



**RADIO AND TELEVISION**

# *Service News*

A PUBLICATION OF THE RCA TUBE DIVISION

**MARCH-APRIL**

**1954**



*Close-up photograph of the shadow mask used in the RCA 15GP22 tricolor kinescope. Through the mask's microscopic holes are projected the beams of electrons emitted by the red, blue, and green electron guns. The mask's screen-like structure permits each beam to strike its proper phosphor dots located on the viewing screen.*

## **IN THIS ISSUE**

	Page
RCA 15GP22 Tricolor Tube .....	2
Some Steps to Success For the Aspiring TV Service Dealer.....	3
New RCA WR-89A Crystal-Calibrated Marker Generator..	4
Radio Phono TV Tips.....	5
Distinctive Gold Label Identifies Genuine RCA Replacement Speakers ...	7

**Vol. 19, No. 1**



# RCA 15GP22

## TRICOLOR TUBE . . . The Heart of Compatible Color TV

The RCA 15GP22 tricolor television picture tube is now being produced commercially by the Radio Corporation of America in its Lancaster, Pennsylvania tube plant. The transition from the developmental stage of the color kinescope to its production in quantity follows years of pioneering research by RCA. The commercial production of the RCA 15GP22 is the climax of a series of important developments which have made all-electronic, compatible television a practical reality.

### Prototype Demonstrated in 1950

The history of the tricolor kinescope is a chronicle of color television itself. The need for this tube was long recognized as vital to the complete development of a practical, all-electronic color-television receiver. An early prototype of the RCA 15GP22 was demonstrated by the Radio Corporation of America for the first time on March 29, 1950. RCA then informed the television industry that as soon as development of the tricolor tube had progressed sufficiently, specific usable information about it would be given to RCA licensees. That promise was fulfilled in a symposium held during the summer of 1951.

### Samples Supplied to 177 Companies

Each manufacturer attending the meeting (who was engaged in color television development) was supplied, upon request, a tricolor kinescope and a set of associated components without charge. Likewise, tube manufacturers engaged in color television development work were given a complete set of parts for the color kinescope.

As part of this industry sampling program, 152 companies were given kinescopes and the necessary components. By mid-March of 1953, close to 500 tricolor kinescopes had been supplied by RCA to 177 companies. And by the end of October, 1953, approximately 1,000 tricolor kinescopes had been shipped.

### Symposium in 1953

On July 15, 1953, information on the design and production of an improved RCA tricolor tube was made available to virtually the entire radio-television tube manufacturing industry at a technical symposium held in New York.

### Representatives of TV Tube Industry Tour RCA's Lancaster Plant

Less than a month afterwards, on August 12 and 13, RCA took

representatives of the television tube industry on an inspection tour of its plant at Lancaster, Pennsylvania. There, they were shown the RCA tricolor tube in pilot production and were supplied additional technical information.

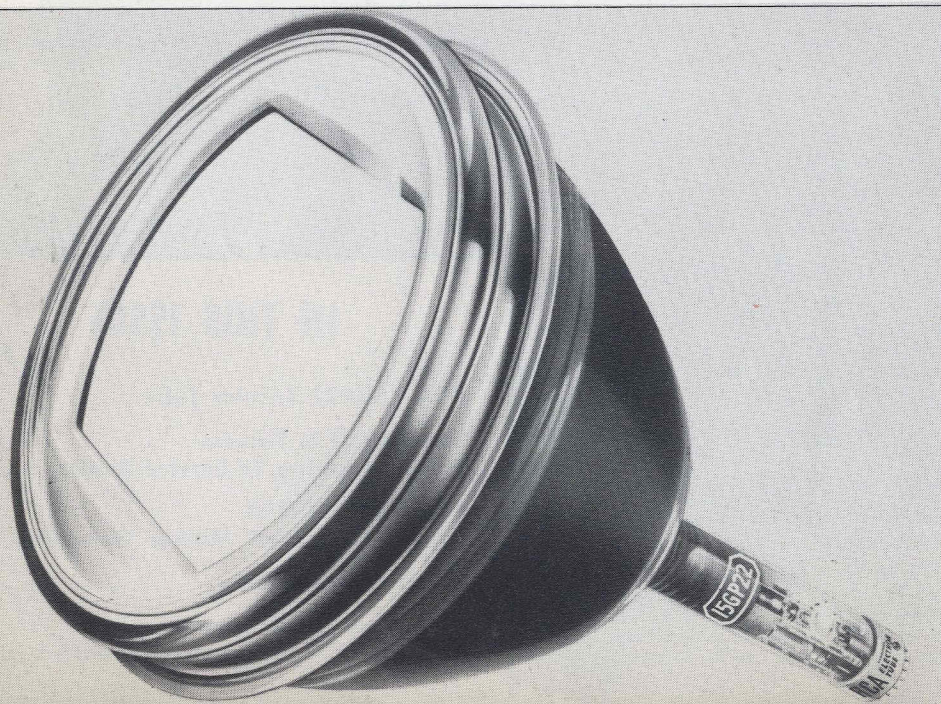
### Manufacture of 15GP22's

Today, the production lines of the RCA Lancaster plant are rapidly being changed over to provide expanding facilities for the manufacture of RCA 15GP22 tricolor kinescopes. Now, the vast manufacturing experience, the ingenious mass-production machinery and total floor space formerly allocated to black-and-white kinescopes are being devoted solely to the production of color picture tubes. A triumph of precision fabrication, the tubes are being manufactured on machines conceived and developed by RCA engineers, and manned by a staff of highly-skilled technicians with long background and experience in television picture-tube fabrication. RCA's resources and engineering skill are dedicated to producing tricolor kinescopes of the highest quality.

### Description of the RCA 15GP22

The RCA 15GP22 is a direct-viewed tricolor kinescope of the glass-envelope type for use in color

(Continued on Page 4, Column 3)



RCA RADIO AND TELEVISION

**RCA**

## Service News

A PUBLICATION OF THE RCA TUBE DIVISION

RCA RADIO & TELEVISION SERVICE NEWS is published in the interest of servicemen and service dealers. It is written to assist them in providing better service, and to foster the growth of their business by supplying them with information on the latest trouble-shooting and sales promotion techniques, sales and service aids, together with invaluable data on RCA tubes, batteries, electronic components, and test equipment.

RADIO & TELEVISION SERVICE NEWS is a bi-monthly publication of the RCA Tube Division, Harrison, N. J.

Copyright 1954  
Radio Corporation of America

Joseph Pastor, Jr.  
Editor



# SOME STEPS TO SUCCESS FOR THE ASPIRING TV SERVICE DEALER

A Common-Sense Philosophy of Business-Building Tips

By Harold B. "Dusty" Rhodes\*

I am the owner of a radio and television service business. As in any business, an owner has many problems that must be solved. Like many businessmen, I expend a great deal of time and effort seeking solutions to the many problems that continually arise.

This is all part of the responsibility we must accept if we want to be successful. Why do we work so hard to be successful? I can only speak for myself—I have two primary objectives in mind. Practically every move I make is motivated by a desire to accomplish one or both of these goals.

## Financial Security

The first is probably common to everyone in all types of business, namely financial security. Naturally, all of us desire sufficient income and reserves to care for our family and our business. We want the feeling of stability that goes with an adequate income and freedom from debt.

## A Reputable Businessman

The second is also of vital importance to me and should be to you. I want to be recognized as a reputable businessman in a profession that has standing in my community and throughout the nation. I don't want to be known as a "screwdriver mechanic." I don't want to be referred to as one of those guys in "that TV repair racket." I don't want to be looked at with suspicion by many people with whom I may do business.

I'm proud of the profession I've chosen. I'm proud of my reputation for personal integrity, and mighty proud of the many friends I have made who trust me and give me the opportunity to do business with them.

Unfortunately, a small minority in our business has done everything possible to destroy public confidence in the TV service industry. It is our job to rebuild that public trust to a point where we as a group hold our rightful place in the business community.

## "Give" and "Take"

There are many things we, as individuals, can do to help attain this goal. But most of these moves can be far more effective if they are made by the concerted effort of a large group working toward a common goal.

Life is not a one-way track, there must be some "give and

take." The trouble is that too many have the idea that it should be all "take" and no "give"!

## Immediate Financial Return

When some proposal is made that might react to the common good, many are too ready to say, "let George do it." Unless they see an immediate financial return, they are far too busy with their own affairs.

Let's be honest, and stop blaming the manufacturer, the jobber, our competitor, and everyone else for the headaches and problems in our business. Tomorrow morning, take a good long look in the mirror . . . you'll see one of the guys that's to blame for most of our problems. That's right — we can blame nobody but ourselves!

## "Enemies of Service"

Given half a chance, any one of these so-called "enemies of service" are ready to be your friend. I'm no Pollyanna, believing that the sun will always shine, but if you try spreading a little "sunshine" for others, you may find

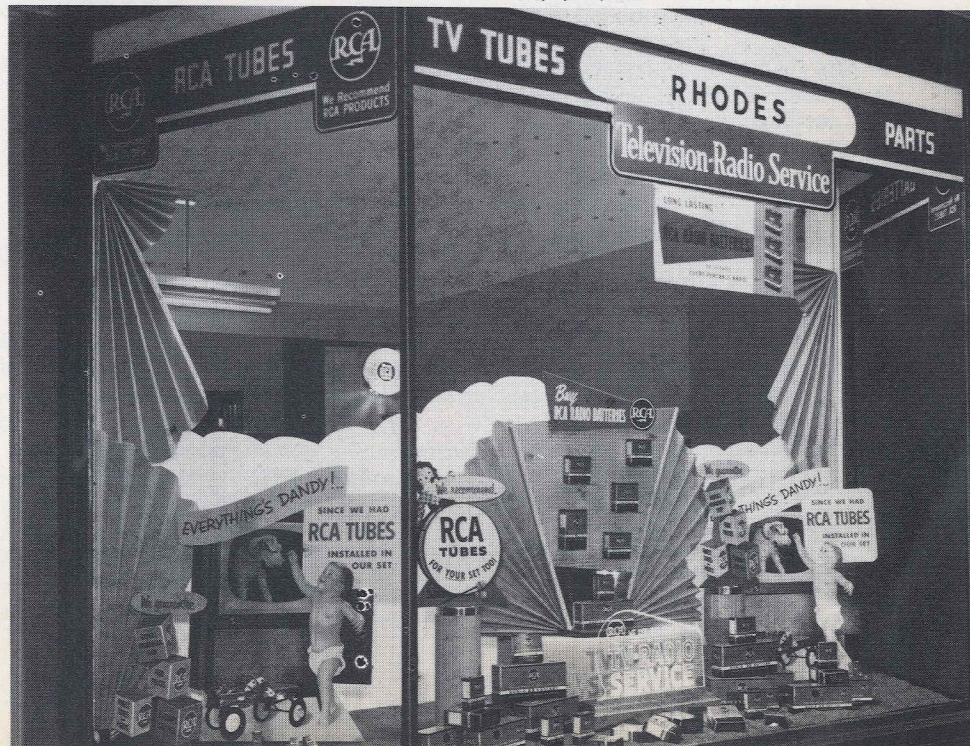
(Continued on page 6, Column 1)

## \*ABOUT THE AUTHOR

Harold B. "Dusty" Rhodes owns and operates Rhodes' Radio and Television in Paterson, New Jersey. "Dusty" is president (fourth term) of the Radio and Television Servicemen of New Jersey, and chairman of the Eastern Conference of Television Service Associations. Also, he is the Eastern Secretary of NATESA (National Alliance of Television and Electronic Service Associations), and a member of the Board of Directors, Retail Division, of the Paterson Chamber of Commerce.

Rhodes' Radio and Television was established in 1945, but "Dusty" is a radio man from 'way back . . . his ham-radio experience goes back to 1920; he has held the calls 2AXV and W2IKW.

A good example of the effective use of window area . . . store front of Rhodes' Television-Radio Service located in Paterson, N. J. Note the permanent identification provided by the RCA valance. Current RCA display pieces are strategically located to stop prospective customers.





# NEW RCA WR-89A CRYSTAL CALIBRATED MARKER GENERATOR

An Unusually Versatile Instrument Designed to Save Time in the Servicing of TV and FM Receivers

Featuring continuous tuning, the new RCA WR-89A Crystal-Calibrated Marker Generator is a basic instrument for use in alignment and trouble-shooting TV and FM receivers and other equipment operating in the frequency range from 19 to 260 Mc.

## Several Functions

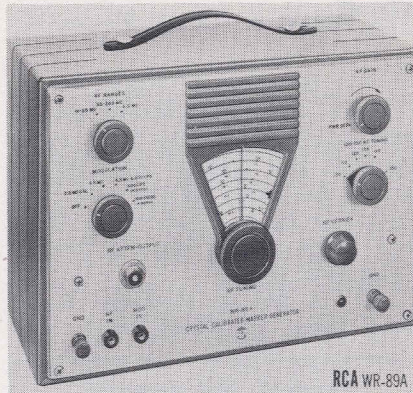
Accurate and versatile, the WR-89A combines the functions of a single, dual, or triple marker generator, a vertical and horizontal bar-pattern generator, a rebroadcast transmitter, and heterodyne frequency meter. A harmonic crystal oscillator is also included to provide highly accurate calibrating beats at 96 different check points, spaced at 2.5-Mc intervals, throughout the tuning range.

## Fundamental-Frequency Output

Two variable-frequency oscillators are used to cover the two VFO tuning ranges. Output is on fundamental frequencies; no beat notes or harmonics are used. The output is at least 0.1 volt (rms) — more than adequate for all service work. A built-in speaker facilitates zero beating the VFO signal with a harmonic of the 2.5-Mc calibrating oscillator or with an external signal fed into the calibrator.

## Internal Modulation

Several different types of internal modulation may be selected by means of a front-panel control. When, for example, the WR-89A is used with a sweep generator and an oscilloscope to reproduce a sweep-response curve, the 4.5-Mc crystal oscillator will modulate the output to produce dual markers



spaced exactly 4.5 Mc apart on the curve for use in aligning rf units and picture i-f amplifiers.

The 4.5-Mc oscillator is also used to provide a separate output signal. This 4.5-Mc output signal may be modulated with 600 cps for visual alignment of the FM detector. An adjustable modulating frequency of 100-150 Kc is also available for making measurements of the bandwidth of FM detectors and sound-i-f amplifiers.

The 600-cps modulation may be applied alone to produce a horizontal bar pattern when the output signal is set to the frequency of the picture carrier or to the picture intermediate frequency.

For additional details on the WR-89A, see your RCA Test Equipment Distributor. Ask him for a copy of the WR-89A flyer; it contains a description of this instrument, complete specifications, and a list of its outstanding features including a list of applications. The suggested user price of the WR-89A is only \$242.50.

### In this One Versatile Instrument You Get:

- **Multiple-Marker Generator** (accurate, crystal calibrated). Single, dual, or triple markers for complete alignment of tuners, i-f amplifiers, and sound detectors of TV receivers.
- **Bar-Pattern Generator.** For checking both vertical and horizontal deflection linearity of a TV receiver.
- **Rebroadcast Transmitter.** When video and sync information from a TV receiver is fed into the WR-89A, you can use the generator as a rebroadcast transmitter to produce a TV picture on any VHF channel of another TV receiver.
- **Heterodyne Frequency Meter.** When an external rf signal is fed into the WR-89A, you can use the generator as a heterodyne frequency meter for measuring precisely the frequency of the external signal.

## RCA 15GP22 TRICOLOR TUBE

(Continued from Page 2)

television receivers. It is capable of producing either full-color or black-and-white pictures 11½ in. by 8½ in. with rounded sides.

This picture tube utilizes three electrostatic-focus guns spaced 120° apart with axes parallel to the tube axis, together with an assembly consisting of a shadow mask and a plane, tricolor Filter-glass phosphor-dot (screen) plate located between the shadow mask and a clear-glass faceplate. The three beams are converged electrostatically and deflected magnetically.

The tricolor, phosphor-dot plate, which serves as the directly viewed screen, carries an orderly array of small, closely spaced, phosphor dots arranged in triangular groups (trios). Each trio consists of a green-emitting dot, a red-emitting dot, and a blue-emitting dot. The phosphor-dot plate has approximately 195,000 dot trios or 585,000 dots. It is metalized after application of the phosphor dots to give increased light output and contrast as well as to prevent ion-spot blemish.

The metal shadow mask, interposed between the electron-gun structure and the phosphor-dot plate, contains round holes equal in number to and centered with respect to the dot trios.

The RCA 15GP22 is rated for a maximum ultor voltage of 20,000 volts. It has an overall length of 26½ inches, and weighs approximately 25 pounds.

### Associated Components for Use with the RCA 15GP22

Simultaneously with the development of the 15GP22 tricolor picture tube, RCA has also developed a comprehensive line of electronic components for the high-voltage supply and the deflection circuits of the 15GP22. These include:

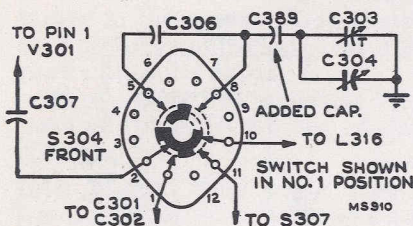
Deflecting yoke; horizontal-output and high-voltage transformer; purifying coil, beam-positioning magnets, and neck-shield assembly; vertical-deflection-output transformer; field-neutralizing coil; horizontal-oscillator and sync-stabilizer coil; vertical-blocking-oscillator transformer; horizontal-dynamic convergence phase control; horizontal-linearity control; vertical dynamic-converging and dynamic-focusing transformer; horizontal dynamic-converging and dynamic-focus transformer.



# RADIO PHONO TV \* TIPS

## MODEL 9TW390 RADIO CHASSIS Addition of Capacitor

A .05- $\mu$ f capacitor, C389, was added between terminal 8 of S304 (front) and tuning capacitor C303/C304 in radio chassis RC617A. Early production models of this receiver do not have this capacitor in the radio chassis.



When the radio function switch is in the TV position, filament voltage is present on the high side of the tuning capacitor due to the function-switch design. Any shorting of the tuning capacitors to ground will cause L314 to burn out. Insertion of capacitor C389 removes filament voltage from the tuning capacitor without affecting its operation.

## BARKHAUSEN OSCILLATION

The usual effect of Barkhausen oscillations is one or more dark, sharply defined vertical lines on the left side of the picture or raster. These lines vary in width and/or intensity from one channel to another and from one brightness level to another. They are usually more apparent on the higher-frequency channels and at low-brightness settings. In the worst case, these oscillations tend to upset horizontal synchronization.

The only tube in the set that could cause this interference is the horizontal-output tube because it is the only one that has a positive grid-to-plate potential at any time. The critical voltages are usually reached just about the time when the spot is in the left hand third of

\*Courtesy RCA Service Co.

## RCA's Continuous Quality-Control Program Results in Superior 5U4-G's, 6W4-GT's, and 6AL5's

More and more radio and television servicemen are buying RCA receiving tubes and thus realizing the benefits of RCA's program of continuous quality improvement. As a result of this continuous quality improvement, regular RCA receiving tubes provide the peak performance usually associated with higher-priced, specialty-designed types.

Recent examples of how RCA's continuous quality improvement is geared to keep pace with present and future requirements of radio and television applications are the design improvements of RCA types 5U4-G, 6W4-GT, and 6AL5.

The RCA 5U4-G now has four outstanding quality features leading to greatly increased life over the older version. They are as follows:

(1) A new electrolytic coating on its filament which produces a uniform, hard emitter.

(2) A special composition glass stem which reduces stem electrolysis.

(3) An RCA-developed carbonized plate material which has heat-radiating characteristics approaching those of a black body.

(4) A channel filament which gives the filament rigidity and insures proper plate-filament spacing during life. This channel minimizes bowing of the filament.

The RCA 6W4-GT now has two outstanding quality features con-

tributing to longer tube life and increased reliability. They are:

(1) An RCA-developed carbonized plate-coating material which has improved heat-dissipating properties.

(2) A cathode material which retards the formation of interface and reduces failure caused by sputtering. It also improves the adherence of the cathode coating to the base material.

The RCA 6AL5 has two outstanding quality features making possible greatly reduced microphonics. They are as follows:

(1) Double helical heaters which insure low hum.

(2) Pinched cathodes which minimize cathode shift within the mount.

These outstanding quality features of the 5U4-G, 6W4-GT, and 6AL5 are typical of the results obtained from RCA's continuous quality-improvement program.

A program of this kind is of tremendous importance to the radio and television serviceman. When you buy receiving tubes, you want the best. You want tubes which will eliminate unnecessary call-backs, assure greater customer satisfaction, and result in higher profits. RCA's regular receiving tubes fill this bill. It pays to remember that you can *always* expect *plus* performance from RCA receiving tubes!

the raster.

The following are a few solutions to the problem:

1. Change the setting of the horizontal-drive control.
2. Replace the horizontal-output tube. (The tube being replaced will probably operate satisfactorily in some other chassis.)
3. Change the antenna or antenna lead-in placement.

The first method is critical with respect to line voltage and should be adjusted to give satisfactory operation on all available channels at any line voltage encountered.

Installations using either a built-in antenna or an indoor antenna are often subject to an undue amount of pickup. (If the lead-in is near the high-voltage compartment, such proximity can produce this trouble.)

## MONEY IN YOUR POCKET



Did you read your copy of this booklet which was recently sent to you by your RCA Tube Distributor? It contains an easy-to-read story with a moral that's worth remembering, "Make every week 'Be kind to Kine' week. It's worth money in your pocket!" Don't forget to see your RCA Tube Distributor for an exchange allowance on out-of-warranty kinescopes toward the purchase of new RCA "Deep Image" Picture Tubes.



## RCA WINS AWARD FOR AID TO TV SERVICE INDUSTRY



Presentation of NATESA's award entitled, "To the Friends of Service," to Charles M. Odorizzi (left), Executive Vice-President, Corporate Staff, Radio Corporation of America. This award was voted to RCA, at the last NATESA national convention in Chicago, for significant contributions to the television industry during the past year. Presenting the award to Mr. Odorizzi are Frank Moch (center), president of the National Alliance of Television and Electronic Service Associations, and Harold B. Rhodes (right), NATESA awards chairman and eastern secretary.

### SOME STEPS TO SUCCESS (Continued from Page 3)

that you're getting a good coat of tan yourself!

In looking back a few years, I find that many of my competitors are now numbered among those I consider my close, personal friends. In getting acquainted with them I trust that once in awhile I may have been of some help to them. But I know that they have been of immeasurable help to me.

#### Set Manufacturers' Service Departments

The parts and service departments of radio and TV set manufacturers over these years of development have not put the independent service company out of business. Quite the contrary, some of them have evidenced a sincere desire to be helpful. I can't speak for others, but my experience with the RCA Service Company, for example, has been very pleasant. Managers of local branches have shown a friendly interest in mutual service problems. They have often been very helpful in solving technical problems relating to RCA sets. Sometimes, they have even obtained parts for me when some items were holding up the repair of a set. In these cases, they helped me with my customer-relations problems. They might have hoarded such parts to promote their own business; but remember, they're human too. Maybe they like to get along with their neighbors. I think they do; frankly, I like the guys. As competitors, I have always thought of them as

healthy competition, an asset to the industry.

#### Cooperation

Have you ever taken the time to listen to the manufacturer's side of the story? I have, and remembering that you can always catch more flies with honey than with vinegar, I don't fight with their parts and service department managers every time they happen to be out of something I need. You'd be surprised how many times these same service managers have been helpful to me — sometimes going well beyond the letter of their warranty contracts to do me a favor. But, I have always tried to avoid making unreasonable requests.

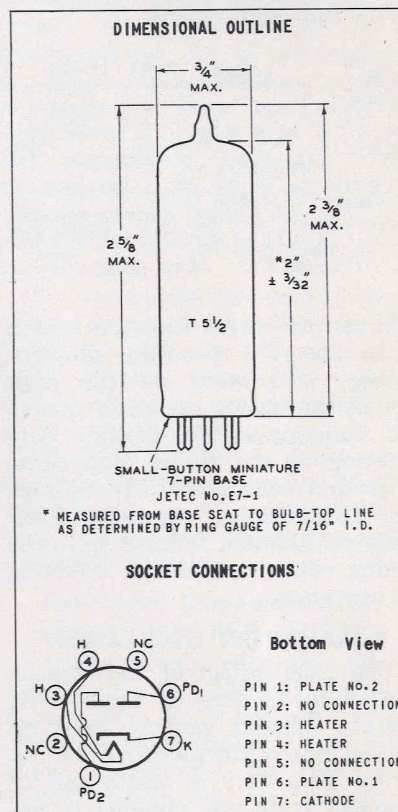
#### Participation in Community Activities

What about the community in which you live and where you have established your business? Do you participate in community activities? Do you belong to the Chamber of Commerce or other trade or civic associations? Do you participate in the activities of these groups, or, "let George do it"? Do you take part in any charitable and cultural activities, or do you keep your head glued to your work bench?

*In short, do YOU give anything to your community in return for the business you expect from your fellow citizens? Oh yes, I know you're a competent technician, but honestly that's not enough! Even*

## RCA 12X4 MINIATURE FULL-WAVE RECTIFIER

The RCA 12X4 is a miniature full-wave, vacuum rectifier intended especially for use in vibrator-type power supplies of automobile radio receivers operating from 12-volt storage batteries. When operated in a full-wave circuit with capacitor input to the filter, and an ac plate-to-plate supply voltage of 650 volts, the 12X4 can deliver about 300 dc volts to the filter at a load current of 70 milliamperes. With choke-input filter and an ac plate-to-plate supply voltage of 900 volts, it can deliver approximately 370 volts to the filter at a load current of 70 milliamperes.



though you give a full measure of honest service for every dollar you charge — it still is not enough!

#### Obligations and the Immediate Dollar Profit

Community life today is a complicated affair. There are many obligations that don't show an immediate dollar profit. These obligations must be met, and as businessmen we should accept our fair share. Our industry is growing up; let's grow up with it. Let's take our proper place in the life of our community and nation!



## DISTINCTIVE GOLD LABEL IDENTIFIES GENUINE RCA REPLACEMENT SPEAKERS

Your customers will be impressed by the improvement you make in their sets when you use RCA speakers. These superior speakers are now clearly identified by a distinctive gold label. Look for the gold label when you buy — and be sure of using only genuine RCA speakers for your replacement needs.

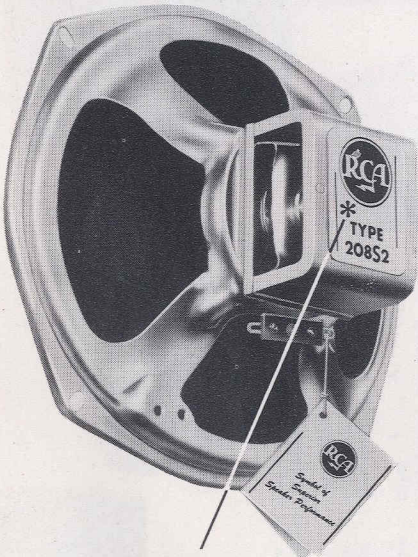
All RCA PM replacement speakers use Alnico V magnets and are designed for high magnetic flux densities in the voice coil air-gap thus producing high sensitivity. High sensitivity means more sound power output from a given audio power to the speaker. Gap designs are carefully controlled to maintain purity of sound output.

Three new PM speakers have been added to RCA's line of quality speakers:

**RCA 216S1.** This 3-inch speaker has a 3.2-ohm voice coil and a 1-oz Alnico V magnet. The suggested dealer price is \$2.22.

**RCA 217S1.** A 5¾-inch speaker having a 3.2-ohm voice coil and an Alnico V magnet. The suggested dealer price is \$2.40.

**RCA 215S1.** Heavy-duty, 10-inch type with a 6-8 ohm voice coil and a 6.8-oz Alnico V magnet. It has a suggested dealer price of \$7.95.



*Symbol* of superior speaker performance

Look for this gold label. It is a symbol of superior speaker performance.

The new gold label which identifies these speakers is your assurance that these speakers represent the superior technical "know-how" and manufacturing techniques that have made RCA the accepted name for high-quality audio products.

For complete information on RCA speakers, see your RCA Distributor.

### Price of WO-88A Reduced \$20

The suggested user price of the WO-88A Oscilloscope (complete with a WG-218 Direct Probe and Cable, WG-216B Low-Capacitance Probe, "slip-on" alligator clip, ground lead, green filter graph screen, and instruction booklet) has been reduced from \$169.50 to \$149.50.

Service technicians will remember the WO-88A as the 'scope which is backed by John R. Meagher's personal endorsement (in addition to RCA's 12-month warranty). Refer back to page 3 of your Jan.-March, 1953 issue of RADIO AND TELEVISION SERVICE NEWS for a complete story on the WO-88A which includes electrical and mechanical specifications.

The "88" is truly a high-impedance "visual voltmeter" which has all the other 'scope features so essential for TV servicing. Before you buy an oscilloscope, be sure to visit your RCA Test Equipment Distributor and see the WO-88A.

## New RCA Vertical-Blocking Oscillator Transformer Covers 900 Models

The new RCA 209T1 Vertical-Blocking-Oscillator Transformer is an open-frame type with a turns ratio of 1 to 4.2.

Over 900 popular TV models on the market today use this type of mounting and turns ratio in the vertical-oscillator circuit.

However, unlike some conventional designs available, the new RCA 209T1 uses cellulose-acetate insulation to withstand the high peak voltages generated in these circuits. This type of insulation also provides additional resistance to moisture absorption. To assure quiet operation as well as long life, the windings of this transformer are impregnated.

The 209T1 can be mounted either above or below the chassis. You'll want to use this new unit in your next job. The 209T1 has a low suggested dealer price of only \$1.65. See your RCA Distributor for more details.

## New Cosine-Wound Direct-Drive Yoke

The RCA 214D1 is a new high-inductance deflecting yoke designed for replacement use in TV sets employing direct-drive, horizontal-deflection systems.

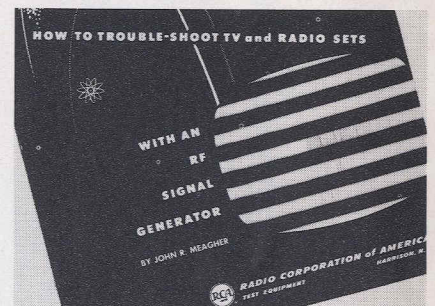
This new 70°-yoke can be used with television picture tubes up to 21 inches in size. It is specifically intended for use in direct-drive TV sets in which the horizontal coils of the deflecting yoke are connected in series with the low-voltage terminal of the fly-back transformer to form part of the direct load for the horizontal-output tube.

A ferrite core is employed in the 214D1 to provide high-deflection sensitivity. The new RCA deflecting yoke features coils of a modified-cosine design specifically wound to maintain full-screen focus.

To facilitate its installation, the yoke has 12-inch, color-coded leads and is supplied with damping and neutralizing elements. A damping resistor is soldered in place across each of the vertical coils; a neutralizing capacitor is soldered in place across terminals 3 and 7 of the horizontal coils.

The horizontal coils have an inductance of approximately 29 mh, and the vertical coils have approximately 3.3 ohms dc resistance. Adequate insulation is provided for use in circuits requiring anode voltages up to 16 Kilovolts.

### ON TROUBLE-SHOOTING WITH AN RF SIGNAL GENERATOR



"How to Trouble-Shoot TV and Radio Sets with an RF Signal Generator" is a new 20-page booklet, written by John R. Meagher, which describes the latest trouble-shooting techniques and many new applications for an rf signal generator. Written in Mr. Meagher's lucid style and generously illustrated with easy-to-read diagrams, this publication is another practical RCA service aid which will prove most helpful to the busy service technician. A copy of this booklet (Form No. 2F785) is yours for the asking—see your RCA Test Equipment Distributor today.





Form 3547 Requested

# \$50,000 "TELL & SELL" CONTEST

## For Dealers and Servicemen\* who use RCA Tubes



**1954 DeSoto Automatic "Hard-Top"**—170-H.P. Fire Dome V8 engine, Power-Flite Transmission, Power Steering... completely equipped, including radio and heater.

**1954 Dodge DeLuxe 1/2-Ton Panel Truck**—complete with "Truck-o-matic transmission," radio, heater and accessories... plus a full set of RCA Test Equipment, aluminum ladder, and winner's business name and address on truck panel.

### Here's all you do—

Get an entry blank from your RCA Tube Distributor Salesman. Complete the following sentence in 25 additional words or less:—

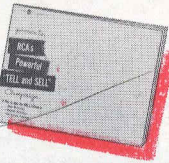
*"I use and recommend RCA Tubes because"*  
It's as easy as that... and you may enter as often as you like, but each entry must be on an official entry blank.

### Hints to help you win

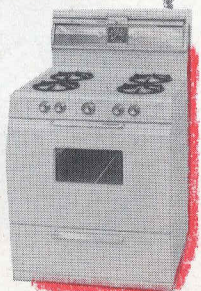
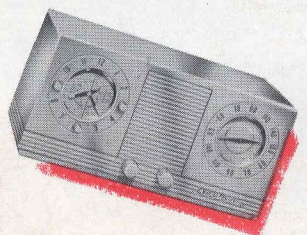
See your RCA Distributor Salesman right away. He has a copy of the "clue book" waiting for you. This book contains full details on the whole exciting "Tell and Sell"

Campaign, including contest rules.

You may win first prize... so don't waste a moment. Contest closes April 30, 1954.



\*Your RCA Distributor Salesman will be glad to help you... because if you win, he wins a duplicate prize!



**400 FABULOUS PRIZES**

**including:**

- \* TV sets
- \* Watches
- \* Cameras
- \* Air Conditioners
- \* Test Equipment
- \* Radios
- \* Ranges

**Compliments of Your Local RCA Distributor**

**RCA**  
Tubes  
Batteries  
Electronic Components  
Test Equipment  
Technical Publications



Durant TV & Radio Serv.  
1264 East Main St.  
Bridgeport, Conn.

Devices and arrangements shown or described herein may use patents of RCA or others. Information contained herein is furnished without responsibility by RCA for its use and without prejudice to RCA's patent rights.

