

JAN 50

RADIO & TELEVISION RETAILING



MILLIONS OF TV SETS SOLD

TV...

Key to More Sales in '50

FACTS & FORECAST ISSUE

AM, FM, TV, Electrical Appliances,
Records and Phonographs, Home Recorders,
Servicing and Sound

January • 1950

CALDWELL-CLEMENTS, INC.

1947

1948

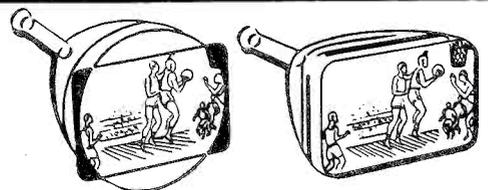
1949

1950

Soft-Lite Full View
rectangular
16" tube



exclusive triumph of
the AIR KING '50 line!



A-2017R
 THE PRINCESS

FIRST T.V. SETS WITH THIS SCREEN!

Exactly as telecast! Pictures received in "perfect shape"... no lost corners, no waste screen area... glare-free filter glass face gives soft light, sharper contrast! New screen fits in more compact cabinets—more beautiful than ever—makes possible amazingly low prices. Get your orders in **NOW!**



A-2016R
 THE REGINA

air  *king*

... has everything!

AIR KING PRODUCTS CO., INC. • 170-53rd St., Brooklyn 32, N.Y.

RADIO & TELEVISION RETAILING

IN THIS ISSUE

JANUARY, 1950

Including "Radio & Television"
and "Radio & Television Today"

Established In 1922
as ELECTRICAL RETAILING

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CALDWELL-CLEMENTS, Inc.
Publishers also of TELE-TECH

★ *AM, FM, Television*

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CALDWELL-CLEMENTS, INC.
480 Lexington Ave., New York, N. Y.

IMPORTANT MESSAGE

**Meck... offers the traditional 40%
margin for television dealers**

YES

Everybody is talking about it...
but only MECK TV gives you—

**UP
TO 40%**

Averaging $\frac{1}{3}$ more for You!

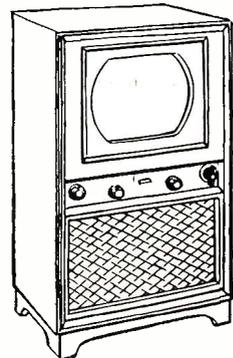
**UP
TO 40%**

On Big Screen Television!

**UP
TO 40%**

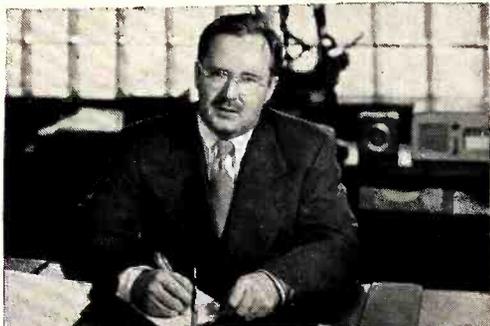
On Top Quality Sets!

more and more....it's MECK



16-INCH TUBE CONSOLETTTE
145 sq. in. picture, built-in an-
tenna, Mahogany cabinet.
XS-786 \$299 RETAIL

FOR EVERY TV DEALER



We at Meck recognize that you, our dealers and potential dealers, are facing the highest operating and selling costs in history. We firmly believe that if you are to continue doing an outstanding selling and merchandising job . . . something must be done now to offer you an adequate profit margin . . . the margin that has been proved through the years essential to sound dealer operation. We, therefore, are pleased to be the first in the industry to announce a dealer

discount of up to 40% for qualifying dealers.

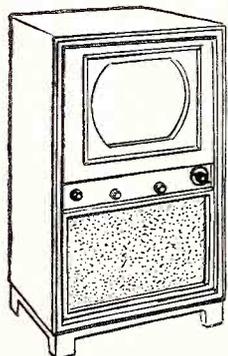
If you are not now a Meck Television dealer, write today for the full story on the Meck Profit Line. And it is also important to remember that regardless of what other TV sets you are now carrying, you still need Meck! For Meck Television not only affords you a maximum profit opportunity but permits you to offer your customers a wider choice *and* proved quality at rock-bottom prices.

Sincerely,

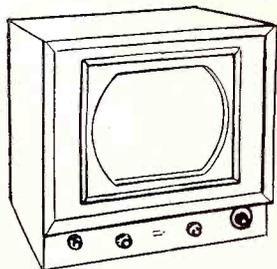
John Meck
PRESIDENT

JOHN MECK INDUSTRIES INC.

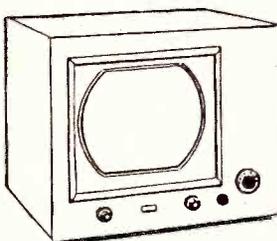
Plymouth, Indiana



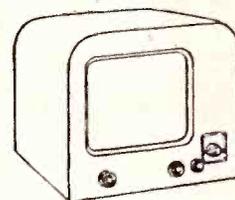
12½-INCH TUBE CONSOLE
96 sq. in. picture, built-in antenna, Mahogany cabinet.
XR-778 \$249 RETAIL



16-INCH TUBE TABLETOP
145 sq. in. picture, built-in antenna, Mahogany cabinet.
XT-785 \$279 RETAIL



12½-INCH TUBE TABLETOP
96 sq. in. picture, built-in antenna, Mahogany cabinet.
XQ-776 \$219 RETAIL



10-INCH TUBE TABLETOP
65 sq. in. picture, all-channel tuning, Mahogany cabinet.
XN-752 \$139.90 RETAIL

MECK
ISO-RAMIC TELEVISION

Because Sheldon Picture Tubes Show NATURAL BLACK AND WHITE TONES



Miss Helen Babich
Inspector
Sheldon Electric Co.

... **THEY STAND OUT!**

"I INSPECT SHELDON 'TELEGENIC' PICTURE TUBES FOR COLOR VALUES. I KNOW THEY'RE OUTSTANDING!"

OUTSTANDING because BLACK is BLACK, WHITE is WHITE . . . and between them, all the natural intermediate shading. Sheldon "Telegenic" Picture Tubes provide 'round-the-clock viewing in DAYLIGHT, ARTIFICIAL LIGHT or DARKNESS, *without glare or eye strain.*



WRITE for Descriptive Literature on these NEW All-Glass Tubes: 10", 12½" and 16" Gray (Black) . . . 16" 52° Deflection Angle, interchangeable with glass-metal 16AP4 . . . 16" Rectangular . . . Short 16" 70° Deflection Angle 17½" overall . . . 19" 70° Deflection Angle.

SHELDON ELECTRIC CO.

Division of Allied Electric Products Inc.

68-98 Coit Street, Irvington 11, N. J.

Branch Offices & Warehouses: CHICAGO 7, ILL., 426 S. Clinton St. LOS ANGELES 6, CAL., 2559 W. Pico Blvd.

SHELDON TELEVISION PICTURE TUBES • CATHODE RAY TUBES • FLUORESCENT STARTERS AND LAMP HOLDERS • SHELDON REFLECTOR & INFRA-RED LAMPS
PHOTOFLOOD & PHOTOSPOT LAMPS • SPRING-ACTION PLUGS • TAPMASTER EXTENSION CORD SETS & CUBE TAPS • RECTIFIER BULBS

PHILCO is ON THE MARCH for '50

Philco distributors in every area are now unveiling the products and the plans that will set the pace in appliance merchandising for 1950. In every line, you'll see the sensational values, the unmatched performance and the unsurpassed quality that built the 19 year record of Philco leadership.

This year, more than ever in its history, Philco is the most valuable franchise in the appliance field. Be sure to get the full story from your Philco distributor and be ready to **concentrate on Philco** for your biggest opportunity for appliance profits in 1950.

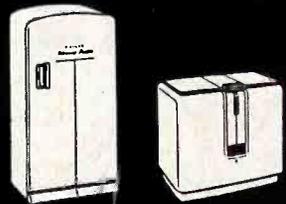
PHILCO

The Most Valuable Franchise in the Appliance Field

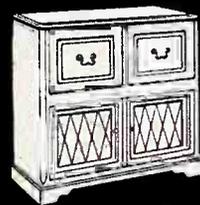
Television



Refrigerators and Freezers



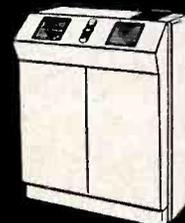
Radios and Phonographs



Electric Ranges

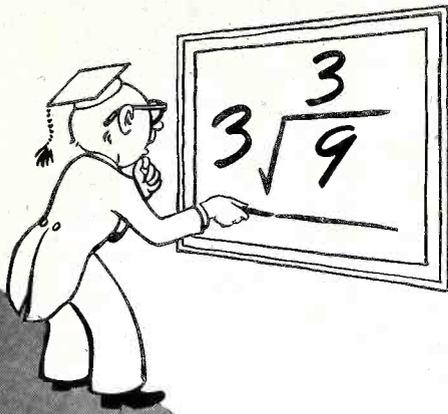


Air Conditioners



Make this

TEST



**TO MULTIPLY SALES...
MULTIPLY YOUR MERCHANDISE DISPLAYS**

Big, mass displays are the surest way of getting more sales out of nationally advertised brands. Millions of people read about advertised products in national magazines—get your share of these customers by letting them know, with merchandise displays, that you sell the brands they read about. Multiply sales faster by featuring the merchandise advertised in the biggest national magazine—The American Weekly, the publication that is read by the people in 9,868,474 families from coast to coast.

Would you like to know how many families in your area read The American Weekly? Just send a postcard to The American Weekly, Promotion Dept., 63 Vesey Street, New York 7, N. Y., and we'll tell you.

THE AMERICAN WEEKLY

Greatest Circulation in the World
—A HEARST PUBLICATION

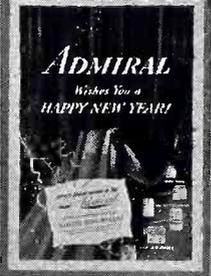
THE MAGAZINE DISTRIBUTED FROM COAST TO COAST WITH 21 GREAT SUNDAY NEWSPAPERS

63 Vesey Street, New York 7, N. Y.



Admiral

AS FEATURED IN THE AMERICAN WEEKLY

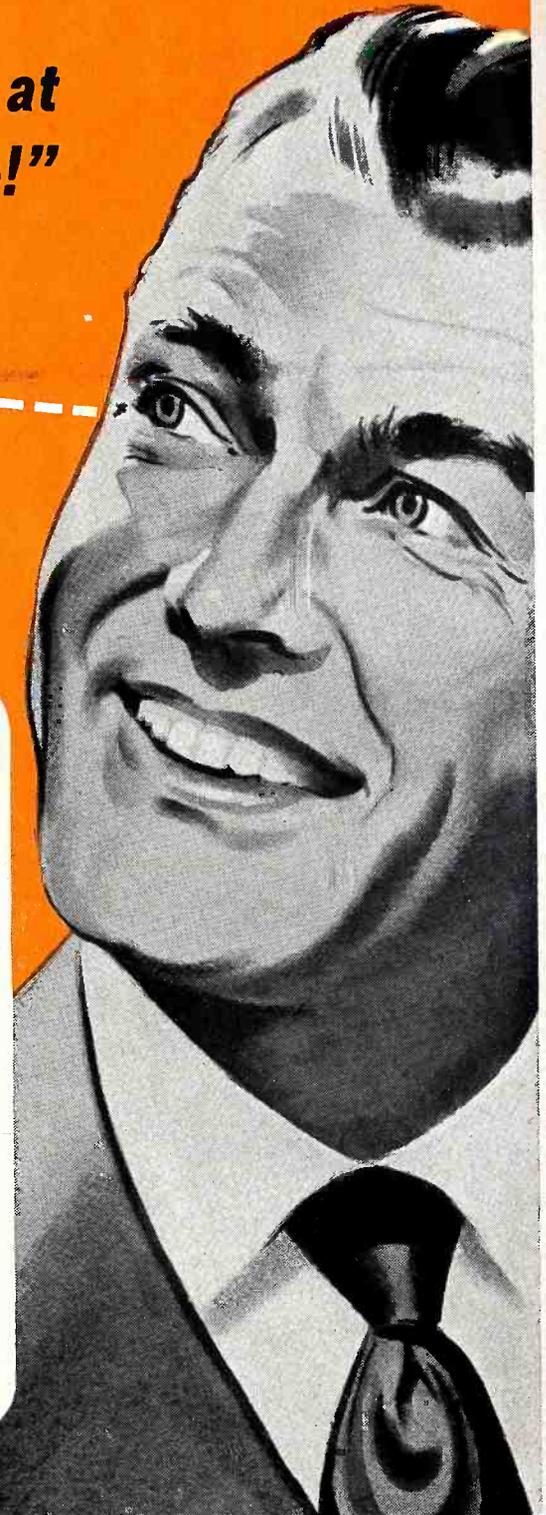


Current advertising featuring Admiral Radio products appears in the January 1 and 29 issues of The American Weekly.

**Read the Advertisements in the Current Issues of
The American Weekly for Other Merchandise Sold
in Appliance, Radio and Television Stores.**

PARTNER?

**"I'm looking at
a good one!"**



"Like having someone to run interference for me on every sale!" Radio-TV servicemen feel that way about the General Electric trademark because experience has shown how highly their customers respect the symbol "G-E".

This is only the start of the G-E dealer-profit story. For General Electric helps you with an unexcelled group of tube promotion aids—income-builders every one! G.E.'s complete line of tubes includes newest types made possible only by superior resources in research, development, and manufacture ... meaning that you can go after *all the tube business, all the time!*

Unwrap this G-E dealer success-package! Give *your* skill and efforts as serviceman a rich reward! Your G-E tube distributor gladly will cooperate in every way. Phone or write him today! *Electronics Department, General Electric Co., Schenectady 5, N. Y.*

You can put your confidence in—

GENERAL  ELECTRIC
181-JA2

TV PICTURE TUBES

METAL TUBES

GLASS TYPES

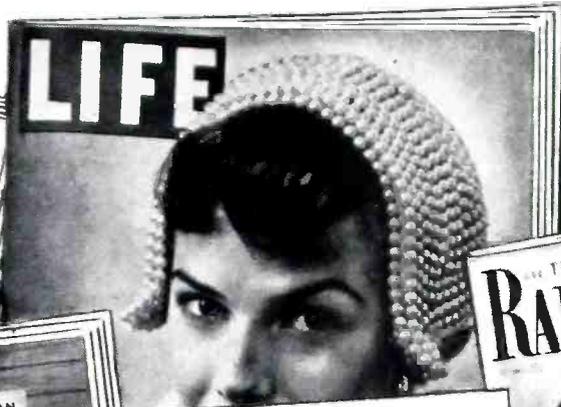
MINIATURES

**ONE SOURCE FOR
ALL YOUR TUBE
REQUIREMENTS!**



—also GERMANIUM DIODES and SELENIUM RECTIFIERS. Stock G-E 100-percent, to save time and routine in ordering—to have the benefit of bulk deliveries from your distributor—to profit from General Electric tube quality and product popularity.

SYLVANIA'S EXTENSIVE NATIONAL ADVERTISING IS Building business for *you* every minute!



LOOK FOR THIS SIGN OF DEPENDABLE RADIO SERVICE

Whistling sounds in your set really give reception a black eye. Get rid of unwanted noises now by calling the radio serviceman who displays the Sylvania sign. He'll make you



LOOK FOR THIS SIGN OF DEPENDABLE RADIO SERVICE

Does your radio give out with squeals and grunts? Then call the serviceman who displays the Sylvania sign. Because your radio needs expert care, the kind this fellow is trained to give.



LOOK FOR THIS SIGN OF DEPENDABLE RADIO SERVICE

If your television becomes a terrible vision, call the expert who displays the Sylvania service sign. He knows these complex sets inside out . . . has the "savvy" to make the delicate adjustments and repairs they sometimes need. He relies on super-keen Sylvania testing devices to detect and diagnose troubles accurately . . . Sylvania radio tubes, the proper television picture tubes and other custom parts to restore perfect sight and sound. Stop at the shop showing the Sylvania sign for top television and radio repairs.

SYLVANIA RADIO TUBES
PRODUCT OF SYLVANIA ELECTRIC PRODUCTS INC.

Sylvania ads especially prepared to boost your service are telling 15,500,000 people from coast to coast all about the *valuable service* and parts you're offering them. Readers of these magazines are attracted to the lively cartoon-type ads, three of which are reproduced above. They tell them to stop at the Sylvania sign

of dependable service . . . for the best radio and television repairs at the fairest prices!

Hundreds of these readers are *your potential customers*. These humorous ads, running in the cream of the nation's publications, help assure you a *steady stream of new customers* and greater profit.

There's Still Time To Cash In On The First 1950 Sylvania Service Dealer Campaign — Write Sylvania Electric Products Inc., Advertising Dept. R-1401, Emporium, Pa.

SYLVANIA ELECTRIC

RADIO TUBES; CATHODE RAY TUBES; ELECTRONIC DEVICES; FLUORESCENT LAMPS, FIXTURES, WIRING DEVICES, SIGN TUBING; ELECTRIC LIGHT BULBS; PHOTOLAMPS

NEW! BIG EXTRA PROFITS

IT'S *tradioVision*

DEALERS:
The TradioVision franchise puts you in command of the great commercial TV market in your area.



tradioVision

Theatre
Size
Television
4 feet X 3 feet
picture

Sales come fast and easy to clubs, schools, taverns, restaurants, social organizations, and all other places where crowds gather! TradioVision is easy to demonstrate! Easy to sell! Easy to install and service!

Bright pictures, day or night.
Darkness not necessary.



Everyone enjoys TradioVision 4 feet x 3 feet television pictures in the Criterion Theatre lounge—one of the many hundreds of theatres, clubs and other places where crowds gather that feature TradioVision. Sales comes fast and easy to all such places.



Jack Dempsey's Broadway Restaurant and Bar becomes a television theatre with TradioVision — and Jack pays for his set out of the extra profits it brings in. Taverns and clubs are "naturals" for TradioVision theatre size television!

Here's a great opportunity for you to identify yourself with a real money-maker. You sell TradioVision for big extra profits because TradioVision sets feature:

- Two models—P 13 (4 feet x 3 feet picture). P 14 3 feet x 2 1/4 feet picture).
- Remote control operated—with single knob for rapid handling. (to make it easy for the owner to tune the receiver and handle customers.)
- FM radio with dual speakers for high quality audio—built in to TradioVision Models.
- Chassis designed as isolated circuit units, plugged in to each other, making instantaneous servicing possible.
- Most advanced engineering development in picture brightness.

With TradioVision you give your customers the best receiver in the television field! Your community TradioVision franchise may still be available. Write today for profit details.

TRAD TELEVISION CORP.

377 Fourth Avenue • New York 16, New York • MUrray Hill 3-9757

A whole new concept
of Television

CROSLEY

Ultra-Fidelity TV

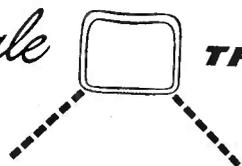


LOOK FOR THIS
Family Theatre
screen, exclusive
hallmark of every
Crosley TV receiver

Model 10-412

The combined skills of top engineers, nationally known designers, the finest cabinet makers, highly skilled technicians—all contributed to perfect this superb TV receiver. There's real *beauty* in the handsome cabinet of Cordovan-finished mahogany veneer. There's outstanding *performance* with the big, brilliant 12½" picture tube. (For customers who want the same beauty and performance in an open face model, demonstrate the outstanding new 10-418 at a slightly lower price.)

From any viewing angle



THE CLEAREST PICTURE!



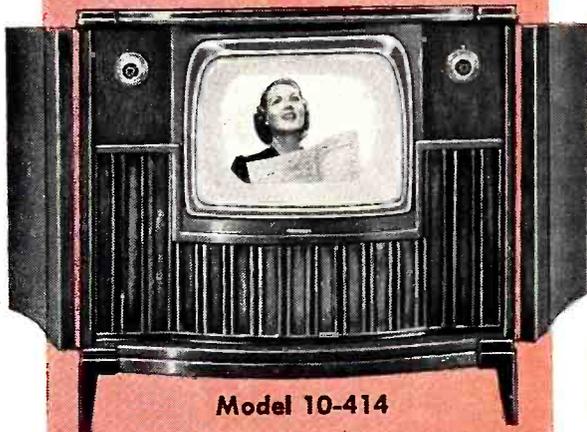
Model 10-401

Cased in durable, stain- and heat-resistant plastic, here's a fine table model that blends with attractive home furnishings. With a bright, clear 10" picture tube.



Model 10-404

A handsome 12½" picture tube table model, styled in the finest Cordovan-finished mahogany veneer.



Model 10-414

Styled in the finest Cordovan-finished mahogany veneer, this outstanding new Crosley TV console is truly a "Family Theatre"—with huge, 16" picture tube that gives clear, steady images. (Model 10-416 has same big 16" screen, but with open face cabinet of special design.)

a new year— a new slant on **TV SALES!**

- You have a new sales approach with the superb Crosley line—designed and built for *every member of the family*. With Crosley, you can discard the idea that "It's always Dad who decides on television." Now you've got a TV line that appeals to the lady of the house too. You offer her a piece of furniture so lovely that it harmonizes with the finest interiors—there's no rearranging necessary. The beauty, performance, and convenience of Crosley TV appeal to the whole family. And, in addition, you're making a happy contribution to family life.

LOOK WHAT CROSLEY OFFERS!

A Whole New Concept of Beauty—superbly designed cabinets . . . handsome furniture that blends with both modern and traditional furniture . . . wide-angle screen at the comfort level for better viewing pleasure for the whole family . . . simple controls located for easy tuning . . . picture tube framed by the lovely contours of a theatre proscenium arch.

A Whole New Concept of Performance—new wide-angle screen . . . unituner that makes TV tuning as easy as radio tuning . . . fade eliminator that virtually eliminates fading, "airplane flutter," and other interference . . . Electronic Picture Stabilizer that holds picture firm and steady . . . high sensitivity for long distance . . . built-in antenna . . . independently mounted cathode ray tube, to make servicing far easier.

The Crosley Trademark is your assurance that the product embodies the finest engineering and skilled manufacturing for the ultimate in TV performance.

CROSLEY

Division



Cincinnati 25, Ohio.

Better Products for Happier Living

Shelvador* Refrigerators...Farm and Home Freezers...Electric Ranges
Electric Kitchens . . . Steel Cabinets . . . Sinks . . . Electric Disposers
Electric Water Heaters...Radios...Radio Phonographs...Television •

TOP

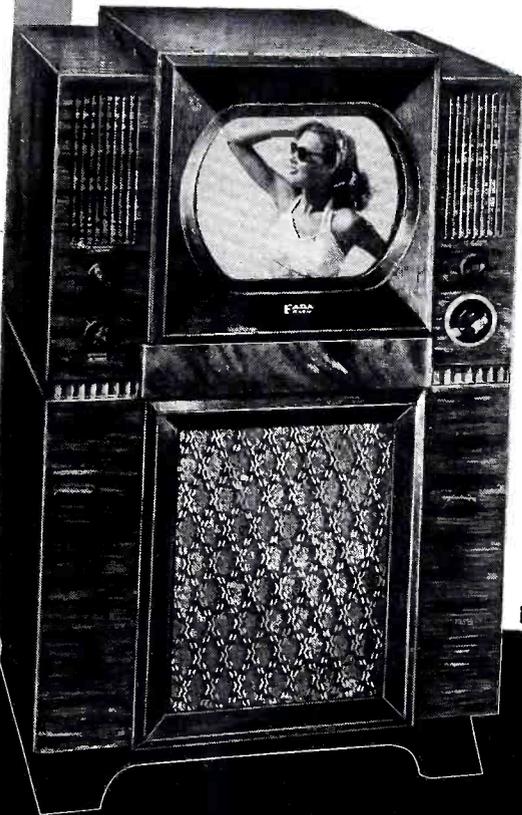
QUALITY..

VALUE AND OUTSTANDING SELLING POINTS

make

FADA *Television*

MODEL 940



the peer for volume sales

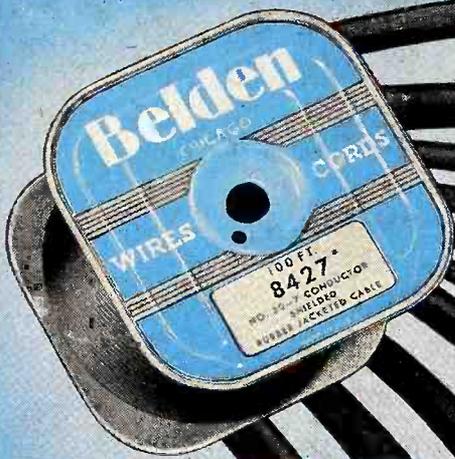
MODEL 965

FOR eye-filling cabinet design and custom built quality . . . for TV performance unexcelled . . . sure to increase cash register returns . . . the Fada TV table model and console line in 12½ and 16 inch big screen direct view pictures is a must with wide-awake dealers everywhere. Capture your customer's attention quickly by showing him FADA TV. You're in line with the best when you're in line with FADA.



"Pioneers in Radio & Electronics Since 1920"

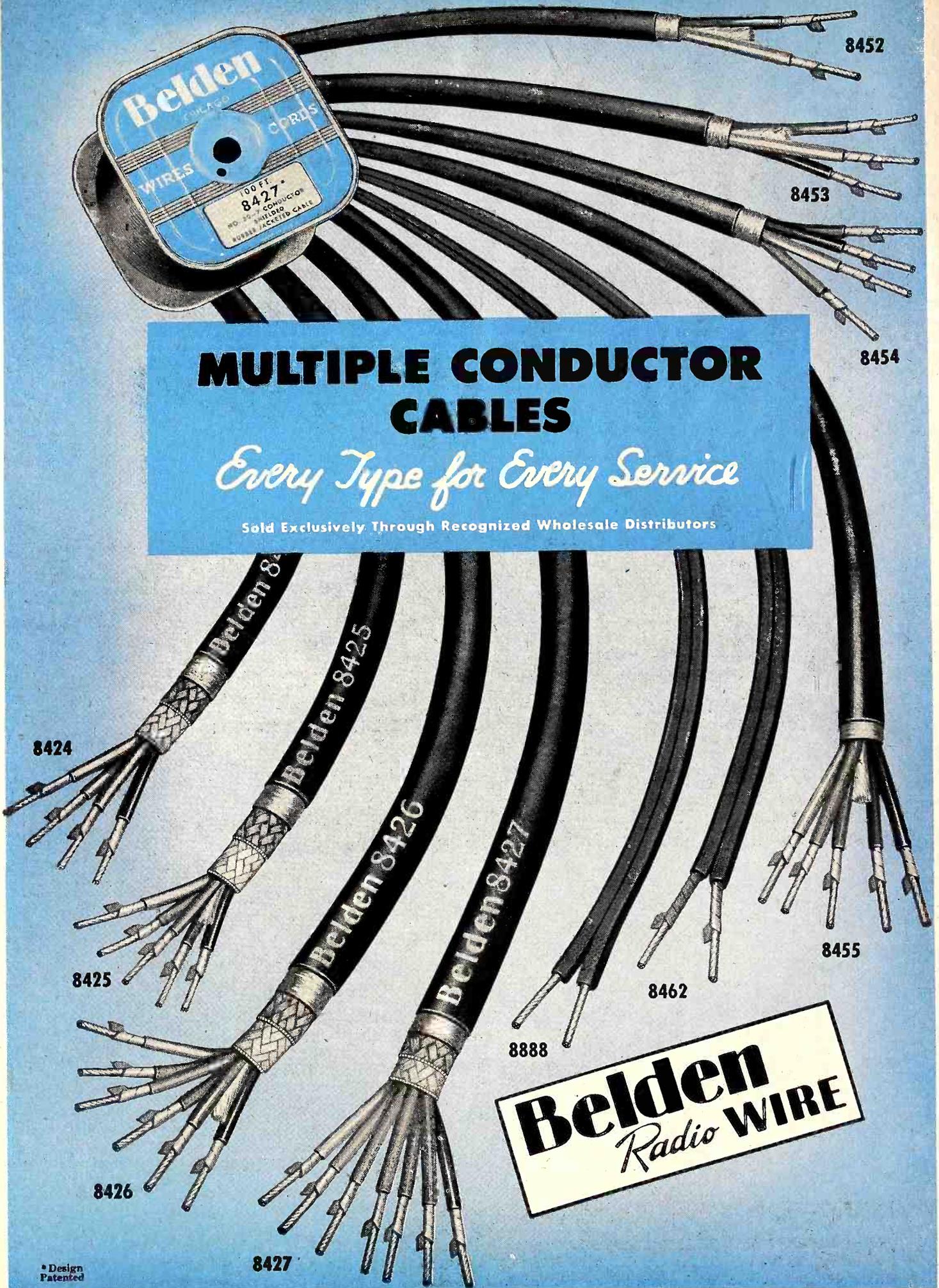
**FADA RADIO & ELECTRIC CO. Inc.
BELLEVILLE, NEW JERSEY**



MULTIPLE CONDUCTOR CABLES

Every Type for Every Service

Sold Exclusively Through Recognized Wholesale Distributors



Belden
Radio WIRE

• Design Patented

AGAIN—in 1950—with a STROMBERG-CARLSON



THE NEW YORKER. 19" tube. Smart, sophisticated cabinet goes in any modern or traditional room with equal beauty. Selected mahogany veneers. #TC-19-LM2..... **\$539⁵⁰***

(In blond avodiré veneers)
#TC-19-LA2..... **\$549⁵⁰***

**NEW
19"
MODELS**
with the
**Biggest Direct-View
Picture!**



THE EMPEROR II. 19" tube. Elegant traditional cabinet in fine selected mahogany veneers. #TC-19-LM3..... **\$645⁰⁰***

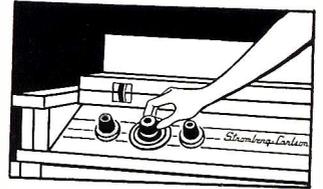


THE CHINESE CLASSIC DE LUXE. 19" tube. High fidelity FM-AM radio. 3-speed record changer. Choice mahogany veneers in a distinguished design that goes beautifully with traditional or modern. #TC-19-M5M..... **\$965⁰⁰***

BIGGEST DIRECT-VIEW PICTURE—203 sq. in.

SHARP-FOCUS TUBE—easy to view in any size room, close up or away back!

TOP TUNING—no crouching—controls are concealed when not in use.



BUILT-IN ANTENNAS—the Stromberg-Carlson "Telatenna".

DOUBLE STRENGTH OF SIGNAL—ideal in "fringe" or difficult spots.

TONAL FIDELITY—with 12" speaker—that matches the picture quality.

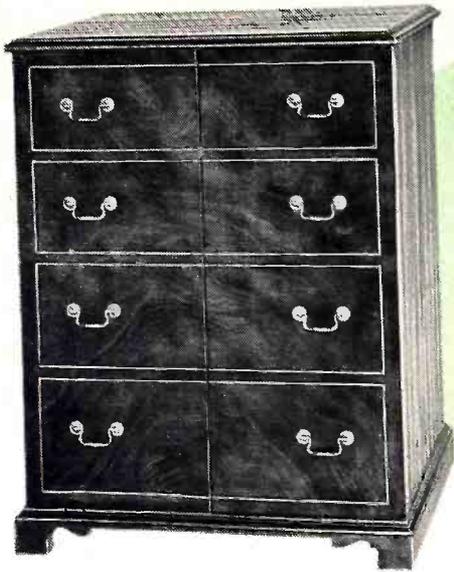
SMARTEST CABINETS in TV.

VALUE!

VALUE TO YOUR CUSTOMERS in the finest television that money can buy—dressed in beautiful decorator-designed cabinets! *Value* to you in highly profitable turnover! Yes, these dramatic new '50 models can make this your most profitable year ever!

brand-new line

is the word for **VALUE!**



THE SALEM. "Opera Glass" Tuning on 12½" tube. Beautiful Early American traditional cabinet in selected mahogany veneers. #TC-125-LS2M..... **\$389^{50*}**

NEW
12½"
MODELS
with
"Opera Glass"
Tuning!



THE HAMPTON. "Opera Glass" Tuning on 12½" tube doubles the center of interest. In fine ribbon-striped mahogany veneers. #TC-125-LM3..... **\$339^{95*}**

DOUBLE-SIZE CLOSE-UPS at the touch of a button.

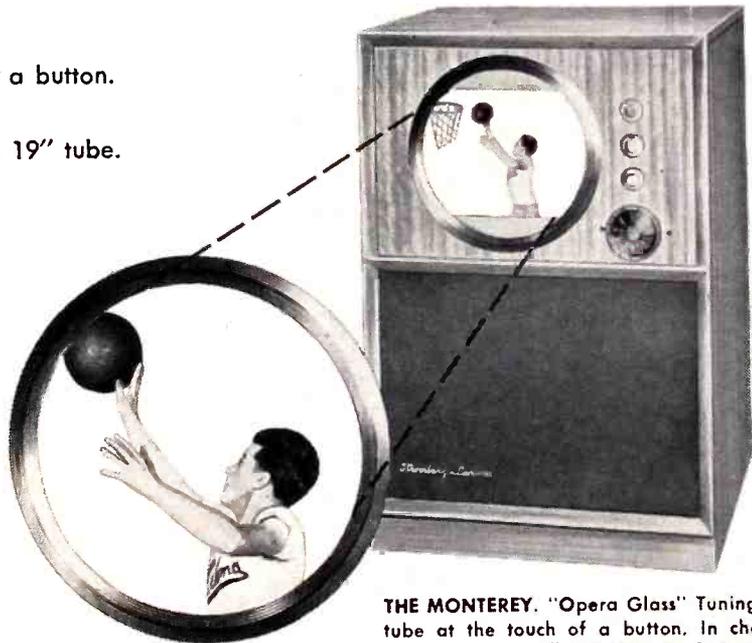
CENTER OF ACTION almost as big as on a 19" tube.

PANORAMIC WIDE-VIEW normal picture on 12½" tube.

"TELATENNA" does away with outdoor or indoor aerials in most places.

SUPER RECEPTION—with double signal strength for "fringe" and close areas.

TRUE-TO-LIFE TONE—on 12" speaker—doubles TV pleasure.



THE MONTEREY. "Opera Glass" Tuning on 12½" tube at the touch of a button. In choice blond awoodiré veneers. #TC-125-LA4... **\$349^{50*}**

*Plus excise tax. Slightly higher in South and West.

® THERE IS NOTHING FINER THAN A
STROMBERG-CARLSON

Stromberg-Carlson Company, Rochester 3, N. Y.—In Canada, Stromberg-Carlson Co., Ltd., Toronto

AGAIN—in 1950—with a STROMBERG-CARLSON



THE NEW YORKER. 19" tube. Smart, sophisticated cabinet goes in any modern or traditional room with equal beauty. Selected mahogany veneers. #TC-19-LM2..... **\$539⁵⁰***

(In blond avodiré veneers)
#TC-19-LA2..... **\$549⁵⁰***

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19"
MODELS**
with the
**Biggest Direct-View
Picture!**



THE EMPEROR II. 19" tube. Elegant traditional cabinet in fine selected mahogany veneers. #TC-19-LM3..... **\$645⁰⁰***

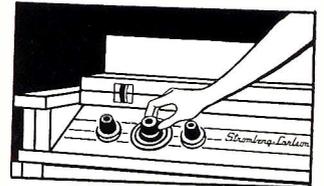


THE CHINESE CLASSIC DE LUXE. 19" tube. High fidelity FM-AM radio. 3-speed record changer. Choice mahogany veneers in a distinguished design that goes beautifully with traditional or modern. #TC-19-M5M..... **\$965⁰⁰***

BIGGEST DIRECT-VIEW PICTURE—203 sq. in.

SHARP-FOCUS TUBE—easy to view in any size room, close up or away back!

TOP TUNING—no crouching—controls are concealed when not in use.



BUILT-IN ANTENNAS—the Stromberg-Carlson "Telatenna".

DOUBLE STRENGTH OF SIGNAL—ideal in "fringe" or difficult spots.

TONAL FIDELITY—with 12" speaker—that matches the picture quality.

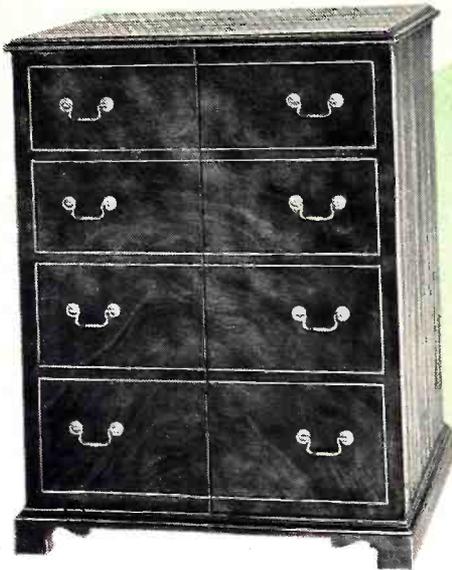
SMARTEST CABINETS in TV.

VALUE!

VALUE TO YOUR CUSTOMERS in the finest television that money can buy—dressed in beautiful decorator-designed cabinets! *Value to you* in highly profitable turnover! Yes, these dramatic new '50 models can make this your most profitable year ever!

brand-new line

is the word for **VALUE!**



THE SALEM. "Opera Glass" Tuning on 12½" tube. Beautiful Early American traditional cabinet in selected mahogany veneers. #TC-125-LS2M..... **\$389^{50*}**

NEW
12½"
MODELS
with
"Opera Glass"
Tuning!



THE HAMPTON. "Opera Glass" Tuning on 12½" tube doubles the center of interest. In fine ribbon-striped mahogany veneers. #TC-125-LM3..... **\$339^{95*}**

DOUBLE-SIZE CLOSE-UPS at the touch of a button.

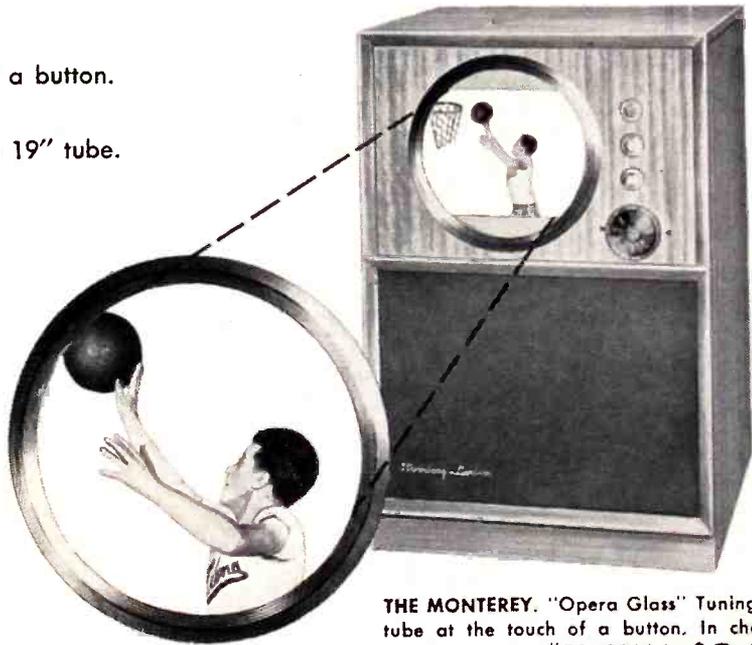
CENTER OF ACTION almost as big as on a 19" tube.

PANORAMIC WIDE-VIEW normal picture on 12½" tube.

"TELATENNA" does away with outdoor or indoor aerials in most places.

SUPER RECEPTION—with double signal strength for "fringe" and close areas.

TRUE-TO-LIFE TONE—on 12" speaker—doubles TV pleasure.



THE MONTEREY. "Opera Glass" Tuning on 12½" tube at the touch of a button. In choice blond avodiré veneers. #TC-125-LA4... **\$349^{50*}**

*Plus excise tax. Slightly higher in South and West.

® THERE IS NOTHING FINER THAN A
STROMBERG-CARLSON

Stromberg-Carlson Company, Rochester 3, N. Y.—In Canada, Stromberg-Carlson Co., Ltd., Toronto

Sales Sensation of the Year...

New Zenith "Black" Tube Television



\$28995*

Plus Federal Excise Tax

New Zenith "Saratoga"

An unprecedented value in television entertainment. With new Glare-Ban "Black" Tube—television's greatest picture improvement! Has "Big B" Giant Circle Screen and sensational new "Picturemagnet" built-in aerial. Plus Zenith's exclusive One-Knob Automatic Tuning and convenient Duo-Picture Control Switch. In handsome cabinet of genuine mahogany veneers.

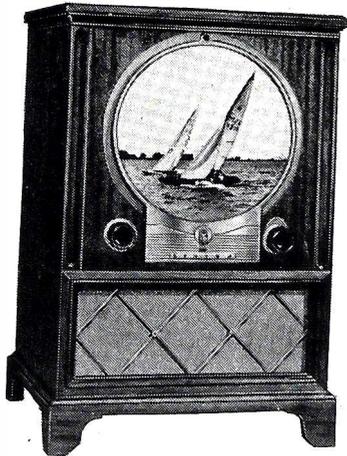
Of course, Zenith Has a Built-In Antenna—the Amazing "Picturemagnet"—Plus the New Super-Sensitive Circuit—Giant-Picture Screen and Many Other Zenith "Firsts"

ZENITH TELEVISION

New Zenith "Lexington"
Quality television at its finest! New Zenith Glare-Ban "Black" Tube—gives greatly improved picture clarity in lighted rooms. With "Giant C" Giant Picture Screen and Zenith's exclusive built-in "Picturemagnet" aerial. Simplified One-Knob Automatic Tuning and convenient Duo-Picture Control Switch. An exquisite console in genuine mahogany veneers.

\$39995*

Plus Federal Excise Tax



Never before have there been such amazing television improvements available to you as in these new Zeniths! Zenith† gives you pictures with great depth and detail—photographic realism. Sensational Zenith Glare-Ban "Black" Tube (Blaxide) increases picture clarity—eliminates objectionable blur and glare. And now in many locations, no need for a separate aerial inside or out with Zenith television... just plug in, and Zenith's exclusive "Picturemagnet" does the rest.

Yes, of course Zenith has a Built-In Antenna—

PLUS These Sales-Proven Zenith Features

- ★ **One-Knob Automatic Tuning**—one twist brings in station, picture, sound. Does automatically what on many other sets takes up to 5 or 6 manual tuning operations.
- ★ **"Gated" Automatic Gain Control**—Zenith's exclusive, automatic protection against "picture flutter."
- ★ **Genuine Armstrong FM Sound**—the FM of the experts. Glorious toned, static-free, even in worst storms!
- ★ **Giant Circle Screen with Picture Control**—gives you a choice of circular or rectangular pictures at the flick of a finger!

ZENITH TELEVISION

Zenith has the great values



New Zenith "Regent"

Television FM-AM Radio-Phonograph Combination. With new Glare-Ban "Black" Tube and "Big B" Giant Circle screen. Has Zenith's new built-in "Picturemagnet" aerial plus exclusive Duo-Picture Control and Simplified One-Knob Automatic Tuning. Matchless radio reception with Zenith's new Super-Sensitive FM and famous Long-Distance AM. Revolutionary new 3-Way Cobra† Tone Arm and Record Changer plays all records, all sizes, all speeds—automatically! All exquisitely combined in a superb "Queen Anne" cabinet of genuine mahogany veneers.

\$48995*

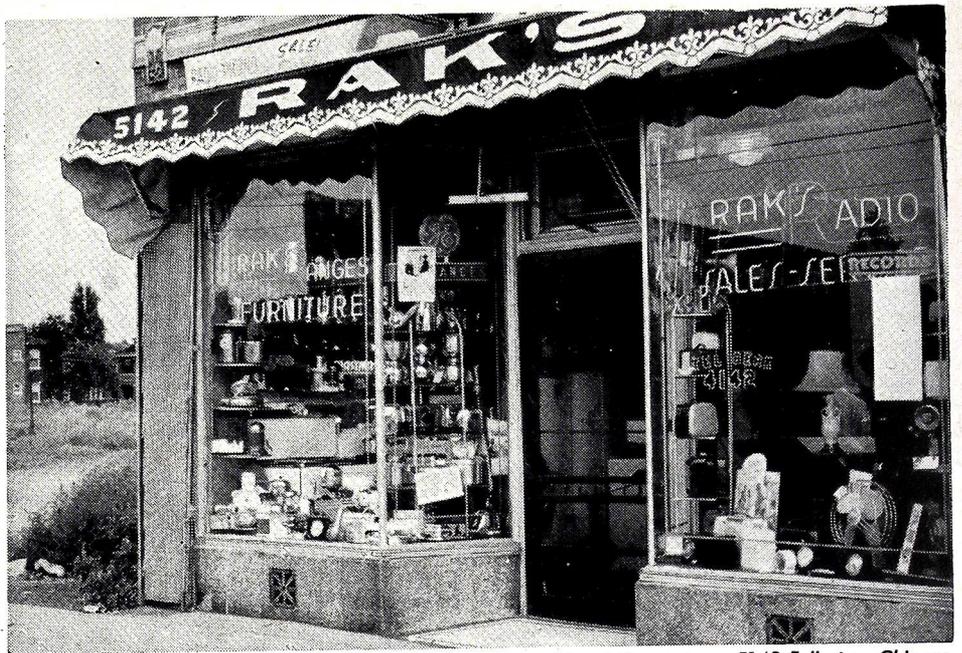
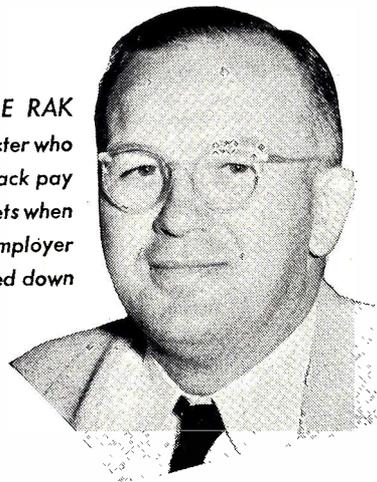
Plus Federal Excise Tax



ZENITH RADIO CORPORATION
6001 West Dickens Avenue, Chicago 39, Illinois

*Suggested retail prices. West Coast prices slightly higher. Prices subject to change without notice.

JOE RAK
—a set-tester who
took his back pay
in radio sets when
his employer
closed down



Rak's appliance store, 5142 Fullerton, Chicago

He does \$196,000 a year in an area where eight other appliance dealers quit...

JOE RAK, who did \$196,000 in appliances in 1948, lost his job in 1936 when the radio factory employing him as a set-tester closed down. How he took out his back pay in high-priced radio sets and went into business for himself is a success story every appliance dealer may study for inspiration and profit.

When you walk into Joe's 17 x 60 foot store today, you wonder where he gets the customers for a volume now pushing \$200,000 in a square-mile slice of middle class Chicago that proved too tough for eight other appliance dealers in the past five years. Joe's philosophy? "You can do anything you set out to do if you work at it."

Burns the Midnight Oil

Joe got a job in 1928 as a set-tester in a radio factory. He read everything he could on radio set construction and theory. Soon he became known as an expert repairman, analyzer and all around installation man. Then the firm he worked for closed down.

"It was then I decided to open a radio sales and service shop," Joe says, "I scraped up about \$300, and took a little space in Wiejaczka's jewelry store, across the street."

Sells 60 Sets for \$100 Each

"After awhile, I got to thinking about the back pay owed me. I offered to take it out in radio sets. It figured out that I paid \$45 apiece for some high-priced sets. Before long, I had sold sixty of them at \$100 each." This convinced Joe he could sell and gradually he expanded his operations.

"Pretty soon the jewelry store started looking more like an appliance store so I began to look around. Across the street was this place, formerly an auto accessory shop. I rented it, fixed it up, and have been here ever since."

Joe Knows His Showmanship

You hear a lot about showmanship—Joe Rak has it. Good examples are his base-

ball and bowling teams that made his name well known around the district.

In 1941, Joe started a free cooking school for the women of his church, using appliances from his store. It was so successful that he has sponsored several similar ventures.

Joe also keeps his eye on the neighborhood romances, from the engagement stage on, and presents newlyweds a gift. "There's no better potential market," Joe says, "Newlyweds need everything we sell."

Beats Seasonal Slumps

Joe says his toughest problem was building volume all year around. "At first we didn't know what to do about the seasonal slumps in appliance sales. But we think we found an answer. First, we put in a line of kitchen equipment, cabinets, lawn chairs, etc., which we give a big play in summer, easing up on other items that sell better in cold weather.

"And then to keep the store's name before the public, we advertise." What kind of advertising does he use? "I'm just like my customers," Joe says, "When I'm putting out my money, I want to get the most for the least."

Joe Gets His Money's Worth

Since 1946, Joe has put a good share of his advertising funds in the Chicago Tribune's Selective Area plan. Most of the ads featuring Rak's Radio Sales and Service are full page size, with hard-hitting, retail store type of copy including big pictures of the merchandise.

"The cost of these ads is split up between the manufacturer, the distributor and dealers," Joe explains, "Ads like these

would be out of the question if I had to pay for them all by myself. With this plan, they cost me as little as \$19 for a full page, because the cost is shared by so many dealers all over Chicago and suburbs.

"In the past two years, we've participated in more than 40 different ads of this kind, and we've found that it's the most productive advertising that we've ever done." * * *

MANUFACTURERS: Joe Rak is one of more than 1,100 appliance retailers in Chicago and suburbs who have participated in the Chicago Tribune's Selective Area advertising plan.

So well does this plan of factory-controlled, agency-placed promotion fit the needs of dealer, manufacturer and distributor that more than \$890,000.00 has been spent under this plan to sell products ranging from shoes to records to washing machines and electronic products.

Ask a Tribune representative to place before you specific suggestions for using this plan to build, maintain and increase your consumer franchise in the multi-billion dollar Chicago market.

Chicago Tribune
THE WORLD'S GREATEST NEWSPAPER

November average net paid total circulation:
Daily, Over 935,000—Sunday, Over 1,575,000

Chicago Tribune representatives: A. W. Dreier, 810 Tribune Tower, Chicago 11; E. P. Struhsacker, 220 E. 42nd St., New York City 17; W. E. Bates, Penobscot Bldg., Detroit 26; Fitzpatrick & Chamberlin, 155 Montgomery St., San Francisco 4; also, 448 S. Hill St., Los Angeles 13.

MEMBER: FIRST 3 MARKETS GROUP AND METROPOLITAN SUNDAY NEWSPAPERS, INC.

TWO STANDOUTS from the OUTSTANDING LINE

CHANNEL MASTER'S FAN-FLECTOR

This sensational new preassembled antenna, the Fan-Flector, a development of Channel Master's research laboratories, is the most sensitive all-channel antenna developed to date.

No high band attachments.

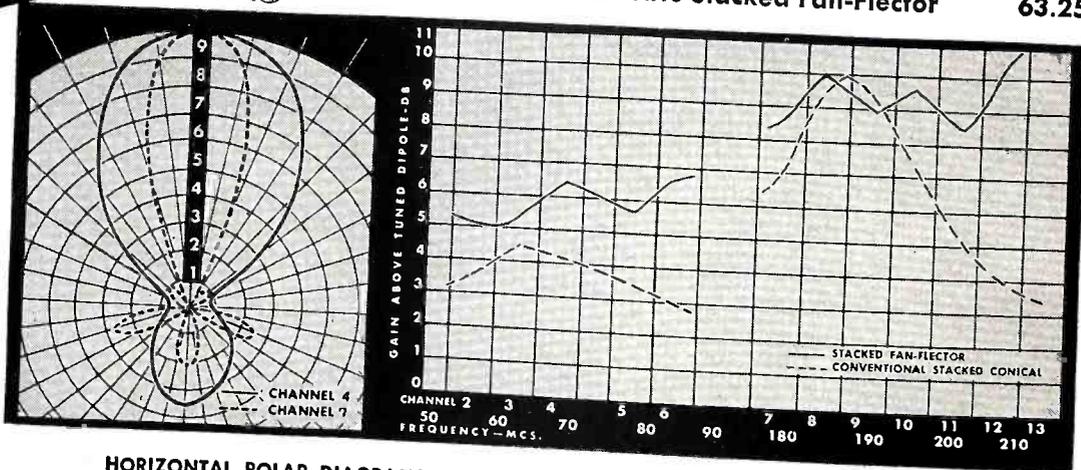
No multiple lead in wires.

No wasted assembly time.

Dealer after dealer has made his most difficult fringe installations stick with the Fan-Flector, America's fastest selling antenna.

**OVER 100,000
SOLD IN 3 MONTHS**

BM312	Fan-Flector	List
BM312X2	Stacked Fan-Flector	13.75
BM312X4	Double Stacked Fan-Flector	29.30
		63.25



HORIZONTAL POLAR DIAGRAMS

Low band front-to-back ratios between 3 and 4 to 1. Lobe width decreases on high band for ghost-free reception. Vee-Beam engineering minimizes side lobes.

GAIN CURVES

"Most popular" conventional stacked conical antenna (broken lines) compared to the stacked Fan-Flector (solid lines).

TO: CHANNEL MASTER CORP., ELLENVILLE, N. Y. DEPT. R-1

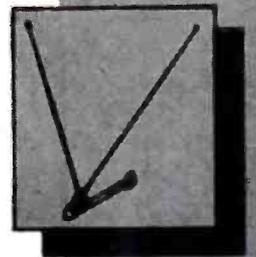
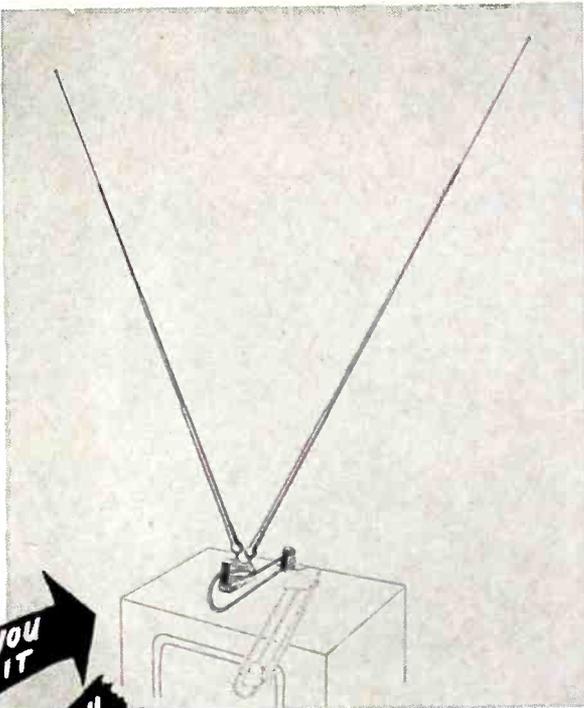
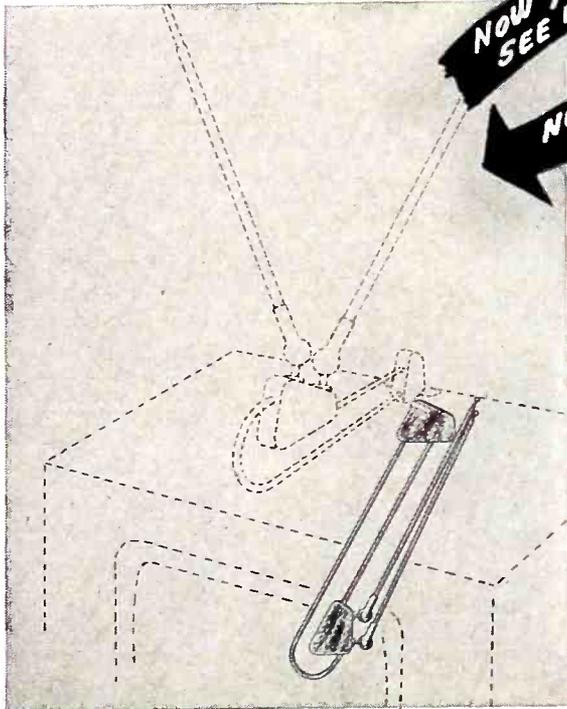
Please send me:

- Name of nearest Channel Master Distributor
- Technical data and literature

YOUR NAME.....
 COMPANY NAME.....
 ADDRESS.....
 CITY..... STATE.....

CHANNEL MASTER'S HIDEAWAY

Combines
**THE DISAPPEARANCE
OF A BUILT-IN ANTENNA**
with
**THE PERFORMANCE OF
AN OUT-DOOR ANTENNA**



Channel Master's exclusive Multiflex Action* enables this antenna to be hidden away behind the set when not in use. The elements can be arranged to form a horizontal Vee for any channel in any direction thus increasing the gain.

The hand rubbed hardwood surfaces, nickel plated metal components and smart design makes the Hideaway the most attractive indoor antenna on the market today.

LIST 975

available in blond,
mahogany and
walnut

*Pat. Pend.



FIRST IN PREASSEMBLED ANTENNAS

ANOTHER GREAT YEAR COMING

SELL RAYTHEON



TRULY . . . a standard
by which others are judged

Raytheon's line leader, THE 16-INCH CRITERION, with 176 sq. in. Super Circle Picture, along with all the most-wanted features of modern television, is a triumph for today—an indication of Raytheon 20/20 Television Achievements of Tomorrow.

UP FOR DEALERS WHO

20/20 TELEVISION

In key markets across the country, Raytheon 20/20 Television stepped into a pace-setting position during 1949.

The reasons were clear—customer-winning features, famous-name engineering, and customer-pleasing prices.

Raytheon is going to adhere to those basic, success-formula fundamentals in 1950—with these elements added:

- Advertising and sales promotion support will be stepped up to a new high.
- Raytheon will incorporate important new, proven features in its 1950 sets.
- Raytheon will intensify the growing preference for its line with startling new TV set creations.
- Raytheon will demonstrate in '50 that its 1949 achievement of offering "more Television for the consumer's dollar" is a part of permanent Raytheon policy.

Distributors and dealers report that Raytheon production and policies in 1949 spelled whopping sales success for them. Building on that foundation, Raytheon predicts a year of still greater reward and achievement in 1950 for all of us who are SELLING RAYTHEON. We cordially invite inquiries from distributors and dealers interested in sharing, with us, in the great year ahead. For information write:

BELMONT RADIO CORPORATION

Subsidiary of Raytheon Manufacturing Company

5923 WEST DICKENS AVENUE • CHICAGO 39, ILLINOIS



TV's BEST BUY

16" Tube

147 Sq. Inch Picture

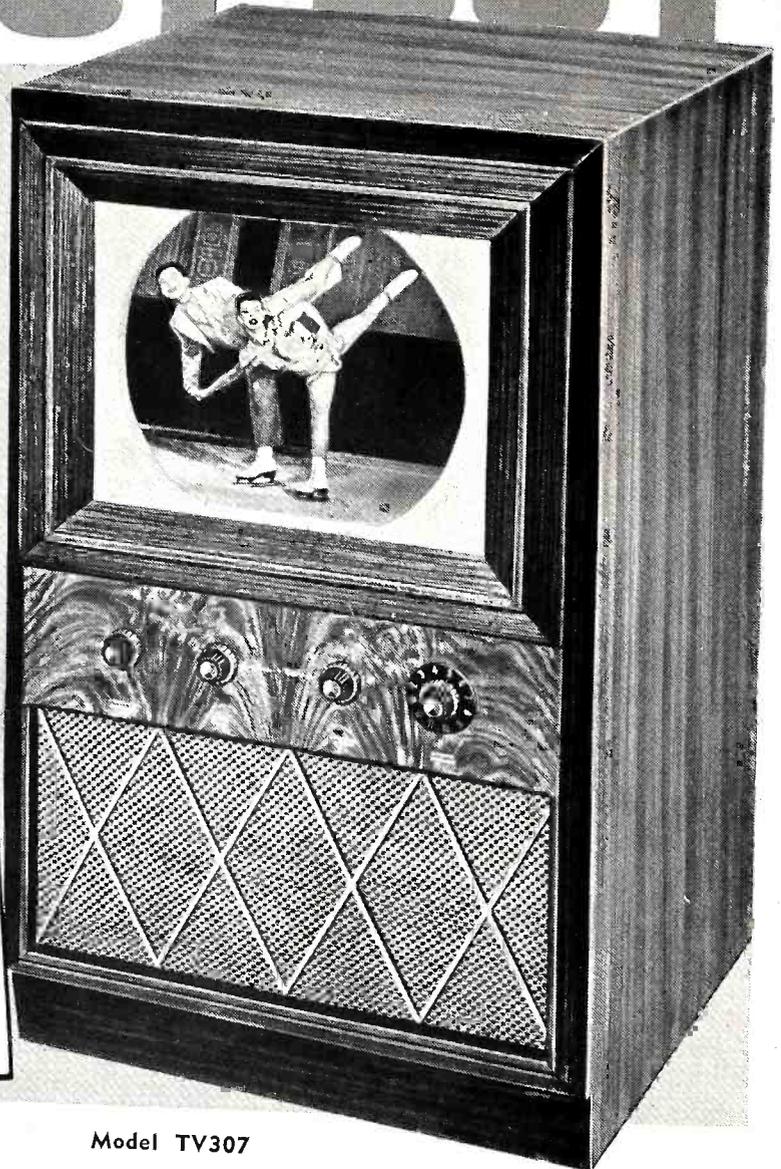
only

\$279⁹⁵ plus excise tax

IN WALNUT

in Mahogany \$299⁹⁵

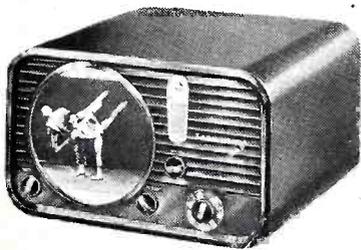
"Automatic Tuning"
Built-in Antenna
Long Range Reception



Model TV307

Tele-tone

RADIO CORP.
 540 West 58th Street
 New York City, N. Y.

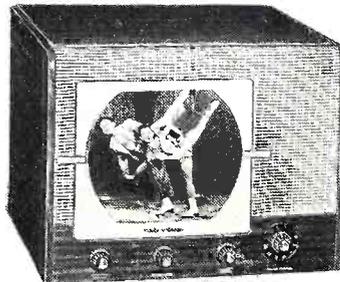


Model TV300. 63 sq. in. picture.
 Built-in antenna. Ebony phenolic cabinet\$149.95

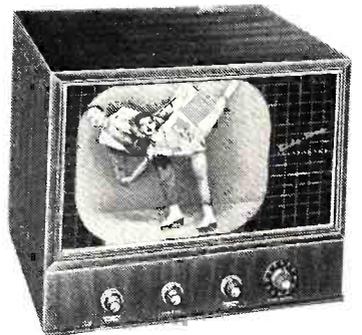
All prices slightly higher in Southwest and Far West.



Model TV301. 63 sq. in. picture.
 Built-in antenna. Mahogany phenolic cabinet.....\$169.95



Model TV305. 92 sq. in. picture.
 Built-in antenna. Smartly styled Honduras mahogany veneer cabinet\$189.95



Model TV306. 16" Rectangular Tube. Built-in antenna. Handsomely decorated mahogany veneer cabinet\$249.95

THE EYE IS QUICKER THAN THE EAR

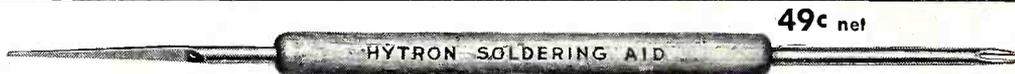


IF you service TV, you know this. Customers are quick to *see* imperfections. Much slower to *hear* them. Therefore *premium-quality* Hytron receiving tubes for the tougher TV jobs. *At no extra cost!* You gain also: Through fewer expensive service call-backs. Better customer satisfaction and confidence. More profits.

How does Hytron do it? By working closely with leading TV set manufacturers. By endless striving to better already superior performance. By improved design . . . processing . . . inspection . . . testing.

Try Hytron TV receiving tubes: 1X2, 6AG5, 6AL5, 6AU6, 6BG6G, 6BQ6GT, 6J6, 6SN7GT, 12SN7GT, etc. You pay no more for Hytron. But *see* the difference yourself . . . on the TV screen . . . on your cash register.

OLDEST MANUFACTURER SPECIALIZING IN RECEIVING TUBES



49c net

OUR APOLOGIES! We knew these Hytron shop tools would be popular . . .

because they are designed "by servicemen, for servicemen." But we didn't dream they would be so popular. That you needed them so badly. First production runs of both Soldering Aids and Tube Lifters melted away like snow in the red hot demand. New, more adequate production facilities had to be rushed into action.

NOW YOU CAN HAVE THEM

Sorry, if you were one of the unlucky ones who had to wait. Your Hytron jobber should now have both Soldering Aids and Tube Lifters in stock. If he hasn't, please drop us a line.



15c net



ALSO AT YOUR HYTRON JOBBER'S . . .

TUBE TAPER 5c net



9-PIN MINIATURE STRAIGHTENER 55c net



7-PIN MINIATURE STRAIGHTENER . . . 55c net



AUTO RADIO TOOL 24c net

In 1949 we asked
you to watch ..

Starrett

Opticlear

you DID...and YOU
MADE MONEY with:

TELEVISION

STARRETT PROTECTED PROFITS

... the franchise exclusive that's guaranteed!

STARRETT DISCOUNT ADVANTAGES

... discounts up to 40%!

STARRETT "OPTICLEAR" TELEVISION

... super-powered, ultra-sensitive chassis that gives trouble-free performance!

STARRETT COMPLETE PRICE RANGE

... America's most inclusive price range!

STARRETT SUPERB CABINETRY

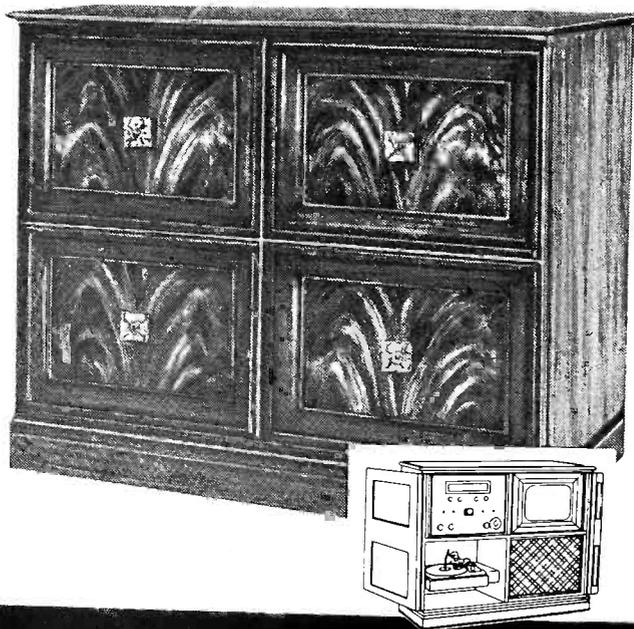
... America's most distinguished cabinet-making!

STARRETT "FILM-FREED" PICTURE TUBE

... sensational exclusive sales-feature!

STARRETT CO-OP ADVERTISING

... liberal, consistent, truly "cooperative"!

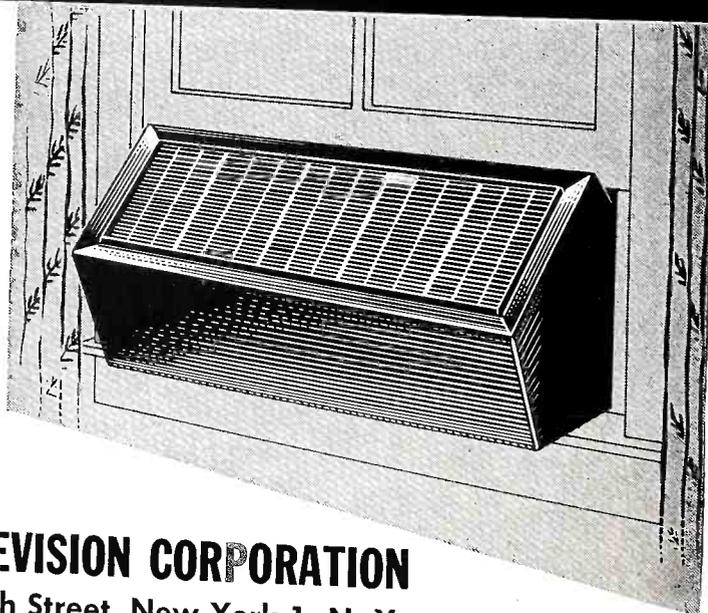


And Now... FOR EVEN GREATER PROFITS IN 1950
new, sensational low-priced TV Models plus — **STARRETT AIR CONDITIONERS**

**SEE STARRETT'S
"1950 PROFIT"
SHOW
IN CHICAGO**

January 9-20
Furniture Mart
Room 1730
also at
Congress Hotel
or write for details:

Starrett "Room-Service"
air conditioners at prices
all America is waiting
for! Window units in ½ HP
and ¾ HP. Console units
¾ HP and 1 HP...all with
exclusive STARRETT engi-
neering features.



STARRETT TELEVISION CORPORATION

601 West 26th Street, New York 1, N. Y.

Consistently, continuously advertised in America's leading Magazines and Newspapers.

another **DUMONT** first...

**YOUR
BEST
BUY!**

19" *Metal Cone* **TELETRON*** TYPE 19A

-  **FOR** a direct-viewing 203 square-inch picture
-  **FOR** superlative brilliance and definition
-  **FOR** shorter tube length requiring smaller cabinet
-  **FOR** exclusive bent-gun construction - sharper focus - no ion-spots

© Allen B. Du Mont Laboratories, Inc.

Literature and quotations on request.

*Trade-mark.

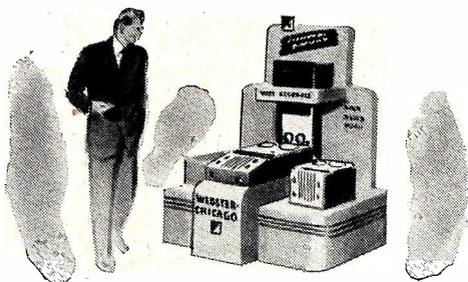
DUMONT

FIRST WITH THE FINEST IN **T-V** TUBES

Teletrons

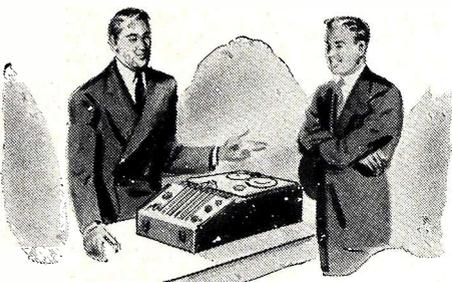
ALLEN B. DU MONT LABORATORIES, INC. • TUBE DIVISION • PASSAIC, NEW JERSEY

the 3 **D**'s for Profitable Sales



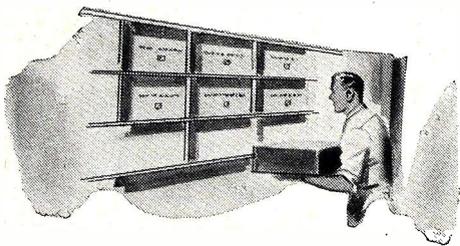
Display

Display the attractive Webster-Chicago Wire Recorders in some conspicuous spot in your store. It will attract attention, it will draw many inquiries—especially if you back it up with some of the attention compelling Webster-Chicago display material.



Demonstrate

Demonstrate the efficient Webster-Chicago *Electronic Memory* Wire Recorders. *With no other product* does a prospect so quickly begin to associate himself with the actual merchandise as he does with the Webster-Chicago *Electronic Memory* Wire Recorder. Once your prospect has heard his own voice played back—you are on your way to a profitable and mutually satisfying sale.



Deliver

Back up your display and demonstration practices with an adequate stock so that you can give immediate delivery. "I can get it for you in a few days" isn't half so effective as "will you take it with you or shall we deliver it?"

THE FAMOUS WEBSTER-CHICAGO *Electronic Memory* WIRE RECORDERS



Model 180

The completely portable *Electronic Memory* Wire Recorder. Handsome, sturdy all wood carrying case covered in attractive burgundy leatherette. \$149.50*



Model 181

The heavy duty, all purpose Wire Recorder for permanent or semi-permanent installation. \$114.50*



Model 178

The ideal model for installation in the record compartment of a radio console. Takes programs direct from radio independent of radio volume. \$107.50*

*Slightly higher west of the Rockies.

For "Sound" Profit... **DISPLAY, DEMONSTRATE AND DELIVER**

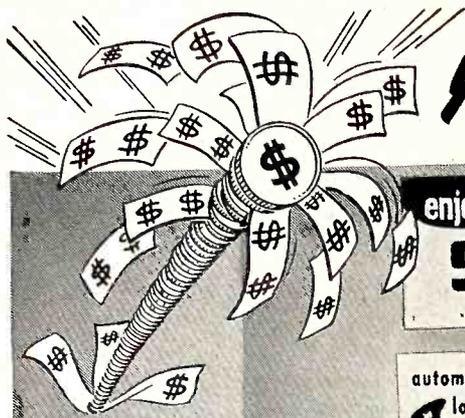


WEBSTER-CHICAGO

5612 WEST BLOOMINGDALE AVENUE

CHICAGO 39, ILLINOIS





YOUR WINDOWS SPROUT PROFITS

enjoy crystal-clear pictures with
Sentinel television
 .. plus .. all these extra features

automatically locked-in picture

built-in antenna

non-glare safety glass

Sentinel H-F-intercarrier system

Sentinel automatic tuning

today's special \$00000 budget payments

any child can tune a Sentinel

... with Sentinel's New Sales Building Promotion

Ask your Distributor's Salesman!

how to get in on this promotion. He has a surprise for you.

Promotions move merchandise! January pulls its full profit load with this, the first of many Sentinel promotions for 1950. It builds traffic, makes sales.

MONEY-MAKER!

In this plan you have proven fast-moving sets. Your Sentinels are clothed in beauty, featuring automatic no-delay tuning, built-in antenna, automatically locked picture, non-glare safety glass . . . everything they want, all right-priced for fast turnover!

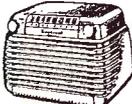
Here's 1950 profit coming up! Contact your Sentinel Distributor right now!

**DURING THE SHOWS
 SEE SENTINEL AT ROOM 1113
 MERCHANDISE MART, CHICAGO
 OR AT THE FACTORY IN EVANSTON**

Sentinel

Radio and Television
 EVANSTON, ILLINOIS

TRAVEL THE PROFIT ROAD ALSO WITH THESE MOST POPULAR SENTINEL RADIOS

314-I 

Sound money-maker! Simplified slide-rule dial, automatic volume control makes tuning-in quick and easy.

316 

3-way personal portable. Light-weight. 4 "Personality Colors." Exciting in tan, red, white or green.

333-W 

FM-AM at a price that sells! Built-in antenna. Loaded with sales appeal! Ideal as an "extra" radio in any home.

331-W 

Priced for volume sales! Radio's grandest achievement in design and engineering. A little beauty.

332-I 

Super sensitive for long-range reception . . . Full range tone control. Beautiful walnut finish plastic.

Sonora

Clear as a Bell

complete for '50!



Clear as a Bell

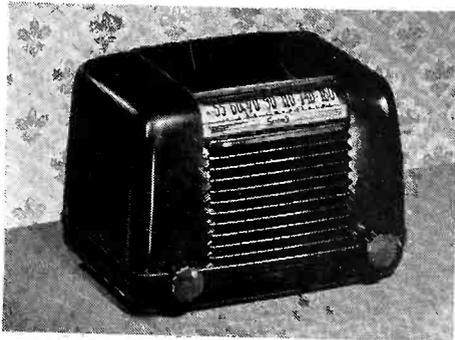
SINCE 1914—FAMOUS FOR TONE.....

FIT FOR '50 in every way! Here they are: model after model stamped with the SONORA tradition for "Clear as a Bell" performance. A complete line for your entire market. A line in which each number sells. The prices are right. The styling is smart. The quality is unsurpassed. America knows SONORA—the 35-year-old name that spells home entertainment at its finest. More than ever—SONORA for '50 is the sensible line for profitable selling.



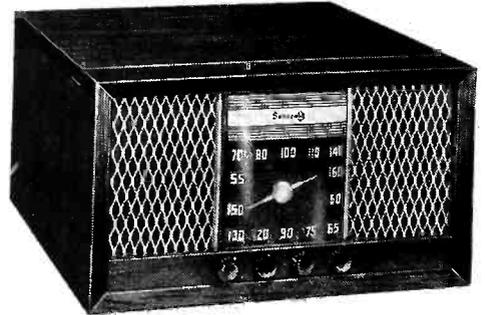
MODEL 299. A low-cost AC-DC beauty in beautiful walnut plastic. Built-in "Sonorascope" loop, full-vision dial, PM speaker.

Model 300, as above, in ivory plastic.

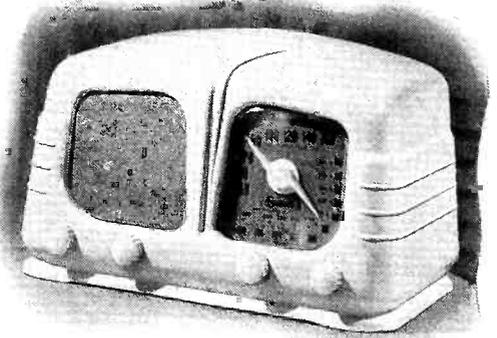


MODEL 1001. "Clear as a Bell" AC-DC Superhet. Built-in loop, slide-rule dial, latest PM speaker. Beautiful new ivory plastic styling.

Model 100M, as above, in mahogany plastic.

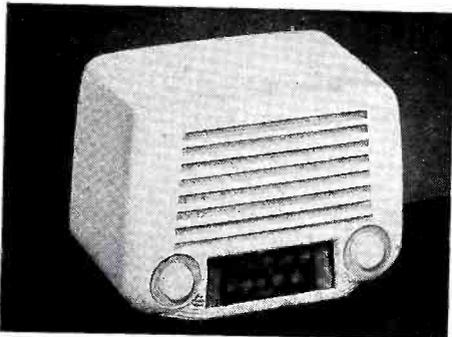


MODEL 306. Distinctive mahogany table radio-phonograph. Superhet radio with built-in loop, clock type dial, PM speaker. Latest 3-speed automatic changer plays all record sizes and speeds.



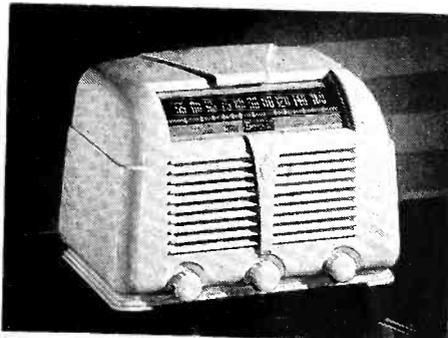
MODEL 240. FM-AM table radio. Features superior FM at a new low price. Full-vision dial, tone control, built-in antennas. Gorgeous ivory plastic.

Model 262, as above, in walnut plastic.



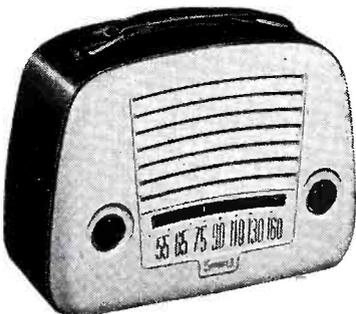
MODEL 172. Compact but great for tone and performance. AC-DC Superhet. "Sonorascope" loop, slide-rule dial, PM speaker. Ivory plastic.

Model 171, as above, in walnut plastic.



MODEL 222. A full-sized table model with big set tone and power. Built-in loop, slide-rule dial, tone control, big PM speaker. Ivory plastic.

Model 248, as above, in walnut plastic.



MODEL 102. Best-selling 3-way "Cavalier" personal portable. Built-in loop, slide-rule dial, PM speaker. Two-tone brown and beige plastic. AC, DC or battery operation.



MODEL 249. 3-way "All-Arounder"—the powerful portable value! Big PM speaker, built-in loop, slide-rule dial. In beautiful brown Spanish-grain finish. AC, DC or battery operation.

"Micro-Sharp" Crystal Clear TV

You can see the difference in "Crystal Clear" SONORA Television. You can hear the difference in SONORA "Clear as a Bell" tone! That's why SONORA TV wins acclaim in every market. There's a complete SONORA TV Line: 12½", 16"—table and console models—priced to sell!



SONORA RADIO & TELEVISION CORP.

325 NORTH HOYNE AVENUE

CHICAGO 12, ILLINOIS

RADIO & TELEVISION RETAILING • January, 1950

COMPLETE HOME ENTERTAINMENT AT ITS BEST

New Low Cost Tape Recorder OPENS VAST MASS MARKETS



AMPRO
Magnetic
TAPE RECORDER
and
PLAYBACK UNIT

\$94⁵⁰

- Complete with Microphone and Cable • Radio Speaker Attachment Cord • Plastic Take-Up Reel • Manual Rewind Crank
- Attractive Carrying Case

Ampro introduces a revolutionary new Magnetic Tape Recorder and Playback with basic advantages that appeal to millions

1 Lowest first cost

Fair Traded to retail at only \$94.50, complete . . . this new unit compares favorably with recorders selling for up to 50% more money!

2 Lowest operating cost— Two full hours of recording from one standard 7" reel!

Almost twice as much recorded material on each reel of tape, as compared with conventional recorders.

3 Lightest weight—most compact

The basically new design of this recorder makes possible tremendous savings in weight. It actually weighs less than any other tape recorder on the market today . . . a mere 15 pounds!

4 Simplest to operate

A young child can operate this new tape recorder . . . it is that easy! Operation has been reduced to its simplest terms, uncluttered by costly, complicated "gadgets" that merely confuse the operator.

5 Built and guaranteed by Ampro

. . . a name famous for fine craftsmanship in the design and manufacture of precision cine' equipment.

A General Precision Equipment Corporation Subsidiary

Vast new markets for tape recorders are smashed wide open with this new Ampro unit! Utilizing a basically new electronic design this is the first complete tape recorder ever offered for less than \$100—a simplified, easy-to-operate recorder that is truly portable because it weighs only 15 lbs.—a recorder that takes up to *two full hours* of recording on one standard 7" reel! Can't you picture how your customers in homes, schools, churches, clubs, organizations, offices and industry will go for this sensational value? And, best of all, you can sell this recorder with complete confidence because it is built and guaranteed by AMPRO—a name famous for dependable, high quality precision engineering.

Write for Dealership Information

For full details about this remarkable new Ampro Magnetic Tape Recorder and Playback—and information on obtaining a dealer franchise—fill out and mail the coupon below—today!

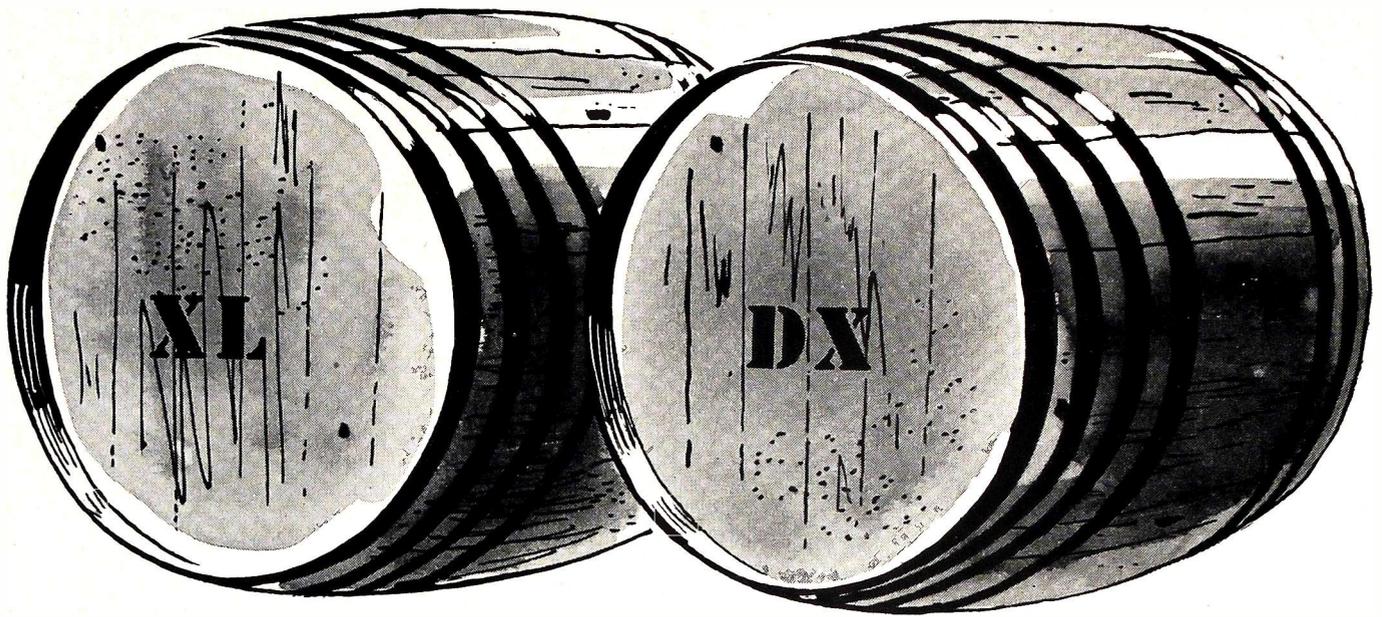
*Trade Mark
Reg. U. S. Pat. Off.



AMPRO* CORPORATION RT 150
2835 N. Western Ave., Chicago 18, Ill.

Please send me descriptive literature on the new Ampro Tape Recorder and complete information on obtaining a dealer franchise.

Name _____
Store Name _____
Address _____
City _____ State _____



Both Barrels

Roll out the barrel!

Roll out *both* barrels!

Olympic leads the way again with a *double-barreled* profit line that's geared for every demand . . .

for every purse:

The Excell Series—Quality television at budget prices . . . destined to become TV's hottest promotional line.

The Super-DX Series — Super-powered . . . extra sensitive . . . packed with startling new quality features. Setting new standards in styling and furniture excellence.

See them at the Chicago Furniture Show
SPACE 118-119 **17th Floor**

American Furniture Mart

starting January 9th

Olympic

TELEVISION

OLYMPIC RADIO & TELEVISION, INC. LONG ISLAND CITY 1, N. Y.

The **LEADERS** use

COMMERCIAL CREDIT *Service*

Not by chance but by careful choice is Commercial Credit service used by distributors and retailers of most of the biggest selling appliances.

With carefully planned efficiency and follow-through, it meets every requirement in the chain of steps by which the appliances are moved from the distributors to the dealers' showrooms and thence into the homes of millions of time-payment buyers.

If you want to increase the volume and the profit on your time-payment business, ask your local Commercial Credit representative for full particulars of Commercial Credit service, including wholesale and retail financing, credit and collection service and merchandising aids.



Helps Dealers Make

More **SALES** • *More* **PROFITS**
More **SATISFIED CUSTOMERS**

COMMERCIAL CREDIT CORPORATION

A Subsidiary of Commercial Credit Company, Baltimore • Capital and Surplus \$100,000,000

MORE THAN 300 OFFICES IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

two new Westinghouse TELEVISION MODELS THAT MEAN MORE BUSINESS FOR YOU!



new 12½-inch picture tube consolette
with these famous Westinghouse features

1

**SENSATIONAL
ELECTRONIC
MAGNIFIER**



A flip of the knob turns
regular-size picture to
GIANT CLOSE-UP

2

**SYNCHRO-
NOUS
TUNING**

When picture is
sharply tuned,
sound is always
perfect, too.

3

**BUILT-IN
ANTENNA**

No antenna needed
... just plug it in for
perfect reception in
a great number of
cases.

MODEL 606K12—Mahogany \$299⁹⁵

607K12—Blonde \$315⁰⁰

new BUDGET-PRICED 10-INCH TABLE MODEL
WITH NEW, IMPROVED PICTURE STEADINESS

- Synchro-Tuning of sight and sound
- Built-In Antenna
- Keyed and fast-acting Automatic Gain Control to maintain constant picture brightness
- Phono-jack and switch for external record player

MODEL 609T10

Only \$199⁹⁵



SEE OUR EXHIBIT

AT THE
CHICAGO FURNITURE MART
SPACE 542B
WINTER FURNITURE MARKET
JANUARY 9-20

YOU CAN BE SURE

...IF IT'S

Westinghouse

RTR-1

RADIO & TELEVISION RETAILING

Including "Radio & Television"
and "Radio & Television Today"

Established in 1922
as ELECTRICAL RETAILING

O. H. CALDWELL, Editorial Director



M. CLEMENTS, Publisher

Foresee '50 a Banner Year in Radio, TV, Appliances and Records

"ADMIRAL CORPORATION SALES for 1949 are expected to total \$110,000,000 against \$67,000,000 for 1948. We are counting on a substantial increase in sales of the Admiral refrigerator and a similar increase in sales of electric ranges."

"Admiral's payroll is at an all-time peak of more than 5,000 employees. Our production lines continue to turn out one TV receiver every 10 seconds, and we are now making in excess of 3,000 sets a day. In my opinion, color in the television picture is still 5 to 10 years away. The television industry will produce approximately 4,000,000 sets in 1950 and Admiral promises to maintain its position in the field."
—Ross D. Siragusa, president, Admiral Corp.

"WE AT ALLIANCE ARE VERY OPTIMISTIC about the potentialities for the coming year. The present tremendous demand for television sets will continue through all of 1950—and the increased demand for radio-phonographs and record players makes us feel that the consumer has, to a large degree, overcome his uncertainty regarding record speeds and will again become a very active buyer in the record market."
—John Bentia, sales manager, The Alliance Mfg. Co.

"IN MARCH, 1949, I PREDICTED in a publicity press statement that between 2,500,000-3,500,000 television sets would be sold during the year, and at the time, several manufacturers felt that this was a 'fantastic' figure. However, sales records for 1949 proved my prediction to be correct.

"For 1950, it is my belief that 5,000,000 television sets will be manufactured and sold, and if the 'freeze' on new TV broadcasting stations is lifted early enough in the year, at least an additional 1,000,000 TV sets will be sold. Television is still a new field with as bright a future as any American industry. The complete growth of the television field is in the hands of the manufacturers, distributors, retailers and others who constitute the entire industry."
—Frank A. D. Andrea, president, Andrea Radio Corp.

"IT IS MY OPINION THAT SALES for the new year will be at a very high level, particularly for the first six months. My conclusions are based on three primary points of reasoning:

"First, there is a backlog of orders for major appliances which was brought about by the unprecedented buying which followed the lift in government restrictions on credit. This, coupled with the recent steel and coal strikes, has resulted in reduced production. We are faced with a prob-

lem of not only meeting consumer demand for our products, but we must refill the pipe-lines all along the way.

"Second, the soldiers' refunds which will be paid in January and February will free a tremendous expenditure, a good part of which will be earmarked for major appliances. Third, the final feature is the tremendous housing program which is now going forward. I believe these three factors in themselves will provide the necessary sales stimulus so that we can safely estimate 1950 as a very productive sales year."
—Frank S. Ryan, manager advertising and sales promotion, Apex Rotarex Corp.

"THERE ARE A THOUSAND FACTORS which swing or sway business trends—good or bad. I think the most important favorable factor for early 1950, as compared to early 1949, is the excellent condition of inventories. Everything points to good appliance sales for the first half of 1950."
—F. W. McGrath, vice-president in charge of sales, Appliance Mfg. Co. (Duchess.)

"SOUND PAGING AND INTER-COMMUNICATING SYSTEMS are constantly becoming a more necessary and critical part of industry. Today every office, factory and plant is striving for increased operating efficiency. Every type of business from the smallest garage or restaurant to the largest steel mill or machine tool fabricator must reduce operating expenses. An adequate sound system saves steps and minutes which in turn save dollars. Industry will demand better sound communications."
—R. C. Reinhardt, president, Atlas Sound Corp.

"THE YEAR 1950 SHOULD BE THE BIGGEST volume year in the history of radio and television. It will be more competitive than ever. Dealers must be more aggressive in sales, take a real interest in properly serving their customers and manage their business wisely if they are to make money for themselves."
—W. A. Brees, vice-president, Avco Manufacturing Corp., and general sales manager, Crosley Div.

"IN MY OPINION THE FIRST QUARTER OF 1950 will be especially active in the TV field; in fact, the sale should meet, and possibly exceed, the final quarter of 1949. I base this on the tremendous backlog of orders now in the hands of the dealer, and distributor, the manufacturer, the continuation of the fine TV programs, and the increased interest in this type of visual entertainment."
—David Housman, president, Automatic Radio Mfg. Co.

(More on following pages)

Foresee '50 a Banner Year in

(Continued from page 33)

"OUR COMPANY IS BUDGETING a modest increase in sales volume in 1950 over 1949. We believe that the inventory situation at the retail level is in much better shape at this time than it was a year ago, and, therefore, the early part of 1950 will show an increase in volume as compared to 1949. Prices generally should remain stable, although better values will undoubtedly be offered at current price levels. All in all, 1950 looks pretty good for those who are willing to work."—**W. Neal Gallagher**, president, **Automatic Washer Co.**

"BUSINESS IS GOOD! WE HAVE just finished one of the most successful years in our history and our backlog of orders now reaches the highest point in our history with the exception of the inflated postwar years of 1946 and 1947. Our sales curve has shown a steady climb since February of 1949 when it reached its lowest ebb. Each month since then has continued to show improvement over the preceding month. A major problem facing us today is to increase our production to keep in step with our sales."—**H. H. Seay, Jr.**, vice-president and general manager, **Bell Sound Systems, Inc.**

"THE OUTLOOK FOR 1950 in the washing machine industry appears to be especially good. In fact, business for washing machine manufacturers should continue to be good for a period of time to come. The basic reasoning behind my optimism, is the fact that the industry is excited with the advent of new developments that not only include the automatic washer and its favorable factors, but many improvements in the standard type washer can be anticipated.

"The newness of the automatic washer and the fact that the saturation of this unit is extremely low, further assures a continuity of business that will undoubtedly prevail for some time to come. The other factors that will aid our industry, includes the benefits that are accruing from the postwar educational process, thus to rehabilitate salesmen to our lines. The acceptance by the public of washing in the home and the re-establishment of proper representation, pretty definitely assures a continuity of good business."—**John M. Wicht**, vice-president, **Blackstone Corp.**

"WITH THE SKEPTICISM OF A FEW MONTHS ago removed, business will be as good as we make it. While prices of all items will be an important factor, quality and performance will be more in demand, particularly as we drive further and further from the strongest television signal areas."—**C. P. Galloway**, **Brach Mfg. Corp.**

"REGARDING YOUR 1950 FORECAST ISSUE, I want to say that we look forward to 1950 with real enthusiasm and optimism. Capitol's business in the third and fourth quarters of 1949 has been exceptionally good, and there is every indication of a stabilization of the market with all three record speeds being accepted by the public. A continuation of the present good business is a certainty."—**Floyd A. Bittaker**, vice-president in charge of sales, **Capitol Records, Inc.**

"BETTER AND STILL BIGGER TV: That's what I see for 1950. TV set sales will exceed three and three-quarter million. Total of installed TV receivers will be about six and one-half million. Of that number, about two million sets will be old enough to start needing service and replacement tubes and parts. That means servicing

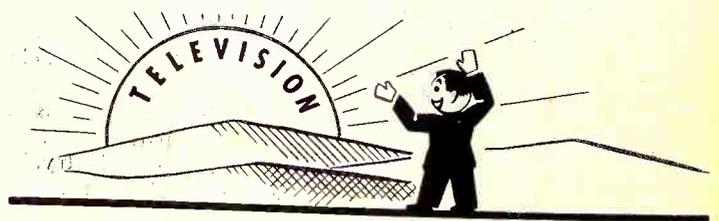
on a scale far exceeding anything yet experienced in this industry. Many TV set owners will want to go to bigger screen sizes. That means growing repeat sales. All in all, I say 'raise your sights' if you aim to get your fair share of the 1950 TV-radio boom."—**Victor Mucher**, president, **Clarostat Mfg. Co., Inc.**

"EVERYONE UNDERESTIMATED THE DEMAND for both records, and instruments to play records, in the Fall of 1949. Certainly this demand, which shows no evidence of slacking, means a very bright outlook for phonograph and record dealers in 1950. Equip yourselves to cash in on it!"—**Edward Wallerstein**, president, **Columbia Records, Inc.**

"LOOK FOR BIGGER AND BETTER THINGS IN 1950—considerably better than '49. Following the steel strike which has cleaned most 1949 inventories and created scarcities in some instances, appliance dealers should get off to a flying start in '50 for a much better first quarter volume than last year. Appliance lines have also undergone considerable design changes and offer more value for the consumer's appliance dollar than ever before to provide increased sales impetus."—**W. C. Conley**, sales manager, **The Coolerator Co.**

"WITHOUT CALLING 'WOLF,' I look to 1950 as the first postwar year of reckoning at the merchandising level. Sales are temporarily strong again after last year's period of inventory adjustment, but this does not mean that the easy selling days of the shortage era have returned. Instead, with the return of normal times, comes the return of equal opportunity—*real* opportunity for the aggressive salesman and sales organizations.

"These times present a challenge to manufacturers and merchants alike to put their houses in order and relearn the old lessons of aggressive selling and merchandising. Everyone in the industry must relearn the old adage of selling merchandising—not just merchandise. Many will unfortunately go to the wall, unable to keep pace with the increasing tempo; many others, taking advantage of the opportunity, will go on to new heights of sales and prosperity."—**J. W. Alsdorf**, president, **Cory Corp.**



100 TV Stations on the Air!

As of January 1, 1950 there were 100 stations on the air in 58 cities in 33 states, with 3,700,000 sets in use. Until the "freeze" is lifted which now prevents the issuance of new construction permits to prospective broadcasters, we can expect only 8 new "TV cities" and 1 new "TV state" to be added this year.

Radio, TV, Appliances and Records

"WE AT DECCA ARE VERY OPTIMISTIC as to the possibilities of the record industry for 1950. In the last quarter of 1949 our sales equalled the last quarter of 1948, indicating to us that the industry has recovered from the mid-year slump caused chiefly by the confusion created with the various speeds. As a matter of fact, we feel that the present pace of business will accelerate. There is still a continued demand for 78's which, together with the ever increasing demand for long playing records, will create a greater volume of sales for 1950."—Milton Rackmil, president, Decca Records, Inc.

"WHILE 1949 WAS A YEAR OF FEAST AND FAMINE, with television sales zooming out of the doldrums and into a period of scarcities and allocations, 1950 promises to be a year of steadily increasing, better controlled sales; with the television market finding a level upon which it can build without the plunging and careening that characterized the past year. And in my opinion conventional radio will come out of the storm cellar and make a bid for its share of the market, which it apparently abandoned in panic when television appeared."—Dr. Lee deForest.

"THE SALES OPPORTUNITY FOR 1950 will be the greatest challenge the industry has met during these post-war years. The amazing success of the few promotionally-minded outlets in the electrical housewares business has proven, during this last year, that imagination, planning and the ability to think, combined with good hard work, will produce results . . . amazing results.

"The general lack of willingness on the part of sales people at every level is the serious merchandising problem of today. The pre-war sales fire of suggestive selling, or the downright pleasure that sales people can get from closing a deal, is missing. I say, for 1950, our opportunity is the greatest. As salesmen, let's all tie into the future for the greatest electrical housewares year so far."—Marvin E. Allesee, vice-president, Dormeyer Corp.

"NINETEEN HUNDRED AND FIFTY LOOKS VERY BRIGHT for the television industry. Television's growth during the last twelve months has been more rapid than the expansion of any other industry on the American scene, and it can be even greater in 1950.

"However, in order for television to realize its full potentialities in 1950, there must be FCC action on four things. They are: 1. Lift the 'freeze' which has existed since September 24, 1948. 2. Issue a plan for allocation of TV frequencies to provide a practical long-term operating plan for television which will best serve the public. 3. Avoid intermingling of VHF and UHF assignments in the same city which would place UHF broadcasters at a disadvantage and would require set owners to buy converters if they wish to enjoy all the programs available. 4. Issue a clear-cut statement on color television and put an end to the public's confusion on this subject.

"I would heartily endorse color television if a system were ready that would (1) provide definition and clarity at least equal to our present system, (2) give constant, reliable and trouble-free service, (3) not be expensive, and (4) be compatible with the present black and white system so that present sets would not have to undergo extensive alterations to receive both black and white and color. None of the color systems presented before the FCC meets these requirements.

"With early action by the FCC, television will move ahead even faster than in 1949 for it starts with terrific

momentum. The young industry has taken its rightful place among America's top industries. Definitely, the Television Age is here."—Dr. Allen B. DuMont, president, Allen B. DuMont Laboratories, Inc.

"I HAVE JUST RETURNED FROM AN extended trip throughout the United States calling on jobbers as well as dealers.

"Frankly, I have found that most of the confusion of the three speed records is being washed away and industry is starting to stabilize itself. Most of the jobbers and dealers were happy to hear that they would be able to buy replacement needles from one source which was heretofore impossible and it considerably simplified their problem. I have found that there is plenty of business to be had but a lot of hard work is necessary to get it. I personally feel that by a conscientious effort by all, this would result in an excellent coming year."—Stephen Nester, president, Duotone Company, Inc.

"THE INDUSTRY RECOGNIZES THAT NOW the market is here, both in television and radio and as a result it is becoming extremely conscious of competition and the necessity for getting out and selling the product. The evidence of that is in the myriad of activities by the various trade associations in sales stimuli and educational programs planned for 1950."—Kenneth C. Prince, executive secretary, Association of Electronic Parts and Equipment Manufacturers.

"THE YEAR 1950 WILL BRING INCREASED stability in television production and sales. While rapid improvement in television quality will occur, no radical changes or innovations can be looked for. Greater sensitivity and better definition in pictures will undoubtedly be achieved, as well as improvements in cabinet design. But the much discussed color television will not be available in 1950. Indeed, it may not be a factor for the next five years.

"Instead of premature changes, expansion in television will come in an orderly manner through such developments as the expected early lifting of the 'freeze order' by the Federal Communications Commission.

"All of these factors should insure a production in 1950 of between 3½ and 4 million television receivers. The extent to which dealers may capitalize on this great opportunity will depend largely on their ability to equip themselves amply to finance and service a much greater volume of business than they have handled heretofore."—Benjamin Abrams, president, Emerson Radio and Phonograph Co.

"THE DEMAND FOR TV THE PAST FEW months has staggered the imagination. Every forecast gives evidence of a continuation of this demand through the first quarter of 1950. Conservatism, while still the watchword, must yield to the opportunistic kind of planning if manufacturers are to derive adequate benefits from Television's broad market possibilities. We all recognize TV's potentials, yet we must still adhere to sound principles of manufacturing, merchandising, and market timing.

"Nineteen hundred and fifty in general looks terrific for a big TV year, but perhaps a note of caution would not be amiss to avoid going overboard. UHF, Color, and general economic factors of all industry must not be ignored."—J. M. Marks, president, Fada Radio and Electric Co.

(More on page 42)



A new triumph in table radios—the 9X571!



Another new hit—9X561!

With the same high value rating as the 9X571. It's further proof that RCA Victor produces your *best-sellers!*

Here's an RCA Victor that's something spanking new in table-model radios. Tops in styling, tone, and value! It offers your customers a big 8-inch speaker, and tone they could never get before. The world-famous "Golden Throat" never sounded better in a table radio!

Merchandise the 9X571 and you'll find it one of your fastest selling radios.



ONLY RCA VICTOR HAS THE "GOLDEN THROAT"

RCA VICTOR

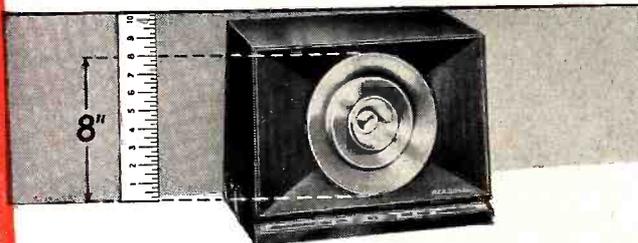


ONLY RCA VICTOR MAKES THE VICTROLA "Victrola"—T.M. Reg. U. S. Pat. Off. **DIVISION OF RADIO CORPORATION OF AMERICA**

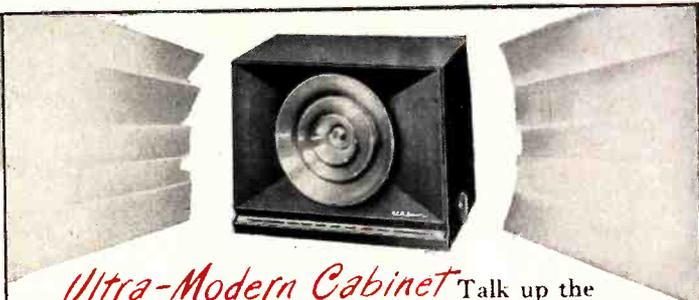
Here's why your profits are greater with this RCA VICTOR

*Higher quality and outstanding selling points of
ALL RCA VICTOR instruments keep turnover high!*

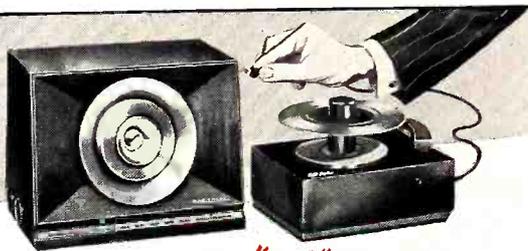
Fast-selling 9X571 features boost your profits!



Big 8-Inch Speaker Let your customers hear the superb tone and volume of this Supersensitive Speaker . . . largest in an RCA Victor postwar table radio.



Ultra-Modern Cabinet Talk up the two "fine wood" plastic finishes . . . either striped mahogany on maroon or blond mahogany on beige. Striking gold-colored speaker grille, too.



Phono-Jack for "45" Player Show your customers how easy it is to attach any record-playing attachment . . . especially the sensational RCA VICTOR "45" automatic record changer.



Slide-Rule Dial Point out to your customers how the engraved calibrations on molded plastic, edge-lighted with two pilot lights, make an attractive easy-to-read dial arrangement.

RCA VICTOR—World Leader in Radio . . . First in Recorded Music . . . First in Television

PICTURE of the BIG RADIO-TV

THE RADIO-TELEVISION INDUSTRY

Data Covers Year Ended December 31, 1949

	Total Investment	Annual Gross Revenue	Number of Employees	Annual Payroll
Radio and TV manufacturers (1200)	\$ 85,000,000	\$ 785,000,000	110,000	\$230,000,000
Radio and TV distributors, dealers, etc.	325,000,000	1,500,000,000	150,000	325,000,000
Broadcasting stations (2897), including talent costs.	150,000,000	460,000,000	*23,000	200,000,000
Commercial communication stations.	60,000,000	.....	15,000	10,000,000
Listeners' radio and TV sets in use (84,250,000)	3,500,000,000	.....	.....	†680,000,000

* Regular staff — not including part-time employes, artists, etc., who number at least 30,000 more.

† Annual operating expense for listeners' sets, for tube replacements, electricity, servicing, etc.

1949 PRODUCTION OF RADIO, TV, FM, PHONO PLAYERS, RECORDS, RECORDERS, TUBES, ANTENNAS

RADIO			TELEVISION		PHONO PLAYERS (separate; combinations)	
Type	Number Units	Retail Value	Total Units	Retail Value†	Total Units	Retail Value
Table	4,127,500	\$ 97,821,750	2,700,000	\$810,000,000	2,310,000	
Console	865,500	125,458,250				
Battery	1,507,000	36,720,000				
Auto	3,500,000	240,000,000				
Total	10,000,000	\$500,000,000				
			RECORDS		HOME RECORDERS (Wire, Tape, Disc)	
			Total Units	Retail Value	Total Units	Retail Value
			225,000,000	\$202,500,000	125,000	\$18,750,000
			TUBES		TV ANTENNAS and ACCESSORIES	
			Total Units	Retail Value†		
			190,000,000	\$350,000,000		
AM-FM and FM (included in total radios, above)	1,180,000	\$159,120,000				Retail Value \$50,000,000

PRODUCTION OF CIVILIAN RADIO SETS — 1922 TO 1949

Year	Total Civilian Radio Sets Manufactured		Total Civilian Tubes Manufactured		Automobile Sets Manufactured		Total Radio Reception Equipment	Auto Sets in Use	Homes with Radio Sets	Total Radio Sets in Use in U. S.	At Close of
	Number	Retail Value	Number	Retail Value	Number	Retail Value	Value	Number	Number	Number	Year
1922	100,000	\$ 5,000,000	1,000,000	\$ 6,000,000	.....	.....	\$ 60,000,000	.....	260,000	400,000	1922
1923	550,000	30,000,000	4,500,000	12,000,000	.....	.....	151,000,000	.....	1,000,000	1,100,000	1923
1924	1,500,000	100,000,000	12,000,000	36,000,000	.....	.....	358,000,000	.....	2,500,000	3,000,000	1924
1925	2,000,000	165,000,000	20,000,000	48,000,000	.....	.....	430,000,000	.....	3,500,000	4,000,000	1925
1926	1,750,000	200,000,000	30,000,000	58,000,000	.....	.....	506,000,000	.....	5,000,000	5,700,000	1926
1927	1,350,000	168,000,000	41,200,000	67,300,000	.....	.....	690,550,000	.....	6,500,000	7,000,000	1927
1928	3,281,000	400,000,000	50,200,000	110,250,000	.....	.....	842,548,000	.....	7,500,000	8,500,000	1928
1929	4,428,000	600,000,000	69,000,000	172,500,000	.....	.....	990,000,000	.....	12,048,762	13,000,000	1929
1930	3,827,800	300,000,000	52,000,000	119,600,000	34,000	\$ 3,000,000	496,432,000	.....	14,000,000	15,000,000	1930
1931	3,420,000	225,000,000	53,000,000	69,550,000	108,000	5,940,000	300,000,000	100,000	16,809,562	18,000,000	1931
1932	3,000,000	140,000,000	44,300,000	48,730,000	143,000	7,150,000	200,000,000	250,000	20,402,369	22,000,000	1932
1933	3,806,000	180,500,000	59,000,000	49,000,000	724,000	28,598,000	300,000,000	500,000	21,456,000	26,000,000	1933
1934	4,084,000	214,500,000	58,000,000	36,600,000	780,000	28,000,000	350,000,000	1,250,000	22,869,000	30,500,000	1934
1935	6,026,800	330,192,480	71,000,000	50,000,000	1,125,000	54,562,500	370,000,000	2,000,000	24,600,000	33,000,000	1935
1936	8,248,000	450,000,000	98,000,000	69,000,000	1,412,000	69,188,000	500,000,000	3,500,000	26,666,500	37,600,000	1936
1937	8,064,780	450,000,000	91,000,000	85,000,000	1,750,000	87,500,000	537,000,000	5,000,000	28,000,000	40,800,000	1937
1938	6,000,000	210,000,000	75,000,000	93,000,000	800,000	32,000,000	350,000,000	6,000,000	28,700,000	45,000,000	1938
1939	10,500,000	354,000,000	91,000,000	114,000,000	1,200,000	48,000,000	375,000,000	6,500,000	29,200,000	51,000,000	1939
1940	11,800,000	450,000,000	115,000,000	115,000,000	1,700,000	60,000,000	584,000,000	7,500,000	29,700,000	56,000,000	1940
1941	13,000,000	460,000,000	130,000,000	143,000,000	2,000,000	70,000,000	610,000,000	8,750,000	30,800,000	59,340,000	1941
1942	4,400,000	154,000,000	87,700,000	94,000,000	350,000	12,250,000	360,000,000	9,000,000	32,000,000	58,000,000	1942
1943	.....	.....	17,000,000	19,000,000	.....	.....	75,000,000	8,000,000	33,000,000	57,000,000	1943
1944	.....	.....	22,000,000	25,000,000	.....	.....	85,000,000	7,000,000	34,000,000	56,000,000	1944
1945	500,000	20,000,000	30,000,000	35,000,000	.....	.....	105,000,000	6,000,000	35,000,000	60,000,000	1945
1946	14,000,000	700,000,000	190,000,000	200,000,000	1,200,000	72,000,000	900,000,000	7,000,000	37,000,000	66,000,000	1946
1947	17,000,000	800,000,000	220,000,000	260,000,000	2,500,000	150,000,000	1,100,000,000	9,000,000	40,000,000	74,000,000	1947
1948	14,000,000	600,000,000	200,000,000	230,000,000	2,800,000	200,000,000	950,000,000	11,000,000	42,000,000	81,000,000	1948
1949	10,000,000	500,000,000	190,000,000	350,000,000	3,500,000	240,000,000	1,500,000,000	14,000,000	.....	.....	1949

Figures for sets give value with tubes in receivers. In normal years, replacement tubes have run 25% to 40% of total tube production. All figures are at retail values. (Statistics Copyrighted by Caldwell-Clements, Inc.)

& RECORDING BUSINESS

ANNUAL BILL OF U. S. FOR RADIO-TV

Sales of time by broadcasters, 1949.....	\$ 460,000,000
Talent costs.....	70,000,000
Electricity, batteries, etc., to operate 84,250,000 radio and TV receivers.....	300,000,000
10,000,000 home radio receivers, at retail value....	500,000,000
2,700,000 television receivers, at retail value.....	810,000,000
Phonograph records, 225,000,000.....	202,500,000
Radio repairs and supplies:	
80,000,000 replacement tubes.....	110,000,000
Radio-TV parts, accessories, etc.....	140,000,000
Labor.....	130,000,000
TOTAL.....	\$2,722,500,000

RADIO SETS IN U. S.; WORLD

	January 1, 1950
United States homes with radios.....	42,000,000
Secondary sets in above homes.....	21,000,000
Sets in business places, institutions, etc.....	4,000,000
Automobile radios.....	14,000,000
TV Sets.....	3,250,000
TOTAL sets in the United States.....	84,250,000
Total radio sets in rest of world:	
North America, 5,500,000; South America, 5,000,000; Europe, 61,500,000; Asia, 10,500,000; Australia, 2,500,000; Africa, —1,500,000.....	86,000,000
TOTAL sets in world.....	170,750,000

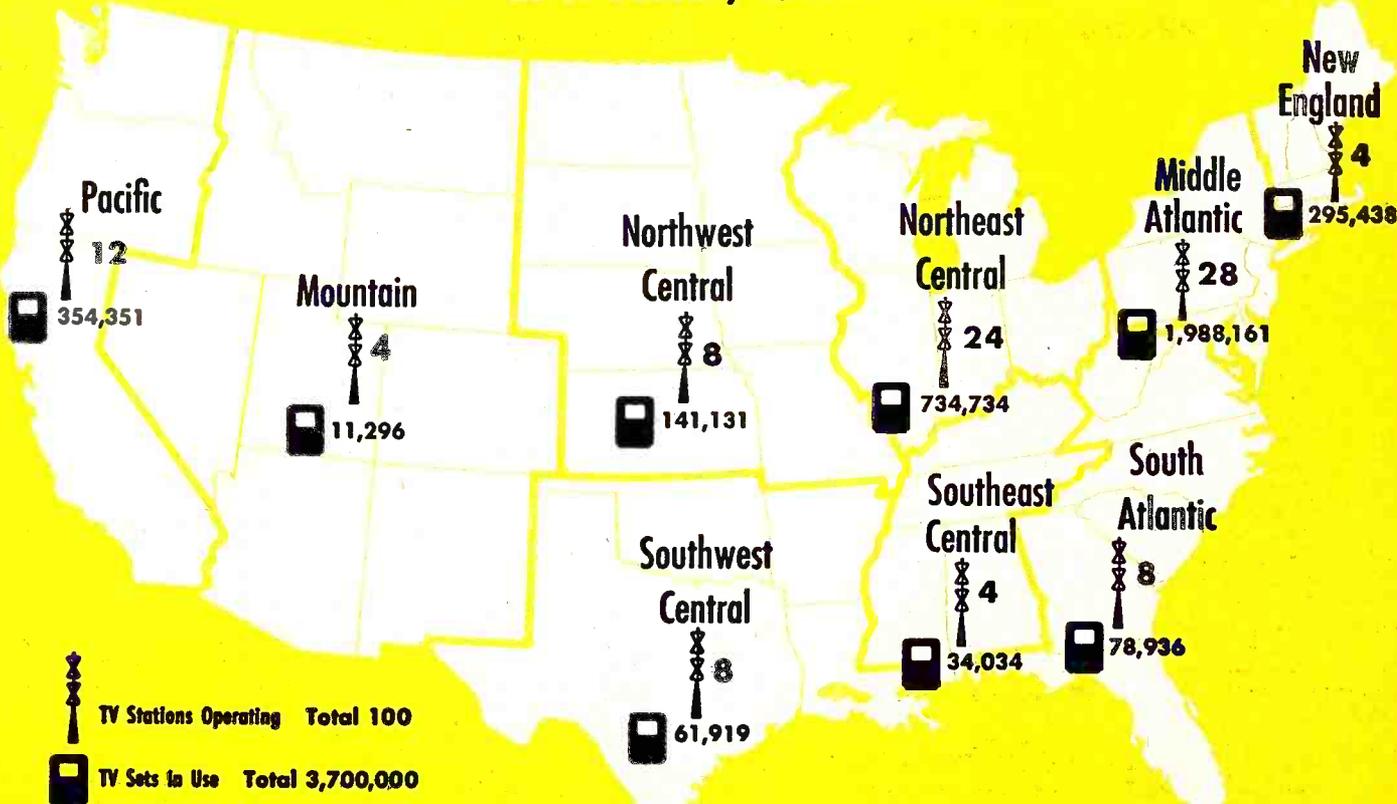
SPEAKING OF STATISTICS — AS OF JANUARY 1, 1950, THERE WERE:

Total AM Broadcast Stations Operating.....	2,055
Total FM Stations Operating.....	742
Total Television Stations Operating.....	100
Population Served by TV Programs	
January 1, 1950.....	95 million people
Total special service stations: marine, aeronautic, railroad, industrial, public safety, etc.....	135,000
Radio operators licensed.....	600,000
Amateur stations.....	85,000

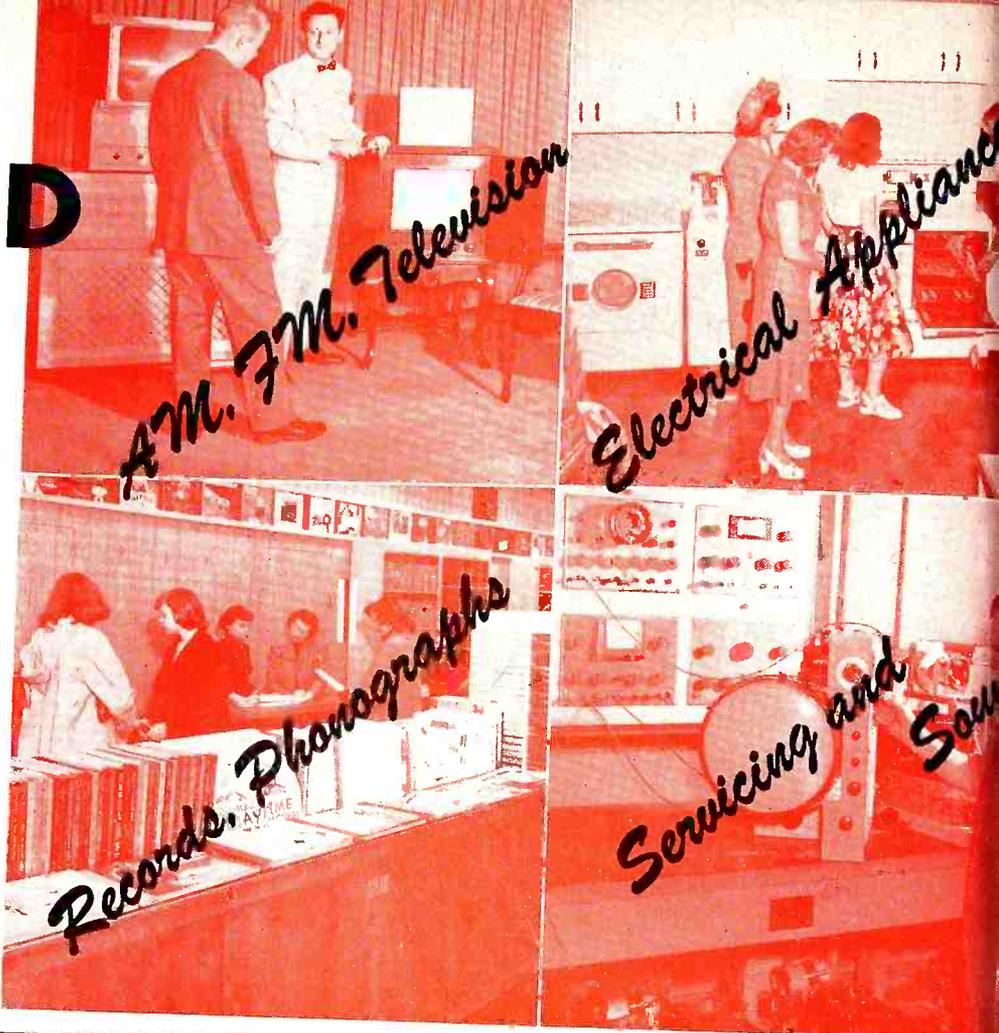
Turntable production figures for 1949:	
(A) 78 rpm only.....	645,000
(B) 33 1/2 rpm only.....	465,000
(C) 45 rpm only.....	450,000
(D) 78-33 1/2 rpm.....	400,000
(E) 78-33 1/2-45 rpm.....	350,000
TOTAL for the year.....	2,310,000

Total turntables in use as of January 1, 1950 (cumulative), capable of playing:	
78 rpm.....	16,950,000
33 1/2 rpm.....	1,515,000
45 rpm.....	800,000
TOTAL in use.....	19,265,000

DISTRIBUTION OF TV RECEIVERS AND STATIONS as of January 1, 1950



4-FIELD



AM, FM, Television

Electrical Appliances

Records, Phonographs

Servicing and Sales

TV SALES for 1950 (estimated)

TV Receivers 5,000,000
Retail Value \$1,250,000,000

TV SETS IN USE

end of 1950
8,700,000

TV SERVICE, PARTS & ACCESSORIES

Total Volume \$165,000,000

TV SPONSORS

by end of 1950
1200

TV STATIONS ON AIR

as of December 1950

110

(Can be more if freeze is lifted)

RADIO

Radio sets: includes AM, FM, combinations, table models, midgets, auto radio and portables

11,000,000 units
at a retail value of \$550,000,000.

PARTS AND SERVICE

1950 promises to be the Golden Year for radio and TV servicing in the United States. Never before has the maintenance and installation end of the industry faced such tremendous opportunity for volume and profit increase. Both the volume of component sales and the service and installation revenue for the New Year can be as much as twice that of 1949, which was, in itself, a very good year.

THE SOUND BUSINESS

"Sound" is no longer a novelty in the American scene, but a distinct necessity, and each year has seen a healthy increase in sales of public address and inter-communication systems. 1950 will be no exception. Sales of sound equipment will be ahead of '49 during the New Year, keeping pace with the general expansion of the country. Scarcely a day goes by that some new use for sound isn't discovered. In addition to new sales, the replacement market in sound is very large.

FORECAST for '50

RECORDERS

Watch this new business! **RADIO & TELEVISION RETAILING** predicts that 400,000 recorders of all types, disc, wire and tape, will be sold in 1950. Principal markets now are: (1) Commercial, including broadcasting. (2) Home use by musicians, singers, music lovers, public speakers, authors and hobbyists.

PHONO RECORDS & PLAYERS

All indications point toward a great year in '50. The disc business, stimulated by the terrific promotion put forth during the still-existent "war" in the industry, could conceivably sell the equivalent of 250,000-000 conventional type platters during the coming year, and if it does, it will equal the volume of 1948. This year 2,310,000 turntables were produced. Of these, approximately 1,395,000 were capable of playing 78 rpm discs; 1,215,000 played 33 $\frac{1}{3}$ rpm discs; 800,000 played 45 rpm records. Standardization, resulting in the general adoption of a single speed does not seem likely. Though some dealers are presently liquidating large stocks of 78-RPM platters at deeply cut prices, the overall inventory of slow-movers is small as we start the New Year.

ELECTRICAL APPLIANCES

FREEZERS — REFRIGERATORS

Look for a strong market in '50, with an increase in total sales of about ten per cent for both these products. . . . Present inventories very low. . . . Big replacement market for refrigerators will be tapped heavily during the next twelve months, with the trend toward the levelling off of former peaks continuing. . . . Present list prices likely to hold. . . . Some newcomers to spend real money in bids for business. . . . Look for 900,000 food freezers (home, farm, commercial) to be sold. . . . More trade-ins will be taken in during 1950 than in any other postwar year. . . .

ROOM COOLERS 1950 promises to see a record-breaking number of sales with upped production being planned by the handful of makers of the compressor type units for the home. . . . Room coolers need specialized selling by informed salespeople since most prospective purchasers consider these units to be glorified fans selling at fancy prices. . . . The refrigeration angle needs to be stressed by manufacturer and merchant. . . . 500,000 units can be sold in '50 if the right kind of effort is put back of these appliances. . . . Several old-established firms not previously making room coolers expected to enter market this year.

WASHERS — IRONERS Healthy market ahead for washing machines with prices likely to hold well at present levels for the most part, though some new model automatics may be brought out at lower lists due to stiff competition. . . . Rumored that some heretofore exclusive makers of conventional types will bring out automatics before end of 1950. . . . Wringer models will continue to sell well in rural areas and to families in lower income brackets. . . . Poorly worked midget market still potentially high, will see some distressed merchandise in this category as New Year starts. . . . Look for '50 sales of washers to run about five per cent ahead of '49. . . . Ironer pro-

duction and sales should be up ten per cent over '49, with prices steady at present levels. . . . Stores heavy on the in-store and in-home demonstration technique getting lion's share of ironer business, with present bounce-back rates away below any of the pre-war years.

VACUUM CLEANERS In spite of fact that '49 sales are below those of '48, look for cleaner sales volume to run ahead of 1949 during the coming year, with greatly increased activity on the outside being chiefly responsible. . . . Since war, some old favorite brands have slipped considerably. . . . Tank types going strong. . . . Prices should remain stable, though more and more trade-in inducement offers will doubtless be made. . . . Most large dealers handling several makes, with a high rate of switching taking place. . . . Selling point to use on price-conscious public: Vacuum cleaners now on market are being merchandised at about pre-war lists.

DRYERS — DISHWASHERS — DISPOSALS The "Three D's" need special selling effort, as we've frequently pointed out. Clothes dryers and disposal units are new on the market, but the dishwasher is an old product. . . . Look for '50 sales of dryers to at least double in 1950; same for disposals and dishwashers, with prices remaining steady.

ELECTRIC RANGES Seems certain that more will be sold in 1950 than in any previous year, with present lists prevailing. . . . Clean business with very little service required. . . . In many localities, installation problems and high current rates hamper sales of ranges and water heaters.

ELECTRIC HOUSEWARES Sales of electric **BLANKETS** should continue to rise, with at least one more large manufacturer entering the field actively in '50. . . . Look for **BROILER**

sales to be steady, but not spectacular. . . . Electric **CLOCKS** will sell ahead of 1949, with replacement sales being a factor; with prices holding as at present. . . . Look for continuing increase in demand for metal **COFFEE-MAKERS** at prices providing attractive profits for dealers. 4,000,000 units, glass and metal should be sold in 1950. . . . The **ELECTRIC FAN**, no longer a luxury item in our present high standard of life, should sell better in 1950 than in any previous year, and may reach 5,500,000 units. In 1950, we'll probably see a sharp decline in list prices of the cheaper makes; a reduction in the more expensive ones.

The inventory of distressed **SPACE-HEATERS** is now lower than it has been for some time, giving suppliers and dealers a chance to clean house. 1950 should be a good year for these items, with an increase in fan types. . . . Electric **IRONS** should sell better in '50 than they did in the past year. Stocks of cats and dogs have about disappeared from the market; several manufacturers have bowed out of the picture. The electric iron is one of the reliables in the appliance field. . . . Look for steady sales of **FOOD MIXERS** in '50, with healthy price situation.

TOASTERS are always good sellers. The automatic, once a luxury item, is now a staple necessity. With so many new homes being set up, look for '50 to be a banner year, with automatics selling three to one over the non-automatics. Some newcomers have made great strides in this field. . . . **WAFFLE-MAKERS** and **SANDWICH GRILLS** continue to be old faithfuls. Look for an increase in production and sales of "combinations." . . . This year, for the first time, we've printed a sales figure on **LIQUEFIERS**—'49 sales, 300,000 units at \$35.00 each, average. Can sell 500,000 units in '50 if features having most appeal are stressed by dealers. Merchants who try to sell this product as simply a "drink-mixer" will never get to first base.

Foresee '50 a Banner Year in

(Continued from page 35)

"NINETEEN HUNDRED AND FORTY-SEVEN, 1948, AND 1949 WERE THREE HECTIC years for the television industry, and the confusion is not yet over. When the commotion has subsided, the dealer will learn the value of standing by the old-line manufacturers. Dealers will again discover the importance of carrying only first-rate merchandise backed by a competent factory. The 'incompetents' in television will have to run for shelter . . . as 1950 will be a competitive year . . . and only the fittest will survive."—**Louis Silver, vice-president and general manager, Garod Electronics Corp.**

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"THE UPPED TREND OF APPLIANCE SALES will extend through 1950. There is no such thing as a saturated market, even for irons and refrigerators. Demand continues for the best known appliances. There is a rapidly expanding market for the so-called luxury items such as dishwashers, garbage disposals and dryers. As always, however, it remains for the retailer to transform the public's latent interest and sometimes dimly felt need into actual sales. More than ever before appliances must be advertised, promoted and sold."—**H. L. Andrews, vice-president, General Electric Co., Bridgeport, Conn.**

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"THE 1950 SALES OUTLOOK for radio and TV technicians is excellent. More TV broadcast stations are going on the air and many thousands of TV receivers are being sold every day. The average earnings of electronic engineers and technicians have shown marked increases and will continue to show increases in 1950. This year is the year of opportunity."—**H. D. Johnson, sales manager, The Hickok Elect. Instrument Co.**

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"THE PUBLIC IS NOW SOLD ON television and it is up to the individual manufacturers to follow through on this acceptance by the public and present their individual products, as well as the industry problems, in an intelligent and simple manner.

"Unfortunately, the confusing advertising that has developed in 1949 has hurt a good many sales and we should correct this situation in order to get these sales in 1950. We feel that the 1950 sales will be fifty to sixty per cent greater than the 1949 sales.

"I think it would be well for the manufacturers to remember that the most important person in TV is the set owner because his recommendation to television greatly influences other prospective buyers, and the price level should be maintained without sacrificing quality.

"Nineteen hundred and fifty should also be a year of training salesmen at all levels to more intelligently present the product. We are looking forward to a big year in 1950."—**H. L. Hoffman, president, Hoffman Radio Corp.**

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"WITH MAJOR APPLIANCE INVENTORIES at lowest point since immediate postwar, the industry will enter 1950 with the healthiest business outlook in its history. Hotpoint's 1950 complete new line received with greatest distributor enthusiasm that I have ever experienced. A strong revival of old fashioned salesmanship is all that is needed to assure maintenance of present high business plateau for the industry."—**James J. Nance, president, Hotpoint, Inc.**

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"WE HERE AT HYTRON EXPECT an excellent first quarter for 1950. After that, we expect the summer seasonal slump but anticipate excellent fall business. We are backing up our belief in excellent business for 1950 with a million dollar expansion in our TV picture tube production facilities."—**John Q. Adams, sales manager, Hytron Radio & Electronic Corp.**

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"WHILE SOME SEGMENTS of the appliance industry have secured less business in 1949 than in 1948, we, at Ironrite, will beat 1948 by a comfortable margin. We have done this by facing the fact squarely that sales can be made in good volume if good selling is applied. To all those who wish to do a better job in 1950, we say that it can be done if the problem of selling is faced realistically. To us, 1950 looks like a banner year."—**Hal L. Biddle, general sales manager, The Ironrite Ironer Co.**

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"BY ALL THE SIGNS AND PORTENTS, 1950 should be a big year in the industry. Television has passed through the novelty stage and has won unprecedented public acceptance; radios, particularly consoles and phonoradio combinations have made a phenomenal comeback, and the allied fields, such as major appliances seem to be keeping pace."—**David Krechman, president, Jackson Industries, Inc.**

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"WE HONESTLY BELIEVE THAT 1950 will be the most prosperous year for the radio and television industry. Potentially, our industry is capable of chalking up one of the greatest sales records of all time. We will achieve it if we do not let ourselves be panicked by fear complexes, which lead to disastrous price-cutting practices. Naturally, we cannot expect an all-year peak business. We must keep our heads and have nothing to fear."—**Julius Finkel, president, JFD Mfg. Co.**

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"WE LOOK FORWARD to even greater sales in the new year than in 1948. We have just expanded our plant facilities by 20%, and are operating on a six-day week, with overtime, to keep up with the demand for Lewyt cleaners. Our sales in 1948 for Lewyt vacuum cleaners exceeded 200,000 units. In 1949 we are shooting for 400,000—double the volume—and it looks as if we are going to be able to do it.

"The increasing public acceptance of the Lewyt—plus our expanded advertising program—plus our intensified floor selling program—plus our new outside selling plan—should make it easier than ever for ourselves, our distributors and dealers, to double the volume."—**A. M. Lewyt, president, Lewyt Corp.**

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"WITH THE EXCEPTION OF ABOUT SEVENTY DAYS at the first of the year of 1949, The Maytag Company had a substantial backlog of orders throughout all of 1949. The same situation prevails on both our conventional and automatic washers as we move into 1950. We operate on a direct factory-to-dealer basis and none of our dealers has any excess inventory.

"While we fully recognize that general economic conditions have contributed to our continuing backlog of dealer orders, yet we are also confident that our improved selective dealer coverage program has played an important part. Our dealer and regional manager organization was never stronger and, naturally, we face 1950 with optimism and confidence."—**Verne R. Martin, general sales manager, The Maytag Company.**

Radio, TV, Appliances and Records

"MERCURY RECORDS LOOK FORWARD to a vigorous and healthy sales outlook for 1950. Based on past performances in the record industry, we have found that the public is no longer satisfied with commonplace recordings, but will buy records if the material is well done and presented in a different and unusual manner.

"We have been striving to stick to this formula as is evidenced by Mercury's recent string of highly successful hits such as 'You're Breaking My Heart,' by Vic Damone; 'Room Full of Roses,' by Eddy Howard; 'That Lucky Old Sun' and 'Mule Train,' by Frankie Laine, as well as the very successful long playing program which we are constantly adding to from day to day."—Art Talmadge, advertising manager, Mercury Record Corp.



"ALL EVIDENCE NOW INDICATES complete acceptance of TV by the public. Programming has made fast progress; set design and prices are right, thereby setting up for a trend to TV and won't be stopped. 1950 sales should exceed 1949 and yet not fulfill the strong growing demand."—W. J. Barron, sales manager, Merit Coil & Transformer Corp.



"OUR BUSINESS IS RELATIVELY small, but we sell hundreds of wholesalers in every state and city in the country, not only in the radio field, but also through automotive and electrical jobbers. So our business represents a good cross section of the whole nation, and in the past our sales curve has almost exactly paralleled the curve of business activity in general.

"With that in mind, we are planning an increase in production for the early months of 1950. If anybody could guarantee this country a respite from strikes and strife, business activity would go far beyond anything dreamed of in the past."—Scott Mueller, Mueller Electric Company.



"NINETEEN HUNDRED AND FIFTY SHOULD BE THE INDUSTRY'S BEST YEAR with an estimated requirement of 8,000,000 radio sets and 3,500,000 television sets, which means the equivalent of approximately 25 million radio sets, as the average television receiver contains about five times as many parts as a radio set. This also means an equivalent service requirement, which should prove important to the retailing and service organizations."—Leslie F. Muter, president, The Muter Co.



"THE ELECTRICAL APPLIANCE INDUSTRY generally faces a situation of continued high consumer demand and tight supply in many instances for the first six months of 1950. A period of good business, probably equal to 1949, is in sight. Competition at the retail level, however, will be strong, with a larger proportion of the available business going to those retailers who are able to increase their sales-power by developing larger and stronger specialty selling organizations."—C. T. Lawson, vice-president, Nash-Kelvinator Corp., in charge of Kelvinator sales.



"THE OUTLOOK FOR THE FIRST FIVE OR SIX months of 1950 is good. Payment of the insurance refund to war veterans will increase the amount of spendable income. The increased population, greater number of marriages, the rapid expansion in housing, the urge to enjoy

a higher standard of living, steady employment, and good general economical conditions all point to a tremendous demand for appliances. I predict 1950 will be one of the greatest in the history of the industry."—H. L. (Red) Clary, general sales manager, Norge Division, Borg-Warner Corp.



"FORECASTING IS NOT MY PROFESSION but like others engaged in free enterprise, production and advertising schedules are based on anticipated sales. We of Permo are so firmly convinced that 1950 will be a good year that our capital investment for equipment, expenditures for advertising and outlay for development and engineering will far exceed any previous year in Permo's history."—Arthur J. Olsen, president, Permo, Inc.



"ALL REPORTS REACHING US FROM our distributors in forty-four cities and from our own salesmen contacting all areas of the United States indicate a strong, continuing market in television and allied fields. I believe that television during 1950 will undoubtedly show an even greater increase through the year and with its increasing popularity should be in a good position to best withstand any general recession, should one occur."—George R. Hinman, president, Pioneer Scientific Corp.



"I BELIEVE THAT THE SALES OUTLOOK for 1950 is bright. It seems probable that inventories at the manufacturing, wholesaling, and retailing levels will be subnormal as of the first of the year, which is always a healthy condition. The national income should remain high so that business will be there. Admittedly there will be a lot of competition for the consumer dollar, but the manufacturer who has the most to offer should certainly get his share."—Joseph Tiers, sales manager for distributor sales, Proctor Electric Co.



"THE OUTLOOK FOR 1950, PARTICULARLY in the television components market, is very bright. The tremendous popular acceptance of television and the resurgence of radio sales should combine to make 1950 one of the best years in electronics history."—James P. Quam, president, Quam-Nichols Co.

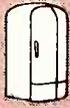
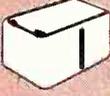
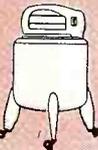
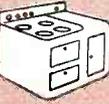
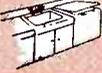


"THE OUTLOOK FOR TELEVISION in 1950 is exceptionally good. The industry may be expected to produce and sell between 3,500,000 and 4,000,000 video receivers, bringing the total number of sets in use by the beginning of 1951 to more than 7,000,000. The potential television audience will then number at least 25,000,000 persons.

"To achieve new production records in 1950, industry reports indicate that capacity will be increased by nearly 50 percent. This will be accomplished through the addition of new manufacturing facilities. The only limiting factor that can be foreseen at this time will be, as it was in 1949, the ability of component parts manufacturers to keep pace with demand."—Frank M. Folsom, president, Radio Corp. of America.

(More statements on the outlook for the New Year will be found on page 46)

Electrical Appliance Production

LARGE APPLIANCES		Total No. of Units	Total Retail Value '49
	REFRIGERATORS (HOUSEHOLD ELECTRIC) SIZES FROM LESS THAN 5 CU. FT. TO 13 CU. FT. AND OVER	4,700,000	\$1,175,000,000
	FOOD FREEZERS (HOME, FARM)	700,000	245,000,000
	ROOM COOLERS (COMPRESSOR TYPES)	300,000	75,000,000
	LAUNDRY EQUIPMENT WASHERS, AUTOMATIC 900,000 \$180,000,000 WASHERS, NON-AUTO- MATIC (WRINGER, SPINNER) 2,500,000 \$362,000,000 WASHERS, MIDGET 250,000 \$ 12,500,000	3,650,000	554,500,000
	IRONERS (ROTARY)	450,000	54,000,000
	CLOTHES DRYERS	125,000	25,000,000
	RANGES, ELECTRIC (HOUSEHOLD NON-PORTABLE)	1,800,000	360,000,000
	VACUUM CLEANERS (HAND, AND UPRIGHTS, TANKS)	3,000,000	180,000,000
	DISHWASHERS	325,000	91,250,000
	DISPOSAL UNITS	250,000	37,500,000
	WATER HEATERS DOMESTIC (ALL SIZES)	1,200,000	142,000,000
ELECTRIC HOUSEWARES			
	BLANKETS ELECTRIC	500,000	20,000,000
	BROILERS, ELECTRIC	300,000	3,600,000
	CLOCKS, ALL TYPES	7,500,000	37,500,000
	COFFEE-MAKERS, ELECTRIC (METAL-GLASS—AUTOMATIC & NON-AUTOMATIC)	3,500,000	40,000,000
	FANS (ALL TYPES)	5,000,000	60,000,000
	HEATERS, SPACE, ELECTRIC (WITH AND WITHOUT FANS—PORTABLE)	1,500,000	13,500,000

Statistics

Estimated by RADIO & TELEVISION RETAILING for 12 Months, Ending December 31, 1949. Figures Are Totals for Industry.

ELECTRIC HOUSEWARES (Cont.)		Total No. of Units	Total Retail Value '49
	HEATING PADS	1,500,000	\$9,000,000
	HOT PLATES	900,000	4,500,000
	IRONS, HAND (AUTOMATIC, NON-AUTOMATIC; STEAM AND TRAVEL)	6,500,000	65,000,000
	LIQUEFIERS	300,000	10,500,000
	MIXERS, FOOD	1,500,000	60,000,000
	ROASTERS	350,000	14,000,000
	TOASTERS		
	AUTOMATIC	3,000,000	\$60,000,000
	NON-AUTOMATIC	1,500,000	6,000,000
	WAFFLE IRONS, SANDWICH GRILLS (INCLUDING "COMBINATIONS")	2,000,000	24,000,000

Roster of Appliance Makers

(Number in business as of Jan. 1, 1950)

Refrigerators.....	24	Washing machines.....	41	Clocks, electric.....	19
Food Freezers.....	45	Disposal units.....	15	Broilers.....	24
Vacuum Cleaners.....	49	Dishwashers.....	13	Food mixers.....	19
(Including private brands)		Irons, hand.....	62	Blankets.....	10
Ironing Machines.....	26	Fans, electric.....	64	Coffee makers.....	36
Ranges, Electric.....	24	Toasters.....	40	Space heaters.....	67
(Includes non-portable types only)					

New Appliance Products

CORY DISHWASHER

"Matic Maid" dishwasher is completely portable; weighs 25 pounds. Involves no plumbing or installation problems; operates



on the drainboard of any size kitchen sink; retails for \$89.95. Outside dimensions are: 16 x 16 x 14 3/4 inches plus motor housing of 3 1/4 inch height. Cory Corp., 221 No. La Salle St., Chicago 1, Ill.—RADIO & TELEVISION RETAILING.

Gibson REFRIGERATORS

Model 720 suggested retail price is \$214.95. Refrigerator is equipped with Freez'r Locker and Fresh'ner shelf, has shelf area of 11.9 sq. ft. Model 700 has a suggested list of \$189.95 and provides 13.6 sq. ft. of shelf area. Unit has simple, accurate control, oversize freezing unit of conventional design, new Sna-Seal door latch which provides air tight seal on the full-length door. Gibson Refrigerator Co., Greenville, Mich.—RADIO & TELEVISION RETAILING.

GE CLOCKS

Four new clocks have been added to the company's line. Mantel chime clock, "The Chorus," is styled in modern Gothic. Cased in grained mahogany with bleached inlay; dial setting of ebony black numerals and gold colored hands and bezel; priced at \$42. "Voyageur" model is modern in style; solid plastic case; hands and numerals chocolate brown with red sweep second hand; priced at \$9.95. "Twinkle" alarm clock has maroon plastic case with ivory colored dial; gold-colored base and hands; priced at \$7.95. "Dinette" kitchen clock is

styled to give a built-in appearance; molded plastic case available in a variety of colors; priced at \$5.95. General Electric Co., 1285 Boston Ave., Bridgeport 2, Conn.—RADIO & TELEVISION RETAILING.

Hotpoint DISPOSALL

New garbage disposal unit can be installed in 85 per cent of existing homes without major changes in kitchen plumbing. MW4 Disposall is six inches shorter than previous models; new model reduced in height to raise the outlet to match this type of drain. Hotpoint, Inc., 5600 W. Taylor St., Chicago 44, Ill.—RADIO & TELEVISION RETAILING.

Guth SLIMLINE, JR.

New series of lighting equipment designed for use with new 4 ft. and 8 ft. single pin slimline lamps. Slimline, Jr. engineered for quality, economical lighting, and designed in modern style. Available in deluxe and economy finish. Bulletin #859 completely describes series. Edwin F. Guth Co., St. Louis, Mo.—RADIO & TELEVISION RETAILING.

Foresee '50 a Banner Year in

(Continued from page 41)

"IF ADVANCE ORDERS ARE ANY CRITERION, 1950 will be a year in which discriminating buying will prevail. The television honeymoon is over and not everything that delivers a video image will sell. The public is extremely value-conscious and will grow increasingly so during 1950 when some marginal operators are bound to fall by the wayside. Definitely a buyer's year, in my opinion."—John H. Cashman, president, Radio Craftsmen, Inc.

"THE TEMPTATION TO FORECAST A PROSPEROUS 1950 for the industry is tempered by the realization that in such a comprehensive field some segments may do very well while others may lag. However, 1950 is the year in which we shall discover new markets, discern more clearly what our present markets are, how to penetrate them and how to render maximum service to the public which hails electronics as its deliverer from boredom and drudgery. Certainly 1950 should be better than an average year."—Howard W. Sams, president, Howard W. Sams & Co.

"THE POTENTIAL VOLUME OF SALES on television receivers for the year 1950 is in my mind far greater than any other single product on the market today. All indications are that production will be inadequate to supply demand and distributors and dealers will be practically out of merchandise at the first of the year. Television is now and will continue to be better styled and more realistically priced than ever before. There will be better television programs and additional stations on the air.

"While there is a natural accent on television, the radio market should not be overlooked. There is a continuous demand for types of sets that can be used as an adjunct to the utility of television. Production of radio sets has been set up on a sensible basis whereby it closely matches the demand. This indicates a healthy profitable market for dealers all through the coming year."—E. Alschuler, president, Sentinel Radio Corp.

"RAYTHEON LOOKS FORWARD to the new year with confidence. The sale of television receivers in 1949 has exceeded expectations. With a large backlog of orders, we are now extending every effort to meet this ever-increasing demand. The widespread distribution of receivers is already stimulating time sales to advertisers, which in turn creates an increasing demand for new broadcasting equipment. We expect 1950 to be a good year for both radio and television."—Ray C. Ellis, vice-president, Raytheon Mfg. Co.

"NINETEEN HUNDRED AND FIFTY WILL BE THE BIG YEAR for everyone in the new giant television industry. New sets, new markets and new sales ideas will add up to a new high in profit \$."—Harry Kalker, sales manager, Sprague Products Co.

"NOTHING SHOULD HAPPEN IN 1950 to this industry which will interrupt its steadily brightening picture—assuming that we keep our heads and do not attempt to push the buying public beyond its normal capacity to absorb electronic products—particularly television. Certainly there is room for all in the television industry who will conduct sound business along sound economic lines in 1950."—Jerome J. Kahn, president, Standard Transformer Corp. (President, 1950 Parts Distributors Show.)

"WE AT SPARTON ARE VERY OPTIMISTIC about the television business for 1950. It is reasonable to assume that the bad practices of the previous year will not be repeated, such as, cut-pricing, dumps and other factors which entered into our business during the past twelve months, because of slow movement on certain models and heavy inventory on the part of the retailer as well as the manufacturer.

"I believe television business will be much better than the average for several reasons—number one, inventory at retail as well as factory level will be at a minimum this January 1. I believe the history of the appliance business, and I am putting television in the category of appliances for the moment, until we had national saturation of roughly 30%, we did not have 100% acceptance of the product by the buying public. In a short space of two years, we have about 9% saturation on TV, which I believe will move at a much faster pace than any other product in the past."—H. L. Pierce, general sales manager, Sparks-Withington Co.

"THERE IS NO DOUBT THAT DURING 1950 there will be a tremendous amount of television receivers purchased. However, we should not depend on the buying public to take the initiative. Plenty of sales ingenuity and training should be applied, so prospective television purchasers are given the opportunity to compare products on the dealer's floor. Business will be good for those who work."—C. J. Hunt, general sales manager, Stromberg-Carlson Co.

"TELEVISION IN 1950 WILL BECOME MORE of a sound, solid business with the influence of the opportunist greatly decreased. Programming and quality of transmission will move forward to match, to some degree, the pace already set by receiver manufacturers. Skillful merchandising and selling will be the key to the success of the manufacturer, the distributor and the dealer."—C. K. (Larry) Bagg, sales manager, Sylvania Television.

"GOOD SELLING IN 1950 WILL UNCOVER almost untapped markets for our products. When we consider how much electronics can do for the average housewife, and how little she now calls upon electronics to do outside of radio and television, we can visualize almost unlimited markets for 1950."—Arie Liberman, president, Talk-A-Phone Co. (vice-president, Radio Manufacturers Assn.).

"IN 1950 WE CAN LOOK TO THE FRINGE areas for much of our continuing TV sales. This is due mainly to the present FCC 'freeze' extending well into next year. There will be few if any new stations during the first half of 1950, beyond that handful still left to go on previously-granted construction permits.

"However, because of the development of higher-gain TV antennas, we shall be able to extend the service areas of present TV transmitters. In addition to this fringe area business, we still have less than 30% saturation in the oldest prime service areas, which in itself represents a huge potential market even though it may require harder selling. With over three million TV sets already installed, it looks to me like another three million during 1950—and probably I'm far too conservative!"—Tore Lundahl, vice-president, Technical Appliance Corp.

Radio, TV, Appliances and Records

"UNSETTLED CONDITIONS AND THE WAVE of strikes in the latter part of 1949 combined to delay a period of prosperity which I think will develop in 1950. I believe that the momentum and degree of accelerated business which marked the end of the year will carry us through a large part of 1950."—**Edward S. Arkin, president, Telequip Radio Co.**



"DEMAND IN 1950 FOR HIGH QUALITY, reasonably priced television receivers will be sharply accelerated beyond 1949 levels. However, the industry's capacity to satisfy this market will, as before, be conditioned and probably considerably restricted by the availability of certain critical parts. Since the best estimates I have been able to obtain forecast an annual cathode ray tube production of 3,750,000, that figure would be my judgment of set production for next year.

"One of the most gratifying developments in the video field, which has already begun, will reach much greater proportions in 1950, I believe, and will act as a tremendous spur to consumer demand for receivers. That development is the opening of more and better telecasting in those areas already having one transmitting station.

"Finally, it may be interesting to note, that our sales research at Tele-tone leads us to believe quite strongly that certain "psychological buying levels" have been reached by the U. S. consumer. We feel that these levels are represented at \$299 for the 16-inch screen set, \$199 for the 12-inch set and \$149 for the 10-inch model."—**S. W. Gross, president, Tele-tone Radio Corp.**



"AS FAR AS GIVING OUR COMMENTS for the sales outlook, it is very hard to forecast for 1950 as there are many problems to contend with. We have always made our own plans and strived to see that they are followed through.

"We are planning for the spring and June brides with our new Bun Warmer which we have just announced. It is an ideal gift, a very useful item and within the pocket reach of every class. Naturally, we are looking forward to having as good a year as we had in 1948 and 1949. The only way of reaching this point is a lot of hard work and constantly calling on dealers. We believe the dealers are the real salesmen."—**M. F. Pavelka, secretary, The Toastswell Co.**



"WITH AN EVER INCREASING TREND toward a more stable national economy, it is to be expected that the buying habits of the American consumer will also become more stable. Manufacturers will come forth with advances in product performance and product design. Merchandising will become keener; greater efforts and monies will be expended for productive advertising and sales promotion."—**Fil Mandl, president, Trans-Vue Corp.**



"THE ADVENT OF THE NEW YEAR will find the radio tube industry operating at capacity and it is expected that the demand for tubes through retail channels during 1950 will be greater than ever before. The number of TV sets in service will continue to show a substantial increase in each of the succeeding months and replacement requirements, both in receiving as well as cathode ray tubes for these sets, will grow to substantial numbers this year and will represent an appreciable part of expected sales volume.

"Conventional radio is not to be counted out by any means and the picture in this field, both as regards new

sets and replacement requirements for old sets, should show an improvement over that experienced this past year."—**R. E. Carlson, vice-president, Tung-Sol Lamp Works, Inc.**



"ABOUT 4,000,000 television receivers, or capacity production will be sold in 1950. More would be built if more picture tubes could be made. But about 1,000,000 more picture tubes will be needed for replacements, curtailing original set production. Trend will be to bigger pictures, more tubes per set, prices close to those prevailing today."—**Hamilton Hoge, president, United States Television Mfg. Corp.**



"NINETEEN HUNDRED AND FIFTY??—WE PREFER 1950!! Television is rapidly reaching the competitive stage in its development. As this market becomes more competitive more set manufacturers will begin adding sales features. The logical addition is a three-speed record changer. With this addition a complete home entertainment center is obtained with the TV set investment. Then, too, there are still some 20 million obsolete phonographs—this is our market and we look forward to a successful SELLING year."—**E. M. Rush, general manager, V-M Corp.**



"OUR ANSWER TO THE OUTLOOK FOR 1950 is more advertising, more sales help, more promotion, and more manpower, both in our own organization and in the field. The saturation point has never been reached in our business. Therefore the opportunity is greater than ever to obtain business in 1950."—**D. H. Darnold, manager, merchandising sales, sound division, Webster Electric Co.**



"OUR MANUFACTURING AND SALES PROGRAMS are geared up for the biggest 365 days in Westinghouse lamp history during Mid-Century year. Our optimism is based upon indications of still further expansion in new home construction, giving us new sockets to fill with light bulbs. It is also based upon a continued high volume of industrial and commercial activity. These factors are fundamental to an increasing lamp market."—**Russell E. Ebersole, general manager of lamp sales, Westinghouse Lamp Div.**



"WITH ALL SIGNS POINTING to an eventual saturation of 40,000,000 television receivers, and with the 1950 market estimated at from 3,500,000 to 4,000,000 sets, it is apparent that television dealers have a golden opportunity ahead of them.

"I size up 1950 this way. Television sales in the first six months will be plentiful, but they'll be made by those dealers who do a real selling job. Those who compile prospect lists and who then go after those prospects will make real profits at the expense of the brethren who just wait for the 'drop-ins.' And remember creative selling pays off.

"In the last six months, I suspect we are in for another seller's market. Television network shows will be even more abundant than they are now, and the quality of the shows will be even better than it is now. And with the natural growth of public acceptance, with the world series, football season, home indoor entertainment season, and the lush Christmas market, it's possible that again the industry may not be able to make enough sets to supply the demand. A minimum of three and one-half million homes will install television sets next year."—**J. M. McKibbin, vice-president, Westinghouse Electric Corp.**

(More comments on page 56)



▲ Famous makes, attractively displayed, skilfully sold, bring in the customers.

◀ Sales know-how backed with fast, efficient service, makes friends of customers in this heavily-populated section of Detroit.

TV Helps Reach Million \$ Volume

Boosts Sales of All Products for Progressive Detroit Dealer

SALES GO UP AND UP

International's volume:	\$100,000	in 1946
"	"	\$450,000 in 1947
"	"	\$800,000 in 1948
"	"	Over a million in '49.

Sales, service and installation of TV is in the hands of experts who have made an outstanding success in the Motor City.



John Duncan, co-owner, International Radio Service, 7524 Tireman Ave., Detroit, who with his partner, O. L. Sayers, has built up big business for the firm.

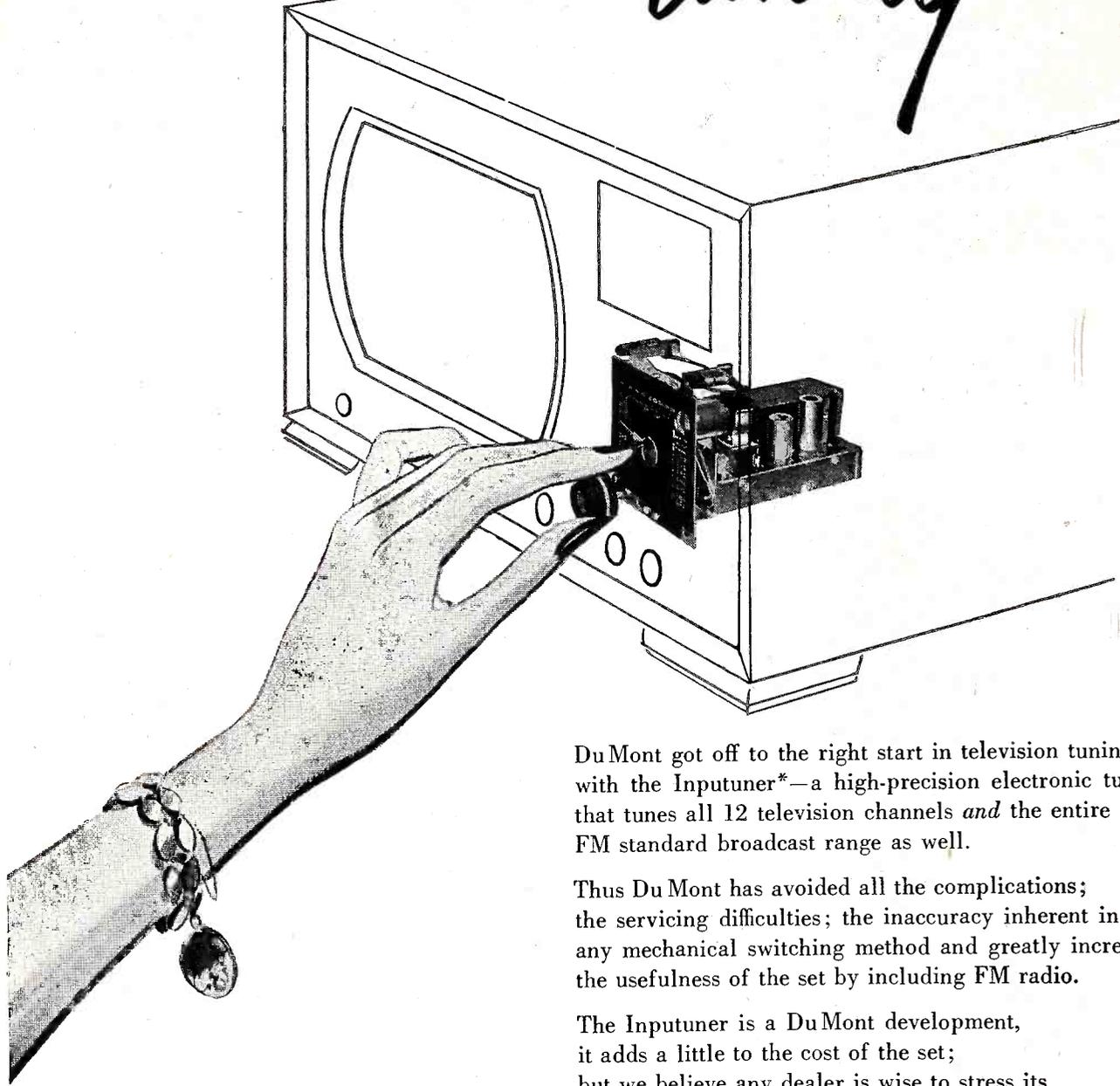
International is now in its new building, comprising 4800 sq. ft., housing a large main showroom, consultation rooms, television lounge, service departments and offices.

A section of the service department at International. Consistent newspaper advertising keeps volume up. The firm also does contract servicing for other dealers.



DU MONT LEADS THE INDUSTRY... WITH

*precision
tuning*



DuMont got off to the right start in television tuning with the Inputuner*—a high-precision electronic tuner that tunes all 12 television channels *and* the entire FM standard broadcast range as well.

Thus Du Mont has avoided all the complications; the servicing difficulties; the inaccuracy inherent in any mechanical switching method and greatly increased the usefulness of the set by including FM radio.

The Inputuner is a DuMont development, it adds a little to the cost of the set; but we believe any dealer is wise to stress its advantages because it means less service trouble and greater customer satisfaction.

Invite your prospects to see the Morey Amsterdam Show over the DuMont Television Network. Morey is a great salesman.

DU MONT *First with the finest in Television*

Copyright 1949, Allen B. DuMont Laboratories, Inc.

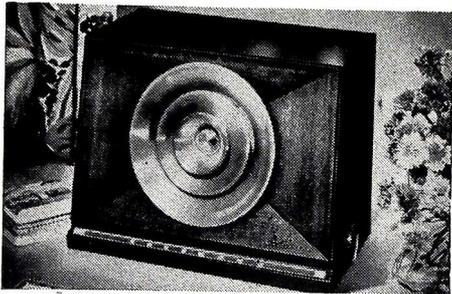
Allen B. DuMont Laboratories, Inc. Television Receiver Div., East Paterson, N.J., and the DuMont Television Network, 515 Madison Ave., N.Y. 22, N.Y.

*Trade Mark

New Dealer Profit Items

RCA TABLE RADIOS

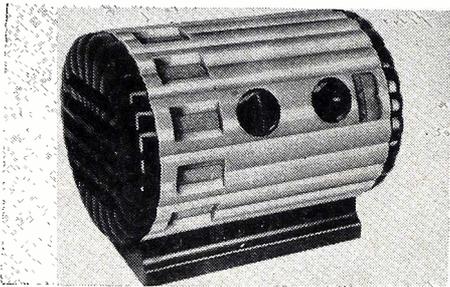
Model 9-X-561 is an AC-DC table radio with 8-inch speaker, plastic cabinet, and



phono-jack, to list at \$32.95. 9-X-571 (shown) is similar in features, but with wood finish on plastic, listing at \$39.95. RCA Victor Division, Camden, N. J.—RADIO & TELEVISION RETAILING.

Espey TABLE RADIO

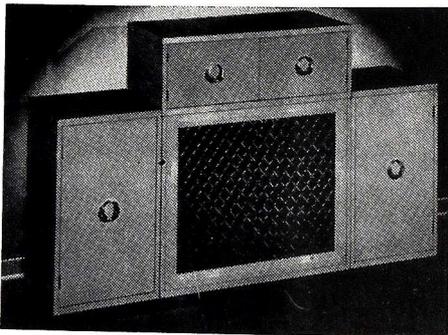
The "Roundabout" is a five-tube AC-DC table radio in two-tone plastic cabinet with drum dial, built-in antenna and 5-inch loud-



speaker. Designated model 31, the set comes in ivory and blue, and ivory and red. Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.—RADIO & TELEVISION RETAILING.

Grand Rapids RADIO CABINETS

"Uni-Modes" are a group of sectional cabinets for housing radio components which permit flexibility of arrangement.



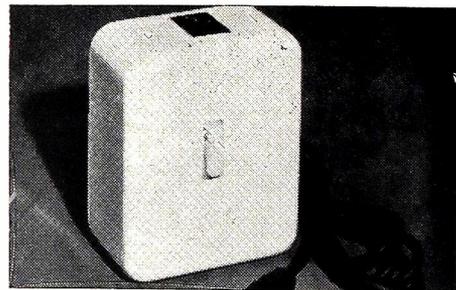
Unit shown consists of 10 parts in one possible arrangement. For complete descriptive catalog write Grand Rapids Woodcraft Corp., 1400 Front St., N. W., Grand Rapids, Mich.—RADIO & TELEVISION RETAILING.

ACA TWIN-TRAX RECORDER

Model 810-DV is a continuous-play tape recorder which permits the continuous repetition of any message from 1 second to 1 hour in duration, as for instance an advertising or sales message. Automatic reversal of direction is effected when the tape comes to the end of a reel. Also announced is an automatic paging system utilizing the continuous-play recorder. With this device, when anyone is paged over a microphone, the recorder automatically records the message, and then (in the "play" position) repeats the message until the machine is stopped or a new paging announcement is made. Amplifier Corp. of America, 398-Broadway, New York 13, N. Y.—RADIO & TELEVISION RETAILING.

A.B.T. "PAY METER"

This 25¢-a-day meter is designed to facilitate time buying of TV, refrigerators, and other appliances, on a "pay while you use" basis. The coin meters cost \$6.95 each



F.O.B. Chicago, accept only quarters, and have a capacity of \$25 (3 months operation). For further information and illustrated literature, write to A.B.T. Mfg. Corp., 715 N. Kedzie Ave., Chicago, Ill.—RADIO & TELEVISION RETAILING.

Columbia LP PLAYER

A new low-priced player attachment to play Columbia's 33 $\frac{1}{3}$ RPM LP records, designated Columbia LP Model 103, will retail for \$12.95. The black plastic cabinet measures 8 $\frac{1}{2}$ by 8 $\frac{1}{2}$ by 3 $\frac{3}{4}$ inches. The turntable starts automatically when the tone arm slides back. A replaceable sapphire needle is provided. Columbia Records, Inc., 799 Seventh Ave., New York, N. Y.—RADIO & TELEVISION RETAILING.

More new products will be found elsewhere in this issue.

Highlights of Parts Show

A three-day conference and clinic on sales and merchandising, inventory control and financial management, featuring nationally known speakers will highlight the 1950 Parts Distributors Show in Chicago, May 23, 24, and 25, according to the Show program announced recently at Chicago.

In addition to the 164-booth display in Exhibition Hall at the Hotel Stevens; display rooms on the hotel's fifth and sixth floors and a complete program of association meetings, the 1950 event will feature an outstanding list of industry speakers and other authorities on the three major subjects selected for discussions. Nationally known keynote speakers on each of the three days will be followed by other authorities on each topic, selected from the electronics industry.

Tuesday afternoon, May 23, the program which will feature sales and merchandising will be in charge of Les A.

Thayer, of Belden Mfg. Co., Chicago, and Jack A. Berman, of Shure Bros., Inc., Chicago.

On Wednesday afternoon, a program in charge of John F. Rider, of Rider Publishers, New York, and H. L. Dalis, of H. L. Dalis, Inc., New York, will be on inventory control.

Financial management will be the topic of the Thursday afternoon program, in charge of William O. Schoning, Lukko Sales, Chicago and Howard W. Sams, of Howard W. Sams & Co., Indianapolis.

New Display Unit

The story of the Universal electric blanket at a glance is told on Landers, Fray & Clark's four-color four-piece counter display unit which utilizes the beautiful full color box cover as a focal center of attractive setting. A blanket in the box gives a third dimensional effect to the display.

Phoenix Bank Boosts TV

Even before Phoenix TV station KPHO-TV had started programming, the First National Bank of Arizona stimulated set sales in that city by newspaper advertising pointing up the fact that sets could be purchased on time through their finance plan. Copy went on to explain details of the plan. Phoenix dealers had installed several hundred sets prior to the station's debut in December.

Neon Gas Improves Fluorescent Lamps

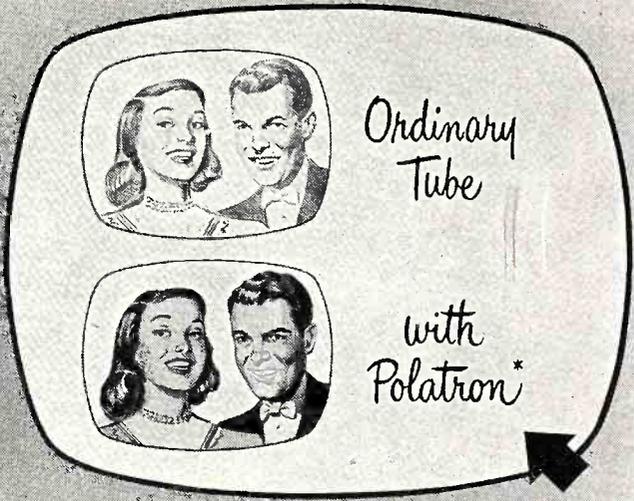
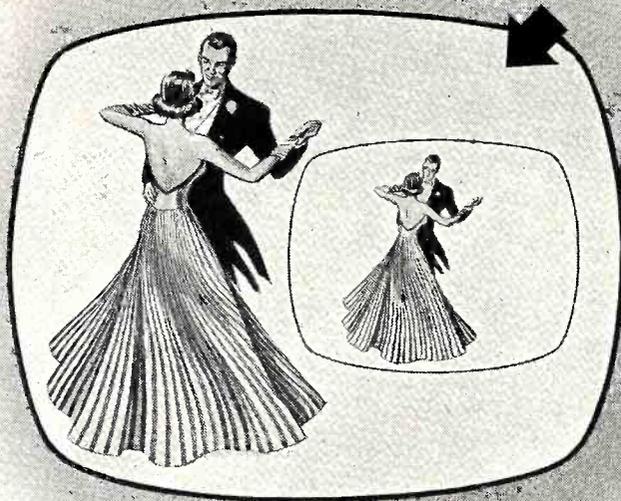
The addition of neon gas to the 25-watt fluorescent lamp manufactured by the Westinghouse Lamp Division, Bloomfield, N. J., has resulted in improved cold weather performance, and has expedited starting. Formerly filled with krypton only, the lamp now contains 75 percent krypton and 25 percent neon.

Not One—but

Two Great

SELLING EXCLUSIVES

EXCLUSIVE CAPEHART TONE
Brings Television to LIFE!



EXCLUSIVE POLATRON* TUBE
Brings New Clarity to Every Image!

... are building **TELEVISION SALES**

for *Capehart* dealers!



The Capehart Nocturne. Big 16-inch picture tube. Needle sharp television. Master-crafted cabinet in mahogany finish. With Polatenna, Capehart's built-in aerial..... **\$39950****

Only Capehart television dealers can use these two great selling points! Because Capehart fidelity of tone and the Polatron* direct view picture tube are exclusive with Capehart.

Full Color Advertisements featuring these two great exclusives are appearing in The Saturday Evening Post, House and Garden, House Beautiful and The New Yorker... reaching millions of potential Capehart customers each month... bringing them directly to the dealers' showrooms.

Capehart tone and picture-perfection—plus the Polatenna, Capehart's built-in aerial—are convincing prospects everywhere that Capehart provides the ultimate in television performance! And the modest price range, starting at \$269.50** for a receiver with a 12½" picture tube, is convincing everyone that Capehart is the television buy of the year!

Get in touch with your Capehart distributor or write Fort Wayne today. Learn the Capehart story.



CAPEHART - FARNSWORTH CORPORATION
Fort Wayne, Indiana

*T. M. Reg. Available at slight additional cost.
**Western prices slightly higher.



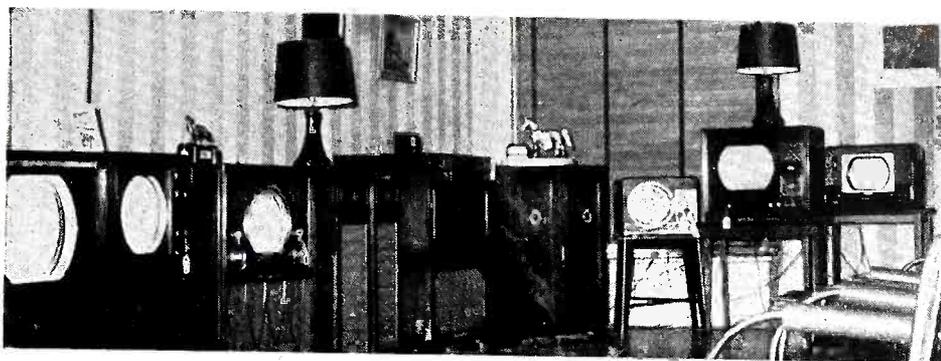
Sales-Making Ideas Pay

Free Home TV Trials Profitable

MONEY-MAKERS FOR TIME-SAVERS: Smart selling ideas pay **Time-Savers**, attractive retail store at **New Rochelle, N. Y.** Owner Harold Shaw employs a number of unique merchandising promotions, among them a personal call on every newcomer resident by trained personnel from a syndicate that

advertising. Local organizations are permitted to use one of the store's show windows to advertise charitable, religious and social events.

The firm handles a large selection of radio and TV, large and small appliances, and specializes in well-known brands.



Above, attractive TV lounge at Time-Savers. At right, below, standard brands of appliances are featured. In store demonstrations are well attended; guests invited via printed postal cards mailed to prospect list.

provides hostesses. The hostess leaves a small gift, extends invitation to visit the store, and *does not* try to sell anything. Time-Savers uses postal cards to invite prospective customers to attend in-store demonstrations of large and small appliances. Results are very good.

The New Rochelle store offers free trials of TV sets in the home. Those desiring to take advantage of the offer are required to sign a contract, and before the receiver is delivered, Time-Savers checks the applicant's credit standing. In each instance, a permanent antenna installation is made to insure the very best reception possible. Mr. Shaw reports that 95% of all "trials" result in sales, which is a very good batting average.

In addition to direct-mail advertising, Time-Savers uses car and bus cards, outdoor signs and newspaper

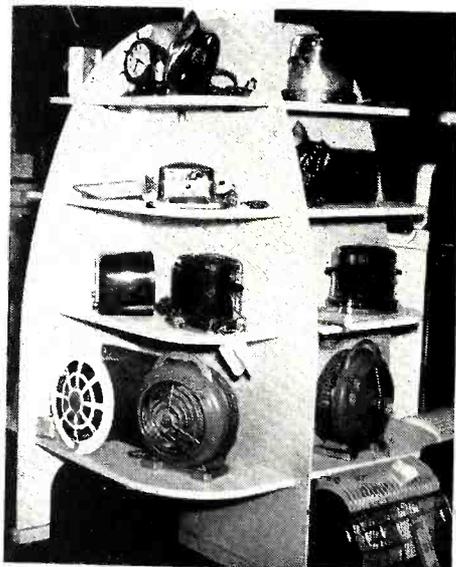


EASY-TO-VISIT STORE: In its ads plugging television, **John M. Smyth Co., 703 Madison St., Chicago**, offers free parking, with an attendant in charge; offers to pay taxi fare of shoppers.

TV METER PLAN BEING plugged by **Morris Music House, New Orleans**, stresses no installation charge, no charge for meter, no down payment, and "at-once delivery."

DISPLAY TIP: "When you have a lemon," said a certain cracker barrel philosopher, "make lemonade." Many appliance and radio dealers see lemons in heavy pillars which come right at the points where they want to build good floor displays. But Jerry Lipscomb, owner of **Lipscomb Appliances, New Orleans**, saw an opportunity to make lemonade.

"This display fixture which we have built around the pillars in our store," he says, "is an admirable way to fea-



Unightly pillars become "salesmen" for Lipscomb.

ture a great number of small radios and small traffic appliances. The design we have gives each individuality. Each stands out in its separate compartment. There is good visibility throughout, and most of them, while they are not at exact eye level, are sufficiently close to it to be quickly seen. As a matter of fact, since we have put this display idea in, I'd rather have pillars—and lemonade—than a straight expanse of floor."

SERVICE IN THE LIMELIGHT: For a number of years, **Star Radio & Television Co., Allston, Mass.**, has found its out-front service department to be a real business-puller. Just recently the firm remodeled the maintenance section, making it more attractive than ever before. At Star, every customer is impressed by the spic and span service set-up.

Progressive Retailers

Heavy Floor Traffic an Asset

HARD-TO-FIND ITEMS BRING 'EM IN: Among the most progressive television-appliance dealers in the Milwaukee area is the **Moraski Radio & Appliance Store**, 3062 South 13th Street, in a good residential section of the far south side. Stanley Moraski, the owner, is no newcomer in the radio and appliance business, having started

lot of new business and keeps old customers happy, Moraski declares. With seven men, specially trained in the servicing and repair of electrical appliances, radios and TV sets, Moraski is the one many people think of when in need of service as reasonable as possible, building up a reputation this way.

Moraski buys time on the nearest radio station, WEXT, Milwaukee, and this, he says has been a great help in keeping his name before the public. He says it takes at least a year on the air with a program to build up a following and before such advertising really begins to work.

Moraski sells RCA Victor, Zenith, Philco, General Electric and Capehart radios and TV sets, and Maytag, Hotpoint and Philco appliances.

This dealer does not think that television will ever replace radio entirely, but that combination sets will always be in demand. Most recently, he finds the 12" tube size appears to be most in demand. Too much effort is not needed if a customer has the means to buy a larger set, Moraski declares, as the various size sets will speak for themselves.

In some instances Moraski is willing to send a set to a prospect's home, but only in rare cases when it is a matter of fitting in with the existing furniture of the home, and then only after a prospect has come to the store and looked over the sets offered.

About 75 percent of the sets sold at present are on time payments.

The biggest drawing card for new set sales, Moraski says, so far as his store is concerned, is the knowledge that his own men do the repairing and service work, instead of having it farmed out. With TV sets, he says, this is highly important.

With about 45,000 TV sets in use in the Milwaukee area at the end of October, and sales running about 2,000 sets a week, divided among dozens of



Variety of products featured here.

this store in 1933. He was active in radio for three years before opening this store, having been a ham (and still is—W9KCD). He knows the business from the technical as well as the merchandising end. This has helped him a lot, he says.

Although located far south of the center of the city, Moraski does business all over the county, including the suburbs and rural areas. To keep the store's name before the public, he advertises in newspapers, church papers and over the radio. His salesmen and seven servicemen are kept more than busy, new business often coming to the store by word of mouth advertising, from satisfied customers.

One way to get new business, Moraski says, and keep old customers, is to have a good floor traffic in the store, and he achieves this by having many small necessities the customers want, such as odd lamps, fuses, hard-to-get parts, and almost anything customers may have a hard time finding elsewhere. In fact, he has been told by customers that some dealers, in the neighborhood and sometimes from sections far removed, have told those who were looking for something hard to find in stock, "You might try Moraski."

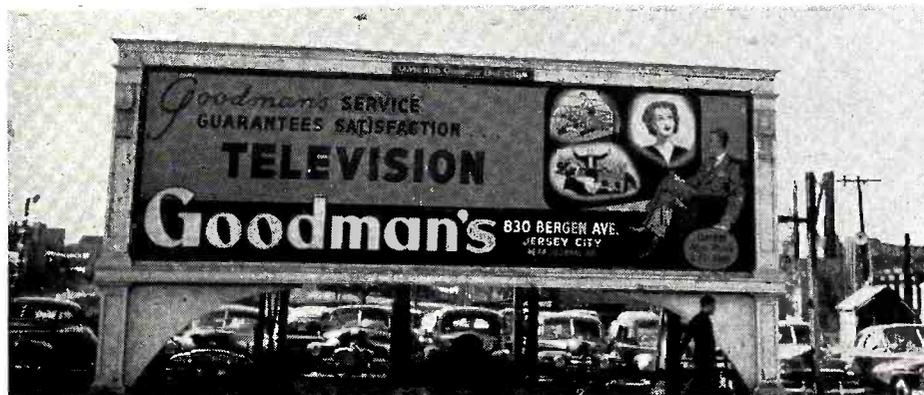
It is really the service department maintained by Moraski that brings in a



Moraski uses air-time, newspapers and direct-mail to keep his store in the public eye.

dealers in the city, no one dealer can expect a large portion of the business, and Moraski is satisfied with the portion that comes to him.

Outdoor Sign Sells Service

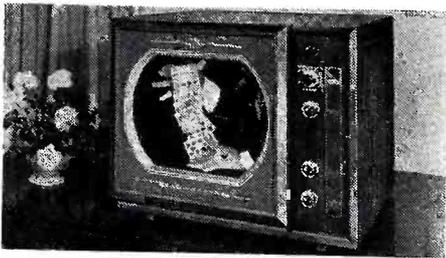


THE IMPORTANCE OF GOOD SERVICE is dramatically and effectively stressed in this large outdoor sign by Goodman's, Jersey City, N. J. Sales executives of this progressive and old-established firm have found that topflight service is a powerful ally in selling television receivers at list prices.

Latest Television Sets

Westinghouse 16-INCH TABLE TV

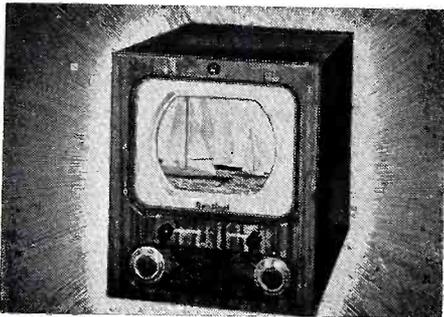
Model H600T16 is a 16-inch table model TV receiver with mahogany cabinet featuring a built-in antenna, and incorporating 23



tubes plus 3 rectifiers and picture tube. Retail price is \$375. Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Penna.—RADIO & TELEVISION RETAILING.

Sentinel TABLE TV SET

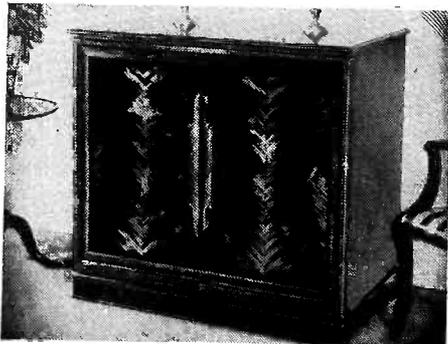
Model 412TVM is a 10-inch table model TV receiver in mahogany cabinet, featuring



built-in antenna and simplified tuning, and incorporating 18 tubes plus 2 rectifiers and picture tube. Sentinel Radio Corp., Evanston, Ill.—RADIO & TELEVISION RETAILING.

Starrett "CLEVELAND"

The "Cleveland" is a 16-inch TV console with AM-FM radio, 3-speed record changer, built-in antenna and 12-inch dual speaker.



Cabinet is mahogany, with solid frame doors of book-matched crotch mahogany. Retail price is \$895. Starrett Television Corp., 601 W. 26th St., New York 1, N. Y.—RADIO & TELEVISION RETAILING.

G.E. 12½-INCH CONSOLE TV

Model 12C-102 features the new 12½-inch "Black Daylight" tube with wide-angle picture opening. Set also has built-in an-



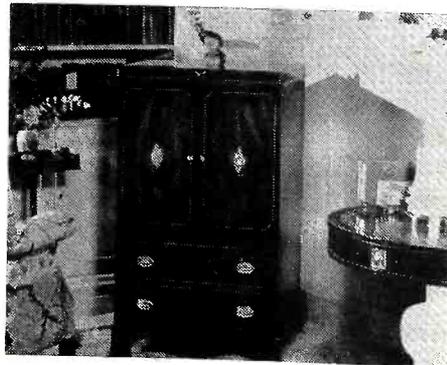
tenna and hand-rubbed cabinet with swivel roller casters. In blonde its lists for \$329.95, and in mahogany for \$319.95. General Electric Co., Electronics Park, Syracuse, N. Y.—RADIO & TELEVISION RETAILING.

Capehart 16-INCH TV CONSOLE

A new 16-inch console TV receiver has been announced, finished in a choice of mahogany or bisque, and incorporating 20 tubes and 4 rectifiers, a 12-inch loudspeaker, and the Polatron built-in antenna. The Polatron dark-face picture tube is said to improve picture quality. Retail price of the receiver is \$399.50. Capehart-Farnsworth Corp., Fort Wayne 1, Ind.—RADIO & TELEVISION RETAILING.

Freed-Eisemann TV CONSOLE

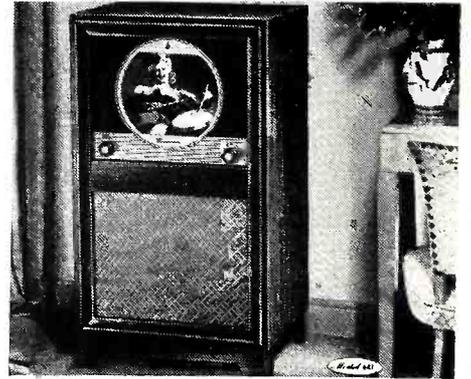
The "Heirloom Sheraton" 16-inch TV console incorporates 29 tubes and 12-inch loudspeaker, with phono connection. Set is



housed in 4-door 18th century cabinet with marquetry inlays in mahogany. List price is \$525. Freed Radio Corp., 200 Hudson St., New York 13, N. Y.—RADIO & TELEVISION RETAILING.

Emerson 12½-INCH TV CONSOLE

Model 647 is a 12½-inch TV console in mahogany veneer cabinet with built-in an-



tenna and 12-inch loudspeaker. List price is \$279.50. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York 11, N. Y.—RADIO & TELEVISION RETAILING.

Pilot ANNIVERSARY TV MODEL

"Anniversary" model TV-123 is a 12½-inch table TV receiver with built-in antenna, FM radio, and phono jack, to sell for \$269.50.



A supporting cabinet base is also available. The sets and cabinets come in modern lined oak or period mahogany. Pilot Radio Corp., 37-06 Thirty-Sixth St., Long Island City 1, N. Y.—RADIO & TELEVISION RETAILING.

Motorola "VAN DYCK"

The Van Dyck is a 16-inch TV console featuring simplified two knob tuning controls, two loudspeakers, and "built-in-tenna." List price in mahogany is \$450., in blonde \$475. Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.—RADIO & TELEVISION RETAILING.

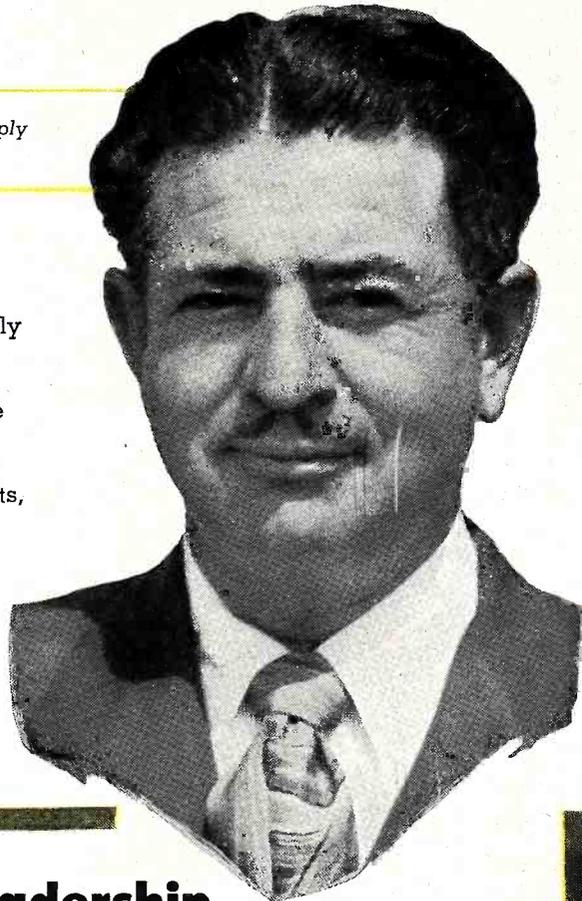
Marvel-Lens TV MAGNIFIER

Marvel-Lens is a flat plastic magnifier weighing less than three pounds, and is said to enlarge the picture 2½ times when flush up against the set. Model 12C (for 10" and 12" sets) lists at \$27.50, model 8C (for 7" sets) is \$23.95. Marvel-Lens Industries, Inc., "A" and Lippincott Sts., Philadelphia 34, Penna.—RADIO & TELEVISION RETAILING.

"We prefer Rauland Tubes
for decidedly Selfish Reasons..."

says Phil Kudler, *President, The Universal Radio Supply Company, Los Angeles, California*

"We, at Universal Radio Supply, prefer the Rauland TV Picture Tube line over all others and for decidedly selfish reasons. Not only are Rauland Picture Tubes tops in quality performance but by reason of this advantage, they are tops in sales as well and so we make more profit. Those kit builders who have used Rauland Picture Tubes have adopted them as their standard and these facts, coupled with being able to replace the tube in any set with a Rauland tube, means there is no sales resistance when we offer our customer a Rauland Picture Tube. Rauland's new Luxide Screen Tubes with the black face are 'out of this world'—no glare whatever and soothing to the eyes—no filter necessary."



Two Reasons for Rauland's Leadership



Rauland Aluminized Tubes

The preferred replacement tube that gives users a better picture than when their sets were new. Gives up to 80% brighter picture than standard tubes, with better contrast and definition. Replaces any magnetic tube—needs no ion trap magnet—eliminates risk of damage resulting from faulty magnet adjustment. Boosts filter sales too—because the extra brightness carries a clear, sharp picture through even a heavy filter.

Rauland Luxide Screen Tubes



The sensational new "Black" Tube that gives notable improvement in contrast, clarity and picture detail. The special light-absorbing glass of the Luxide screen sharply reduces reflection of ambient light from the phosphors of the screen—greatly reduces halation—two reasons why pictures "wash out." All-glass 12LP4A and metal cone 16AP4A are available for replacement of corresponding standard tubes.

THE RAULAND CORPORATION



Perfection Through Research

4245 N. KNOX AVENUE • CHICAGO 41, ILLINOIS



Foresee '50 a Banner Year

(Cont. from p. 47)

"DESPITE THE PRESENCE OF CONFLICTING forces of sundry variety, among which is the trend towards rising prices, the fact remains nevertheless that employment is at a very high level, and the savings banks have goodly amounts of labor's funds; moreover, according to the Federal Reserve Bank, in excess of forty-five billion dollars' worth of savings bonds are in the hands of the public.

"All of this represents buying power, and there is no question that television receiver sales will feel the accelerated pace. Neither the freeze nor the color problem will hold back TV receiver sales. The longer this agitation lasts, the weaker will be its effect. There are many who think that AM radio is on the way out. We acknowledge that in unit volume it will not approach the very early postwar years, but there is no doubt in our mind that people are becoming selective in TV areas, and make use of AM equipment.

"There is a growing conflict between sports and other types of TV broadcasts. It is reasonable that the present status of reduced sports broadcasts will be maintained, or perhaps even expanded, in which case, the AM receiver will be used for the reception of these events, and for reception before and after TV hours."—John F. Rider, John F. Rider Publisher, Inc.

☆ ☆ ☆ ☆
"BUSINESS IN 1950 SHOULD BE ON A MORE constructive basis with less emphatic seasonal swings. We of Sylvania Electric believe that the recession fear complex has largely been cast aside. Television will continue to show its spectacular growth in 1950 with industry estimates of an increase in the number of sets to be sold in the order of 50 percent or around 3¼ million sets. Judging from the current demand for picture tubes, the market should be 90 percent or better in 12½ inch and larger sets."—Don G. Mitchell, president, Sylvania Electric Products, Inc.

☆ ☆ ☆ ☆
"THE DISSIPATION OF THE SCARE that receiving sets would in a short time become obsolete has now stabilized the market. The buying public has regained its confidence that together with the improvement in telecasting programs, prices within the reach of the average person, all point to a banner year.

"Sightmaster will devote its efforts to featuring the patented sightmirror through 1950 in its quality receiving sets, specializing in the 16 inch tube field, where Sightmaster has always been in the vanguard."—Michael L. Kaplan, president, Sightmaster Corp.

☆ ☆ ☆ ☆
"DESPITE THE INCREASED USE OF INDOOR and 'built-in' television antennas in 1950, there will still be a tremendous demand for efficient, outdoor installations. The year will see tower or mast manufacturers devote more time to education on proper installation procedures of their product. This is an important requisite for the antenna support industry."—Davis B. Oat, sales manager, tower and antenna division, Wind Turbine Co.

"I BELIEVE THAT TELEVISION is the news story of 1950. I believe also that the big news in that story is Phonevision . . . for I expect 1950 to mark its official birth as a going service for the public.

"Today, despite the terrific demand for more TV sets than the industry can currently supply, there is still a hitch to television's progress. The economics involved in good, high calibre programming for advertising sponsored television is a modern David barring the path of a new Goliath. Advertisers simply cannot pay for the cost of telecasting first run movies and other features the public wants.

"With Phonevision and the establishment of a box office in each TV-set-owning home, the economic barrier is removed and television will be able to provide first run movies and other costly, high quality entertainment that its audience expects. In Phonevision, I find the force to roll back the golden curtains on the finest entertainment the world has ever known."—E. F. McDonald, Jr., president, Zenith Radio Corp.

☆ ☆ ☆ ☆
"THE PUBLIC WILL SPEND OVER \$800,000,000 for TV receivers in 1950, plus \$60,000,000 for installations. To support this demand, the industry is setting its production sights for 3,500,000 receivers—a 30 percent increase over 1949. Roughly half of these receivers will be table models. The trend will be toward production of more sets with larger picture tubes (12 and 16 inch)."—Dr. W. R. G. Baker, vice-president, General Electric Company.

☆ ☆ ☆ ☆
"COURAGE EXPRESSED IN A HIGH level of production, and courage in carrying out well-coordinated and aggressive sales plans, should make 1950 a peak year in the television industry. The demand for TV products is present and constantly increasing. To be capitalized, it needs only sound products, soundly presented and marketed."—Ben Snyder, president, Snyder Mfg. Co.

☆ ☆ ☆ ☆
"EVEN IF BASIC ECONOMIC FACTORS did not indicate strongly a good business year ahead for all fields—which they definitely do—we in our field would have ample reason to be optimistic. Radical improvements in the things we produce and sell have generated great new interest and desire for ownership. Newer products are selling themselves, and helping to sell older, improved products. For example, as television set owners find themselves on intimate terms with orchestras and vocalists they can see as well as hear, more and more will want record players and recordings of these same orchestras and vocalists. Such influences put strong support under sales volume, and would even serve to cushion, for us, prolonged strikes in other fields or other dampening effects on the national economy."—William J. Doyle, general sales manager, The Astatic Corporation.

☆ ☆ ☆ ☆
"UNLESS I AM COMPLETELY MISLED BY PRESENT indications, 1950 will be the biggest selling year the electronics industry has ever known. And also, I might add, the fastest moving year. Any salesman who expects to rest on his laurels in 1950 is going to be a sadly surprised citizen this time next year to discover that newcomers have invaded his preserves."—Aleck K. Gianaras, president, Raypar, Inc.

FUTURE EVENTS OF INTEREST TO READERS

JAN. 9-20: Home Furnishings Market, Merchandise Mart, Chicago.

JAN. 15-17: National Appliance & Radio Dealers Assn. (NARDA), Annual Meeting, Congress Hotel, Chicago.

JAN. 30-31: National Assn. of Music Merchants (NAMM), Board of Directors, Midyear Meeting, Shamrock Hotel, Houston, Tex.

FEB. 1-2: National Assn. of Music Merchants (NAMM), Regional Conference, Shamrock Hotel, Houston, Tex.

FEB. 6-10: Western Winter Market, Merchandise Mart, San Francisco.

MAR. 6-9: IRE Show, Grand Central Palace, N. Y.

APR. 14-22: National Electric Housewares Week.

MAY 22-26: Parts Distributors' Conference & Show, Hotel Stevens and Exhibition Hall, Chicago.

JUNE 12-16: National Association Electrical Distributors, Convention Hall, Atlantic City, N. J.

JULY 16-19: National Assn. of Music Merchants (NAMM), Music Industry Trade Show & Convention, Palmer House, Chicago.

AUG. 7-19: U. S. International Trade Fair, Chicago Coliseum, International Amphitheater and Navy Pier, Chicago.

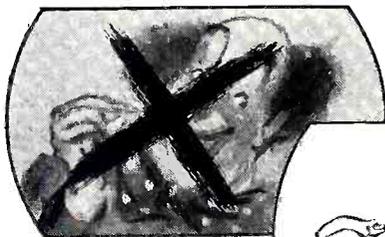
AUG. 27-SEPT. 1: Radio Parts Distributors' Convention (NEDA), Cleveland Auditorium, Cleveland, O.

"The Standard Booster"

A New High Gain TV PREAMPLIFIER
For Studio-Clear Reception



Model B-50



"The Standard Booster" is attractively designed to blend with any TV set. One tube—single stage—trouble free operation—adaptable to either 300 or 75 ohm line.

Plus Profits for You

**Boost Your TV Set Sales
in Fringe Areas**

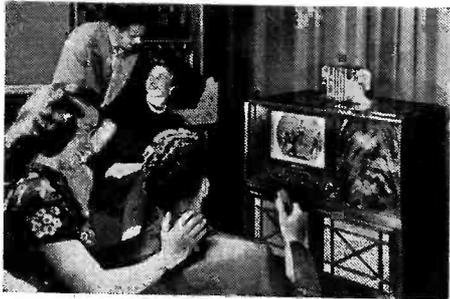
"The Standard Booster" will give your TV set customers brighter, sharper pictures. Considerably higher gain... lower signal to noise ratio... 2 knob control... continuous tuning eliminates a switch from high to low channels... fully shielded... printed circuit for added stability.

Standard COIL PRODUCTS CO., INC.
CHICAGO • LOS ANGELES • BANGOR, MICHIGAN

For the 1950 Market

RCA 12½-INCH TV COMBINATION

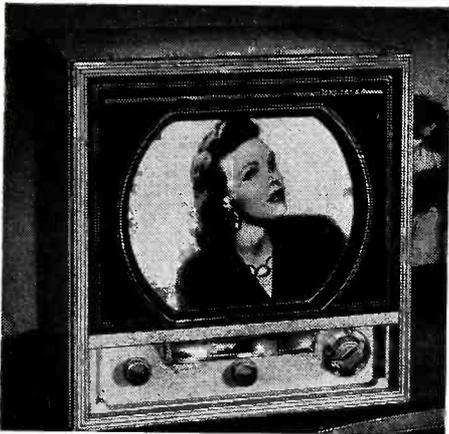
Model 9-TW-309 is the first RCA TV-radio-phonograph with a 12½-inch picture tube. The instrument includes AM, FM, 45 RPM phono, 78 RPM phono and TV, the latter



with "Clos-Up" control. Suggested list is \$495. Also announced is a new matching table for table models T-121 and 9-T-256, which provides compartments for the 9TY record player and record albums. Suggested list for this table (model 18STD) is \$19.95. RCA Victor Division, Camden, N. J.—RADIO & TELEVISION RETAILING.

Magnavox 12½-INCH TABLE SET

The Metropolitan table model TV receiver is equipped with built-in antenna and 12½-inch picture screen, incorporating 24 tubes



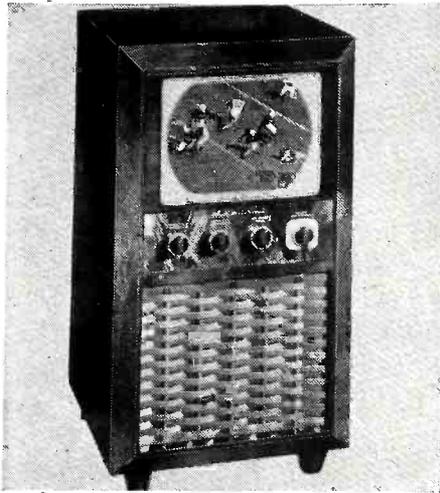
including 2 rectifiers and picture tube, and 8-inch speaker. List price is \$239.50 in mahogany and \$249.50 in blond. Magnavox Co., 2131 Beuter Rd., Fort Wayne 4, Ind.—RADIO & TELEVISION RETAILING.

Rembrandt TV SETS

Model 1606 12½-inch TV consolette is priced at \$389. in walnut. Models 80 and 1950, also 12½-inch sets, are \$389. and \$329., respectively. 15½-inch models 1606-15, 721 and 130 are \$479., \$399., and \$479., respectively. All models incorporate FM radio. Remington Radio Corp., White Plains, N. Y.—RADIO & TELEVISION RETAILING.

Admiral TV CONSOLE

Model 20X145 is a TV-only console model in a neo-modern hand-rubbed walnut cabinet, with 12½-inch viewing screen and



built-in directional "Roto-Scope" antenna, to retail at \$279.95. Also available in mahogany and blonde. Admiral Corp., 3800 Cortland St., Chicago 47, Ill.—RADIO & TELEVISION RETAILING.

Wilcox-Gay 4-WAY TV CONSOLE

Model 9D446 incorporates AM-FM radio, 3-speed automatic record changer, and 16-inch TV in traditional cabinet, listing at



\$499.50. Also announced is a 16-inch consolette with FM radio (model 9E426) listing for \$379.50. Wilcox-Gay Corp., 604 W. Seminary St., Charlotte, Mich.—RADIO & TELEVISION RETAILING.

Stromberg TV RECEIVERS

Two new Stromberg-Carlson TV consoles have been announced: The Silver Anniversary model TS-125-IM2, 12½-inch console with 12-inch loudspeaker, phono jack and built-in antenna, listing at \$329.95; and the Salem, model TS-125-LSM, same technical features housed in cabinet of early American design, to retail at \$385. Stromberg-Carlson Co., Rochester 3, N. Y.—RADIO & TELEVISION RETAILING.

Dumont "CANTERBURY"

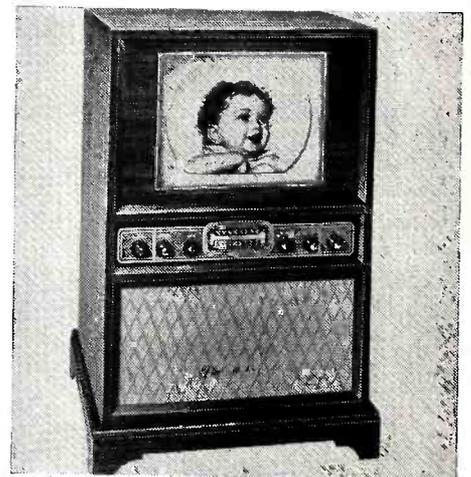
The Canterbury is a new 12½-inch console TV receiver with FM radio and a phono connection. Set features "local-distance" switch and "tuning eye" tube. The mahog-



any cabinet is of Hepplewhite design. Price is \$379.50. Allen B. Dumont Labs., Inc., 515 Madison Ave., New York, N. Y.—RADIO & TELEVISION RETAILING

Regal 16-INCH TV SET

Console model CD36 combines 16-inch television with AM-FM radio, and incorporates a phono connection and 12-inch loud-



speaker. Chassis is duplicate of RCA 8TS30 model with provision for higher voltage. Regal Electronics Corp., 603 W. 130th St., New York, N. Y.—RADIO & TELEVISION RETAILING.

I.T.I. 16-INCH CONSOLE

Model 1021 16-inch open-faced console is equipped with built-in non-directional antenna, 12-inch loudspeaker, automatic gain control and intercarrier sound. Suggested retail price is \$389.50 (\$20. additional for blond). Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.—RADIO & TELEVISION RETAILING.

Additional New Products
Elsewhere in Issue

Record News Notes

The second in a series of sales training booklets produced by the **National Association of Music Merchants** is entitled "Inventorying Your Personality Assets and Liabilities." The booklet contains comprehensive personality rating charts, and is available to NAMM members at 30 cents per copy.

Webster-Chicago reports that the introduction of the electronic memory method of music instruction has resulted in a sharp increase in the sales of its wire recorders. The system enables the music student to take home a complete wire recording of each lesson for repeated use during practice. Music merchants are utilizing a number of sales techniques to sell wire recorders to music students and teachers.

Karl Jensen, general manager, **Jensen Industries, Inc.**, Chicago, announced a new line of replacement type phonograph needles. The line comprises practically every needle replacement that can be made for the cartridges available today. Jensen has also introduced a cross-reference replacement needle chart which provides a complete listing of replacement needles, name of cartridge needle is designed to fit, name of phonograph using the cartridge, and list price. Jensen has appointed two new representatives: H. M. Richardson & Co., Minneapolis; Art Cerf & Co., Newark.



Ken McAllister, left, and Jeff Wilson, right, have been appointed director of advertising and promotion of Columbia Records, Inc., and general sales manager, respectively, announced Paul Southard, vice-president in charge of merchandising for the company.

A special advertising and sales promotion campaign has been launched to introduce **Columbia's** LP model 103 player attachment. Included in the campaign are display pieces featuring a photograph of the player, a descriptive mailing piece, a small counter card that can be used on top of the player, and special co-op ad mats.

Sydney N. Goldberg has been appointed a vice-president of **Decca Distributing Corp.**, wholly owned subsidiary of **Decca Records, Inc.**, it was announced by Milton R. Rackmil, president of **Decca Records, Inc.**

Coral Records, Inc., has announced the signing of the following artists to exclusive recording contracts: Lenny Herman, maestro of "The Mightiest Little Band in the Land"; Tommy Sosebee, folk singer; Cliff Warren, folk singer; The Beavers, vocal quartet. Two new Coral distributors have also been named: Seaboard Distributing Co., Hartford, Conn.; Stone Distributing Co., 444 N. W. 84th Territory, Miami, Fla.

RCA Victor's forthcoming line, it

has been reported, will contain several combination TV sets and straight consoles equipped to play not only 45 rpm discs, but 78 rpm and 33 $\frac{1}{3}$ rpm recordings as well. Emphasis is laid on the fact that the 45 rpm system will continue to be featured by **RCA Victor**.

J. B. Elliott, vice-president in charge of consumer products, has announced the sponsorship by **RCA Victor** of the topflight evening show, "Screen Directors' Playhouse," as another step in strengthening the company's consumer advertising on national, distributor, and dealer levels. **RCA Victor** dealers reported an average initial purchase of \$15 worth of records with each 45 rpm instrument, with **Red Seal** records in many instances most in demand. Accordingly, **RCA Victor** has announced the forthcoming release of a substantial number of classical selections on 45

rpm, bringing the total listings of the 45 rpm repertoire to the 2,000 mark in all classifications.

"Your Surest Selling Job," title of an **RCA Victor** film designed to acquaint record and instrument retailers with the sales features of 45 rpm music reproduction system, has been hailed by retail groups as a documentary in the fundamentals of selling, and recommended for use as a general sales training film.

Alan Kayes has been appointed to a newly created position as commercial manager of **Red Seal Records** for **RCA Victor**. New artists signed by the label include Mack Harrell, Metropolitan Opera baritone, who will record exclusively on the **Red Seal** label, and The Honey Dreamers, a versatile young vocal group, scheduled to make **Bluebird** recordings.

KIND *to record*
 KIND *to ear*
 KIND *to purse*

the Magic Touch

Fidelitone

LONG LIFE PHONOGRAPH NEEDLES

FROM 50¢ to \$5.00

PERMO, Incorporated
 CHICAGO 26,

Unit switch construction houses precision resistors in insulated recesses.

Easy-to-change standard batteries. Double spiral springs give permanent connection.

Direct connections—no harness cabling—no shorts.

Molded selector switch fully enclosed. Spiral spring index control—over 150,000 cycles without breaking.

Here's why top engineers and technicians use Model 630

Features like those shown above are what make this popular V.O.M. so outstandingly dependable in the field. The enclosed switch, for instance, keeps the silvered contacts permanently clean. That's rugged construction that means stronger performance, longer life. And tests show that the spiral spring index control, after more than 150,000 cycles of switch rotation, has no disruption or appreciable wear! Investigate this history-making Volt-Ohm-Mil-Ammeter today: 33 ranges, large 5½" meter.

ONLY
\$37.50
AT YOUR DISTRIBUTOR

FOR THE MAN WHO TAKES PRIDE IN HIS WORK
Triplett
TRIPLETT ELECTRICAL INSTRUMENT COMPANY • BLUFFTON, OHIO, U.S.A.



**Now! ARVIN offers the
HOTTEST VALUE in TV!**



8½" table model only \$129⁵⁰*

The Lowest Priced TV Set with Big Set Features!

ARVIN
Visible Value
TELEVISION

You can
SEE the difference!

- ✓ Uses no-glare Black Tube for better contrast and picture clarity.
- ✓ Simplified tuning. Only two visible groups of controls. Easy as tuning a radio.
- ✓ Service-free electromagnetic circuit—the same as used in more expensive TV sets.
- ✓ Designed for straight AC operation for longer tube life, dependability, service-free operation.
- ✓ Horizontal automatic frequency control. Keeps picture automatically locked in even with high interference levels.
- ✓ New high intermediate frequencies substantially reduces interference from ham radio, diathermy equipment, etc.
- ✓ Delayed automatic gain control for maximum sensitivity in weak signal areas.
- ✓ Graceful, modern cabinet in lacquer mahogany finish. Weighs only 40 pounds. Receiver designed to comply with Underwriters' standards.

SEE IT AT THE JANUARY MARKET

SPACE 441-442 — AMERICAN FURNITURE MART, CHICAGO, JANUARY 9-20

*Slightly higher in Zone 2

IMPORTANT: Orders are now being accepted by your distributor for early 1950 delivery.
Arvin Radio & Television Division • NOBLITT-SPARKS INDUSTRIES, INC., Columbus, Indiana

More Sales with New



Lovely Toni Arden has been signed to an exclusive Columbia recording contract. The songstress created quite a stir with Eastern audiences on television appearances.

Juanita Hall's Broadway appearance in "South Pacific" first brought her to the public attention. Her RCA Victor recordings of "Scarlet Ribbons" and "Blow Them Blues Away" show great promise.



Lennie Herman, below, and his quintet "The Mightiest Little Band in the Land" has been making Coral executives happy judging by sales of the calypso "Control Yourself" backed by "Kiss Polka."



• Pictured on these pages are just a few of the many bright names and faces that have appeared on the record scene during the past year, and which show great promise for '50. Dealers would do well to familiarize themselves with the latest recordings by the new artists, and get their share of plus sales.

It is interesting to note that the medium of television has given the recording industry a goodly share of young talent. Some of these singers got their "chance" on television—and subsequently recruited their fans and following from the TV audience.

Other names which will bear close watching by alert retailers are show-

Stars

Handsome Jack Maskell, star of a popular television network show, has been signed by Decca Records. His rendition of "Too-Whit, Too-Who" had been making the cash registers ring for dealers.

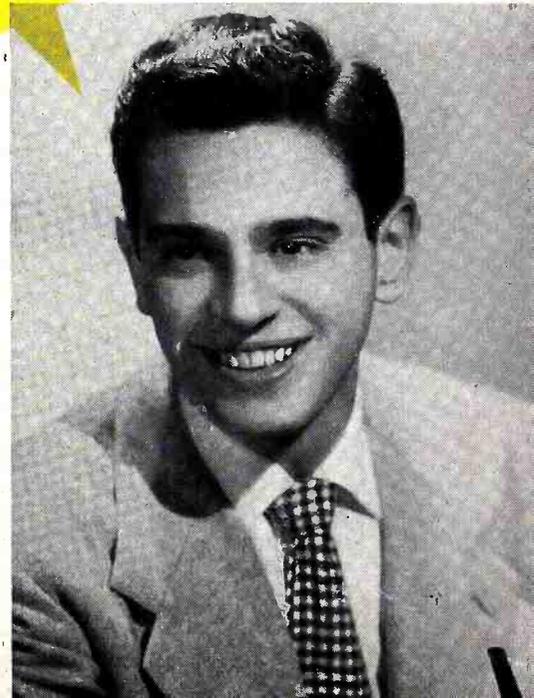


The Capitol roster is chock full of girl singers whose records sell. A new star, Kay Starr, above, has been featured on several radio shows and has been getting a big publicity build-up.

Hollywood vocalist, Doris Drew, left, is doing nicely for MGM with her platter coupling of "Billy" and "I Wish I Was Back in My Baby's Arms."



Here's Richard Hayes, another television discovery, signed by Mercury Records, and well on the way to success via his recording of "The Old Master Painter."

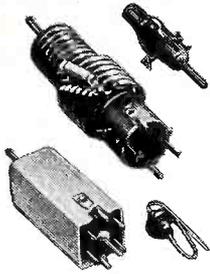


business new comers — particularly those in this season's crop of Broadway musical hits.

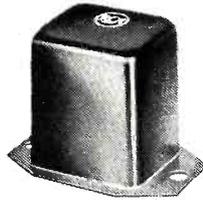
Expectations for '50 in the record business are high. (See quotes from leading record companies executives on pages headed "Foresee '50 a Banner Year.") The customer's dilemma about the various record speeds has resolved itself into an acceptance of the new, coupled with the realization that the old will be with us for quite a while.

'49 saw some drastic and definite improvements in the recording industry, in addition to the new-speed, unbreakable discs. In those areas where television is extremely popular, the record business seemed to be equally good, so the television bogey man and his effect on record sales would seem to be favorable. The greater availability of players for records of all speeds during the coming year is another factor which will definitely operate in the dealer's favor.

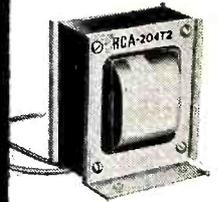
Picture and Sound IF and Video Coils—Kit #204X1 containing 15 coils for picture and sound if stages, and video circuits.



Type 208T2 Vertical Blocking-Oscillator Transformer—Generates 60-cps pulses to drive vertical-discharge tubes.



Type 204T2 Vertical Deflection Output Transformer—For vertical-deflection circuits using RCA-201D1, 201D3, or 201D12 Deflecting Yoke.



Type 203R1 Horizontal Oscillator and Synchronizing Control Coil—Permeability tuned center-tapped oscillator coil.



Types 201D1, 201D3, and 201D12 Deflecting Yokes—For RCA kinescopes 10BP4, 12LP4, and 16AP4.

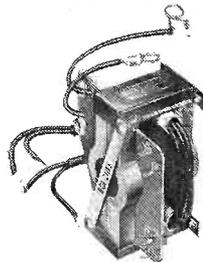


Type 202D1 Focusing Coil—For kinescopes such as the RCA-10BP4 operating at anode potentials up to 10 kilovolts.

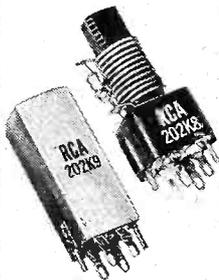
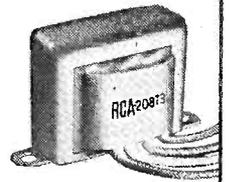
Type 203D3 Ion-Trap Magnet—For use with kinescopes which utilize ion-trap guns and operate with anode potentials of 7 to 14 kilovolts.



Type 211T5 Horizontal-Deflection-Output and High-Voltage Transformer—For pulse operated power supplies up to 13.5 kilovolts.



Type 208T3 Horizontal Blocking Oscillator Transformer—Designed to drive the grids of the horizontal discharge tubes.



Picture IF Transformers—Type 202K5 to 202K11—Seven coils for stagger-tuned IF systems such as used in RCA TV receiver models 8T241, 8T243, 8T244.



Type 201R4 Width Control—For controlling picture-width in receivers using RCA-16AP4 kinescopes.



Type 203L5 Video-Circuit Trap—A 4.5-megacycle video-circuit trap designed to operate in the plate-circuit of the first video amplifier.

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HARRISON, N. J.

SERVICE & SOUND

Section of **RADIO & TELEVISION RETAILING**

Wide Angle Deflection for TV

Shorter CRT's Will Mean Savings in Tube and Cabinet Costs

• It has been obvious that the physical size of the picture tube has more or less determined the overall size of the TV cabinet. With the trend to larger and larger pictures, it has been equally obvious that picture tubes must get smaller or it would be impossible to make a large screen table model which would actually fit on a table. Confining our discussion for the moment to direct-view tubes, we can see three ways to reduce their size: (1) The neck can be made shorter. This has been done, but involves redesign of the gun structure. (2) The funnel can be made smaller in volume. This has been done in the rectangular face tube, but this new development is still not in the volume production category. (3) The funnel can be made shorter. This involves increasing the angle of deflection, and is the phase of tube development

which is seeing the most activity at the moment.

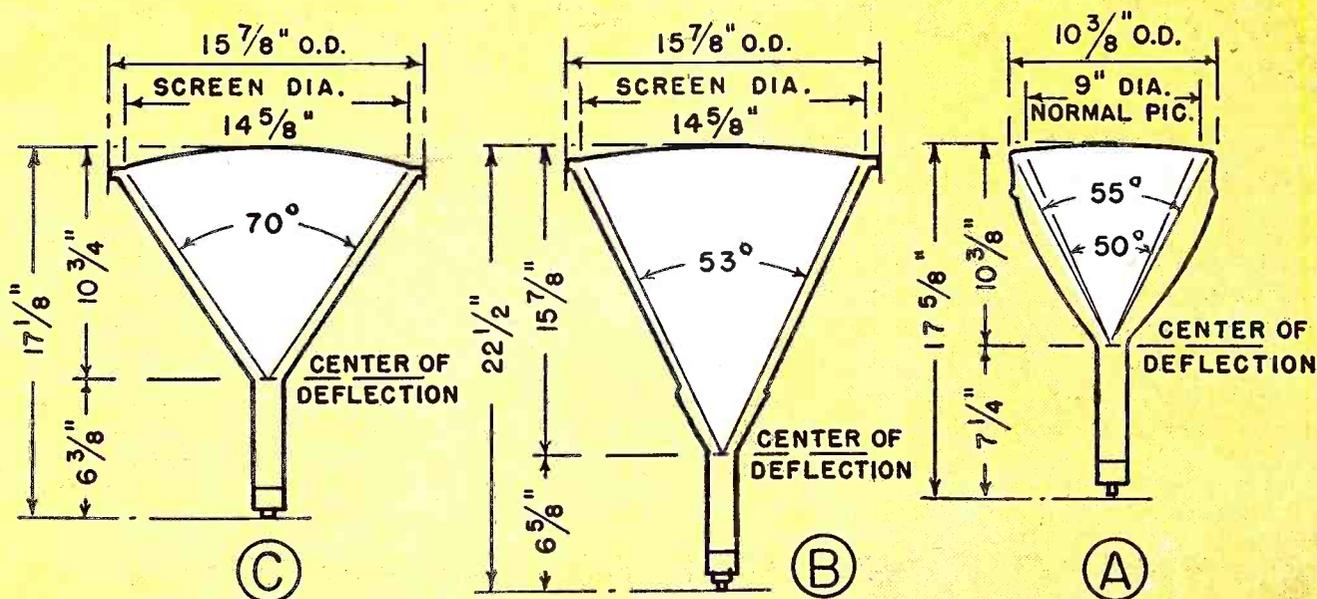
The first step, historically, in shortening both the neck and the funnel was the switch from electrostatic to magnetic deflection. The 7JP4 is 14½" long, and following the same proportions, the 10BP4 would have been over 20" long, but actually is 17½". Practically every newly developed larger size tube has been *relatively* shorter than its predecessor. The 16AP4, if of the same proportion as the 10BP4, would be over 28" long, but is actually 22½", with savings principally attained in a shorter neck. Full screen width deflection in both these tubes is about 53 degrees (26½ degrees either side of center). The 16AP4 is, therefore, a "short" 16-inch tube. The new 16GP4, however, is only 17½" long, attained by shortening the funnel (and increasing

the deflection to approximately 70 degrees). The 19AP4 is almost as short, relatively, as the 16GP4, being 21½" long.

Increasing the deflection angle of a tube while retaining the same screen width and high voltage (as in the 16GP4 when compared with the 16AP4) would seem to require a considerably stronger deflection field. This would mean a redesign of the deflection amplifiers and deflection yokes. Due to the shorter length of the tube, however, not as high a 2nd anode voltage would be needed to obtain a comparable beam velocity (and therefore equivalent brightness and spot size). A lower 2nd anode voltage (the 16GP4 is comparable in length to the 10BP4) would mean that less deflection field strength would be needed to obtain the *same* deflection

(Continued on page 75)

Approximate dimensions of the 10BP4 (A), 16AP4 (B), and 16GP4 (C)



Locating Faults in

Careful Trouble-Shooting Will Often Eliminate Costly Repeat Calls

• A defective power transformer will cause one or more of the following symptoms to appear:

- 1—Blowing of fuse.
- 2—Immediate smoking or overheating of transformer.
- 3—Overheating of transformer after set has been on for some time.
- 4—Improper or no voltage output by transformer.
- 5—Buzz-type noise.

When a customer reports that his radio smoked, or caused a house fuse to blow, or was plugged into a d-c outlet by mistake (an a-c receiver is assumed), the set's power transformer may be shorted. The serviceman should, in this case, take some precaution to avoid blowing the shop fuse. Such an event generally causes a loss of time, particularly when the fuse is located in some place other than the store. A customer may conceivably be lost as well, since a darkened shop and an unlit window do not induce trade.

A simple device for checking whether or not a power transformer short or overload is present can be readily made up with a 25-watt bulb, socket, and a line cord extension. The socket may be a flat-bottomed type which will stand up on the work-bench. The extension cord, which has a male plug at one end and a female one at the other, is cut and connected as shown in Fig. 1.

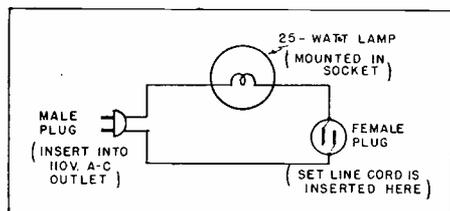


Figure 1

When a set with a possibly defective transformer is brought into the shop, it is connected to the power line through the transformer-testing device. If no short is present in the transformer or an associated component, the bulb will glow dimly—just how dimly, can be readily observed by testing a set known to be normal. If, on the other hand, a short does exist in the transformer, the bulb will glow much more brightly, since a heavier current will flow through it. Even when a completely shorted transformer primary is present, the fuse will not blow, since the line current is limited by the resistance of the bulb to a safe value.

The question might be raised: Won't

the voltage applied to the power transformer be reduced, since the bulb is connected in series with the primary? If the answer is yes, such a check might be considered unreliable, since the conditions under which the transformer normally operates would no longer exist. The answer is, however, no. The voltage drop across the bulb is small, since the impedance of the transformer primary is very large compared with the resistance of the bulb. Approximately the full line voltage is therefore applied to the transformer.

If the bulb test just described indicates a shorted or overloaded transformer, one of the following conditions may be present:

- 1—The transformer may be defective.
- 2—A component, or wiring external to the transformer, may be faulty.

As an aid in further localizing the trouble, the rectifier tube should be removed. If the transformer no longer shows signs of distress, the trouble may be one of the following:

- 1—Short in the B supply.
- 2—Defective rectifier tube, or tube socket.
- 3—Improperly-seated rectifier tube, due to broken key on latter.
- 4—Wrong tube in rectifier socket.
- 5—Improperly connected transformer secondary.

Troubles 1 through 4 may be found by resistance checks, tube check and visual inspection. Trouble No. 5 merits some explanation.

The condition referred to is illustrated in Fig. 2. Fig. 2A shows the normal hook-up of the transformer secondary. Fig. 2B shows an improper hook-up. Incorrect judgment of the color on the center-tap of the secondary winding may lead to such an error.

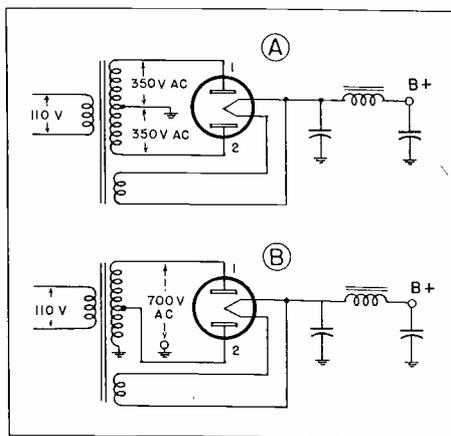


Figure 2

The voltage between plate 1 and ground will be approximately 700 v in such a case, causing an excessive d-c voltage to appear at the cathode of the rectifier, as well as other points in the B line. The input filter condenser is very apt to blow in such a case; the rectifier filament or cathode may also be destroyed, and the transformer overloaded as well.

The defect can be readily located by checking the resistance from each plate of the rectifier to ground. The readings should be approximately equal. (A 10% difference is normal.) If one plate reading is observed to be twice that of the other, however, the center-tap of the secondary has been connected to this plate, instead of to ground or B--.

Possible Filament Troubles

We have just considered the troubles possible if symptoms of an overloaded transformer disappear when the rectifier tube is withdrawn from its socket. If symptoms of overloading persist when the rectifier tube is withdrawn, one of the following defects may be present:

- 1—A "hot" filament lead may be shorted to ground.
- 2—A short between a plate connection and ground may be present at the rectifier socket.
- 3—A transformer winding may be shorted to another winding.
- 4—An internal short in one of the transformer windings, or the leads to the winding may be present.

To check for trouble No. 1, the voltage output of the filament feed windings should be checked. When a-c voltage across any of these windings is absent, a defect in the winding or its associated circuit is indicated.

Power should be applied to the transformer for the shortest possible interval of time in this test, as well as in others involving an overloaded transformer. The possibility of further damage to the unit will thus be minimized. Voltmeter leads should be clipped on to the windings being checked before the set is turned on. The switch can then be turned on and off very rapidly, and the reading of the voltmeter noted.

If a filament winding is located across which no a-c voltage is present, the hot side of the winding should be disconnected, as shown in Fig. 3A. All the tubes fed by that winding should be removed. The resistance between the fila-

Power Transformers

ment terminal and ground is then checked (see Fig. 3B). If the reading is infinite, no filament short external to the transformer is present. If a continuity reading appears, however, one of the filament socket pins on a tube, or a filament wire, is shorted to ground.

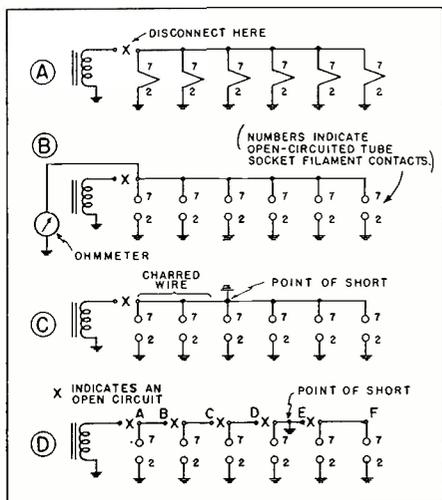


Figure 3

In the latter case, the wire between the short and the transformer winding will frequently be charred, due to the excessive current flow that has taken place in it. The point at which charring begins will, in this case, indicate the site of the short (see Fig. 3C).

When no charring is present, visual inspection will generally locate the short. If resistance testing proves necessary, the filament wiring should be disconnected, section by section. When a section of wire that has been isolated in this way (see Fig. 3D) gives a reading of zero instead of infinite ohms, the short lies in that section of wire.

If checks show that the troubles just discussed are absent, the presence of a defect within the transformer itself is indicated.

Fault May Be Repairable

Let us pause for a moment. Why, some servicemen may be inclined to ask, should it be necessary to localize trouble in a power transformer to the exact winding at fault? Why not replace the transformer, and let it go at that?

There are three reasons why an exact localization of the trouble is desirable:

1—The serviceman can be more certain that trouble exists in a transformer, when the site of the defect has been located.

2—Faults in a power transformer are sometimes of a minor nature, and can be remedied, saving the cost of a replacement.

Why You Should Analyze Transformer Faults

1. To be sure the trouble is in the transformer
2. The fault may be something easily fixed, like a nicked, shorted or open lead to the windings.
3. To avoid ruining a replacement transformer, if the cause of trouble lies in the set.

3—A better analysis of the possible cause of trouble can be made. Sometimes a condition within the receiver may be responsible for the transformer becoming defective. It is important, in this case, that the serviceman remedy the condition before replacing the transformer.

Resistance checks between different windings will generally determine whether one of them is shorted to another. All transformer leads should be disconnected from the receiver for this test.

To determine if an internal short in some winding is causing a transformer to overheat, all leads should be disconnected between the transformer and receiver. The line voltage should then be applied to the transformer primary, and the secondary voltages quickly checked, using the precautions previously described. If any voltages are absent or improper, the winding affected is shorted or partially shorted.

If an internal transformer defect is indicated, the case of the unit should be removed, and all the leads carefully inspected. Shorts and nicks in these leads not infrequently occur, and can be readily repaired. In some cases, the lower half of the transformer casing may have to be permanently removed, to prevent pressure on some lead that cannot be properly insulated. (The induction of hum into a nearby stage is possible, but not probable, when the procedure just mentioned is employed.)

Partially shorted transformers sometimes function well for a time, then begin to smoke. The radio may continue to perform perfectly in such a case. A defect in the transformer, rather than in some other component, is indicated when this occurs. The serviceman should, however, make sure no condition in the receiver has caused the transformer to break down.

An open or partially open winding in a transformer can usually be readily located by voltage and resistance checks. Sometimes the center tap of a filament winding has not been connected, or

properly soldered, causing an open-circuit to occur (see Fig. 4). A resistance reading of considerably more than ½-ohm across a filament winding points to a poor connection.

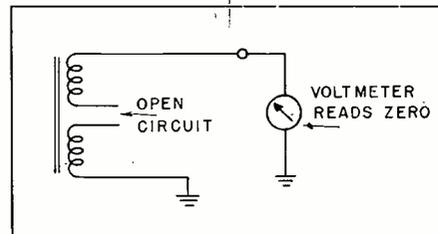


Figure 4

Hum or a buzz-type noise in the vicinity of a power transformer indicates loose laminations within the unit. The trouble may be verified by placing a finger on the transformer. Vibration will be felt, when loose laminations are the source of trouble.

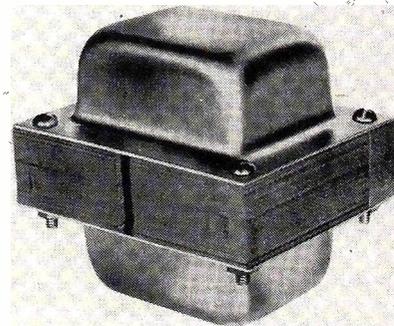


Figure 5

The defect may be remedied in some cases by simply tightening the screws or nuts on the casing of the transformer. (Fig. 5.) In other instances, taking the casing off, putting appropriately-sized pieces of wood on top of the transformer, then replacing the casing, will remedy the condition. The compression of the laminations in this case prevents the transformer from vibrating.

Television Technician

Section of RADIO & TELEVISION RETAILING

Transvision OSCILLOSCOPE

Model 450A, 5" oscilloscope for servicemen and technicians features vertical amplifier response to 1 MC, sensitivity of .15 volts RMS/inch, push-pull amplifiers on both horizontal and vertical. Net price is \$99.00. Transvision, Inc., New Rochelle, N. Y.—RADIO & TELEVISION RETAILING.

Superior SIGNAL GENERATOR

Model TV-30 TV signal generator is designed for alignment of IF and front ends without an oscilloscope. Company claims this unit permits alignment in the



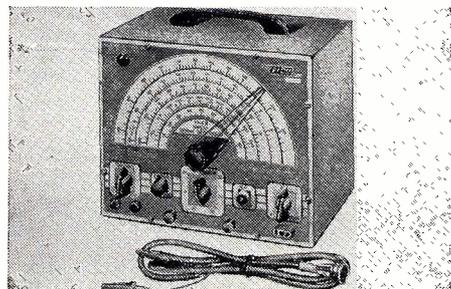
same manner normally employed to align broadcast receivers. Covers 18-250 MC in four ranges. Superior Instruments Co., 227 Fulton St., New York, N. Y.—RADIO & TELEVISION RETAILING.

Telrex TV ANTENNAS

The new Telrex line, designated the Special series, is said to retain all the reception ability of the Deluxe series but is priced one-third lower than the regular models. Model S1X-BD is \$5.75 list; S2X-BD, \$11.50; S2X-TV, \$11.25, and S4X-TV, \$24.00. The only model not offered in the Special series is the 8X-TV. Telrex, Inc., 26 Neptune Highway, Asbury Park, N. J.—RADIO & TELEVISION RETAILING.

Eico TV-FM SWEEP GENERATOR

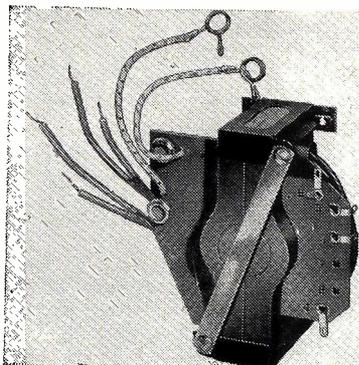
Model 360 TV-FM sweep signal generator features sweep width variable from 0-30 MC with mechanical inductive sweep, built-in crystal marker oscillator with variable



amplitude. Kit complete with all tubes and instructions, \$29.95. Wired: \$39.95. Electronic Instrument Co., Inc., 276 Newport St., Brooklyn 12, N.Y.—RADIO & TELEVISION RETAILING.

Stancor TV TRANSFORMERS

3 new horizontal deflection output and high voltage transformers include the A-8119, an exact duplicate of RCA 211T5 for use with 16AP4; A-8127, an exact duplicate of RCA211T3, for use with 10BP4, and the



A-8128, a transformer for between the 10" and 16" sizes, and for converting a smaller receiver to 16". Complete prices and description available in bulletin DA6-354. Standard Transformer Corp., 3580 Elston Ave., Chicago 18, Ill.—RADIO & TELEVISION RETAILING.

Clarostat TV BALLASTS

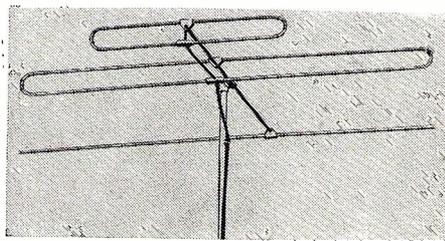
Five new ballast replacement numbers have been announced: Emerson 397022 and 397023, Motorola 17A485459, Teletone TPR 102D, and Belmont B9M 16067. These numbers are in addition to the Motorola 17A47033 and Emerson 571-606 already listed. All numbers list at \$3.00. Clarostat Mfg. Co., Inc., Dover, N. H.—RADIO & TELEVISION RETAILING

Sola POWER TRANSFORMER

Type CVE power transformer for original equipment and replacement use corrects line voltage variations of 100-130 volts to plus or minus 3% or less at its outputs. High voltage plate and filament windings (6.3 and 5 volts) are provided. Bulletin CVE-138 available on request. Sola Electric Co., 4633 W. 16th St., Chicago 50, Ill.—RADIO & TELEVISION RETAILING.

C-D TV ANTENNAS

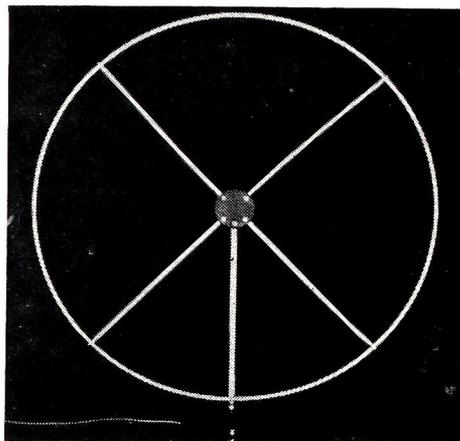
The "Skyhawk" line of antennas includes five in-line hi-lo antennas, three single types and two double-stacked types.



Prices range from \$17.50 to \$45. retail. For details, write: Cornell-Dubilier Electric Corp., South Plainfield, N.J.—RADIO & TELEVISION RETAILING.

Circle "X" INDOOR ANTENNA

A new indoor antenna is circular in design and incorporates many of the features of the outdoor Circle "X" antenna. The Circular Indoor Antenna is designed



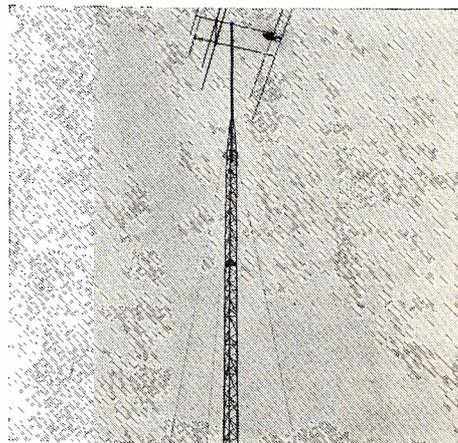
for high gain with a wide range of signal sweep. High band pickup is said to be especially strong. Retail price is \$24.00. Circle "X" Antenna Corp., 500 Market St., Perth Amboy, N.J.—RADIO & TELEVISION RETAILING.

Alprodco TV TOWERS

Aluminum towers featuring strength combined with light weight are available in knocked down or built up 6 foot sections. May be erected in one piece to heights of 42 feet. Additional height up to 120 feet obtainable by adding 6 foot sections. For more information write Alprodco, Inc., Box 607, West Lafayette, Indiana.—RADIO & TELEVISION RETAILING.

Easy-Up TV TOWER

A new economy-priced model weighing 40 pounds elevates a TV antenna approximately 30 feet above roof-top. Designated the Model 300 "Rota-Tower," it incorpor-



ates a feature which permits the antenna to be oriented after tower is installed. Unit comes in three pre-assembled sections which are joined together at installation by 3 bolts. List price is \$64.50. Easy-Up Tower Co., Racine, Wis.—RADIO & TELEVISION RETAILING.

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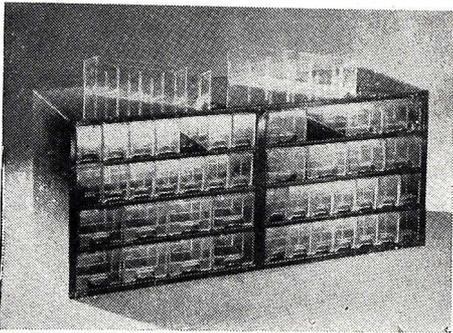
New Service Equipment, Tools

Drake **SOLDERING GUN**

The Drake "Insta-Heat" soldering gun operates only when the trigger is pulled. A built-in light illuminates dark corners. The soldering tip can be easily and immediately removed. The gun comes with an extra 6½-inch soldering tip. Drake Electric Works, Inc., 3656 Lincoln Ave., Chicago, Ill.—RADIO & TELEVISION RETAILING.

Andrew **PLASTIC TRAYS**

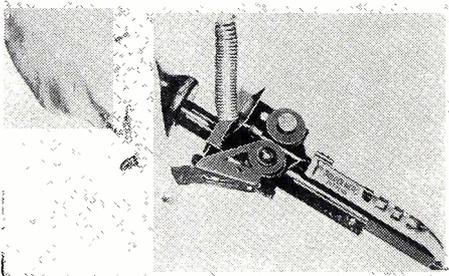
A combination of metal shelf racks and two sizes of transparent plastic trays is designed for storing and identifying small parts, as for a service shop. Individual



shelf sections can be stacked atop one another. Trays are provided with an index card slot and a molded-in finger pull. Complete details are provided in bulletin 520, Andrew Technical Service, 4747 N. Damen Ave., Chicago 25, Ill.—RADIO & TELEVISION RETAILING.

Stern **SOLDERING DEVICE**

"Solder-Matic" is a hand soldering device that automatically feeds solder to the tip of the iron, said to fit any standard electric soldering iron from 75 to 250 watts.



In addition, a Home Craftsman model is available consisting of an 85-watt soldering iron with the Solder-Matic attachment and 6 feet of solder priced at \$5.95. Stern Corp., 436-A Fourth Ave., Pittsburgh, Penna.—RADIO & TELEVISION RETAILING.

Bay **STACKING BOX**

Designed for handling and storing medium loads, the box is available in sizes 10 x 16 x 6 inches to 10 x 20 x 8 inches. The continuous stacking rim assures rigidity when stacked. Complete information may be secured by requesting bulletin No. 449 from Bay, Inc., 3001 N. 16th St., Philadelphia 32, Penna.—RADIO & TELEVISION RETAILING.

Equipto **STEEL SHELVING**

Instantly movable steel shelving features a special iron-grip stud which eliminates necessity for nuts, bolts and tools for assembly. Available in open and closed shelving, parts bins, and counters. Write for 24-page catalog, Equipto Div. of Aurora Equipment Co., Aurora, Ill.—RADIO & TELEVISION RETAILING.

Lynn **SOLDERLESS TERMINALS**

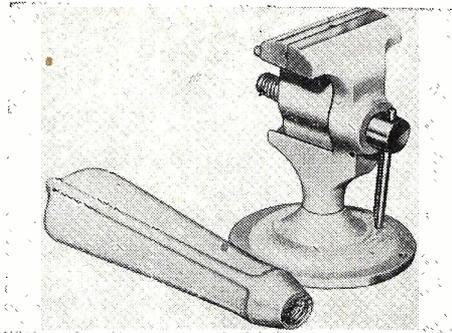
The "Lightning" solderless terminal service kit (No. 2090) contains a complete assortment of the most popular solderless wire terminals and insulation tubing plus the Lynn crimping and cutting tool, all encased in a transparent plastic box. The complete outfit lists for \$7.95. Lynn Products Co., 317 E. Ontario St., Chicago 11, Ill.—RADIO & TELEVISION RETAILING.

Handy **SCREW HOLDER**

This device makes it quick and easy to get any screw started in "hard-to-get-at" places. The set of Handy screwholders consists of a 10", 7" and 4½" holder. Set of 3 is priced at \$1.00. Handy Industries, Dept. 233, 141 W. Jackson Blvd., Chicago 4, Ill.—RADIO & TELEVISION RETAILING.

Besnel **WISE**

The 2-way vise can be bench mounted or held in the hand by means of a cast aluminum handle. When bench mounted it



measures 3 inches high. Jaws open to ¾ inch. The 2-way vise is designed to retail for \$1.95. Besnel Products, Inc., 3525 Auburn St., Rockford, Ill.—RADIO & TELEVISION RETAILING.

Lyon **STORAGE BINS**

Bin units for storage or display of tools, small parts and packaged items measure 3' wide, 1' deep and 6½' high. Dividers in all bins are adjustable horizontally every inch. Shelves are adjustable up and down every 1½" where dividers are not used. Lyon Metal Products, Inc., Aurora, Ill.—RADIO & TELEVISION RETAILING.

Burndy **WIRE-STRIPPER**

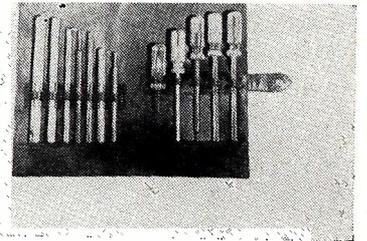
Hytool No. Y9M cuts wire, strips the insulation, and indents popular Hydent connectors on wires No. 22 through No. 10. The Y9M is made of steel, with one-piece molded plastic handles. Burndy Engineering Co., Inc., 107 Bruckner Blvd., New York 54, N. Y.—RADIO & TELEVISION RETAILING.

Proved Products **RIBBON SOLDER**

De Luxe Ribbon Solder is a low melting ribbon of ⅜" wide solder with self-contained flux designed for applications where soldering is done close to low-melting materials (such as plastic insulation), and for field work where no electrical outlet is available. An ordinary match will melt it. The manufacturer has available descriptive literature which may be obtained on request. Proved Products Mfg. Co., Drawer 1190, San Fernando, Calif.—RADIO & TELEVISION RETAILING.

Walsco **ALIGNMENT TOOLS**

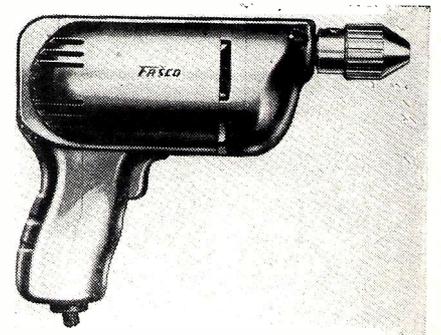
A complete line of plastic alignment tools with steel operating ends is designed to cover all present day TV-FM needs. Tools may be purchased individually or



in sets; either in pocket-sized leatherette kit or masonite wall rack for shop use. For further information write Walter L. Schott Co., 9306 Santa Monica Blvd., Beverly Hills, Calif.—RADIO & TELEVISION RETAILING.

Fasco **ELECTRIC DRILL**

The Fasco drill uses a universal motor with 1600 RPM no-load speed, and is provided with a Jacobs hex key chuck. Rated



capacity is up to ¼ inch in steel, ½ inch in wood. Weighing 3½ pounds, the drill is operated by a trigger, and retails for \$19.95. Fasco Industries, Inc., Rochester, N. Y.—RADIO & TELEVISION RETAILING.

Gits **CIRCUIT TESTER**

The visual circuit tester is a small device which may be used to check for opens in fuses, pilot lights, voice coils, and other low resistance circuits up to 50 ohms. It utilizes two penlight cells, and a bulb which lights to indicate continuity. Retail price is \$1.69. Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.—RADIO & TELEVISION RETAILING.

**NEW
SUPERIOR**

**Hi-
Lo**

TV ANTENNA

by  **the Leader in The
Antenna Field**

\$9.95with 2 section 8 ft.
electro-galvanized steel mast

Another pace setting development by *Radiart!* Here is the popular HI-LO antenna streamlined to a price that you would pay for just an ordinary single bay style. This type, the HL 4 series covers all TV channels 2 through 13. Its unidirectional pick-up helps to eliminate ghosts and other unwanted signals. It permits separate orientation of the high and low bays, allowing each to be set in the most favorable direction.

FEATURES INCLUDE:

- Speedy installation with pivoted dipoles
- Rigid and sturdy to defy the wind and elements
- Bakelite insulators — cadmium plated hardware
- Electro-galvanized steel masts

AVAILABLE IN THE FOLLOWING TYPES:

- High and Low Bays, 2 section 8 ft. mast . . . model HL 4S . . . \$ 9.95
- HL 4S unit plus swivel base, guy ring, stand-off insulator and phasing line model HL4 10.95
- High and Low Bays only model HL 4L 7.95
- High Bays only model H4 2.75
- Low Bay only model L 4 5.75



Topping the
Nation in Sales

**RADIART TV
CONICAL TYPE ANTENNAS**

Our "Lazy X" line is **HOT**
... feature it for
faster sales



IT'S RIGHT WHEN IT'S RADIART

THE RADIART CORPORATION
CLEVELAND 2, OHIO



- VIBRATORS
- TV ANTENNAS
- POWER SUPPLIES
- AUTO AERIALS

TUNE UP! TUBE UP! CHECK UP!

*Nationwide Servicing Campaign
Aimed at*

20 *million radios
in need of repairs*

Coincides with Spring Cleaning and Portable Radio Seasons
Begins in the MARCH issue of

**RADIO & TELEVISION
RETAILING**

OPPORTUNITY EXTRAORDINARY!

For DEALERS, SERVICEMEN and DISTRIBUTORS
—Opportunity to hit an all-time peak in service and replacement sales, plus orders for electrical appliances. Every call is a potential sale.

For MANUFACTURERS—Unprecedented opportunity to promote the sale of tubes, parts, accessories and test equipment. Every cooperating dealer is a source of extra volume during this campaign.

SUGGESTION TO MANUFACTURERS

- ✓ Join in this TUNE UP, TUBE UP, CHECK UP campaign by making this the theme of special advertising in RADIO & TELEVISION RETAILING starting in March.
- ✓ Coach your factory sales staffs and Reps.
- ✓ Enlist the teamwork of your parts distributors.
- ✓ Use every possible tie-up through space, direct-mail, posters, exhibits, window displays, cooperative dealer advertising and personal contacts.
- ✓ Plan your participation now and let us know that you will join.

Watch for
the March issue of RADIO & TELEVISION RETAILING containing

THE BIG ALERT

CALDWELL-CLEMENTS, INC., 480 Lexington Avenue, New York 17, N. Y.

Philco Appointments



The appointment of Larry F. Hardy, shown, as president of the television and radio division of Philco Corp., was announced by William Balderson, president of the Philco Corp. In this capacity Hardy will be in charge of all phases of the corporation's television and radio business. Joseph H. Gillies, vice-president and a member of the board of directors assumes full responsibility for all operations of the division, and has also been appointed vice-chairman of the executive committee of the television and radio division. Frederick D. Ogilby has been named as vice-president, sales, of the television and radio division, Mr. Balderson also made known.

Name Harry J. Deines

Harry J. Deines, of New York, an advertising executive with nearly twenty years of experience in the electrical manufacturing field, has been named manager of advertising and sales promotion for the Westinghouse Electric Corporation, Pittsburgh, Pa. J. H. Jewell, vice-president in charge of sales for Westinghouse, who announced the appointment, said Mr. Deines will have responsibility for staff supervision and coordination of all Westinghouse advertising and sales promotion activities. He also will maintain basic company relationships.

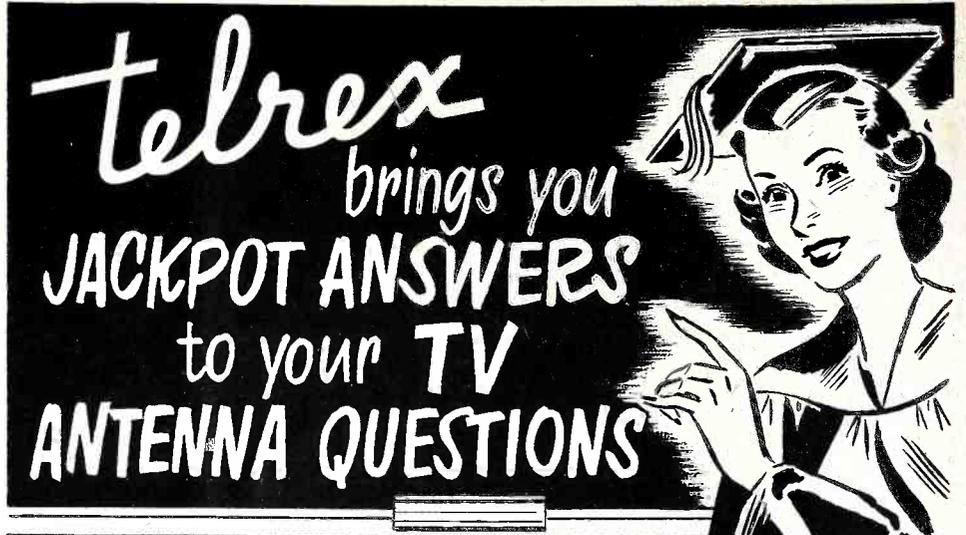
WCEMA Committee Heads

Los Angeles Council of WCEMA at its recent meeting in Ciro's, Hollywood, named 1950 committee chairmen. They were introduced and each made brief report and presented all committee members.

Dick Leitner, Lear of California, Inc., will head trade practice and technical committees; Leon Ungar, Ungar Electric Tools, Inc., publicity; Ed Grigsby, Altec-Lansing Corp., programming and entertainment; E. M. Bagley, U. S. Engineering Co., Glendale, membership; Herb Balderson, Thermador Electrical Mfg. Co., labor and employment; Bob Bell, Packard Bell Co., industry coordination and Ed. Curtis, Altec-Lansing Corp., traffic.

Buys Brach Mfg. Co.

A. S. Saphier, president of General Bronze Corporation, New York, has announced that his company has acquired the business of the L. S. Brach Mfg. Corporation of Newark, N. J., and will operate this company as a division of General Bronze.



Telrex brings you JACKPOT ANSWERS to your TV ANTENNA QUESTIONS

1. QUESTION—What's the one antenna that cuts installation troubles and service call-backs to the bone in all locations?

ANSWER—Telrex Conical Antennas, the conical "V" beams that cover all TV channels and FM, and afford best reception in every signal area. There's an engineer-designed, service-tested model for every TV location.

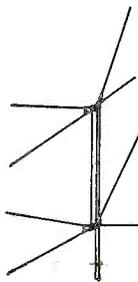
2. QUESTION—Why have Telrex Conical "V" beams replaced every possible combination of antennas for TV reception?

ANSWER—Because Telrex "V" beams are the only antennas offering true conical performance—top TV reception without bulky metal cones. For experience-designed models to meet every problem, workmanship that gives longer service . . . continue to look to Telrex!

3. QUESTION—Who has built 95% of all conical antennas installed today?

ANSWER—Telrex! Leadership in engineering and quality keeps Telrex out in front. The Telrex staff is ever seeking better methods, improved materials and design advancements. Supply a Telrex antenna on your next TV installation—you'll see the difference!

TELREX MODEL 2X-BD



- Bi-Directional Stacked Conical "V" Beam
- Low Vertical Angle
- Extremely High Signal to Noise Ratio
- Constant Center Impedance
- Uses 72, 150 or 300 Ohm Transmission Lines
- Universal Mounting Clamp

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Telrex INC.
CONICAL ANTENNAS



Telephone—ASBURY PARK 2-7252

AMERICA'S
OUTSTANDING
TELEVISION
BEAM

ASBURY PARK 2, N. J.

PICK the RIGHT DURANITE CAPACITOR

from this chart

AEROVOX DURANITE
MOLDED TUBULAR PAPER CAPACITORS

Model	Capacitance	Tolerance	Voltage
0011	0.001	±5%	50V
0012	0.002	±5%	50V
0013	0.005	±5%	50V
0014	0.01	±5%	50V
0015	0.02	±5%	50V
0016	0.05	±5%	50V
0017	0.1	±5%	50V
0018	0.2	±5%	50V
0019	0.5	±5%	50V
0020	1	±5%	50V
0021	2	±5%	50V
0022	5	±5%	50V
0023	10	±5%	50V
0024	20	±5%	50V
0025	50	±5%	50V
0026	100	±5%	50V
0027	200	±5%	50V
0028	500	±5%	50V
0029	1000	±5%	50V
0030	2000	±5%	50V
0031	5000	±5%	50V
0032	10000	±5%	50V
0033	20000	±5%	50V
0034	50000	±5%	50V
0035	100000	±5%	50V
0036	200000	±5%	50V
0037	500000	±5%	50V
0038	1000000	±5%	50V
0039	2000000	±5%	50V
0040	5000000	±5%	50V
0041	10000000	±5%	50V
0042	20000000	±5%	50V
0043	50000000	±5%	50V
0044	100000000	±5%	50V
0045	200000000	±5%	50V
0046	500000000	±5%	50V
0047	1000000000	±5%	50V
0048	2000000000	±5%	50V
0049	5000000000	±5%	50V
0050	10000000000	±5%	50V

AEROVOX CORPORATION
NEW BEDFORD, MASSACHUSETTS



Initial-equipment Duranite — RMA color-coded — values immediately read on the wall chart. Replacement Duranite available through jobbers — values stamped on units for direct reading.

• Save time, trouble, mistakes! This wall chart gives direct readings for those initial-equipment RMA color-coded molded tubulars — capacitance, tolerance, voltage — at a glance. Handsomely printed in full color. And it's FREE! Get yours from your Aerovox jobber. • Order the corresponding Duranites for profitable servicing.



FOR RADIO-ELECTRONIC AND INDUSTRIAL APPLICATIONS

AEROVOX CORP., NEW BEDFORD, MASS., U.S.A.
Export: 13 E. 40th St., New York 16, N.Y. • Cable: 'ARLAB'
In Canada: AEROVOX CANADA LTD., Hamilton, Ont.

Introduce TV to San Antonio Market



Shown at the television show which introduced the medium to the San Antonio market, are, l. to r.: Ed Sweeney, co-chairman of the television show committee; Harry L. Roper, president of the Appliance Assn., San Antonio; Hugh A. L. Halff, owner of WOAI-TV; Dick Perry, of WOAI-TV.

Sylvania Continues to Promote Radio Servicemen

Sylvania Electric Products Inc., radio division, will continue to promote radio and television servicemen during 1950 in a new series of national ads in the Saturday Evening Post, Life, Look, Collier's, and Radio & Television Best, scheduled to start in January.

Sylvania will supplement the ads with a cooperative campaign kit for servicemen and dealers which includes four-color window posters based on the monthly ad, two-color streamers, three-color postal cards, free mats for local newspaper advertising, and radio spot announcements.

Zenith Vice-President

The directors of Zenith Radio Corporation have elected Dr. Alexander Ellett vice-president in charge of research, it was announced by Commander E. F. McDonald, Jr., president.

Meck Appointee

Harold Blumenstein of Philadelphia, veteran radio and television promotion executive, has been appointed district sales manager for the middle Eastern seaboard by John Meck Industries, Inc., Plymouth, Ind., manufacturers of television and radio receivers.

Three decades of radio-television "know-how"

insist on insuline

... for superb television
... for fidelity FM reception
... for high quality
... for low prices

Challenger
ANTENNAS
KITS and ACCESSORIES

Illustrated is the Model No. 6444

Challenger Antennas are first choice with TV installation men

Hi-Band Lo-Band
Folded Dipoles and Reflectors

For outstanding reception over the entire high band and low band television range. Ideal for "fringe" areas. Antenna sections rotate separately. Easy to install.

Write for latest catalog illustrating and describing the complete "Challenger" line of Antennas and Accessories.

The "Challenger Line" features precision engineering . . . manufacturing skill . . . maximum performance . . . competitive prices. There is an Insuline "Challenger" for every requirement . . . outdoor, indoor, window.

insuline CORPORATION OF AMERICA

INSULINE BUILDING • 36-02 35th AVENUE • LONG ISLAND CITY, N. Y.
West Coast Branch and Warehouse: 1335 South Flower Street, Los Angeles, Calif.
Exclusive Canadian Sales Agents: CANADIAN MARCONI COMPANY, Montreal

Wide Angle TV Deflection

(Continued from page 65)

(53 degrees). This would leave us some spare strength to obtain the additional deflection (to 70 degrees). Due to the wide angle of the glass funnel where it meets the neck of the tube, however, it is necessary to have the point of the center of deflection (usually about $1\frac{5}{16}$ " back from the junction of the neck and the funnel) very close to the funnel, to prevent the electron beam from hitting the sides of the tube.

Need New Sweep System

Therefore, the wide angle requires more compact, shorter yokes which will fit snugly up to the funnel and keep the center of deflection toward the front of the tube. Redesign of the horizontal deflection output system has also been under consideration for some time, partly because the 6BG6 has been driven right up to (and even past) its maximum permissible power dissipation (with resultant short life and tendency toward oscillation), and partly because of the desirability of using a single ended tube in this function.

Features of new horizontal deflection output and high voltage systems will be discussed in a forthcoming continuation of this article on wide angle picture tubes.

REJECT INTERFERENCE ON TV-FM-AM!



NEW
MEISSNER
WAVE-TRAPPERS

AVAILABLE IN 5 MODELS

6 to 13 mc, 13 to 27 mc
27 to 54 mc, 54 to 108 mc
108 to 216 mc

You can now attenuate interfering signals on fundamental or harmonic frequencies with these new, highly efficient tunable wave traps. Several may be connected in series if interference exists on more than one frequency. Efficient with any balanced or unbalanced line from 50 to 400 ohms impedance. **\$5.00** List Price



NEW MEISSNER LINE FILTERS

(Grounded & Shielded)
Reject interference from electric shavers, electric fans, food mixers, vacuum cleaners, etc. 300 watt rating. **\$6.50** List Price

See Them At Your Dealers

MEISSNER MFG. DIVISION
Maguire Ind. Inc.
Mt. Carmel, Illinois

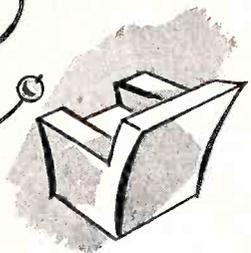
IT'S HERE! New, Sensational Federal REMOTE CONTROL ELECTRONIC MAGNIFIER



WITHOUT LEAVING YOUR ARM CHAIR, YOU PRESS THE REMOTE CONTROL BUTTON AND INSTANTLY THE PICTURE IS ELECTRONICALLY MAGNIFIED!! PRESS THE BUTTON AGAIN AND THE PICTURE RETURNS TO NORMAL.

JOAN MERRILL —
STAR OF SCREEN, RADIO
AND TELEVISION

- MAGNIFIES ALL SIZE PICTURE TUBES TO GIANT CLOSE UP.
- TWENTY-FIVE FOOT EXTENSION CORD.
- EASILY INSTALLED ON ANY SET.
- NO LENSES USED.
- FACTORY WARRANTY.



JUST PRESS THE BUTTON . . . It's Television Magic!

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TV DEVELOPMENT CORP.

1819 BROADWAY, NEW YORK 23, NEW YORK

Phone PLaza 7-7749

Jobber Inquiries Invited

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**WHAT MEDICAL TEXTS
ARE TO THE PHYSICIAN
RIDER BOOKS
ARE TO THE
ELECTRONIC TECHNICIAN**

**RADIO OPERATOR'S LICENSE
Q AND A MANUAL**

by Milton Kaufman

This book is a most complete and comprehensive treatment of the subject and should prove especially valuable as a quick review of essential theory, as well as a refresher for advancement in the field. It lists all the QUESTIONS and ANSWERS for the FCC examinations. However, the outstanding feature of this volume is its thorough FOLLOW-THROUGH... a carefully simplified discussion of the answer to the technical question... so necessary for a complete and absolute understanding of the question. Useful appendices, which include Small Vessel Direction Finders and Automatic Alarm, not ordinarily available in a book of this type, provide a valuable "extra". An indispensable reference volume for the student and operator. 608 pages. 193 explanatory diagrams.

\$6.00

FM TRANSMISSION and RECEPTION

by John F. Rider and Seymour D. Uslan

A "must" book for the radio serviceman who looks to FM and television as an important part of his future earnings. Covers all types of frequency modulation systems employed in TV, radio, amateur radio, railroad, aviation, marine, police, point-to-point and mobile receivers. 416 pages, profusely illustrated.....\$3.60

**TV PICTURE PROJECTION
and ENLARGEMENT**

by Allan Lytel

Timely... Complete... Authoritative

Combines theory with practice, and offers a clear and well-organized explanation of the fundamentals of light, optics and optical systems as employed in home television receivers, with emphasis on projection types and front lens enlargement. 192 pages; 119 illustrations, charts.....\$3.30

BUSINESS HELPER

by Leslie C. Rucker

(Rucker Radio Wholesalers)

Written by a successful business man who started from scratch and worked his way up to a chain of 3 stores. Any one of his many worthwhile ideas can mean fifty times the cost of this book in your pocket. 144 pages; 22 chapters.....\$2.00

OTHER RIDER BOOKS

- The Oscillator at Work. 254 pages.....\$2.50
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278 pages.....\$3.30
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- A-C Calculation Charts. 168 pages.....\$7.50
- Vacuum Tube Voltmeters. 188 pages.....\$2.50
- Radio Amateur's Beam Pointer Guide
32 pages.....\$1.00
- Automatic Frequency Control
Systems. 154 pages.....\$1.75
- Installation and Servicing of Low
Power Public Address Systems
208 pages.....\$1.89
- Understanding Vectors and Phase
158 pages.....Cloth Cover..\$1.89
Paper Cover..\$.99
- Radar—What It Is. 80 pages.....\$1.00

RIDER BOOKS

JOHN F. RIDER PUBLISHER, INC.
480 Canal Street, New York 13, N.Y.

A Look at What's Ahead

• Written especially for RADIO & TELEVISION RETAILING by Harry A. Ehle, vice-president International Resistance Company, Philadelphia. A prime mover in the "Town Meeting" movement, Mr. Ehle has worked consistently on improvement projects within the industry.

January 1, 1950, finds the electronics industry moving at a breathless pace, frightened by the shadows of undreamed of developments, secure only in the knowledge that nothing can stop the industry from growing.

We consistently have a feeling that we are a little bit like a 4th of July fireworks display. We have over the years been putting up the framework then roping off the area and with the last few finishing touches will be ready for somebody, sometime, to light the fuse. Many think that television is the Big Bang. Personally, I just think it is one of a number of displays that will be watched with awe and wonder by young and old. Some of the displays may fizzle out quickly, most of them will undoubtedly prove completely successful.

All kinds of unexpected things are going to happen during the next decade, as a result of the developments during this decade. These developments should multiply and expand at a rate greater than the developments that resulted during the 40's from the work done during the 30's.

If you will review the Lorans, Shorans, Radar, Computers, Television and other large and basic developments resulting from the work done during the 40's, I am sure you will agree that we can expect tremendous developments both in technical and production achievement during the 50's

If you are convinced of this, then you must be convinced that the one permanent thing about this industry is CHANGE. Radical changes in the design, development and the ability to produce television sets must, undoubtedly, occur. Consistent with that, component parts, as we know them, will become obsolete and new and different types in enormous volume must be available. This imposes a severe burden on the technical ability and management of the parts industry. Resulting from these changes will be the need for major changes in the techniques, equipment and mental requirements on the portion of the industry that is responsible for keeping this equipment in operation. Certainly, television alone is going to require many new faces with new techniques, recently trained and, therefore, without preconceived prejudices.

Most of us in the industry are hopeful that we will survive physically in the next ten years. Perhaps this is

a good time to question ourselves as to whether or not we can survive mentally. Whether our ability as an industry to manage our affairs, capitalize on our technical developments, properly present the results to the public and maintain the equipments is a question which each of us should ask ourselves individually and each of us take the necessary steps should we decide to prepare ourselves for the terrific task ahead.

Aggressive leadership in all portions of the industry will be required. Certainly the industry cannot be handicapped by cautious leadership since the very nature of the electronic industry, its essential daring, requires that the individuals who manage its affairs be equally as daring. We will require leadership that not only recognizes that the industry must compete for consumer dollars at a profit with other industries but that the industry by its very nature must at all times provide a public service and in many respects to a greater degree than other industries.

Operate as a Group

Our ability to control people's minds through sight and sound forces us to assure them freedom of expression and to wisely provide communication without bias. As an industry, we have a basic responsibility in international relations since the medium that we use not only knows no national boundaries but has, insofar as we know, very few space limitations.

Since we can expect change and rapid change in a rapidly growing and dynamic industry involving highly technical skills, we must recognize that within the industry we are completely interdependent on each other and that cooperation between individuals and groups is an absolute necessity if we are to assume the above responsibility.

The factor of growth and potential growth is so enormous that it should convince us that as individuals we can afford to be unselfish and operate as a group since it must be apparent to all that there will be more than enough business, more than enough profits, more than enough security for all who are currently in the industry at the present time.

During the next ten years we face the perfect American challenge just as other industries in days past faced the same challenge; let us be aware of the mistakes that they made and of the good things that they did; let us prepare our minds for CHANGE with full realization of our fundamental responsibilities and full recognition of the wisdom of achieving mutual trust and cooperation.

Willard H. Sahloff



Dr. W. R. G. Baker, vice-president and general manager of the electronics department, General Electric Co., has announced the appointment of Willard H. Sahloff, above, as manager of the GE receiver division at Electronics Park, Syracuse, N. Y.

Carl Hollatz Named

Carl J. Hollatz has been retained as a consultant to the sales division of the Tube Department, Radio Corporation of America, it is announced by L. S. Thees, general sales manager of the department. Mr. Hollatz will make his headquarters in Chicago.

The TV Outlook for '50

"There will be no changes in television sets for the first few months of 1950." This statement was made by Louis I. Pokrass, chairman of the board of the Tele King Corporation. "When changes are made, they will be in sizes and shapes of tubes and sets, rather than in performance," he said. He pointed out that changes in television manufacture will probably follow the trend of the automobile industry when it went into efficient assembly line production. Most changes will be in design and size, and not performance. More transmitting power will clear up images on the so-called fringe area.

Service on television is now no more frequent or difficult than radio service. Perfected television should operate for a year or more without service calls, if the customer has received proper instructions in operations at the time of purchase and installation, according to Mr. Pokrass.

Tricraft Representatives

Tricraft Product Company, 1535 N. Ashland Ave., Chicago, manufacturers of a complete line of antennas for radio, FM and television, has announced the appointment of these new representatives: To cover metropolitan New York: Ben Joseph, 551 Fifth Ave., New York, N. Y. To cover the state of Michigan: A. P. Williams, RR 1 Box 62, St. Joseph, Mich. To cover Illinois and Wisconsin: Jack West, 6747 N. Octavia Ave., Chicago.

WHAT A BASIC MEDICAL REFERENCE LIBRARY IS TO THE PHYSICIAN... RIDER MANUALS ARE TO THE ELECTRONIC TECHNICIAN



And, should you ask any Doctor — "What does your medical reference library mean to you?"

His answer probably would be— "Medical science grows more complex every day. And while no man can be expected to retain the millions of details in his mind, he **MUST** have them **AT HIS FINGERTIPS**. My library furnishes me with **COMPLETE, ACCURATE and AUTHENTIC DATA**. It gives me all of the factual information that I want... **WHEN I NEED IT.**"



And now, ask yourself— "What Do **RIDER MANUALS** mean to me?"

Your answer probably would be— "Electronic science grows more complex each day. And while no man can be expected to retain the millions of details in his mind, he **MUST** have them **AT HIS FINGERTIPS**. My **RIDER MANUALS** furnish me with **COMPLETE, ACCURATE and AUTHORIZED MANUFACTURER'S DATA**. They give me all of the factual information that I want... **WHEN I NEED IT.**"

RIDER MANUALS ARE EQUALLY IMPORTANT TO YOU IN YOUR WORK!



RIDER RIDER MANUAL XX TV MANUAL VOL. 3

★ Larger Page Size, 12" x 15"!
All Pages In Place!

★ Easier To Use!

★ Complete, Accurate, Authentic Data
Direct From The
Manufacturers Themselves!

74 manufacturers. 441 models. 243 chassis. Easier to use than ever before. Diagrams and related text are more closely positioned. Giant pages have been retained, but now have only one fold for greater convenience and durability. For greater efficiency, for more information, for more value for your money, order **RIDER TV MANUAL Vol. 3** from your Jobber!

Equivalent of 2032 Pages (8 1/2 x 11) Plus
Cumulative Index Volumes 1, 2 and 3,
Plus the famous Rider "How It Works"
Book Complete **\$21.00**

Available Soon at Your Jobber's. Reliable, authentic, factory-authorized servicing information covering the latest AM-FM Radio, Auto Receivers, Record Changers, etc. Complete in every respect, but with the added advantage of text and double spreads assembled in position. More than 1700 pages. More than 70 manufacturers. Price \$18.00. Publication February 1950.

PLACE YOUR ORDER TODAY! NOW!

RIDER MANUALS

Television Manual Volume 3 (Plus "How It Works" Book and Index).....	\$21.00
Television Manual Volume 2 (Plus "How It Works" Book and Index).....	\$18.00
Television Manual Volume 1 (Plus "How It Works" Book and Index).....	\$18.00
Volume XIX	\$19.80
Volume XVIII	\$19.80
Volume XVII	\$16.50
Volume XVI	\$ 8.40
Volume XV	\$19.80
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Volume VI	\$12.50
Abridged Manuals I to V (one volume).....	\$19.80
Master Index, Covering Manuals, Vols. I to XV.....	\$ 1.50
PA Equipment Manual, Vol. I.....	\$18.00

NOTE: Are you receiving your copy of "Successful Servicing"? It's Rider's own publication of interest to every Serviceman. Write for it... it's FREE!

JOHN F. RIDER PUBLISHER, Inc., 480 Canal Street, New York 13, N. Y.
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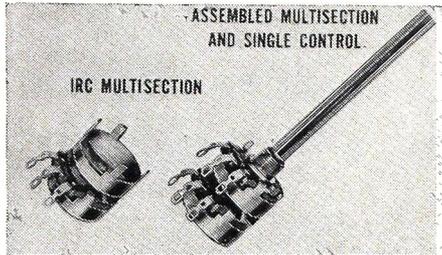
RIDER MANUALS mean SUCCESSFUL SERVICING

NOTE: The Mallory TV Service Encyclopedia, 1st TV Edition, makes reference to only one source of TV receiver schematics - Rider TV Manuals.
NOTE: The Mallory Radio Service Encyclopedia, 6th Edition, makes reference to only one source of radio receiver schematics - Rider Manuals.
NOTE: The C-D Capacitor Manual for Radio Servicing, 1948 Edition No. 4, makes reference to only one source of receiver schematics - Rider Manuals.

Technical New Products

IRC MULTISECTION CONTROLS

A technician can assemble his own ganged controls by means of Multisections, which are complete control sections that can be added to any of the recently an-



nounced IRC miniature Q, PQ or RQ volume controls, just as switches are attached. 17 different standard resistance values from 1000 ohms to 10 megohms are available. International Resistance Co., 401 N. Broad St., Philadelphia 8, Penna.—RADIO & TELEVISION RETAILING.

Immanco REPLACEMENT WASHERS

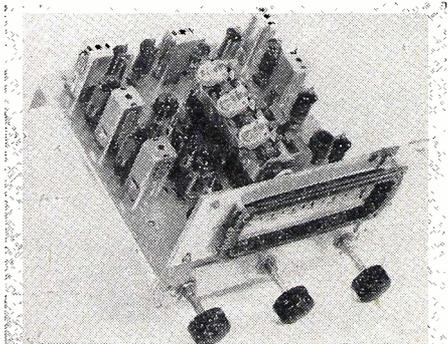
Immanco hard vulcanized fibre washer assortment provides 24 different sizes of replacement washers in separate compartments of a hinged-cover box. Each assortment contains more than 1000 washers. List price is \$4.33. Insulation Mfrs. Corp., 565 W. Washington Blvd., Chicago 6, Ill.—RADIO & TELEVISION RETAILING.

All Channel TV ANTENNAS

Conical type antennas of aluminum construction available with single element, with reflector, and stacked, from \$8.25 to \$45.80 list. For catalog sheet, write All Channel Antenna Corp., 153 W. 72nd St., New York 23, N. Y.—RADIO & TELEVISION RETAILING.

Approved AM-FM TUNER

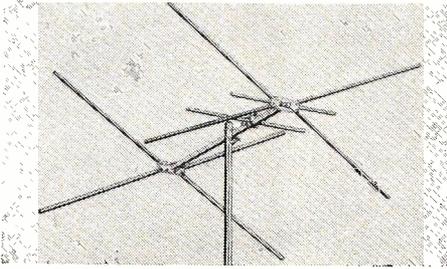
Model A-710 is a high quality 12-tube AM-FM tuner featuring small size (8¼x 5½x8 inches) and choice of either horizontal or vertical mounting. Net price is



\$57.50. Separate power supply required is available for \$10.95 net. Approved Electronic Instrument Corp., 142 Liberty St., New York 6, N.Y.—RADIO & TELEVISION RETAILING.

Insuline TV ANTENNA

Known as the "Bi-Con" this antenna is of the modified conical type, with separate high and low frequency reflector elements.



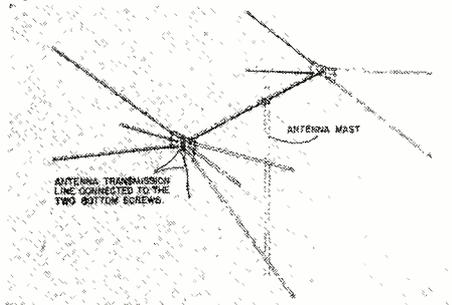
The basic 2-element "Bi-Con" lists for \$13.50. A 2-stacked array lists for \$29.50. Insuline Corp., of America, 3602 35th Ave., Long Island City 1, N.Y.—RADIO & TELEVISION RETAILING.

V-M 3-SPEED RECORD CHANGERS

Model 406 "Tri-O-Matic" record changer plays automatically all sizes and speeds of records, plays 10" and 12" records of the same type intermixed, and shuts off after the last record. List price is \$56.50, and \$59.50 when mounted on metal base. Model 407 incorporates the same features but is "custom-styled" and lists at \$60., and \$63.50 mounted on metal base. V-M Corp., Benton Harbor, Mich.—RADIO & TELEVISION RETAILING.

Tricraft TV ANTENNAS

The new "3000" hi-lo conical Type X antenna series are pre-assembled, and are said to be all-wave and high gain on all channels. Constructed of aluminum, the



Type X antennas are available in single, double or quad element assembly with or without mast. Tricraft Products Co., 1525 N. Ashland Ave., Chicago, Ill.—RADIO & TELEVISION RETAILING.

Lyon REVOLVING BINS

Circular storage bins revolve in either direction on roller bearings to increase visibility and availability, for repair shops, stockrooms, etc. 4 and 7 shelf units are 34" in diameter. A counter top unit is 17" in diameter. Lyon Metal Products, Inc., Aurora, Ill.—RADIO & TELEVISION RETAILING.

Recorder Sales Growth Continuing

• The numbers, both of types and applications, of speech and music recording devices have undergone tremendous growth since the war and promise to increase far beyond present horizons. We now have disc cutting, disc embossing, and magnetic disc; magnetic wire; magnetic tape; photographed sound on film, embossed sound on film, and magnetic sound on film.

We have recorders (of practically every type) for home, professional and business use, including: home recording for parties, for voice training, for music lessons, for a record of children's growth, for recording of radio programs, etc.; public schools and music schools use recorders for educational purposes; business uses include dictation, telephone answering and recording of messages, recording business conferences and sales messages, technical as well as sales training courses for employees; stores use recorders for demonstrators and attention getters; broadcasting stations use recorders to keep a record of programs and also to distribute programs to affiliated stations; and, of course, recording companies make phonograph records for retail sale. And this list of types and applications of recording is by no means complete, as new ones appear every month.

Potential Market

From the retail point of view, sales of recorders will usually be for home, school and office use, since professional users utilize different channels of distribution. RADIO & TELEVISION RETAILING conservatively estimates recorder sales for 1950 at 400,000 units. There are in the neighborhood of 500,000 home recorders in use already, with the total number of recorders in use over 1 million, not counting the great quantity of cylinder-type office dictating machines which were in use before the war.

Accessory Sales

Recording materials (blanks, discs, wire, tape, cylinders, film reels, needles, etc.) represent a sizable and ever-growing business in themselves which is expected to equal in dollar volume this year the sales of original equipment. Magnetic tape and wire recorders, which advertise (and justifiably) that the recording medium may be used over and over, nevertheless represent substantial sales due to the fact that most users wish to save the recording made rather than erase it.

Already assuming the proportions of an important industry in itself, the recorder business will mean many plus dollars to the alert retailer this year.

Nation-wide
ACCEPTANCE
 on Proven Superiority



ANCHOR
TV PRE-AMPLIFIER

SOUTH BEND, IND.—"We have found Anchor TV Pre-Amplifier to be superior in performance to anything else on the market. It has been a profitable item on which we have built up dealer good will."

COMMERCIAL SOUND & RADIO CO.—A. E. Kester, Pres.

PHILADELPHIA, PA.—"Anchor Booster's consistency, its high gain and its performance in outer fringe areas have built for it a reputation which cannot be beat in our area. The excellency of this product has opened up many television areas and many additional sales in Television Receivers, their component parts and accessories."

RADIO ELECTRIC SERVICE COMPANY OF PENNSYLVANIA
 Albert N. Kass, Sales Manager

Here are several messages from enthusiastic distributors all over the country!



ANCHOR has established general

acceptance and good will for good boosters through its own top notch performance . . .

The unanimous, *proven* verdict of users! Anchor's engineering has not been approached in its efficiency—nor will it ever be. For Anchor's booster-specialization has developed this outstanding leadership and will continue.

Why then be satisfied with imitations? It is ANCHOR that is every day building the demand for the most reliable Booster—making more sales for dealers—adding good will.

DEPENDABILITY—WITH INSTANT SALES APPEAL

With 2½ times average gain (Voltage Ratio), and guaranteed coverage of low and high band, ANCHOR wins your customers with its compact, beautifully styled, precision construction. Also by their pride in knowing they are getting the best!

Tie this Anchor Booster into every television sale.

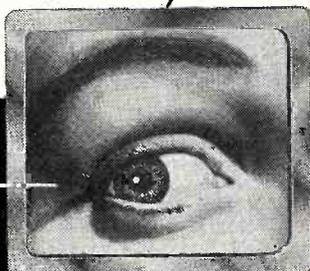
Get in touch with your jobber at once.
 LIST PRICE \$37.50

ANCHOR ENGINEERING ALWAYS A YEAR AHEAD

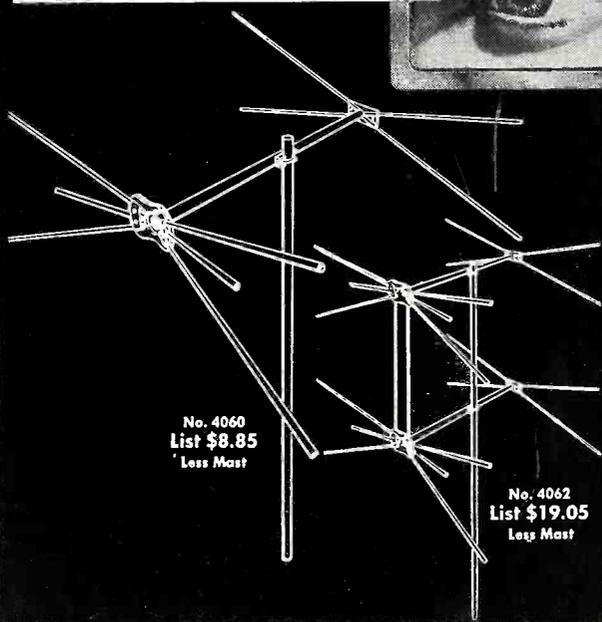
ANCHOR
 RADIO CORP.
 2215 S. St. Louis Ave.
 Chicago 23, Ill.

only WALSCO

gives so much
 for so little...



crystal-clear TV reception.



No. 4060
 List \$8.85
 Less Mast

No. 4062
 List \$19.05
 Less Mast

**amazing antenna
 out-sells all others!**

only
only
only

WALSCO features a *silicone-treated styron molded insulator* to assure crystal-clear TV reception.

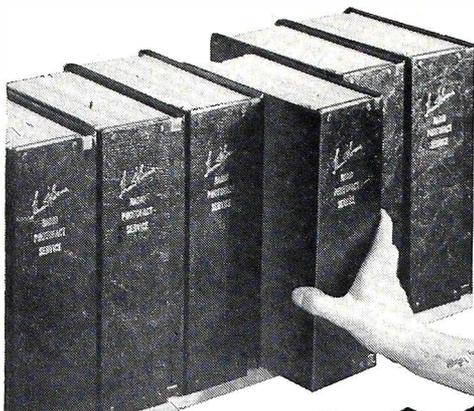
WALSCO uses *marine type high tensile dural* for elements . . . with a "yield point" 94% higher than ordinary aluminum.

WALSCO uses a *butt-seamed tubing* for elements to assure the *highest* elasticity.

WRITE FOR FREE ILLUSTRATED CATALOG 49-T

WALSCO New TV Alignment Tools are used everywhere. Available at your local jobber.

WALTER L. SCHOTT CO.
 Beverly Hills, California
 Chicago 5, Illinois



Reach for **BIGGER PROFITS** in your Service Dept.!

PHOTOFACT lays dollars right smack in your hand

**SAVE TIME
BOOST OUTPUT
SIMPLIFY WORK
CUT PARTS STOCK**

**Proved in
Hundreds of
Service
Shops!**

Your service department will show *bigger* profits with PHOTOFACT on the job! It's the *only* Service Data based on actual laboratory analysis of all postwar AM, FM and TV receivers. Uniform, accurate, complete—it helps your men turn out *more jobs in less time!* It standardizes proper servicing procedures, cuts errors and waste, minimizes your parts stock inventory. PHOTOFACT *pays for itself* because it saves time and labor, because it *guarantees* bigger radio repair profits. Put PHOTOFACT to work on your service bench *now*—you'll earn the thanks of your men—and *you'll earn more!*

FREE! Photofact Folder of your choice!

Learn for yourself—at our expense—how PHOTOFACT earns bigger radio repair profits for you! Ask for a FREE Folder covering any postwar AM, FM or TV receiver of your choice. Examine it. Put it to work at your service bench—then judge for yourself.

WRITE FOR FREE FOLDER TODAY!

HOWARD W. SAMS & CO., INC.

HOWARD W. SAMS & CO., INC.
2205 EAST 46TH ST., INDIANAPOLIS 5, IND.

- Send FREE PHOTOFACT Folder covering following receiver
- Send full details on the PHOTOFACT Service Data Library.

Name
Address
City Zone State
Attn.

DuMont Daytime Shows

Commenting on the new daytime-network television programming by the DuMont Television Network, Ernest A. Marx, general manager of the receiver sales division, Allen B. DuMont Laboratories, Inc., stated:

"This additional daytime programming on a network basis will be an added stimulus to the sale of television receivers.

"It will be of special help to dealers in that it will give them two hours each afternoon to demonstrate television to prospects. The additional ten hours of programming each week, and the opportunity for afternoon demonstration by dealers, will result in a marked increase in receiver sales."

Snyder Using Dualcoted Steel in TV Aerial Masts

Announcement has been made through Dick Morris, sales manager of Snyder Mfg. Co. of Philadelphia, that TV masts for its Redi-Mount and Head-Line Aerials are now being made of Walker Dualcoted steel.

Exclusive with Snyder, the Walker Dualcoted steel masts, it is claimed, offer greater protection against corrosion. Preventing corrosion from salt water, acids and caustics, the Walker Dualcoting process gives the masts a

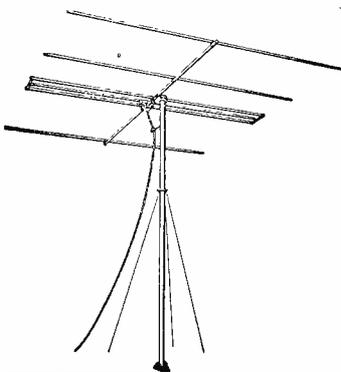
tough, flexible coating that sticks in any kind of weather. Both inner and outer tube walls are protected by a double safety coating that will not crack or chip if bent during installation.

Hasemeier Resigns

Warren L. Hasemeier, vice-president in charge of sales of the Wilcox-Gay Corporation, Charlotte, Michigan, submitted his resignation to become effective January 1st. Mr. Hasemeier has been active in the radio industry since 1925. He joined the Wilcox-Gay Corporation in 1936 as sales manager to establish a national distributor organization for the company's products. He was elected to the board of directors in 1940 and was made vice president in 1941. Mr. Hasemeier states that he has not made definite plans for the future.

Capehart Distributors

The appointment of Tri-State Supply Company, Chattanooga, Tenn., as distributors for the Capehart line of television receivers and phonograph-radios in eastern Tennessee is announced by C. R. Ward, sales manager of Capehart-Farnsworth Corp., Fort Wayne, Indiana, a subsidiary of the International Telephone and Telegraph Corporation.



TRIO
ANNOUNCES
SOMETHING *new*
IN
YAGIS

A new type double folded dipole developed by Trio solves Construction and Engineering problems to give improved performance and sturdy light weight.

High Gain—10 db on optimum channel.

High Front-to-Back Ratio—over 25 db. Maximum suppression of minor lobes to give sharp directional pattern.

Ease of Assembly and Installation—6 bolts for complete assembly.

Light Weight—only 5 lbs. for channel 5, 2¼ lbs. for channel 9.

Flexibility—more than one bay may be mounted on mast with independent orientation of each.



List price with mast and mounting hardware, Channels 2-6 **\$35.00**

Antenna bay only Channels 7-13 less mast **\$14.95**

Order Model No. 304 by channel number. If not available through your jobber, write for details. Choice distributor territory still available.

TRIO MANUFACTURING CO., GRIGGSVILLE, ILL.

RCA Victor Ad Director



Ralston H. Coffin, shown, has been appointed director of advertising for the RCA Victor Division, Radio Corporation of America, it was announced by Robert A. Seidel, vice-president in charge of distribution.

Hallierafters Jobbers

Three new distributors of Hallicrafters have been announced by Rollie J. Sherwood, general sales manager. The Home Products Sales Co., 2530 N. Broad St., Philadelphia, has been appointed to cover the Quaker City area. Principals in the newly-formed company are Robert B. Rosenfeld and David Rosenbloom. Other lines handled are Kitchen Craft Cabinets and Estate Ranges. The United Radio Supply Co., New Britain, Conn., has been selected to cover the state of Connecticut and part of western Massachusetts. This long established company is headed by Victor Morrell. The Crest Corporation, 3949 Forest Park Blvd., St. Louis, Mo., will handle St. Louis and surrounding counties. President is William Schmidt. Among the other lines the company distributes are L and H Ranges and Geneva Kitchen Cabinets.

Fred D. Wilson



At a meeting of the board of directors of the Capehart-Farnsworth Corp., Fred D. Wilson, above, was elected president.

"SERVICE?"
It's in the dictionary...
and at your
TUNG-SOL
DISTRIBUTOR



Sure, when you place an order with a distributor you want it delivered promptly. That's service! And there's a distributor right near you to whom that word "service" means just that . . . plus a lot more that is mighty valuable to you.

He's your Tung-Sol distributor and in addition to getting your order to you quickly, service means keeping abreast of technical developments in radio and television . . . being informed of the best values in sets and components . . . knowing the requirements of his dealers and reflecting that knowledge in a full and balanced stock of supplies . . . keeping up

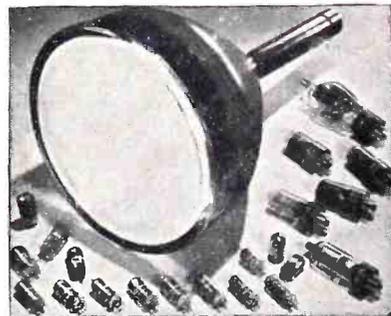
with manufacturers merchandising plans so that you can take fullest advantage of their profit-making possibilities.

It is because of these service standards that that distributor has his Tung-Sol franchise. He carries a full line of Tung-Sol "vibration-tested" Radio and Television Tubes. They are made to highest standards of quality which includes 77 individual manufacturing tests. Give your orders to your Tung-Sol distributor. You'll like his service.

TUNG-SOL LAMP WORKS INC.
Newark 4, N. J. • SALES OFFICES:
ATLANTA • CHICAGO • DALLAS • DENVER
DETROIT • LOS ANGELES • NEWARK

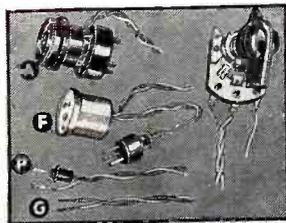
TUNG-SOL
TELEVISION TUBES
RADIO TUBES
DIAL LAMPS

ALSO AUTO LAMPS, ALL-GLASS SEALED BEAM LAMPS & FLASHERS



Make Extra Profits . . . selling and installing

Installation is easy. We furnish Plug Adaptors to fit most cars at no extra cost. Illustrated below.



MAGNA-TONE uses the QUAM Adjust-a-Cone speaker, made expressly for rear seat application. Has unusual power handling capacity needed in auto speakers. Large diameter 1-inch voice coil. Distinctive chromium grill enhances car interior. Quality throughout. Established manufacturer.

MAGNA-TONE
Auxiliary
AUTO SPEAKERS



Only \$12.95 list
with full trade margins

AERO-TONE
MFG. CO., INC.

4836 Joy Road, Detroit 4, Mich.

All three are...

favorites



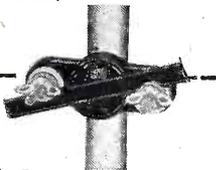
RMS

TV PREAMPLIFIER SP-4



Provides average gain of 4 to 6 times over entire television range—actually rejects a high percentage of outside interference. Has individually shielded input, output and power sections; complete unit shielded against outside and TV receiver interference.

RMS



LIGHTNING ARRESTOR LA-1

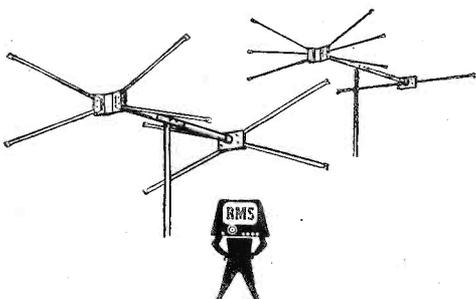
Takes twin lead or coaxial cable. No wire stripping on 300 ohm. No input loss.

RMS

all channel

VERSACONE

2 antennas in 1! By simply shifting the rods in the versatile preassembled insulator and reflector plate, conical arrangements of 6 front, 2 back or 4 front and 4 back can be made in seconds!



RADIO MERCHANDISE SALES, INC.
1165 Southern Boulevard, New York 59

**Hytron
RECTANGULAR PIX TUBE**

Hytron Type 16RP4 is a 16-inch all glass TV picture tube with a rectangular screen, designed to permit smaller, less



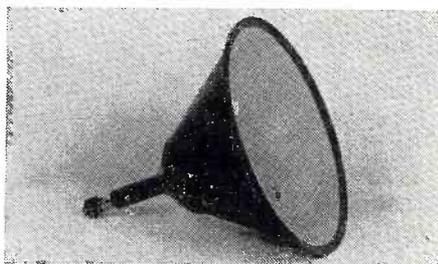
costly cabinets. Usable screen area of 138.7 square inches utilizes entire transmitted picture. Weight of the tube is approximately 2/3 that of 16-inch all glass round tube. Hytron Radio & Electronics Corp., Salem, Mass.—RADIO & TELEVISION RETAILING.

RCA SHORT 16-INCH TUBE

RCA Type 16GP4, 5½ inches shorter than the present 16AP4, measures 17½ inches long. Utilizing 70-degree deflection angle, the tube has a "filterglass" face plate for greater contrast. New receiving tubes, yokes, transformers and associated components for use with the 16GP4 will be available. Tube Dept., RCA Victor Div., Camden, N.J.—RADIO & TELEVISION RETAILING.

GE 16-INCH TUBE

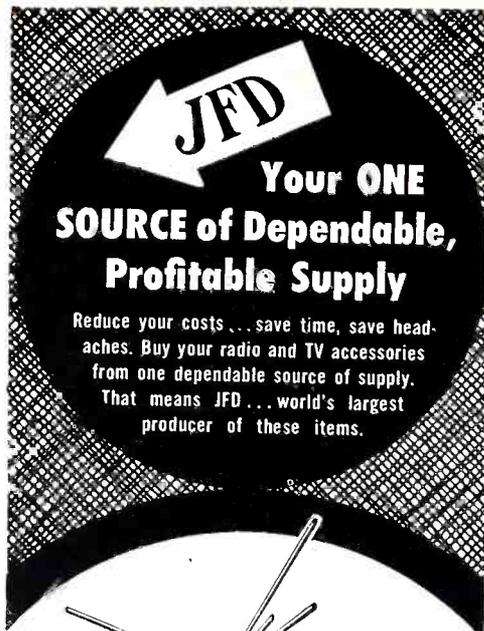
Type 16GP4 is a new wide-angle 16-inch metal picture tube five inches shorter than conventional tubes of this type. Overall length of the tube is roughly 17½ inches. The new tube will also feature a "filter-glass" face plate, said to improve picture contrast by reducing halation and cutting



down reflections. It has also been announced 12-inch tubes 12KP4 (aluminized) and 12LP4 (non-aluminized) will have "filter-glass" counterparts, the 12KP4A and 12LP4A, which will carry list prices of \$47.10 and \$44.40 respectively. General Electric Co., Electronics Park, Syracuse, N.Y.—RADIO & TELEVISION RETAILING.

Flippen TV ANTENNAS

A complete line includes single element foldeds, hi-lo inline types, hi-lo piggy-back types, stacked foldeds, conicals and stacked conicals. For complete description and prices, write Flippen Mfg. Co., P.O. drawer 29, Santa Ana, Calif.—RADIO & TELEVISION RETAILING.



JFD
Your ONE SOURCE of Dependable, Profitable Supply

Reduce your costs... save time, save headaches. Buy your radio and TV accessories from one dependable source of supply. That means JFD... world's largest producer of these items.

JFD C370

"COMMANDAIR"
ALL-BAND
CONICAL with

HIGH FREQUENCY ELEMENT

Here's proof positive of the JFD leadership in the field. No better performance... no lower price.

\$10.50
LIST

JFD
"DRIVE-IN"
INSULATORS

Nobody...but nobody...has a greater variety of insulators than JFD. These are typical values.

No. NT100 for twin lead (Illustrated)

No. NT100 (3½")—No. 8 wire)	List, ea. 9c
No. NT200 (3½")—No. 6 wire)	List, ea. 12c
No. NT207 (7")—No. 6 wire)	List, ea. 15c

9c
LIST

Write for FREE JFD Catalog of TV Accessories No. TV100

More than a catalog, it contains installation and servicing data of invaluable interest to every Serviceman.

Also FREE for the asking... JFD Catalog of Radio Accessories, No. 438.



JFD

MANUFACTURING CO., Inc.
6103 16th Avenue
Brooklyn 4, N. Y.

FIRST IN TELEVISION ANTENNAS AND ACCESSORIES

Astatic Executives



William J. Doyle, left, general sales manager, Astatic Corp., Conneaut, O., goes over a batch of fan mail from users of the firm's new "Channel Chief" television booster, with F. H. Woodworth, company president.

Show Space Sold Fast

All booth space at the 1950 Parts Distributors Show has been sold—nearly six months in advance of the Show dates, May 22nd-25th at the Hotel Stevens, Chicago—Kenneth C. Prince, Show manager has announced. This year's rush for space on the part of electronics components manufacturers exceeded any in the previous history of the Show, Prince said.

In Raytheon Sales Post

James J. Tynan, general sales manager of Equipment Sales Division, Raytheon Manufacturing Co., Waltham, Mass., has announced the appointment of Albert E. Keleher, Jr., as manager of Raytheon's mobile radiophone sales.

Battery Prices Down

A price reduction from 12½¢ to 10¢ for the RCA-VSO36 "sealed in steel" flashlight-type radio "A" battery has been announced by the RCA Tube Department. The RCA-VSO36 is a premium radio "A" battery designed especially for radio use. This battery features a steel jacket which not only keeps it fresh for years, but minimizes corrosion, leakage, and swelling. A special radio mix, in contrast to that used in the conventional flashlight battery, insures long life under conditions encountered in radio operation.

Philco Toy Bank



Toy television bank, an exact miniature of a Philco TV set, is designed to help the family save for a full sized television set, and to offer the children a series of fast action pictures on an illuminated screen. Retail cost is approximately \$1.50, with dealers refunding cost of toy when a full sized set is purchased.



LIST PRICE
\$49⁵⁰

ADDITIONAL FEATURES

- 1 Self-contained power supply operating from 115 volt, 60 cycle AC power line.
- 2 On-off switch allows booster to be switched in or out of the circuit at will.
- 3 Recessed pilot light indicates when booster is on.
- 4 Beautiful, furniture-finish mahogany cabinet (8-1/2" wide x 6-1/2" high x 7-3/8" deep) to complement fine home furnishings.
- 5 Simple to install and operate—complete instructions with each unit.



A Radically Improved New Type of
TELEVISION BOOSTER
Offering Great New
**ADVANTAGES IN
RECEPTION AND TUNING**

THE ASTATIC
Channel Chief

THE NEW ASTATIC CHANNEL CHIEF, Model AT-1 Television Booster, eliminates the common failing of many boosters—showing a "peak" on some channels and "fall-off" on others. The Channel Chief provides extremely high gain, uniform on all 12 television channels. Its dual controls allow separate tuning of picture and sound, with no sacrifice of one for the other. A variable gain control permits reduction of signal strength to prevent picture distortion when the signal input is greater than that required for good definition. Altogether, the results are the considerable extension of fringe areas, good reception in areas previously rated as unsatisfactory, easier tuning and added selectivity on any receiver, elimination of the need for expensive outdoor antennas within service areas. The

increased selectivity serves to reduce drastically, or eliminate, interference. No other booster can do so much . . . for you or for your customers. Write for added details.

Leading Manufacturers of Microphones, Phonograph Pickups, Cartridges and Related Equipment.

THERE'S A LEADER IN EVERY CROWD

TACO
LAZY X

- Antennas may look alike from a distance. But COMPARE them side-by-side for ease of assembly, structural strength, TV performance, and you'll see why TACO is the leader.
- Taco Lazy X (illustrated) is an all-band antenna with a uniform high gain throughout both bands. FOR REAL RESULTS, INSTALL A TACO!

WRITE FOR DETAILS AND CATALOG

RADIO AND ELECTRONIC EQUIPMENT

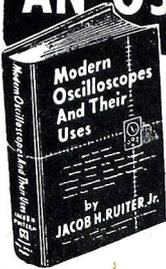


TECHNICAL APPLIANCE
CORP.
SHERBURNE, N. Y.

In Canada: Stromberg-Carlson Co. Ltd., Toronto 4, Ont.

JUST OFF PRESS!

**Now you'll really
know HOW TO USE
AN OSCILLOSCOPE**



Don't let the oscilloscope "stump" you!

Learn to use it fully—and watch your efficiency soar. This easy-to-understand book by an expert gives you the facts and how-to-use-it-data you've been wanting.

MODERN OSCILLOSCOPES AND THEIR USES

by JACOB H. RUTER, Jr.

of Allen B. Du Mont Laboratories, Inc.
326 pages, 370 illustrations, \$6.00

This big book gets right down to earth in explaining oscilloscopes (cathode ray oscillographs) and showing exactly how to apply them to specific AM-FM-TV service jobs. No involved mathematics! First the author explains oscilloscopes fully. Then, in easily understood terms, he tells exactly how to employ them on specific jobs—from locating receiver troubles to aligning and adjusting the most complicated circuits..

WHAT IT IS—HOW IT WORKS



1. Introduction to Oscilloscopes
2. History of the Oscillograph
3. The Development of the Cathode Ray Tube
4. Principles of Cathode Ray Tube Operation
5. Details of the Modern Cathode Ray Tube
6. The General Purpose Oscilloscope
7. Power-Supply Circuits
8. Amplifiers, Attenuators, and Positioning Circuits
9. Time-Base Circuits

HOW TO USE IT ON THE JOB

10. Operation of the Oscilloscope
11. Interpretation of Basic Patterns
12. Auxiliary Equipment
13. Typical Applications in the Electronic Industry
14. Servicing A-M Radio Receivers
15. Servicing F-M Radio Receivers
16. Servicing Television Receivers
17. Use of the Radio Transmitter
18. Using the Oscilloscope in Teaching
19. Additional Industrial Uses of the Oscilloscope
20. Photographing Cathode Ray Patterns (a) Glossary

EASY TO UNDERSTAND

Each operation is carefully explained including the making of connections, adjustment of circuit components, setting the oscilloscope controls, and analyzing oscilloscope patterns. About 400 illustrations, including literally dozens of pattern photos, make things doubly clear.

Besides its radio and TV uses, you learn about many oscilloscope applications in industry and medicine. Send coupon today for your copy of MODERN OSCILLOSCOPES AND THEIR USES. If not more than satisfied, return it after 10 days and we'll gladly refund the purchase price.

10 DAY MONEY-BACK GUARANTEE

Dept. RTR-10, MURRAY HILL BOOKS, Inc.
232 Madison Ave., New York 16, N. Y.

- Send me a copy of MODERN OSCILLOSCOPES AND THEIR USES for which I enclose \$6 (\$6.50 outside U.S.A.) or
- Send book C.O.D. (U.S.A. only) for \$6 plus postage. I will pay postman.

In either case, if book is not satisfactory, I will return it in 10 days and you guarantee to refund my \$6.

Name

Address

City, Zone, State

Sylvania RECEIVING TUBES

A number of new types have been announced: 12AY7, duo-triode audio amplifier for 1st audio amplifier stage; 6BC5, sharp-cutoff pentode RF amplifier for TV use equivalent to 6AG5 but with higher gain; 6BQ6GT, horizontal deflection amplifier for TV; 1L6, miniature pentagrid converter for portable radios; 1W4 pentode



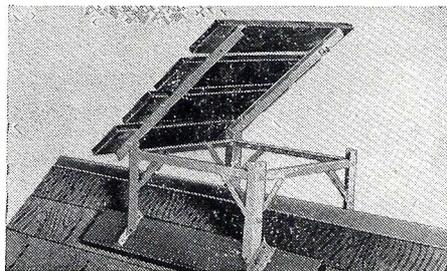
power amplifier and 1C3 triode amplifier or oscillator, both for portables; 7X6 lock-in type high vacuum rectifier for power supply; and 6 new miniatures, 6BT6 and 12BT6, 6BK6 and 12BK6, 6BU6 and 12BU6, to replace types 6AT6, 12AT6, 6AV6, 12AV6, 6BF6 and 12BF6 respectively. Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N.Y.—RADIO & TELEVISION RETAILING.

Sprague HYPASS CAPACITORS

"Hypass" 3-terminal feed-through capacitors are suited to minimizing TV interference from amateur transmitters, or for attenuating power-line interference from diathermy machines, electronic heating, and other high frequency signal sources. The units are available in a complete line of capacities and voltages (up to 5000 volts). Bulletin M-432 describing this development will be sent on request. Sprague Products Co., North Adams, Mass.—RADIO & TELEVISION RETAILING.

Radiodyne TOWER PLATFORM

Model HT-5 hinge-top tower mounting platform facilitates mounting TV antenna towers on flat or peaked roofs. Size wood



platform, approximately 28"x28", height overall—12". List price, each F.O.B. Racine \$27.50. Western Coil and Electrical Co., 215 State St., Racine, Wis.—RADIO & TELEVISION RETAILING.

Willard "B" BATTERY

A new flat-pack 90 volt radio "B" battery features a new construction consisting of 15 flat cells sealed into a 22½ volt pack. Four such packs are used in the new battery, which measures 3¼x1¾x3⅝ inches. Willard Storage Battery Co., 246 E. 131 St., Cleveland, O.—RADIO & TELEVISION RETAILING.

CORROSION-PROOF!

Snyder
PHILADELPHIA

TV

MASTS
OF
walker
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DUALCOTED
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Designed as low priced "business builders," the Melodier line includes models E-9 and C-14. Both have acoustic reproduction



and 78 RPM AC motors. C-14 is the portable version, E-9 is a table model. Waters Conley Co., Rochester, Minn.—RADIO & TELEVISION RETAILING.

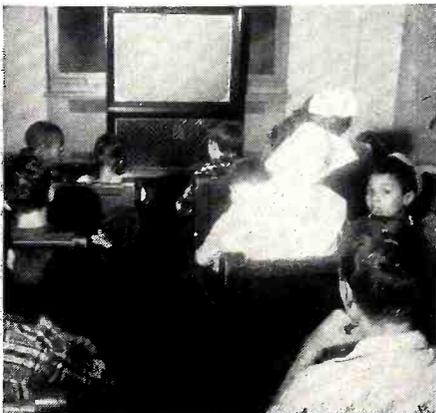
Eicor TAPE RECORDER

New case styling and design feature the Model 15 magnetic tape recorder, while retaining the basic engineering de-



sign of the Model 1000 which it replaces. The leatherette case includes compartment for mikes, cords and tape. Weight is 27 pounds, price \$134.95. Eicor, Inc., 1501 W. Congress, Chicago, Ill.—RADIO & TELEVISION RETAILING.

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Trad Theatre-Size video set entertains patients in Kings County Hospital, Brooklyn, N. Y.

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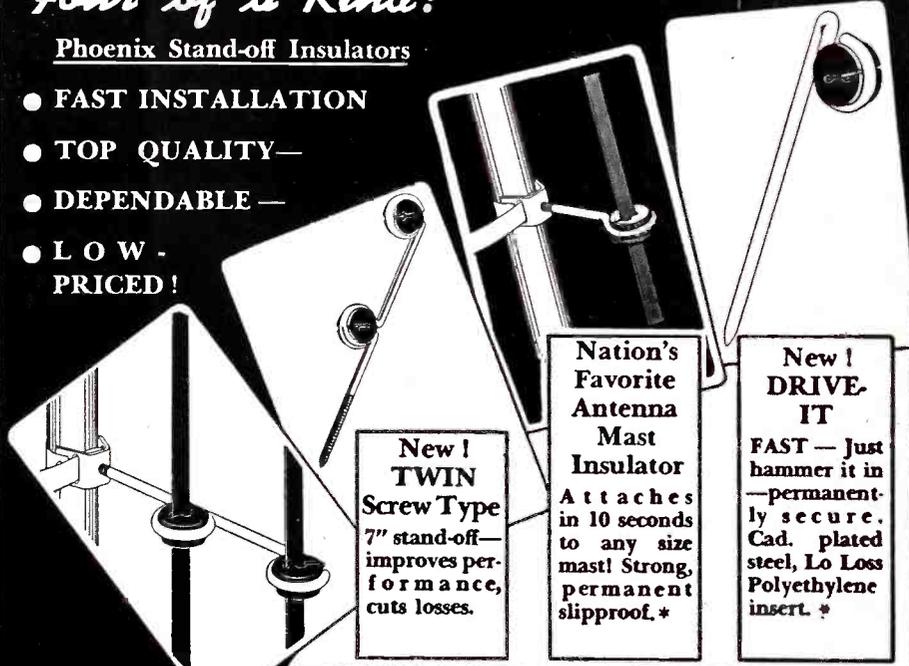
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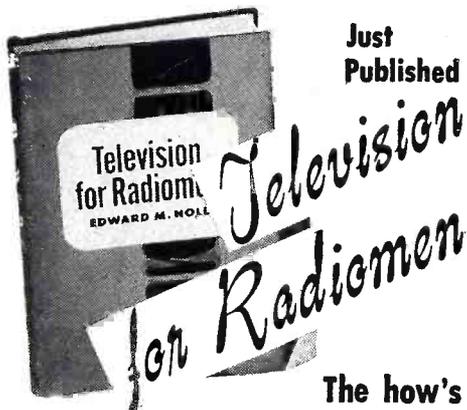
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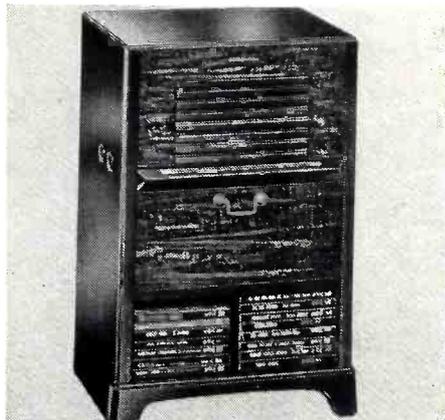
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New Products

RCA RADIO-PHONOGRAPHS

Two new console radio-phonographs (models 9-W-78 and 9-W-106) feature separate turntables for 78 and 45 RPM records, plus AM-FM radio. 9-W-78 retails for \$199.95, 9-W-106 for \$269.50. Model 9-W-51 (shown) is a chest-styled console combining



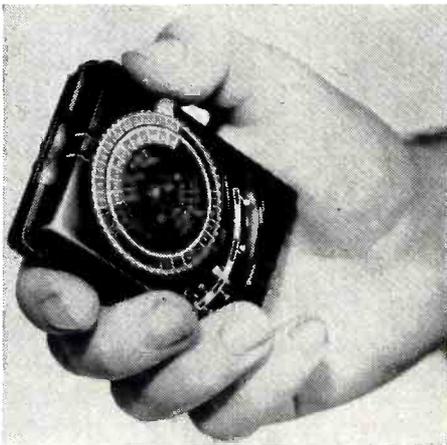
a standard band radio with 45 RPM record changer, plus album storage, and lists at \$99.95. Also announced is a new 45-RPM portable amplified record changer, Model 9-EY-31, in simulated leather carrying case, to retail at \$49.95. RCA Victor Division, Camden, N. J.—RADIO & TELEVISION RETAILING.

Electro PHONE AMPLIFIER

"Magnatele" is an electronic amplifying device which fits under a telephone and, without connection to it, amplifies all conversation. Operated with batteries, the unit facilitates conferences and other business uses of the telephone, permitting the user to have both hands free. List price is \$39.50. Electro Engineering and Mfg. Co., 627 W. Alexandrine, Detroit 1, Mich.—RADIO & TELEVISION RETAILING.

Lloyd EXPOSURE METER

The "Red Dot" photographic exposure meter utilizes the principle of comparing a light of known value against the scene illumination. The meter is calibrated for



film speeds from 6 to 400 ASA and has a range of shutter speeds from 2 seconds to 1/800th, apertures from f:1.4 to f:45. Meter sells for \$4.75. Lloyd Mfg. Co., Houtzdale, Penna.—RADIO & TELEVISION RETAILING.

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Philson New Location

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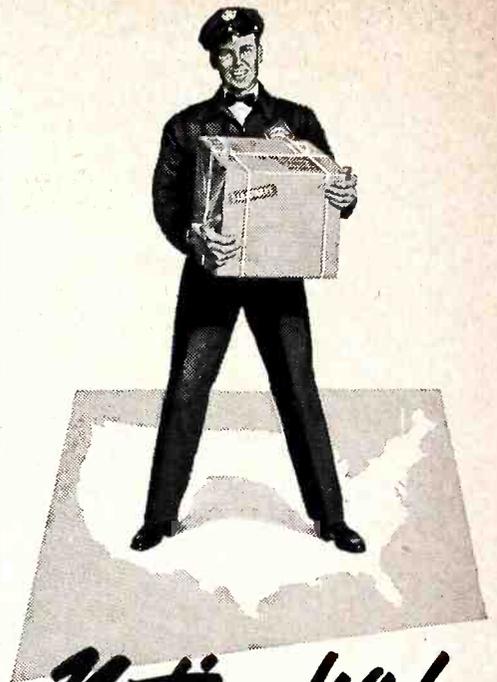
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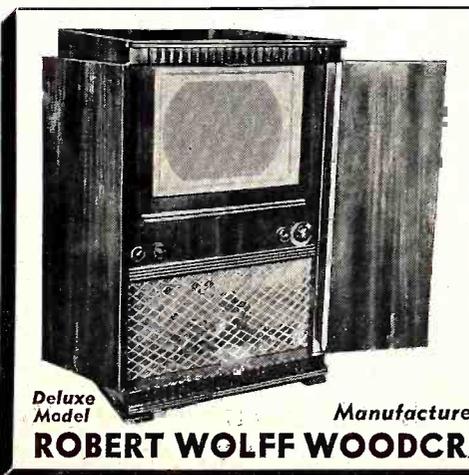
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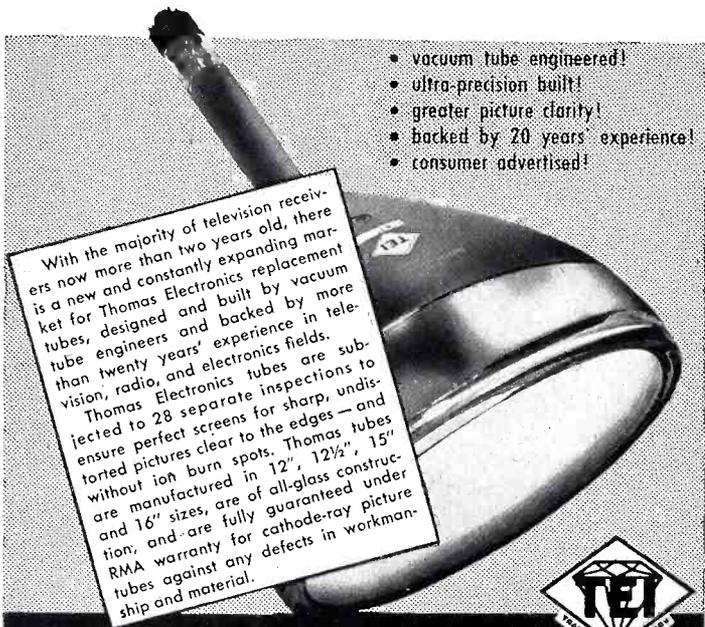
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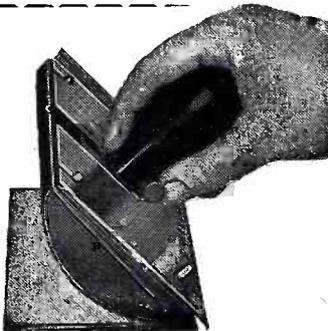
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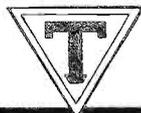
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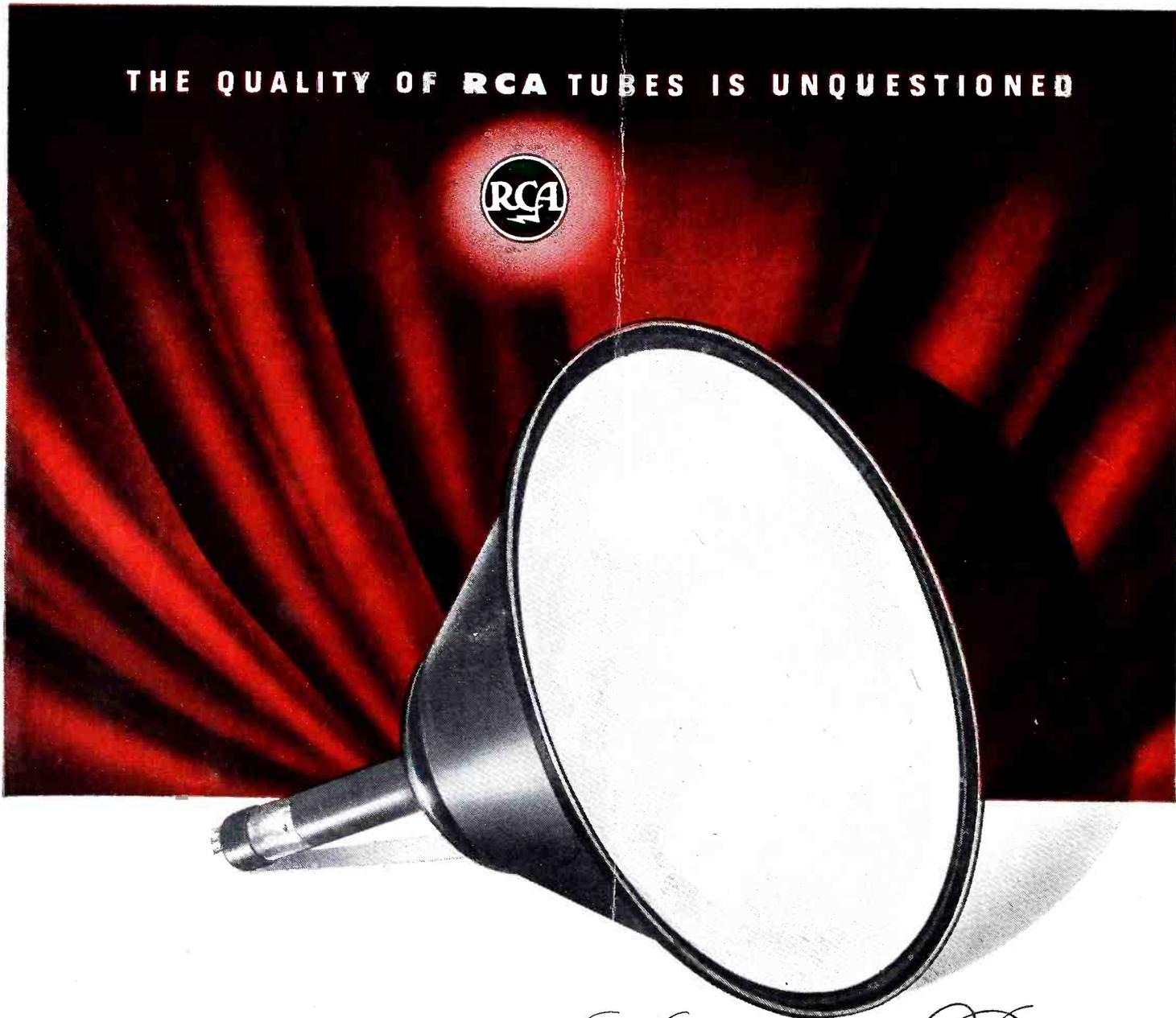
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