

## PUBLICATION OF THE RCA TUBE DEPARTMENT



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# New WR-49A RF Signal Generator Has Design Features Not Usually Found in Lower-Priced Instruments

Active radio and TV servicemen already know that a service bench equipped with RCA test equipment is really set up to "turn out the work." RCA test equipment is respected throughout the industry for its accuracy and dependability . . . day in and day out. In addition, there's a further important reason why these muchwanted instruments are considered tops by the service technician: They're designed specifically for him and they're reasonably priced. Take the new RCA WR-49A for example. It not only meets the serviceman's requirements insofar as electrical specifications and quality are concerned, but also contains those "extras" which make this instrument the best buy in its price class... and by a wide margin!

Functional-Design Dial The WR-49A was designed for efficient servicing. RCA's engineers did everything they could to make this instrument a time saver. Note the functional-design dial. It is

#### SPECIFICATIONS

RF Frequency Range	
Maximum RF Output Voltages* (all ranges)	_
At RF OUT HI connector	at least 0.05 volt (rms)
At RF OUT LO connector	at least 0.01 volt (rms)
Accuracy of Dial Calibration	+ 1%
Attenuator Range	,0 65 db
Internal Modulating Frequency	
Internal Percentage of Modulation**	adjustable up to 70%
Audio-Frequency Output	dajusiable up to 70%
Audio-Frequency Output	at least 8 volts (rms) (across 15,000-ohm laad)
External Modulation	
Modulating Frequency	15 Kc max
Voltage required for 30% modulation using 400 cps** Impedance at AF IN/OUT connector (400 cps)	10 volts (rms)
Tube Complement	120117 404
Power Requirements	
Voltage	105 125 volte
Frequency	50.60 cm
Consumption	15 watts
Dimensions	
Height	71/- :-
Width	101/2 10.
Depth	4 in
Weight	0 IL
*Open-circuit value.	0 ID
** With WR-49A tuned to 3 Mc.	

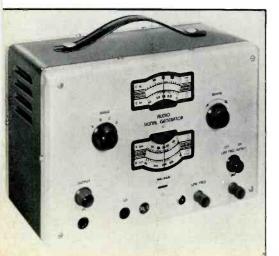
divided into two parts each of which contains three frequency ranges. Note further that the letters "A," "B," etc., appearing alongside each dial range, correspond to the markings on the frequencyrange selector switch which is located immediately to the left of the dial. On the other side of the dial, the end-limits of each scale are clearly marked so there is never any doubt about the coverage of each range. A window-type dial has an additional advantage in that the dial is mounted entirely inside the metal case ... a feature which helps to minimize radiation.

Another feature of the dial arrangement in the WR-49A is the movable hairline index. This arrangement facilitates extreme accuracy of calibration when the dial scale is compared with the frequency of a broadcast station or a crystal standard.

(Continued on Page 7, Column 2)

# RCA WA-44A . . . AN AUDIO SIGNAL GENERATOR OF ADVANCED DESIGN

Even the busiest service technician must have given a few moments of thought to the Hi-Fi market which has mushroomed in the last two years. Those not interested in high fidelity at the moment are apt to overlook the potential profits yet to come to the serviceman from this new source.



Suppose one of your satisfied customers passes your name along to a friend, the owner of an ailing high-fidelity setup . . . could you help him out? What kind of test equipment do you have for troubleshooting audio-frequency equipment?

If you'd like to pride yourself

in being able to tackle any servicing job (home radios, TV, auto radios, P. A. systems, Hi-Fi, etc.), then you should add an RCA WA-44A to the test equipment on your service bench.

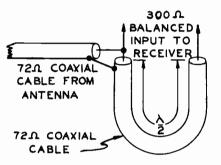
Extended Frequency Range

The frequency range of the WA-(Continued on Page 6, Column 1)

You \	Will Need the WA-44A for Measuring:
	<ul> <li>Intermodulation distortion in amplifiers</li> </ul>
	Amplifier frequency response
	• Frequency response of tone controls
	• Frequency response of phonograph equalizers
	• Input and output impedances of amplifiers
	Resonance frequency of speakers
	• Speed of recorder/reproducer mechanisms
And f	or:
	• Tuning bass-reflex enclosures
	Dating bass-renex encrosures
	• Determining unknown audio frequencies
	Determining inductance and capacitance
	<ul> <li>Tracing audio signals</li> </ul>
	• Determining the resonance frequency of LC circuits
	• Locating cabinet resonance and rattles
and the second s	· Locaring caomer resonance and rattles

#### CO-AX TO BALANCED LINE MATCHING NETWORK

In some locations it may be necessary to use 72-ohm co-ax transmission line between the antenna and the receiver because of interference pick-up. Early receivers employing KRK-2 series rf units are provided with 300-ohm balanced input only. To connect 72ohm co-ax to these early receivers, construct a network as shown below. The matching section should be one electrical half-wavelength long for the picture carrier of the weckest signal received.



#### MODELS 9TC247 & 9TC247 Cracking of Wood Masks

Under certain conditions of temperature and humidity, the wood kinescope mask (Stock No. 74754) in these sets may warp or crack. A new mask has been made available for replacement. The new mask (Masonite) is available as Stock No. 74808.



S1000 AND 9TW390 TV CHASSIS Brightness-Control Range

To increase the range of operation of the brightness control in these receivers, R222 was changed from 47K to 39K. If 9TW390 or early S1000 receivers exhibit insufficient brightness range, this change can be made in the field.

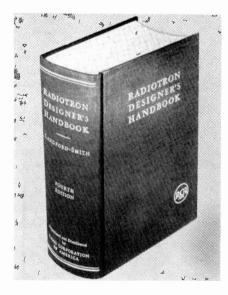
#### CORRECTION OF ERROR IN STOCK NUMBER

The correct stock number for capacitor C138 (100  $\mu\mu$ f, 1000 v) in the instruments listed below is 75060.

10000.		
8T241	9TC240	9TC272
8T243	9T246	9TC275
8T244	9T256	9TW390
8TV321	8T270	9TC245
8TV323	8TC270	9TC247
8TR29	8TC271	9TC249
8TK29	8TK320	T121
9TW333	9T270	T120
9T240		9TW 309
*Courtesy RCA	Service Co.	

## GREATLY-ENLARGED 4TH EDITION OF RADIOTRON DESIGNER'S HANDBOOK NOW AVAILABLE

The RCA Tube Department recently announced the fourth edition of the RADIOTRON DESIGNER'S HANDBOOK. This book was written



for design engineers, students, experimentors, and service technicians interested in the design and practical application of radio and audio circuits and equipment.

Undoubtedly the most comprehensive work of its kind ever published, this latest edition is more than four times larger than the previous edition. The Radiotron Designer's Handbook represents over 12 years of effort by editor F. Langford-Smith and a staff of 33 author-engineers. It contains 1,500 pages, 1,000 illustrations, and a 7,000-item, cross-reference index.

The next time you visit your RCA Distributor, thumb through a copy of the new Radiotron Designer's Handbook—you'll surely want a copy. The price of the new handbook is \$7.00. Copies of this handbook can also be ordered from RCA, Commercial Engineering, Harrison, N. J.

## TV ANTENNA INSTALLATION TIPS

### PART 8—Antenna Orientation

If the TV stations in the service area where the set is installed are not all located in one place (such as the Empire State Building in New York), the orientation of a fixed TV receiving antenna must be a compromise.

The correct orientation can be determined by the temporary use of an antenna rotator and by a comparison of the reception for several directions of the antenna.\* Proceed as follows:

Loosen the bolts and slide the bottom end of the mast clear of the chimney bracket so that the rotator can be positioned on the mast. Place the bottom end of the rotator assembly in the bracket.

Connect the rotator control box at the set and operate it to rotate the mast for the best reception of the *low*-frequency channels.



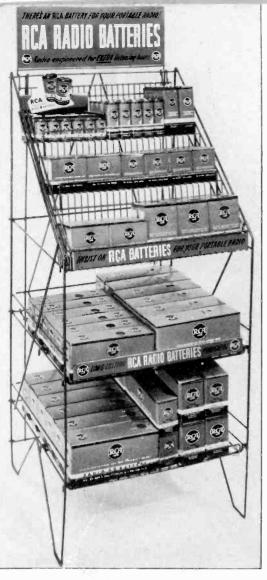
Return to the roof and mark the top mast clamp of the chimney bracket to indicate the proper direction of the low-frequency antenna. Identify this mark with an "L."

Go back to the set and rotate the mast for the best reception of the high-frequency channels. Then return to the roof and mark the mast position for proper orientation of the high-frequency antenna.

Remove the rotator and tighten the mast in the bracket in accordance with this last marking.

Loosen the low-frequency antenna mast clamp and rotate that antenna to the proper position as indicated by the mark "L." Replace the transmission line in the standoff insulator. END OF SERIES

"In Part 6 (Jan.-March, '53 issue), it was suggested that the line be installed so that its removal from one standoff insulator would provide sufficient slack to permit the insertion of the rotator.



Supermarket techniques will pay big dividends when this rugged floor stand goes to work selling RCA batteries for you. This silent salesman requires a floor space of only 18 by 18 inches. The front height measures 311/4 inches; the rear height is 44 inches.

You'll see plenty of sales action after you place this RCA point-of-purchase counter merchandiser on your counter. It is sturdily constructed of steel wire and is reinforced to support more than 50 pounds of batteries. (Note the forceful sales messages on the shelf edges.)



# Self-Service Selling with RCA Battery Merchandisers Increases Dealers' Profits

Substantial increases in the sale of RCA Batteries have been reported by service dealers who are using the RCA Battery Counter Merchandiser (3F439) and the RCA Battery Floor Stand (3F438) for self-service selling. These merchandising aids were brought to the attention of the readers of RADIO AND TELEVISION SERVICE NEWS in the Spring 1953 Supplement which was sent with the Jan.-March issue.

A study of the dollar sales and number of units sold per square foot of selling space (based on the counter and floor areas required for these battery merchandisers) revealed that RCA Batteries represented one of their top-profit lines. Such supermarket selling can pay big dividends when either the attractive counter merchandiser or the large battery floor stand goes to work for you.

Whether you will want to employ a counter merchandiser or a floor stand should be decided upon after you select the best spot in your store for merchandising batteries. Also, the anticipated annual demand should serve as a guide to the inventory of batteries required . . . the floor stand can display a complete inventory of volume-type RCA Batteries.

Although the "AB" battery packs are shown only on the two lower shelves of the floor stand, there is sufficient room in the counter merchandiser to hold several "AB" packs. Because the demand for RCA types varies throughout the country, it is difficult to accurately prescribe which combination of batteries should be recommended as a model inventory for stocking your RCA Battery Counter Merchandiser or RCA Battery Floor Stand.

Before you prepare your battery order, read the following comments about RCA's fast moving types. They are offered to help you select the right combination of batteries. Then, contact your RCA Battery Distributor salesman and order your hard-hitting merchandiser and stock of batteries.

**V\$036** ( $1\frac{1}{2}$  v, size D). The

VS036 should be included in every self-service display. Although this popular cell carries a small price tag, its large unit turnover helps create a solid profit opportunity.

**VS236**  $(1\frac{1}{2}$  v, size G). A longlife cell, the VS236 has rapidly become a unit sales leader. The reason for this popularity is evident: Two of these batteries are used together with each longplaying VS216 alkaline "B" battery now featured in the latest personal-type portable radios made by more than a dozen different manufacturers. This popularity of the personal-type portable should keep these two battery types near the top, sales-wise, for some years to come.

**V5216**  $(671/_2 v)$ . The VS216 is an important item in your unit sales picture. It is priced at \$3.25 (list); because it has a profitbuilding mark-up for you (from a dealer price of \$2.30), it should contribute greatly to your dollar volume.

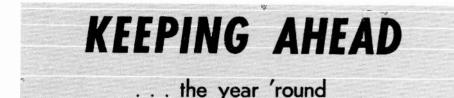
**V5090** (90 v). The VS090 is a reliable sales builder in nearly every section of the country.

**VSO16**  $(67\frac{1}{2} v)$ . Long a leader in both dollar and unit batterysales totals, this "B" battery is a must for every dealer's stock. A good quantity of this exceedingly popular type should be on open display in your store. This battery is used in countless portables and in many additional radio and nonradio applications.

**VS067**  $(4\frac{1}{2} \text{ v})$ . A low-priced "A" Battery, the VS067 is a fastseller; it should be kept on display in adequate quantities.

**VS013** (45 v). The VS013 is one of the more important 45-volt "B" batteries. Sustained demand for this moderately-priced type makes it an essential part of your stock. The dollar volume it creates will yield a good return. (Note that the bottom shelf of the Floor Stand's top tier has been designed specifically for the VS013.)

**VS057W** (71/2 v, 9 v, 90 v). Another high-volume type which should be displayed prominently. (Continued on Page 7, Column 1)



A few days ago, we were glancing through an issue of an old RCA dealer publication\* printed back in September, 1931. As you can well imagine, most of the articles reflected the vast difference between the old radio business of twentytwo years ago and the highly competitive servicing industry of today.

One paragraph, however, caught our eye and made us stop short. It read, "Who of us can tell anything about a radio tube by looking at it, anyhow? It might be beautiful, but a dud. Neither can you judge of its quality by feeling, or tasting, or smelling—unlike most of the things that enter our daily way of living. We have to learn to substitute a name for the ordinary standards by which we judge the product. Therefore, the product whose name both quickly and convincingly sug-

\*Good News, predecessor of RCA Radio Service News and RCA Radio and Television Service News. gests quality wins the favor of our purchase."

The thought behind the above paragraph is perhaps even more true today than it was twenty years ago. In this age of supermarkets and vending machines, the public has become brand-conscious to a considerable degree. The better the reputation a brand name has earned, the more firmly entrenched it becomes in the mind of the consumer. He is then more inclined to place his faith and trust in that name and to spend his money for products or services associated with it.

Now, how does this apply to you and your radio and TV servicing business? In the long run, the better the service you offer, the better will be your reputation. But your job of gaining the customer's confidence can be made so much easier . . . so much faster . . . by Second article in this new feature column written to help you exploit the vast service market in your area, and to help you stimulate your business on a year-'round basis.

associating your service with a brand-name product which already enjoys the respect and confidence of your customers—RCA for example. This is extremely important in making that initial contact before you get the opportunity to demonstrate your own personal ability. It is even more important during the course of the actual service call. Take this case, for example:

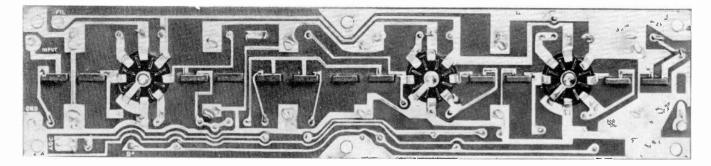
You ring the door bell and a housewife answers. You identify yourself, and she ushers you to the faulty TV set. You proceed to make various tests and adjustments and repair the set. To you, fixing a television set is a routine job . . . but to your customer, it's an important event, and she expects to get her money's worth.

So she watches you with the sharp eye of a thrifty housewife at (Continued on Page 6, Column 3)

#### NEW PRINTED-CIRCUIT, 40-MC IF AMPLIFIER FOR INTERCARRIER-SOUND TV SETS



The RCA 207E1 if amplifier shown in these photographs is now being affered by RCA to manufacturers of television receivers. This prealigned unit was designed for use in intercarrier-sound TV receivers having picture-if and sound-if carriers of 45.75 Mc and 41.25 Mc, respectively. The 207E1 amplifier employs printed-circuit if transformers, coils, and traps arranged in tandem with three 6CB6 tubes and a 1N64 crystal diode. Resistors and capacitors in the 207E1 are uniquely mounted on top of the amplifier chassis with their leads inserted through the chassis and dip-soldered to the printed wiring.



# TWO NEW BATTERIES . . . 75-Volt "B" and Small Steel-Encased, 45-Volt "B" Added to RCA's Line

The VS217 is a 75-volt "B" battery designed for use in portable radios and portable clock radios. The RCA battery complement for such sets is currently an RCA VS217 and a pair of RCA VS236's.\*

This new battery has the same conventional cell construction as the VS016, RCA's popular 671/2volt "B" battery. The maximum over-all dimensions of the VS217 are  $1\frac{7}{8}$  by  $1\frac{1}{2}$  by  $6\frac{1}{2}$  inches.

Another addition to RCA's line of radio batteries for the radio trade is the VS086, a 45-volt "B" battery. This steel-encased battery is designed for use with the RCA VS035, a sealed-in-steel, 11/2-volt "A" battery (size C cell) in small portable radios.

Although the cell size of the VS086 is smaller than that used in the long-playing RCA VS216, 671/2-volt "B" battery, it has the same outstanding alkaline-type construction. The maximum over-\*The VS216, RCA's alkaline-type, 671/2-volt "B"

battery can also be used in portables designed for a 75-volt "B" battery the size and shape of the VS217. In such use it will produce more play-ing hours than the VS217.

all dimensions of the VS086 are  $1\frac{1}{16}$  by  $\frac{11}{16}$  by  $3\frac{9}{16}$  inches.



Remember this new-battery announcement which you received from your RCA Battery Distributor recently? It was printed on card stock using over-sized type so that you could use it as a wall announcement in your store. If you haven't already done so, tack up your copy on the wall (or fasten it inside your front window with cellophane tape) to inform your customers that you can supply them with batteries for their new portables.

#### **RCA** Test Equipment Repair Service

If you find it necessary to return a piece of RCA test equipment for reconditioning or repair, do not return the instrument unless it is accompanied by a TEST EQUIPMENT SERVICE REPORT (Form 2F772). Copies of this form are obtainable from your RCA Distributor.

If the instructions in this report are carefully followed, our service shop will be in a very favorable position to provide quick service.

WA-44A AUDIO SIGNAL GENERATOR (Continued from Page 2)

44A (11 cps to 100 Kc) permits checking the response of highfidelity amplifiers over a range of five times the normal audible frequency range-an absolute requirement for checking the response of amplifiers with inverse feedback. This range provides generous overlap (20 Kc) with the WA-44A's companion, the RCA WR-49A RF Signal Generator.

**Highly Stable Output** Another feature of the WA-44A is its highly stable output over ex-SPECIFICATIONS

Frequency Range       11 cps to 100 Kc         Frequency Response       ± 1 db from 11 cps to 100 Kc         100 Kc with o reference frequency of 1100 cps       100 Kc with o reference frequency of 1100 cps         Frequency Stability       ± 3% or less, under normol operating conditions         Output Voltage (continuously variable)       "HI" – 15 volts rms (mox)         "LO" – 2.5 volts rms (mox)       "LO" – 2.5 volts rms (mox)         "LO" – 2.5 volts rms (mox)       0.1% or less of roted output         Calibration Accuracy       ± 2%         Power Requirements       105-125 volts         Voltage       105-125 volts         Frequency       50-60 cps         Consumption       35 wotts         Tube Complement       6BH6, 6AK6, 6AQ5, OA2, 6A4         Dimensions       7 in.         Width       10/2 in.         Width       10/2 in.         Weight       10 tb		•••=•••	
Frequency Response       ± 1 db fram 11 cps to 100 Kc with o reference frequency Stability         Frequency Stability       ± 3% or less, under normol operating conditions         Output Voltage (continuously variable)	Frequency	Range	
100 Kc with o reference frequency of 1100 cps         Frequency Stability       ± 3% or less, under normal operating conditions         Output Voltage (continuously variable)			
frequency Stability	,		
Frequency Stability       ± 3% or less, under normol operating conditions         Output Voltage (continuously variable)       ''HI'' - 15 volts rms (max)         "LO'' - 2.5 volts rms (max)       ''LO'' - 2.5 volts rms (max)         Total Harmonic Distortion       2% or less from 30 cps to 15 Kc         Hum Level       0.1% or less of roted output         Calibration Accuracy       ± 2%         Power Requirements       50-60 cps         Voltage			
Output Voltage (continuously variable)       ``HI'' - 15 volts rms (max) ``LO'' - 2.5 volts rms (max)         Total Harmonic Distortion       2% or less from 30 cps to 15 Kc         Hum Level       0.1% or less of roted output         Calibration Accuracy       ± 2%         Power Requirements       50-60 cps         Voltage	Fraguanay	Stability.	
Total Harmonic Distortion         "LO" – 2.5 volts rms (mox)           Hum Level         2% or less from 30 cps to 15 Kc           Calibration Accuracy         0.1% or less of roted output           Calibration Accuracy         ± 2%           Power Requirements         105-125 volts           Voltage         50-60 cps           Consumption         35 wolts           Tube Complement         6BH6, 6AK6, 6AQ5, OA2, 6X4           Dimensions         7 in.           Width         7 in.           Depth         6 in.	riequency	sidonity	$\pm$ 3% or less, under normal operating conditions
Total Harmonic Distortion         "LO" – 2.5 volts rms (mox)           Hum Level         2% or less from 30 cps to 15 Kc           Calibration Accuracy         0.1% or less of roted output           Calibration Accuracy         ± 2%           Power Requirements         105-125 volts           Voltage         50-60 cps           Consumption         35 wolts           Tube Complement         6BH6, 6AK6, 6AQ5, OA2, 6X4           Dimensions         7 in.           Width         7 in.           Depth         6 in.	<b>A</b>		
Total Harmonic Distortion       2% or less from 30 cps to 1/5 Kc         Hum Level       0.1% or less of roted output         Calibration Accuracy       ± 2%         Power Requirements       105-125 volts         Voltage       50-60 cps         Complement       6BH6, 6AK6, 6AQ5, OA2, 6X4         Dimensions       7 in.         Width       10½ in.         Depth       6 in.	Output Ve	pitage (continuously variable)	''HI'' - 15 volts rms (mox)
Hum Level       0.1% or less of roted output         Calibration Accuracy       ± 2%         Power Requirements       105-125 volts         Voltoge       50-60 cps         Consumption       35 wolts         Tube Complement       68H6, 6AK6, 6AQ5, OA2, 6X4         Dimensions       7 in.         Width       10½ in.         Depth       6 in.			
Hum Level       0.1% or less of roted output         Calibration Accuracy       ± 2%         Power Requirements       105-125 volts         Voltoge       50-60 cps         Consumption       35 wolts         Tube Complement       68H6, 6AK6, 6AQ5, OA2, 6X4         Dimensions       7 in.         Width       10½ in.         Depth       6 in.	Totai Harr	monic Distortion	2% or less from 30 cps to 1.5 Kc
Calibration Accuracy         ± 2%           Power Requirements         105-125 volts           Voltage         50-60 cps           Consumption         35 wolts           Tube Complement         6BH6, 6AK6, 6AQ5, OA2, 6X4           Dimensions         7 in.           Width         10½ in.           Depth         6 in.	Hum Leve	l	0.1% or less of roted output
Power Requirements	Calibration	Accuracy	
Voltoge	Dames Da		<u> </u>
Frequency         .50-60 cps           Consumption         .35 wolts           Tube Complement         .6BH6, 6AK6, 6AQ5, OA2, 6X4           Dimensions         .7 in.           Width         .10/2 in.           Depth         .6 in.			
Consumption	Volto	oge	
Tube Complement         6BH6, 6AK6, 6AQ5, OA2, 6X4           Dimensions         7 in.           Height         7 in.           Width         10½ in.           Depth         6 in.	Freq	uency	
Dimensions         7 in.           Height         7 in.           Width         10½ in.           Depth         6 in.			
Dimensions         7 in.           Height         7 in.           Width         10½ in.           Depth         6 in.	Tube Com	plement	6BH6, 6AK6, 6AQ5, OA2, 6X4
Width01/2 in. Depth6 in.	Dimension	s	
Width01/2 in. Depth6 in.	Heia	ht	7 in
Depth6 in.			
	Dept		
Finish	Einish		
Finishblue Hommeroid	Finish		blue Hommeroid

## **KEEPING AHEAD**

(Continued from Page 5)

a bargain counter, but in reality it's all a mystery to her . . . a mystery, that is, until it's time for you to take the tube cartons out of your kit. This is the critical moment. If the tube carton bears a well-known everyday trademark, she is quick to recognize it as a "good" buy.

Now she is in her element. Now she has something tangible in which to place her confidence. She's a brand-judger from way back . . . an expert shopper who has learned to buy by brand name. Once she's seen the familiar RCA trademark on those tube cartons, you have her complete confidence. She's sure now that her set is in good hands, and that's how reputations are built.

Doesn't it make sense, then, to associate your name as closely as possible with an outstanding trade name like RCA ... a name which enjoys wide recognition and immediate acceptance by your customers? This is sound business insurance. You profit twice ... in dollars and cents . . . and in increased "customer confidence."

On every service call, the familiar RCA trademark is your silent partner . . . helping you to build repeat business.

How can you cash in on the magic of the RCA trademark? In a hundred different ways, both inside

(Continued on Following Page)

tremely wide ranges of ambient temperatures and ac line voltage. The frequency is stable within  $\pm 3$ per cent because of a unique delayed-AGC circuit which maintains steady oscillations.

#### **Cathode-Follower Output Stage**

An "extra" usually found only in much more expensive units, the cathode follower circuit isolates the sine-wave oscillator from effects of reflected load reactance and resistance thereby assuring excellent output waveform, a high degree of frequency stability, and excellent voltage regulation.

For additional information on the WA-44A, ask your RCA Distributor for a copy of the WA-44A flyer. The suggested user price of the WA-44A Audio Signal Generator is only \$87.50.

## KEEPING AHEAD

(Continued from Page 6)

your shop and in your customer's home. It takes such a little bit of extra effort, and it can pay off so handsomely! Your RCA Distributor salesman will be glad to tell you all about the many RCA sales and business aids available to you at little or no cost . . . all designed to help you associate your name with the most famous trademark in electronics.

People often buy service work with their fingers crossed. And in the intangible world of TV servicing, a familiar name serves as a welcome guidepost. That's why the technician who associates his name with RCA, the leading brand name in radio and television, is securing for himself a good headstart in *KEEPING AHEAD* ... *THE YEAR 'ROUND*.

#### RCA BATTERY MERCHANDISERS (Continued from Page 4)

Inasmuch as its unit list price is \$5.75 (a profit-building mark-up from the dealer price of \$4.03), it will contribute heavily to your dollar sales totals.

**V\$058** (9 v, 90 v). This pack has a relatively strong unit volume.

**VS019**  $(7\frac{1}{2}$  v, 9 v, and 90 v). This popular pack stands high in its classification in both dollar and unit sales performance at the retail level.

**VS050** (6 v,  $7\frac{1}{2}$  v, and 75 v). This type is used in many RCA Victor sets.

**VS047** (9 v and 90 v). Big selling pack and a quality favorite in many areas. If the demand for large-size portables is evident in your area, this type will contribute substantially to your dollar volume in batteries.



## New RCA 234A1 and 235A1 Low-Loss UHF Lightning Arresters Now Available

The RCA 234A1 and 235A1 Lightning Arresters are RCA's newest—they're designed for UHF antenna installations. The 235A1 (strap type) and 234A1 (screw type) are the UHF counterparts of the widely-used RCA 214X1 and 215X1 VHF lightning arresters.

Both of the UHF arresters accommodate most of the tubular round and oval transmisison lines without the need of splicing or baring conductors. The new RCA UHF arresters can also be used with the latest narrow-spaced, foam-insulated UHF lines.

With either of these new arresters, the losses are negligible; the 234A1 and 235A1 contain resistance elements made from a remarkable new conductive rubber that is noncorrosive and impervious to moisture.

These new arresters are listed by Underwriters Laboratories.



Dress up your tube shelves with these colorful pressure-sensitive shelf strips. Imprinted with the type numbers of RCA receiving tubes, these shelf strips will enable you to organize your tube stock for efficient operation. The blank space to the right of each tube type number is intended for the minimum inventory balance.

These self-sticking shelf strips are easily applied by simply peeling the strips off a thin backing sheet and applying them directly to the shelf.

A 34-page booklet containing 408 individual receiving-tube shelf stickers can be obtained through your RCA Tube Distributor—see him for further details.

#### WELL DONE, FELLAS

The results of a second Roper Survey show that an even higher public regard for television technicians than was revealed in a similar survey taken by Roper last year. (An article on the first Roper Poll appeared in the Aug.-Sept., 1952 issue of RADIO AND TELEVISION SERVICE NEWS.) These surveys are part of a continuous study sponsored by the RCA Victor Division of the Radio Corporation of America and the RCA Service Company.

Seventy per cent of the 5,000 television families (representing an accurate cross-section of adults in TV areas throughout the country) questioned on the quality of work done termed it "really good." Nineteen per cent said the work was "fairly good." Only six per cent expressed dissatisfaction, and five per cent did not reply.

Questioned on the cost of service, more than two out of three set owners described the serviceman's charges as entirely reasonable. Only one out of ten considered his service bills excessive.

The survey also revealed that the public is pleased with the promptness of service. Of those contacted, 75 per cent reported service completed either the same day, or within at least two days of their initial request!

### WR-49A RF SIGNAL GENERATOR (Continued from Page 2)

#### **Built-in Blocking Capacitors**

The use of a dc blocking capacitor dangling from the probe tip is a thing of the past when you use the new RCA WR-49A. This instrument has blocking capacitors built into the output circuit.

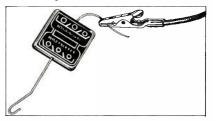
#### Shielded Cable

Full-length shielding of the rf output cable, designed to minimize radiation, cuts down annoying radiation and hum pickup. With the WR-49A, you can troubleshoot in sensitive rf circuits without fear of radiation and annoying hum pickup.

#### Cathode-Follower Output Stage

This stage isolates the oscillator from the effects of reactive and resistive loads; it aids in preserving good output waveshape, and frequency stability.

For additional information on the WR-49A, ask your RCA Distributor for a copy of the new WR-49A flyer. The suggested user price of the WR-49A RF Signal Generator is only \$59.50.



You no longer have to use a haywire-connected blocking capacitor when you use the WR-49A —the blocking capacitors are built into this instrument.

POSTAGE





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Form 3547 Requested

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