Purposes and places where current is not available from power companies. Will Operate Water System, Refrigerator, Household Appliances.

**Sizes to Suit Every Purpose**

Built in sizes 350 to 50,000 watts, \$110 and up. Supply 110 or 220 volt, 60 cycle, single or three phase current. Operate on Gasoline, Gas or Distillate. Also 32 volt, D.C. Models. All Models furnished complete, ready to run.



Write for details

**D. W. ONAN & SONS**  
562 Royalston Ave. Minneapolis, Minn.

**Resistance Maintained**



**T**HE Ward Leonard policy of conservative Watt Rating is a protection to you. When you do a job with Ward Leonard Resistors, it stands up... no burn-outs of the resistors themselves or any other parts that take the load when resistors fail. Furthermore, because they are wire wound on porcelain tubes and have all joints silver soldered, they maintain their resistance values. Why jeopardize your reputation and profits by fooling around with "unknowns" when you can get Ward Leonard resistors? Send for the new price list.

**WARD LEONARD**  
RELAYS ♦ RESISTORS ♦ RHEOSTATS

WARD LEONARD ELECTRIC CO.  
Mount Vernon, N. Y.

Please send me new bulletin Nos. ....  
Name .....  
Company .....  
Street .....  
City and State..... RT

## WITH THE WHOLESALE

★ Hawaiian angle on current interest in auto radio comes from a Honolulu jobber, Nylan Bros. & Co., Philco distributor. Hawaiians like the new features on the car receivers—two speakers, streamlined control unit, wide-vision dial—to the extent that Nylan's expect the best auto radio year yet.

★ Anchor Lite Appliance Co., Crosley jobbers of Pittsburgh, Pa., has started extensive remodeling operations, has increased its personnel 40 per cent, and has a fleet of new delivery trucks.

★ General Household Utilities Co., Chicago, Ill., and Marion, Ind., makers of Grunow radios and refrigerators, have announced the appointment of National Products Distributing Co., 287 Peachtree St., Atlanta, Ga., as exclusive distributor for northern and southeastern Georgia.

★ C. S. Tay, manager, Crosley Distributing Corp., Chicago, reports on his dealer meeting late last month: 450 dealers attended and signed the greatest dollar volume of orders for 1937 line ever booked at such a gathering.

★ Reader's Wholesale Distributors, Houston, Texas, were recently hosts to 400 dealers at a 1937 Crosley receiver show complete with wives, banquet, floor show, dance.

★ M & M Co., Cleveland distributors, have discontinued their retail operations and have moved from 500 Prospect Ave. to new and larger quarters at 5200 Prospect. Among other appliances, M & M distributes Grunow home radio and refrigerators, Motorola auto receivers; president is J. C. McLean.

★ New Orleans distributors. Interstate Electric Co., were recently hosts to 200 Crosley dealers from Louisiana and Mississippi at a lively showing of new models. District manager George H. Lasley was there; Interstate execs on the program were P. Stern, pres.; O. G. H. Rasch, sec.-treas.; H. V. Moninger, ad. mgr.; and L. E. Cope, general sales representative.

★ Distributor showing of the new Spartan line is set for June 25-27, at Jackson, Mich. Sparks-Withington Co. has elaborate plans for the unveiling of new models, having worked up considerable interest in the engineering features of 1937 Spartan receivers. Company's general manager, Harry G. Sparks, will be on hand, as well as other factory execs.

★ New and exclusive jobber for Grunow throughout the state of South Carolina is R. E. Mehlman, Inc., Columbia. Other recent appointments by Grunow include Warren Electric Co., Sioux City, Ia.;

Wichita Distributing Co., Wichita Falls, Tex.; Reichmann-Crosby Co., Memphis, Tenn.; Commercial Refrigeration Co., Houston, Tex.; National Products Distributing Co., Atlanta, Ga.; Charron Radio Co., Worcester, Mass.; Virginia Battery & Tire Co., Petersburg, Va.; Findlater Hardware Co., San Angelo, Tex.; Red Rooster Supply Co., Grand Island, Neb.; Hastings Piano Co., Hastings, Neb.

**LICENSED**  
SYNCHRONIZED SOUND SYSTEMS

Incorporating every known improvement... for best and enduring performance, and for simplified, damage-proof operation.

Model  
PA-417A



**17 WATT... PORTABLE... SPARKLING BRILLIANCE**

**System Includes:**

- Dual Diaphragm Crystal Microphone.
- Dual Input Mixing System.
- 4 Stage Amplifier Using 6 Tubes (furnished).
- One or Two 12" D.C. Dynamic Speakers.

WEBSTER-CHICAGO offers you today's finest in P.A. systems at thoroughly competitive prices. WEBSTER-CHICAGO has earned its reputation for building outstanding trouble-proof sound equipment—the kind every service dealer likes to sell and recommend. See your Jobber. See for yourself that WEBSTER-CHICAGO merchandise does not cost more. Write for catalogue.

**Strict Dealer Policy**  
**Fully Licensed Time Payment Plan**  
**THE WEBSTER CO.**

Section JN-9

3825 W. Lake Street Chicago, Ill.

WEBSTER-CHICAGO manufactures a complete line of synchronized public address systems, sound equipment, amplifiers and accessories of all kinds.

THE WEBSTER COMPANY  
3825 W. Lake St., Chicago, Ill.  
Without obligation please send me  
.....More information on Model Pa-417A.  
.....Send complete catalogue.  
Name .....  
Address .....  
City..... State.....

# coming!

~ a new radio journal

## RCA REVIEW

A quarterly journal of technical progress in radio and the allied arts, contributed by RCA and associated engineers.

Combining in one publication articles on the most significant developments in all branches of radio.

A new and authoritative source of information for radio engineers and executives who wish to keep up with the latest advances in the field.

Partial List of Contributors  
 DR. V. K. ZWORYKIN  
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First Issue . . . . . July, 1935  
 One Year (4 issues) . . . \$1.50  
 Outside U. S. . . . . \$1.85

Published by  
**RCA INSTITUTES  
 TECHNICAL PRESS**  
 A Department of RCA Institutes, Inc.  
 75 Varick Street New York

### KEY TO NOVELTY FEATURES OF THE NEW RADIOS

★ Following is a list of the names of new offerings of 1936-37 radio sets as listed on the front cover of this issue, together with the names of the manufacturers offering these features:

Automatic Maestro . . . American Bosch  
 Flywheel Tuning  
 Continental (Admiral)  
 Focused Tone . . . . . General Electric  
 Foreign Tuning . . . . . Philco  
 Magic Eliminator . . . Galvin (Motorola)  
 Magic Voice . . . . . RCA-Victor  
 Outdoor Radio . . . . . Ansley  
 Phantom Conductor . . . . . Crosley  
 Precision Eye . . . . . Westinghouse  
 Rhythm Radio  
 Noblitt Sparks (Arvin)  
 Robot Control  
 United Motors (Delco)  
 Stream-Line Radio . . . . . Fada  
 Target Tuning . . . . . Zenith  
 Teledial Tuning . . . . . Grunow  
 Tell-Time Radio . . . Case-Hallicrafters  
 Time Tuning . . . . . Emerson  
 Tri-Focal Tuning  
 Stromberg Carlson  
 Tuning Beacon . . . . . Pilot  
 Turret-Shielding . . . Fairbanks Morse

★ National Broadcasting Co. has filed application with the FCC for a power jump on Station WJZ to 500,000 watts. NBC also asked permission to erect a new antenna, 640 feet high. President Lennox R. Lohr states that the new equipment should

be ready by November; under the direction of Chief Engineer O. B. Hanson, it will be planned to use all up-to-the-minute transmitting devices.

★ Station WKY, Oklahoma City, recently entertained 750 guests at a gala opening of elaborate new studios in the Skirvin Tower Hotel. WKY is sister station to KLZ, Denver, "pioneer station of the West."

### AK DISTRIBUTORS TO STOCK NEW LINES

★ With the announcement that Atwater Kent would less actively promote radio sales, a number of distributors have informed RADIO TODAY regarding lines which they will stock in place of Atwater Kent:

Albany Dist. Co., Albany, N. Y.  
 Emerson  
 Capital Paper Co., Indianapolis  
 Fairbanks-Morse  
 Columbus Ignition Co., Columbus, O.  
 Emerson  
 D'Elia Electric Co., Bridgeport, Conn.  
 Emerson  
 Dow Radio Supply Co., Pasadena, Calif.  
 Zenith  
 Edmond Co., White Plains, N. Y.  
 Emerson  
 Lansing Co., Scranton, Pa.  
 Stewart-Warner  
 Sorenson Co., Des Moines, Iowa  
 Grunow  
 Vermont Hardware Co., Burlington, Vt.  
 RCA-Victor  
 Williams Distributing Co., Charleston, W. Va.  
 Grunow

### YOU BELONG IN THIS PICTURE



### OUTDOOR SUMMER CALLS FOR Magic Magnet Extension Speakers

THE tremendous extension speaker market, practically untapped and highly profitable, is opened to the servicing field for the first time on a practical basis by the Cinaudagraph Magic Magnet Speakers.

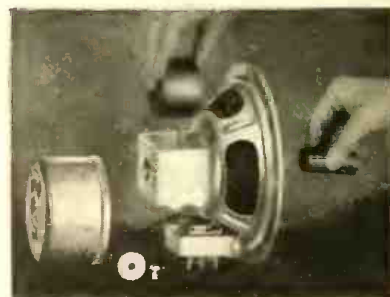
Every owner of a radio receiver (and there are some 22,000,000 in America!) is a prospect. For porch, garden, bedroom, for every spot not reached by the set. They're a cinch to sell—these Magic Magnet Speakers with their high fidelity characteristics, sturdy construction, and simple installation features—only two wires being required for hook-up.

Extension speakers have proven a boon in England. Why not here? Just try selling your customers on the idea. You will be surprised at the response. Details sent on request.

CINAUDAGRAPH CORPORATION  
 Speaker Division, Dept. T. Stamford, Conn.

## CINAUDAGRAPH

### • Just Change the Field! •



### SIMPLE! PRACTICAL! EFFICIENT! "CHANGEABLE FIELD" SPEAKERS by OXFORD

YOU can see at once how easy to service . . . how flexible and economical to use . . . these new Dynamic Replacement Speakers by Oxford really are! Ideal for amateurs, too! A simple change of field coil gives you the proper combination of field and transformer you need for the "job." Universal transformer matches any tube. Voice coil remains centered. Available in 6", 8" and 11" models.

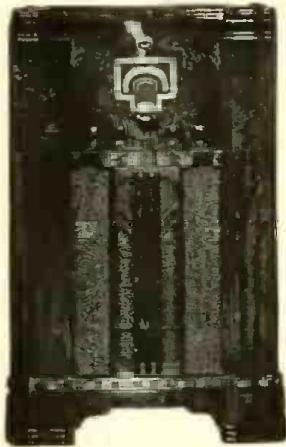
Ask Your Jobber or  
 Write Now for Bulletin 361T

EXPORT DIVISION:  
 15 Lighthouse Street, New York, N. Y. Cable: "ARLAB"

**OXFORD-TARTAN**  
 RADIO CORPORATION  
 915 W. VAN BUREN ST. • CHICAGO U. S. A.

# NEW THINGS FROM THE MANUFACTURERS

## RCA Victor line



★ 1937 RCA line consists of AC, AC-DC, farm, and radio-phonograph combinations. Feature of large sets is the magic voice—eliminates boom of low notes and extends lower frequency range. Metal tubes used in most models. Iron-core i-f. transformers and air trimmers in many models.

Model 10-K (illustrated) has ten tubes and magic voice. 5-bands, 150-410, 530-60,000 kc. Magic eye tuning indicator—magic brain—higher fidelity. Magnetite core i-f. transformers and air trimmers. Antenna coupler. Higher fidelity—music-speech control. Dual ratio selector dial—phonograph connection. Beam power output of 9 watts. List \$149.50.

### Other magic brain consoles:

9-K	9T	4-band console	\$99.95
9-K-2	9T	5-band console	\$129.95
15-K	15T	5-band console	\$199.50



In the low price field are several consoles. Model 6-K-2 (illustrated) with large black edge-lighted dial and white figures. Metal tubes—music-speech control—automatic tone compensation. Antenna wavetrap. Power output of 4½ watts—

12-inch dynamic speaker—phonograph connection. 3-bands, 540-18,000 kc. List \$59.95.

### Other consoles:

6-K	6T	2-band AC	\$49.95
7-K	7T	3-band AC	\$79.95
8-K	8T	3-band AC	\$89.95

Among the table models are both walnut and white finishes. Model 5-X (left) 2-band 5-tube superhet. Range 540-6,500 kc. Band indicator—full-vision dial. Magnetite i-f. transformers—antenna wavetrap. Output of .9 watt—5-inch dynamic speaker. AC-DC operation—list \$29.95.



Four-tube AC-DC superhet (right)—range 540-1,720 kc. Has features of 5-X—8 watt output. Model 4-X-3—list \$24.95.

### Other table types:

4-T	4T	1-band AC	\$20.00
4-X	4T	1-band AC-DC	\$27.95
4-X-4	4T	1-band AC-DC	\$22.95
5-T	5T	2-band AC	\$29.95
5-X	5T	2-band AC-DC	\$32.95
5-X-3	5T	2-band AC-DC	\$29.95
6-T	6T	2-band AC	\$39.95
6-T-2	6T	3-band AC	\$49.95
7-T	7T	3-band AC	\$59.95
7-X	7T	3-band AC-DC	\$49.95
8-T	8T	3-band AC	\$69.95
9-T	9T	5-band AC	\$89.95
10-T	10T	5-band AC	\$109.95

RCA Mfg. Co., Front & Copper Sts., Camden, N. J. — RADIO TODAY

## 1937 Emerson line

★ New Emerson models total 25 including battery sets. Time tuning Gemloid dial—looks like the face of a fine watch. Metal tubes are employed in the more expensive models.

Five-tube broadcast and police band table set. Velvet-drive tuning assembly—Gemloid dial indirectly



lighted. Audio overload control—tone control. 6 watts output—6-

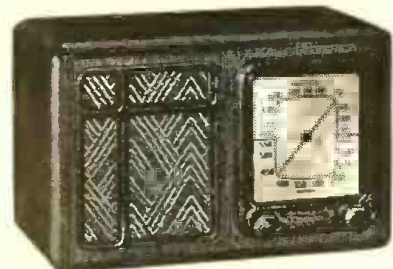
inch dynamic speaker. Oriental walnut cabinet—15½ x 9¼ x 8¼ inches. AC operation. Model K-121—list \$29.95.



Outstanding among the consoles is the D-139—ten tubes. Range—540-17,500 kc. in 3-bands. Gemloid time tuning dial—Cathode ray tuning indicator—3-gang condenser. Output of 15 watts—12-inch speaker. AVC and tone control. High-fidelity reproduction. List \$99.50.

### Other table models:

126	5T	1-band AC-DC	\$14.95
A-130	6T	2-band AC-DC	\$24.95
B-131	6T	2-band AC-DC	\$29.95
K-123	5T	2-band AC	\$24.95
L-117	5T	2-band AC	\$29.95
L-122	5T	2-band AC	\$34.95



Economical AC-DC 6-tube superhet—broadcast and police bands. Gemloid dial with velvet drive. Automatic overload control—6-inch dynamic speaker. Walnut cabinet—12 x 8¼ x 6¾ inches. Model A-132—list \$19.95. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York City—RADIO TODAY

## Velocity mikes

★ Four models of velocity ribbon microphones with essentially flat response from 30 to 12,000 cycles. Shielded transformer eliminates hum pick-up. Cavity resonance reduced by use of screen ribbon covering with open sides. Output impedances for 200-ohm line or direct to grid. Black or chrome finish. List \$25 to \$75. Electro-Voice Co., 324 E. Colfax Ave., South Bend, Ind.—RADIO TODAY

(Continued on next page)

# NEW THINGS

(Continued from preceding page)

## Zenith features 42 models

★ New line for Zenith has 42 models including farm receivers. All models use "G" type tubes except farm. Privacy plug-in for headphone reception—secret volume governor limits maximum volume of set.

Five-tube table model with speaker in top—3-bands, 538-19,250 kc. Tone control—6-inch speaker—output of 3 watts. 2-gang rubber floated condenser. Split-second station indicator—secret volume governor—built-in an-



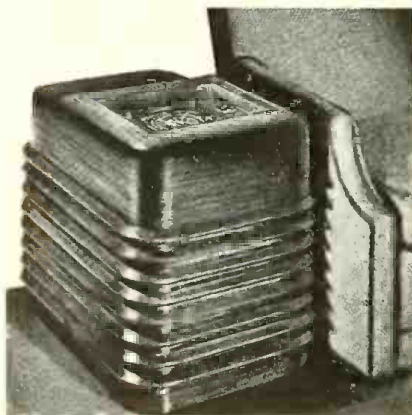
tenna tuning. Size—11½ x 9½ x 13½ inches. Model 5-S-126—list \$39.95.

### Other table models:

10-S-130	10T	3-band table	\$84.95
8-S-129	8T	3-band table	\$74.95
6-S-137	6T	3-band zephyr	\$64.95
6-S-128	6T	3-band table	\$59.95
5-S-127	5T	3-band table	\$39.95
5-S-119	5T	3-band table	\$44.95

### AC-DC types

7-D-138	7T	3-band zephyr	\$84.95
7-D-127	7T	3-band table	\$49.95
7-D-119	7T	3-band table	\$54.95
7-D-126	7T	3-band (illus.)	\$44.95
6-D-118	6T	2-band table	\$39.95
6-D-117	6T	2-band table	\$34.95
6-D-116	6T	2-band table	\$29.95



Chair model receiver with controls on top. 6-tube 3-band super-range, 538-1,780, 1,740-6,050, 5,500-19,250 kc. Large Zenith dial for ease in tuning—calibrated controls in exclusive tell-



tale system. Built-in antenna tuning system for doublets. Zephyr type cabinet—22¾ inches high—sets beside chair. Model 6-S-147—list \$84.95.

### Other chair models:

10-S-147	10T	3-band zephyr	\$119.95
7-D-148	7T	3-band AC-DC	\$ 84.95

Model 10-S-153 (illustrated)—10 tubes with 3 bands, 538-1,780, 1,740-6,050, 5,500-19,250 kc. Squared-circle black dial with tell-tale controls—split second re-locator. Voice-music-hifi control—target tuning indicator. Beam power output of 16 watts—overtone amplifier. List \$99.95.

### Other console models:

25-S	25T	4-band console	\$750.00
16-A-63	16T	4-band console	\$295.00
16-A-61	16T	4-band console	\$295.00
12-U-159	12T	4-band console	\$175.00
12-U-158	12T	4-band console	\$149.95
10-S-160	10T	3-band console	\$139.95
10-S-155	10T	3-band console	\$119.95
10-S-157	10T	3-band console	\$109.95
10-S-156	10T	3-band console	\$109.95
8-S-154	8T	3-band console	\$ 89.95
6-S-157	6T	3-band zephyr c.	\$ 79.95
6-S-152	6T	3-band console	\$ 69.95
5-S-161	5T	3-band console	\$ 64.95
5-S-151	5T	3-band console	\$ 59.95
5-S-150	5T	3-band console	\$ 52.95

### AC-DC types

7-D-168	7T	3-band zephyr c.	\$ 79.95
7-D-162	7T	3-band console	\$ 79.95
7-D-151	7T	3-band console	\$ 69.95

Standard cabinet finish is walnut—certain models available in bone white, ebony, or maple. Zenith Radio Corp., 3620 Iron St., Chicago, Ill.—RADIO TODAY

## Dwarf-size metal-can electrolytics

★ Ultra-compact line of electrolytic condensers—only one inch diameter. 4-mike—2 3/16-inch high; 16-mike—4¾-inch high. Available in 4, 8, 12, 16 mfd. sizes. Type GLS5—

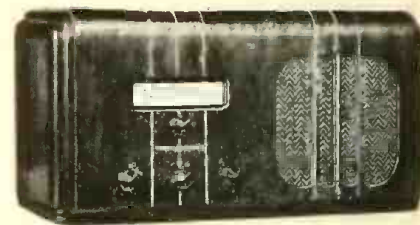


450 volts DC; type GLS250—250 volts DC. Aerovox Corp., 70 Washington St., Brooklyn, N. Y.—RADIO TODAY

## G-E focused tone sets

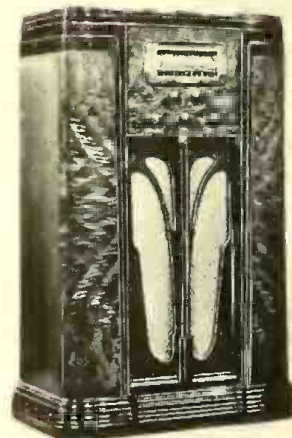
★ 1937 General Electric line includes 8 table models, 8 consoles, 5 battery types, and 2 radio-phono combinations. Colorama dial with silent tuning changes color when set is in tune. Automatic frequency control on more expensive models insures perfect reception. Metal tubes.

Seven tube table model with extra i-f. stage. 3-bands—540-18,000 kc. Automatic band indicator—dual vernier dial drive. Tone control—bass compensation—i-f wavetrap. Walnut cabinet. Model E-72—list \$49.95.



### Other table models:

E-51	5T	2-band AC-DC	\$34.95
E-61	6T	2-band table	\$29.95
E-62	6T	2-band table	\$34.95
E-71	7T	3-band table	\$44.95
E-81	8T	3-band table	\$59.95
E-91	9T	3-band table	\$74.95
E-101	10T	3-band table	\$84.95



Four-band coverage in the 12-tube console—540-70,000 kc. Master slide rule scale (colorama dial) with dual ratio vernier—personalizer station strip shows station letters. AFC—tone control—bass compensation. 15-watt push-pull output feeds 12-inch speaker. Master sentry box—silent tuning. Model E-126—list \$150.

### Other consoles:

E-76	7T	3-band console	\$59.95
E-86	8T	3-band console	\$74.95
E-95	9T	3-band console	\$89.95
E-105	10T	3-band console	\$99.95
E-106	10T	3-band console	\$139.95
E-155	15T	5-band console	\$195.00

Offered in the low-priced field is the E-68 console. Six metal tubes—



2 bands, 540-1,700, 2,200-7,000 kc. Junior slide rule. Tone control and bass compensation — power line filter. Five-watt output — 12-inch speaker. List \$44.95. General Electric Co., 1285 Boston Ave., Bridgeport, Conn. — RADIO TODAY

### Streamline auto antenna



★ Antenna designed for use with autos having metal turret-top roof. Mounts on rubber vacuum cup standoffs—no holes to drill. Aluminum tubing for high conductivity—low motor noise because of shielding effect of roof. Also adaptable to fabric top cars. List \$7.50 for sedans; \$6.50 for coupes. Norwest Radio Labs., 3454 Fullerton Ave., Chicago, Ill. — RADIO TODAY

### Arvin rhythm radios



★ 1937 Arvin line contains 14 models — 4 6-volt sets, 2 AC-DC models, 8 AC types. Featured in all sets is black reversed dial with travelling spotlight finder. "G" tubes in 6 tube sets and larger.

Model 927 illustrated has three bands — 550-18,500 kc. Dual ratio vernier and automatic antenna compensation provide for ease in short-wave reception. Cathode ray tuning indicator — 3 gang tuning condenser. 9 tubes — 12-inch speaker — continuous tone control. List \$99.50.

#### Other models:

407	4T 2-band AC-DC table	\$19.95
417	4T 2-band AC table	\$19.95
507	5T 2-band AC-DC table	\$29.95
517	5T 2-band AC table	\$34.95
527	5T 2-band AC console	\$49.95
617	6T 3-band AC table	\$59.95
627	6T 3-band AC console	\$74.50
1127	11T 3-band AC console	\$150.00



Table model with 4 glass tubes — two bands, 530-3,600 kc. Superhet circuit — 2 gang condenser. 5-inch dynamic condenser. Walnut cabinet — 8¾ x 13¼ x 7¼ inches. Model 467 — list \$24.95. Noblitt-Sparks Industries, Columbus, Ind. — RADIO TODAY

### Admiral no-stoop console

★ Ten tube console with sloping front panel eliminates need of stooping to tune (photo on page 13). Four bands, 150-370, 540-1,720, 1,700-5,900, 5,900-18,000 kc. 11-inch dial — fly-wheel tuning — second hand indicator — cathode ray indicator. Automatic tone control reduces interstation noise. Beam power amplifier — 10 watt output. Model AM6. Continental Radio & Television Corp., 325 W. Huron St., Chicago, Ill. — RADIO TODAY

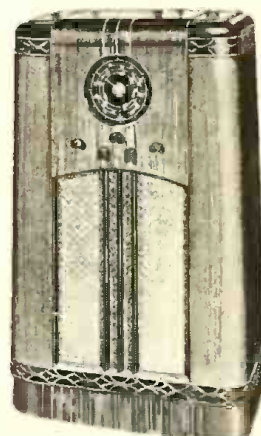
### Portable sound system



★ Class "A" 12-watt portable PA system using 2A3 push-pull output—overall gain of 105 db. Complete with crystal mike, 10-inch dynamic speaker with 50-foot cable. Variable high and low frequency volume controls. Outfit contained in leatherette case which acts as speaker baffle when operating. Model 115. Operadio Mfg. Co., St. Charles, Ill. — RADIO TODAY

### 1937 Crosley sets

★ New line of Crosley sets includes 15 home models and 11 farm type sets. Large black dials on all models — metal tubes in many models.



Featured in the 13-tube console are: mystic hand or AFC — cardiac unit construction — phantom conductor volume range expander. Time-log tuning with magna-ceramic dial — vernimatic dial drive. Tuning range — 540-1,800, 1,800-6,000, 6,000-18,000 kc. High-fidelity — multivox control. Model 167 — list \$167.50.

#### Other console models:

117	9T 3-band console	\$117.50
137	10T 3-band console	\$137.50
499	5T 2-band console	\$49.95
699	6T 3-band console	\$69.95
899	8T 3-band console	\$89.95



Dual-band 5-tube table model — range 540-1,570, 1,570-4,000 kc. Full vision dial — tone control. Triple-twin power output tube — dynamic speaker. Striped walnut cabinet — 10½ x 16½ x 7¾ inches. Model 295 — list \$29.95.

#### Other table types:

Fiver	5T 2-band AC	\$19.00
250	5T 2-band AC	\$25.00
251	5T 2-band AC-DC	\$25.00
299	5T 2-band AC-DC	\$29.95
349	5T 2-band AC	\$34.95
395	5T 2-band AC	\$39.95
449	6T 3-band AC	\$44.95
495	6T 3-band AC	\$49.95

Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio — RADIO TODAY

### 1937 Westinghouse line

★ New Westinghouse line will include AC and AC-DC types of sets. In addition there will be several battery models for farm use. — RADIO TODAY

(Continued on next page)

# NEW THINGS

(Continued from preceding page)

## American-Bosch centromatic sets

★ Eight consoles and 9 table models comprise the 1937 American-Bosch line—of these 4 are battery models. Band-stand baffle gives better tone—automatic maestro larger models. Metal tubes



used throughout the line. Model 660C console above—7 tubes with 9-tube performance. 3-band—540-1,800, 1,800-6,000, 6,000-18,500 kc large semaphore dial—automatic maestro for better tone range—automatic frequency control.



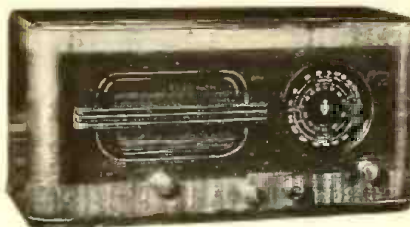
Model 670S—9-tube 4-band superhet covering 150-375, 540-18,500 kc. New style black reversed dial with vernier logging indicator. Automatic maestro—semaphore tuning.

### Other console models:

605C 5T 2-band console  
625 7T 2-band AC-DC  
650 6T 3-band console  
670C 9T 4-band console  
680 12T 4-band console

### Other table models:

515 5T 2-band table  
604 5T 2-band AC-DC  
605 5T 2-band table  
620 7T 3-band AC-DS  
660T 7T 3-band table



Six tube 3-band table model—range, 540-1,500, 1,500-4,500, 5,500-16,500 kc. AC operation. Model 640.

United American Bosch Corp., 3664 Main St., Springfield, Mass.—RADIO TODAY

## Fairbanks Morse turret shield radio

★ Featured in the new F-M line is the turret shielded chassis in 69.95 consoles and up. Tone projector employed in consoles diffuses sound over wide angle.



Twelve metal tube superhet—5-bands, long wave and up to 70,000 kc. Semaphore dial logging pointer—single band at a time scale. Cathode ray tuning indicator—visual tone and volume indicators. Tone projector with concert speaker. Cabinet inside finished in bronze. Model 12C6—list \$149.50.

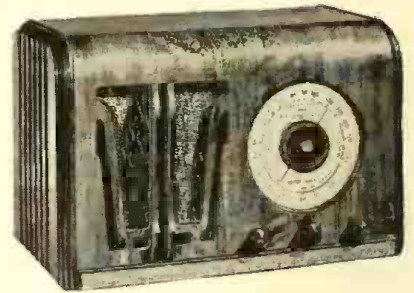
Model 91C4—9 tube 4-band console—similar features to 12C6. List \$99.50.



Medium priced console—3-bands, 540-1,750, 2,350-7,500, 7,500-2,300 kc. Great circle dial with tuning eye and short-wave separator. Shielded chassis—tone projector.

Voice control—3-gang condenser. Model 72C2—list \$69.95.

Five tube AC table superhet—2-bands, 540-7,500 kc. Black dial with vernier. Model 57TO (illustrated)—list \$29.95.



Model 58T1 5-tube table superhet—3-bands, 540-23,000 kc.—list \$39.95. Fairbanks, Morse & Co., Indianapolis, Ind.—RADIO TODAY

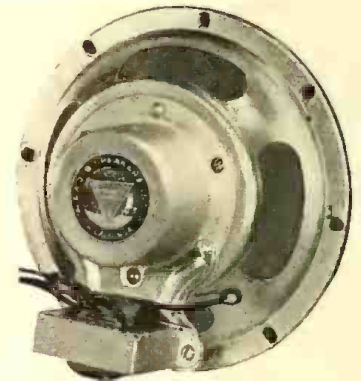
## Isolantite base wave switch

★ Low-loss, low-capacity multi-section switch with Isolantite insulation. Switch has double-bite clips with low contact resistance—free from looseness or rocking. Available in multiplicity of designs. Centralab, 900 E. Keefe St., Milwaukee, Wis.—RADIO TODAY

## Cathode-ray tuning indicator for AC-DC sets

★ Recent development has permitted a rating of 100 volts to the Ken-Rad 6E5 and 6G5 cathode-ray tuning indicators. Tubes now fully applicable to AC-DC sets. Ken-Rad Corp., Owensboro, Ky.—RADIO TODAY

## Dynamic speakers



★ Complete line of electrodynamic and permo-dynamic speakers. Sizes—5, 5½, 6½, 8, 10, 12 inches. Permo-dynamic type illustrated. Radio Speakers, Inc., 1338 S. Michigan Ave., Chicago, Ill.—RADIO TODAY

## DC to AC converters

★ Line of rotary converters operating on 6, 12, 32, 110 DC—output 110 AC 60 cycles. Vents in case provide cooling—special bearings require no oiling. Size 4 x 5 x 2½—6¼ lbs. Maximum rating of 40 watts. 6 volts input—list \$19 without filter. Filter \$4. Carter Motor Co., 361 W. Superior St., Chicago, Ill.—RADIO TODAY

## Grunow features 36 models

★ Ace console of the Grunow line has automatic tuning—"Teledial." Features of the line are automatic antenna tuning, clock type tuning, cathode ray indicator, and unusual cabinet design. Metal tubes in most models.



Broadcast and police 2-band superhet with metal tubes. Full-vision 3½-inch dial. Tone control and AVC—output of 3 watts. Cabinet of striped walnut—size 9½ x 14¾ x 7½ inches. Model 542—list \$32.95.

### Other table models:

510 5T 1-band AC	\$34.95
532 5T 2-band AC	\$24.95
555 5T 3-band AC	\$49.95
564 5T 2-band AC	\$19.95
572 5T 3-band AC	\$44.95
590 5T 2-band AC-DC	



Three-band 7 metal tube console—range, 550-1,720, 1,720-5,600, 5,600-18,000 kc. Dual ratio vernier dial—electron eye tuning indicator. R-f. preselection—floating condenser gang and chassis. AVC and tone control. Power output—3½ watts. Model 731—list \$79.95.

Other console models with same chassis: 723—\$79.95; 733—\$79.95; 735—\$79.95.

### Other consoles:

551 & 553 5T 2-band	\$44.95
573 5T 3-band	\$54.95
631 & 643 6T 3-band	\$69.95
823 & 831 8T 4-band	\$99.95
833 & 835 8T 4-band	\$99.95
941 9T 4-band	\$119.95
1541 15T 4-band UHF	\$179.50

Some models available in black or white. General Household Utilities Corp., 2638 N. Crawford Ave., Chicago, Ill.—RADIO TODAY

## Bell intercommunicating system

★ "Low cost inter-department communications system. Three standard units serve all uses—AC-DC amplifier unit with crystal speaker which also serves as mike; speaker unit used also as mike; mike unit with crystal speaker. Combination of standard units provides multiple unit service. Two-station outfit—list \$39.50. Bell Sound Systems, Inc., 61 E. Goodale St., Columbus, Ohio—RADIO TODAY

## Magnavox record player

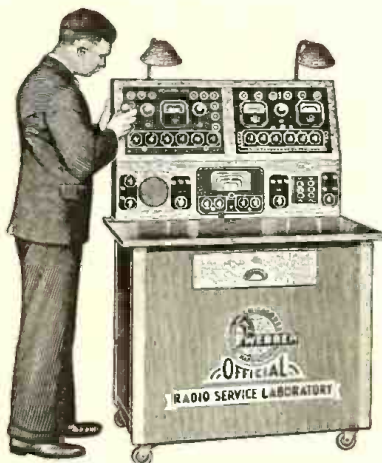


★ Phonette radio attachment for playing records through radio set. Self-starting constant speed motor, crystal pick-up, and volume control. Housed in walnut case. Standard models for AC circuits—AC-DC types at increased price.

Complete electric phonographs with amplifiers and speakers also available. Electro-Acoustic Products Co., Fort Wayne, Ind.—RADIO TODAY

## Service laboratory

★ Portable service laboratory comprised of vibrator analyzer, tube analyzer, test oscillator, universal test speaker, electrolytic condenser analyzer, capacity tester, multi-meters. All equipment mounted on steel work



bench with rubber tired castors—wooden top—tool drawer. Earl Webber Co., 1217 Washington Blvd., Chicago, Ill.—RADIO TODAY

## Professional recording machine



★ 1937 model recording machine—cuts from inside out or outside in. Special timing bar with speed regulated at 90, 110, 130 lines per inch—instantaneous change of speed or lines. Massive turntable—floating head with vertical and lateral angle adjustments. Exclusive micrometer adjustment. Universal Microphone Co., Inglewood, Calif.—RADIO TODAY

## Nomad auto radio

★ Six-tube superhet with synchronous vibrator-rectifier. Mounts in any car—two holes required. Iron-core i-f. and r-f. coils—3 gang condenser. Controls for instrument panels. Power output of 2½ watts feeds 6-inch speaker. Size 7 x 7 x 9½ inches. Model HA-67—list \$49.50. Hetro Electrical Industries, 4611 Ravenswood Ave., Chicago, Ill.—RADIO TODAY

## Halsion AC-DC set

★ Six tube table type superhet with 5-inch full-vision dial. Two wave bands, 545-2,400, 6,000-20,000 kc. Dual-speed vernier—i-f. wavetrap. Size 7¾ x 9½ x 11½ inches. Model 50-X—list \$36.95.



### Other Halsion sets:

05 5T 2-band AC-DC table	\$22.50
05E 5T 2-band AC-DC table	\$24.35
50-RLW 6T 2-band AC-DC table	\$35.55
60-M 7T 3-band AC-DC table	\$45.95
60-L 7T 3-band AC-DC table	\$48.55
100-M 6T 1-band AC-DC table	\$30.65
536 5T 2-band AC table	\$38.55
606 7T 3-band AC table	\$49.10
6L6 7T 3-band AC table	\$51.70

Halsion Radio Mfg. Co., 120 E. 16th St., New York City—RADIO TODAY

## Sectional rack for amplifiers

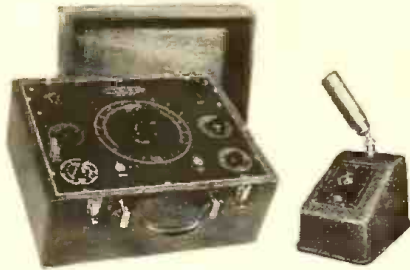
★ Standard type rack with sectional construction for use with standard relay rack panels. Available in numerous sizes—knock-down form. Insuline Corp. of America, 25 Park Pl., New York City—RADIO TODAY

(Continued on next page)

# NEW THINGS

(Continued from preceding page)

## Service instruments



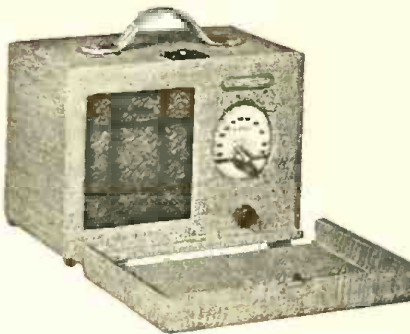
★ Bridge for measuring C, R, L with self-contained standards and 60-1200 cycle oscillator. Ranges: 2 mmf. to 100 mf.—1 to 1,000,000 ohms—10 microhenries to 100 henries. Visual null indicator in form of 6E5 cathode ray tube.

Visual indicator with 2-stage resistance couple amplifier and 6E5 indicator tube—self-contained power supply—swivel mount for 6E5. Tobe Deutschmann Corp., Canton, Mass.—RADIO TODAY

## High-meg resistors

★ Ultra - high - ohmage resistors for engineering and scientific work. Type FH-1 available up to 10,000 megohms—filament type with special processing to reduce humidity effects and surface leakage. Type MG in values from 20 to 100,000 megohms—voltages up to 4,000 volts. International Resistance Co., 401 N. Broad St., Philadelphia, Pa.—RADIO TODAY

## Freed-Eisemann portable AC-DC radio



★ Five-tube compact travelling case radio with self-contained aerial. Tuning range—540-1,750 kc. Illuminated full-vision calibrated dial. Dynamic speaker—automatic overload control—AC-DC operation. Weight 7½ lbs—10 x 7 x 7½ inches. Model FE-58—list \$25. Freed Mfg. Co., 44 W. 18th St., New York City—RADIO TODAY

## Volume controls

★ Step-type volume control for broadcast and sound installations. Beryllium-copper contacts and switch arms eliminate noise and increase life. Fully enclosed—removable dust cover

for access to contacts. Depth of 2 3/16 inches behind panel. Standard impedances of 50, 200, 250, 500 ohms. Model 653—list \$12.50. General Radio Co., 30 State St., Cambridge, Mass.—RADIO TODAY

## Amperite cable input transformer

★ Input transformer for coupling low-impedance line to high-impedance amplifier input. Allows use of up to 2,000 feet of cable with low impedance. Shielded in heavy alloy case. Standard input impedance of 200 ohms matches 50-200 ohms. Amperite Corp., 561 Broadway, New York City—RADIO TODAY

## Mike volume controls

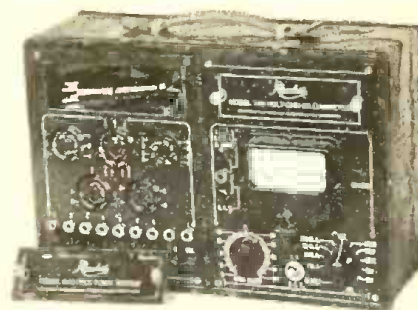


★ Volume controls for all makes of crystal microphones—studio and plain types. Capacitors are employed for regulating attenuation—smooth operation free from jumps. No frequency discrimination or tone control effects. List \$7.50 to \$12.50. Colortone, Inc., Sturgis, Mich.—RADIO TODAY

## Portable battery set

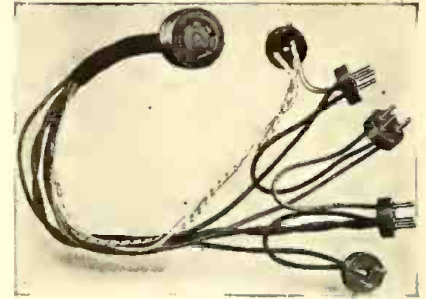
★ Four-tube portable battery superheterodyne for vacationing and traveling. Self-contained aerial and batteries. Illuminated full-vision dial calibrated from 540-1750 kc.—5-inch speaker. Size—9¼ x 8¾ x 4¼ inches. Sportsman AA—list \$26.50 less batteries. Simplex Radio Co., Sandusky, Ohio—RADIO TODAY

## Readrite test combination



★ Radio set tester comprised of 640 free point tester and 740 multi-meter. Meter is Triplett moving coil type. Range—0/10/50/250/500/1000 volts AC-DC; 0/1/10/50/250 mills DC. Resistance range—0/300/100,000. Metal case—11½ x 7¾ x 4¾. Net \$27. Readrite Meter Works, Bluffton, Ohio—RADIO TODAY

## Eby battery adapter



★ Adapter consisting of a socket to fit plug in set, and cable with plugs to fit standard "B" and "C" battery sockets. Two types—7-prong adapter for sets using 3 45-volt and 2 4½-volt blocks; 8-prong type makes connection with an additional 4½-volt block. Hugh H. Eby, Inc., 2066 Hunting Pk. Ave., Philadelphia, Pa.—RADIO TODAY

## Quam chromatic speaker



★ Small speaker with greater sensitivity than dynamic and more volume capacity than ordinary magnetic type. Patented snubbing device prevents rattle on loud notes—consists of thin plunger riding between gum rubber pads and directly connected to armature arm. On normal amplitude of tones plunger rides free with no effect on operation. Models in sizes suitable for battery and AC-DC sets. Quam-Nichols Co., 1615 W. 74th St., Chicago, Ill.—RADIO TODAY

## J. F. D. auto radio cable tool



★ New tool for replacing auto radio tuning cable, removing old fittings, applying new ones, swedging cable to prevent unraveling and all other work on cable, housing and fittings. Any length cable with any type fitting can be prepared quickly and easily. This tool, with cable, housing and fittings, constitutes complete equipment for producing exact duplicates of original parts. List \$47.50. J. F. Distributing Co., 5024 Ft. Hamilton Parkway, Brooklyn, N. Y.—RADIO TODAY



# ATWATER KENT

## RADIO

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June 6, 1936

Dear Mr. Dealer:

Political conventions are creating opportunity for the sale of dependable, quality radios. The quality of Atwater Kent Radio is never questioned.

Today—as in the past—the name “Atwater Kent” on a radio receiver is full assurance to the dealer and consumer of outstanding quality, real value and satisfactory service from his set.

The distributor in your territory will be happy to serve you. Get in touch with him.

**ATWATER KENT MANUFACTURING COMPANY**

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ARROW-LIGHT TUNING

RAINBOW DIAL

FAN-SPREAD STATION SPACER

# CURRENT LITERATURE ON RADIO LINES

**I**NFORMATION on any of the products listed below may be obtained promptly by using the post card herewith. Put a circle around the numbers of the items that interest you, fill out the card and mail. No postage needed.

This is an advertisers' service, free to anyone engaged in the radio business, and we ask you to confine your requests to those items in which you have a specific interest. This is necessary because of the cost incurred by manufacturers in complying with the many requests.

**51 Operadio.** P.A. catalog emphasizing advantages of unit-matched equipment to insure profitable P.A. installations.

**52 Arcturus.** Literature visualizing four separate divisions of the tube market and types of tubes available for each.

**53 Supreme.** Folder giving details of time payment plan applying to testers, analyzers, signal generators, etc.

**54 Webster-Chicago.** Information on fully licensed 17-watt portable PA system and time payment plan.

**55 Ansley.** Literature on portable battery-operated superheterodynes and radio-phono combinations.

**56 Quam - Nichols.** Announcement of "Chromatic" speaker employing new principle in sound reproduction.

**57 Sylvania.** Sales and technical data of value in developing a profitable tube business.

**58 J. F. Distributing.** 5-p. catalog covering new tool performing all operations in replacing auto radio cable and fittings.

**59 Pioneer Gen-E-Motor.** Literature on low-priced engine-driven generator, 6 or 12 volts with 200-watt output; powered by Lauson engine.

**60 Lafayette.** 48-p. catalog on P.A. amplifiers, complete systems and accessories.

**61 Onan.** Details of 110 and 220-volt AC electric plants for radio, PA, sound cars, camps, farms, etc. Also 32-volt DC.

**62 Cinaudagraph.** Suggestions on marketing possibilities of extension speakers, created by permanent magnet type of speaker.

**63 Ward Leonard.** New price list of resistors and policy statement relating to conservatism in watt ratings.

**64 Oxford-Tartak.** Literature on speakers having changeable fields, simplifying replacement and service.

**65 Radolek.** Book, "Public Address Sales Promoter" and repair parts guide.

**66 Guthman.** Literature on coils for IF, RF, short wave and all other coil applications in radio.

**67 Universal Microphone.** Catalog sheets on velocity and carbon microphones; also recording equipment.

**68 Utah.** New speaker catalog and up-to-date replacement vibrator guide.

**69 Weston.** Data and diagrams of tube bases; over 60 prong arrangements and connections. Data on 300 types of tubes. Bulletin of price reductions on oscillators, vacuum tube voltmeters, capacity and output meters.

**70 Cornell-Dubilier.** Catalog 131A and technical data on the most important sizes of electrolytic condensers for the service field.

**71 Corona.** Details of a dealer franchise covering jointly the sale of Corona battery-operated radio sets and Corona gas engine plants for radio and farm lighting; backed by extensive advertising to farmers.

**72 Centralab.** Features of fixed resistors giving sturdiness, uniform resistance and uniform load distribution.

**73 Allied.** Bulletin of sales promotion suggestions re political public address.

**74 Webber.** Folder on a new and striking idea in radio servicing. A single unit, known as "official radio service laboratory."

**75 Inlantenna.** Description of new rubberized all-weather auto antenna having many original features.

**76 Electrad.** New house organ, "Electrad Contact" with leading article on noise silencers, offered to servicemen.

**77 National Carbon.** Complete data on use of conversion resistor plugs to convert 2-volt dry battery sets into "air cell" receivers with greater battery-life and economy.

**78 Mallory.** Service and replacement manual showing replacement condensers for thousands of receivers. Also has a catalog section.

*Space does not permit details of the numerous 1937 announcements by manufacturers of receivers. Current and prospective announcements are listed below:*

- |                     |            |
|---------------------|------------|
| 79 American-Bosch   | 85 Crosley |
| 80 Fairbanks-Morse  | 86 Grunow  |
| 81 General Electric | 87 Philco  |
| 82 Stewart-Warner   | 88 RCA     |
| 83 Emerson          | 89 DeWald  |
| 84 Arvin            | 90 Zenith  |



If you want to join this parade to greater sales and profits, look across the page and read what G-E says about *Focused Tone* Radio. Watch for your G-E Radio Distributor's announcement of his local dealer showing.





Off-Focus Tone      G-E Focused Tone      Off-Focus Tone

## Radio's Newest Marvel

# GE Focused Tone

SO PACKED WITH SENSATIONAL IMPROVEMENTS THAT YOU'LL ALWAYS BE GLAD YOU SOLD G-E ... and your customers will always be glad they bought it.

### WHAT IS FOCUSED TONE?

It is G.E.'s new radio circuit that **AUTOMATICALLY** and **VISIBLY** shifts itself into hair-line tuning—perfect tone.

It is the new G-E Colorama Dial that changes from red to green to tell you that your program is perfectly tuned.

It is the Personalized Radio with the custom-tailored dial—your own local station letters flash on when you tune in.

It is Silent Tuning—you can switch from one program to another without a single squeal, squawk, or screech.

It is the combination of all the new and revolutionary G-E Radio inventions and developments — G-E Metal Tubes; G-E Sentry Box; G-E Stabilized Dynamic Speaker; G-E Sliding-rule Tuning Scale; G-E "V-doublet" All-wave Antenna — which give you the finest, truest tone of any radio ever built—that's Focused Tone! Only the new G-E gives it to you — **AUTOMATICALLY!** — **VISIBLY!** — **INSTANTLY!** — every time you tune in.

### HERE'S NEWS THAT WILL MAKE RADIO HISTORY!

There's a 6-metal-tube, 2-band model—utilizing an 8-inch Stabilized Dynamic Speaker, with 5 watts output—a sensational price leader to sell at \$29.95\*.

You can sell a beautiful all-wave console using 7 metal tubes, having a 12-inch Stabilized Dynamic Speaker, with 5 watts output for \$59.95\*. A sensational 10-metal-tube, all-wave console employing Focused Tone features, a 12-inch Stabilized Dynamic Speaker, with 10 watts output, sells for \$99.95\*.

Then there's a deluxe, 15-metal-tube, console model, using every Focused Tone feature, 5 reception bands, 15-inch Stabilized Dynamic Speaker, with 35 watts output, to sell at \$195.00\*. Models with Focused Tone features sell for as low as \$74.95\*.

**Before making any further plans, be sure to attend the dealer showing of General Electric Focused Tone Radio. WATCH FOR YOUR G-E RADIO DISTRIBUTOR'S ANNOUNCEMENT OF HIS LOCAL DEALER SHOWING. Or better still, phone or write him for the date of this important event. You can't afford to pass up this great opportunity.**

\*Eastern List Prices — slightly higher in west and south.

# GENERAL ELECTRIC

## Focused Tone Radio

APPLIANCE AND MERCHANDISE DEPARTMENT, GENERAL ELECTRIC CO., BRIDGEPORT, CONN.

# News Flash!

**ORDERS** prove RCA Victor has  
the Hot Line of the Year!

At RCA Victor dealer showings held in all parts of the country during the past two weeks *dealers ordered 2 to 3 times as much RCA Victor merchandise as last year!*

From one end of the country to the other, leading merchants say that RCA Victor is the hot line of the 1937 season, and they're backing their verdict with orders!

Magic Brain, Magic Eye, Magic Voice, RCA Metal Tubes, more beautiful cabinets than ever, stepped-up performance, many other features, all backed by aggressive promotion in newspapers, magazines, on the air—WHAT A LINE! See the merchandise, hear it play, and you'll know why RCA Victor dealers are sure to make more money than ever before.



**IT'S A SENSATION!** Here is the RCA Victor Model 9K-2, with Magic Brain, Magic Eye, RCA Metal Tubes and **MAGIC VOICE!** A revelation in tone, in a cabinet of distinction. Nine tubes, and tunes 150-410, 530-60,000 kc. Full of sales-persuading talking points. At \$129.95 it's a sales leader and profit maker. Other sets from \$20 to \$600, including AC, AC-DC, farm, auto, phonograph-radios, record players and phonographs. (Prices f. o. b. Camden, N. J., subject to change without notice.)



# RCA Victor

RCA MANUFACTURING CO., Inc. Camden, N. J., a Service of Radio Corporation of America