



RADIO SERVICE NEWS

VOLUME XV, No. 3

RCA TUBE DEPARTMENT, HARRISON, NEW JERSEY

September-October, 1950

HIGH-FIDELITY 515S2 SPEAKER ANNOUNCED BY RCA TUBE DEPT.

The outstanding new 15-inch Duo-Cone Speaker, designed for high-quality reproduction at both high- and low-power levels, has been announced by the RCA Tube Department. The new 15-inch speaker is a direct low-cost adaptation of the famous LC-1-A speaker developed by Dr. H. F. Olson, world-renowned acoustics authority of the RCA Laboratories. It is the latest addition to the comprehensive RCA line of replacement speakers.

A permanent-magnet type, the RCA 515S2 features high sensitivity between 40 cps and 12,000 cps, and it is capable of handling 25-watts input. It is intended particularly for high-quality radios, phonographs, television receivers, and monitors.

The unique design of the new 515S2 provides the advantages of both single- and dual-cone speakers, at the same time avoiding cross-over interference encountered in conventional two-cone speakers.

The RCA 515S2 employs a unique magnetic structure with a vibrating system consisting of a large cone and a small cone mounted so that for all practical purposes, the large cone is a continuation of the small cone. It is this "duo-cone" arrangement in the new 515S2 which avoids the cross-over interference characteristic of conventional high-low speaker combinations in which the "woofer" and "tweeter" are spaced apart. In the duo-cone arrangement, each cone is mounted in a separate housing and is driven by a separate voice coil operating in an individual air gap.

A 3/4-inch voice coil drives the small cone to produce the high frequencies; a two-inch voice coil drives the large cone to produce the low frequencies. The small cone does not vibrate at the lower audio frequencies because of the high reactance of the coupling capacitor at these frequencies. This design permits extreme simplification of the usual multi-element, cross-over electrical network; only the coupling capacitor is required to prevent excessive low-frequency power from damaging the high-frequency voice coil.

The unusual magnetic structure of the new speaker utilizes a single two-pound Alnico V magnet arranged with the pole pieces and yoke so that the magnetic paths form a bridge network to provide

(Continued on Page 6, Column 1)

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NEW RCA TRADE-MARK PLAQUE DESIGNED FOR DEALER STORES

Reflects Prestige and Public Acceptance

Every RCA dealer and serviceman will want the new RCA Trade-Mark Plaque, which symbolizes the greatest brand name in radio and television.

The prestige and public acceptance of the RCA trademark is today at its highest point in history. And all who are associated with it and its

future of the rapidly growing and expanding electronics art and industry.

Something of the meaning and prestige of this symbol is reflected on every business establishment that displays the RCA trademark. Ask your RCA Distributor for a copy for your store or window. (Form No. 3F7).



Julius Haber, Advertising and Sales Promotion Manager (left) presents the first copy of the new RCA trade-mark plaque to Larry Thees, General Sales Manager.

products and services benefit from this unequalled position. It stands for dependable, outstanding quality, and top values. It stands for pioneering leadership, technically and commercially, in virtually every field of electronics. It stands for continuing progress and profit in the

The RCA plaque measures approximately 15 x 18 inches. It features a raised red-and-white 8-inch trademark on a lacquered, burnished copper background, with the words, "RCA Television Tubes." It is framed in genuine limed oak, on which the title reads, "The Picture of Quality."

RCA DISTRIBUTORS NOW SUPPLY RCA VICTOR SERVICE DATA BOOKS

Prices Reduced on Vols. I and II

Service Data Booklets Available for 1950 Models

To make complete authoritative servicing information on RCA Victor television sets, radios, and phonographs available to as many servicemen as possible, RCA Victor Service Data Books will no longer be sold as Service Parts. Instead, RCA Victor Service Data are now available, together with other Tube Department Publications, from your RCA Distributor.

Four bound volumes, available as stock items, cover the 1923-1948 models. Volume V, now in preparation, will contain complete service notes on the 1949 models. In addition to the Service Data Books, separate booklets on current RCA Victor models are now available.

Volumes I and II, formerly \$6.00, (Continued on Page 7, Col. 1)

NEW EDITION OF POPULAR RCA TUBE MANUAL AVAILABLE

A new edition of the famous RCA Receiving Tube Manual, long used throughout the world by radio and television servicemen, electronics engineers, schools, laboratories, radio amateurs, and experimenters as the most comprehensive and authoritative reference book on receiving tubes in the industry, has been announced by the RCA Tube Department.

The new RCA Receiving Tube Manual, RC-16, which incorporates many new features reflecting new developments in electronics, has been brought up to date with many revisions and substantial expansions. Containing over 300 pages, it is considerably larger than the previous RC-15 edition which it supersedes.

The same valuable and complete coverage of technical data contained in previous editions, ranging from elementary theory to easy-to-understand descriptions of receiving-tube applications, has been continued and enlarged in the new RC-16. In addition, the new manual, which now has a new "lie-flat" binding for ease of use, contains many new features. Detailed technical information is provided on more than 460 receiving tubes and kinescopes. The section on tube and circuit theory has been expanded and includes formulas and examples for calculation of power output, load resistance, and distortion for several classes of amplifier service, as well as cathode-follower design information. Television coverage includes kinescope installation data and handling information.

For quick and easy reference, the new manual contains a classification chart which groups types having

(Continued on Page 7, Col. 1)



Photolithographed in U. S. A.



Kids, cowboys and television make an unbeatable human interest combination in this new RCA display. It's lithographed in six vivid colors. Measures 22 x 29 inches. Order it from your RCA Distributor and brighten up your store or shop. (Form No. 2F989-B.)

FROSTED FACES ON RCA 16G- AND 19A-KINESCOPIES

Frosted face plates are now being incorporated in the popular RCA 16GP4 and 19AP4-A kinescopes, without any increase in price. These kinescopes when supplied with frosted Filterglass face plates are designated as 16GP4-B and 19AP4-B, respectively.

Use of frosted face plates reduces specular reflection of bright objects in the room which might otherwise be objectionable. This improvement supplements the previously announced use of Filterglass face plates to give improved picture contrast.

Our ability to produce the 16G- and 19A- kinescopes is currently restricted by an acute shortage of Filterglass face plates and limited frosting facilities. We can, however, obtain limited quantities of face plates made of clear glass, both

frosted and unfrosted.

For the time being, therefore, we are producing four versions of 16G-picture tubes and two versions of 19A-picture tubes, differing only in their face plates and designated as follows:

Face Plate	Type
Filterglass (no frosting)	16GP4
Clear glass (no frosting)	16GP4-A
Frosted Filterglass	16GP4-B
Frosted Clear Glass	16GP4-C
Filterglass (no frosting)	19AP4-A
Frosted Filterglass	19AP4-B

All four versions of the 16G- and the two versions of the 19A- are now being shipped from our warehouses. During the present shortage, orders for a specific 16G- or 19A- type will be filled, depending on availability, with any one of the four 16G- versions or either of the 19A- versions. As soon as conditions permit, only the 16GP4-B and 19AP4-B versions will be manufactured.



RCA COMPONENTS DIRECTORY FOR TV RECEIVERS. A convenient compilation of stock or part numbers of the major replaceable components of approximately 500 television receivers of 38 manufacturers, together with the type numbers of genuine RCA television components—a real time saver! Get your copy from your RCA Distributor, by ordering Form No. SP-1006A.

TELEVISION SERVICE

By John R. Meagher

Television Specialist, RCA Renewal Sales

PART X

More on Horizontal-Deflection Troubles

This article covers additional horizontal-deflection troubles, including those that are encountered in the "direct" deflection type of circuit. This circuit, Fig. 1, is used in many receivers of recent design.

As shown in the July, 1949 issue of RCA Radio Service News and, in greater detail, in the RCA Pict-O-Guide, most of the troubles in the horizontal-deflection circuit of a television receiver produce, in the picture, one or more of the following visual symptoms:

1. Insufficient width, excessive width, or poor horizontal linearity.
2. Bright or dark vertical bars on the raster.
3. Fold-over at left- or right-hand sides of the raster.
4. Absence of raster, due to lack of high-voltage.

Failure of the horizontal oscillator, discharge, or output circuits, or their supply voltages, will result in failure of the high voltage. When the high voltage fails, either partially or completely, there is a complete absence of a raster or a picture on the kinescope.

Insufficient Width

Insufficient width may be due to one or more of the following items:

1. Reduced amplitude of the output signal from the horizontal oscillator. (The horizontal-deflection signal is generated in the horizontal oscillator which acts through the horizontal discharge and output

circuits to energize the horizontal-deflection coils.) Weak output from the horizontal oscillator may be due to a defective tube or other component, or reduced plate voltage in the oscillator circuit.

2. A weak tube, a defective component, or reduced plate voltage in the horizontal-discharge or horizontal-output circuits.

3. Low line voltage, a weak power rectifier, or other defect in the B+ circuit.

Reduced Line Voltage

The effect of reduced line voltage on the size of the picture is shown in the three superimposed photographs of Fig. 2, which were taken at three different values of line voltage: 125, 115, and 105 volts.* (The brightness control was readjusted slightly in each case to maintain approximately the same brightness level. Other controls were not touched. The receiver under test had automatic gain control so it was unnecessary to adjust the contrast control.)

The fact that it is possible to increase the height of the picture beyond the top and bottom of the picture tube should not be regarded as an indication that the line voltage and B+ voltages are adequate. Although a television receiver may appear to have more reserve power available for vertical deflection than is ever required in actual use, even at the lowest probable line voltage; actually, this reserve power may not

*An RCA TV Isotap, WP-25A, was used to obtain the three different voltages.

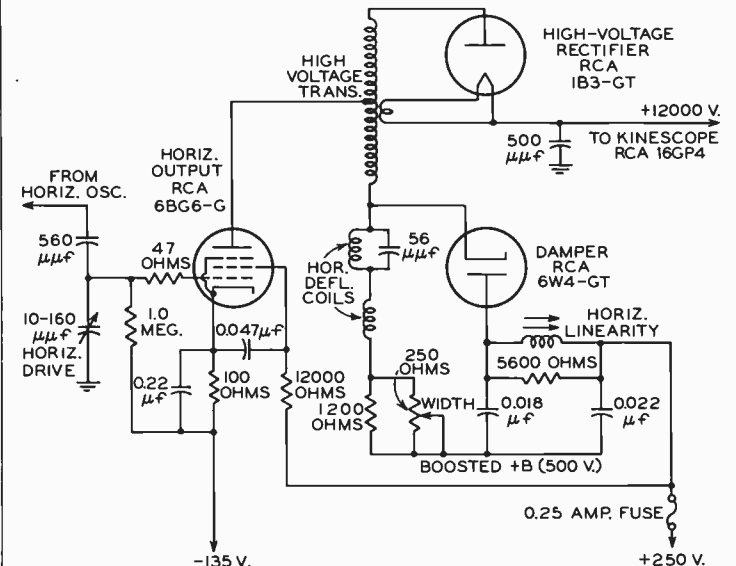


Fig. 1. "Direct" horizontal-deflection circuit used in RCA model T164 and many other recent models. Note that the horizontal-deflection coils are connected in series with the plate winding of the high-voltage transformer, which is an air-core type. In earlier models, the horizontal-deflection coils are connected to a secondary winding on an iron-core, high-voltage transformer. This RCA direct-deflection type of circuit has higher power efficiency than earlier circuits.

be usable because the linearity of the picture obtained with extended vertical deflection probably would be unacceptable. On the other hand, there is comparatively little reserve power available for extra horizontal deflection even at normal line voltage. Although low line voltage is seldom a problem in obtaining sufficient vertical deflection, it may be one of the causes of insufficient width.

Obtaining Increased Width

Occasionally it is necessary to obtain more width than was provided in the original design of the receiver. For example, more width is required when the mask is changed from a straight-sided shape to one with curved sides. In such cases of insufficient reserve power for the extra horizontal deflection, it is necessary to alter the deflection circuit slightly. In horizontal-deflection circuit similar to that used in the RCA model 630TS, additional width can be obtained by connecting a capacitor of approximately 0.05 μ f across the width coil, or by opening the width coil. The effect of opening the width coil in this deflection circuit is shown in Fig. 5. In some projection-type receivers, it is possible to obtain appreciable increases in width and height by moving the deflection yoke slightly back toward the socket-end of the picture tube. This expedient is seldom practical on other types of receivers due to beam cutoff by the neck of the tube.

To locate the cause of insufficient width, it is advisable to first try new tubes in the horizontal oscillator, discharge, output, and damper circuits, and in the B+ rectifier circuit. Also check the line voltage.

If the line voltage is normal, and if a new tube does not correct the condition, it is necessary to check the voltages and components in the horizontal oscillator and deflection circuits. If possible, check the peak-to-peak input and output voltage of each tube in the horizontal circuits, using a good cathode-ray oscilloscope, such as the RCA

WO-57A, or an electronic voltmeter that can read peak-to-peak voltage, such as the RCA WV-97A.



Fig. 2. Effect of line voltage on picture width and height is shown by these three superimposed photographs taken with line voltages of 105, 115, and 125 volts. The picture size is smallest with 105 volts, and largest with 125 volts. When sufficient width cannot be obtained by means of the width and drive adjustments, it is advisable to check the line voltage.

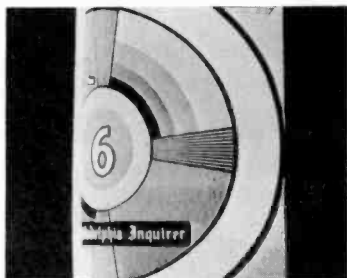


Fig. 3. Fold-over at left due to short-circuited width coil in RCA 630TS.

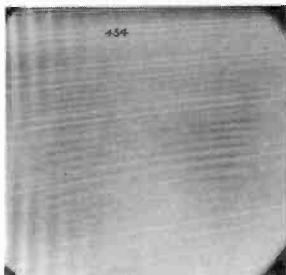


Fig. 4. Ringing in horizontal-deflection circuit, evidenced by vertical bars at left side of raster, due to open 56- μ f capacitor across one-half of horizontal-deflection coil in the "direct" horizontal-deflection circuit of Fig. 1.

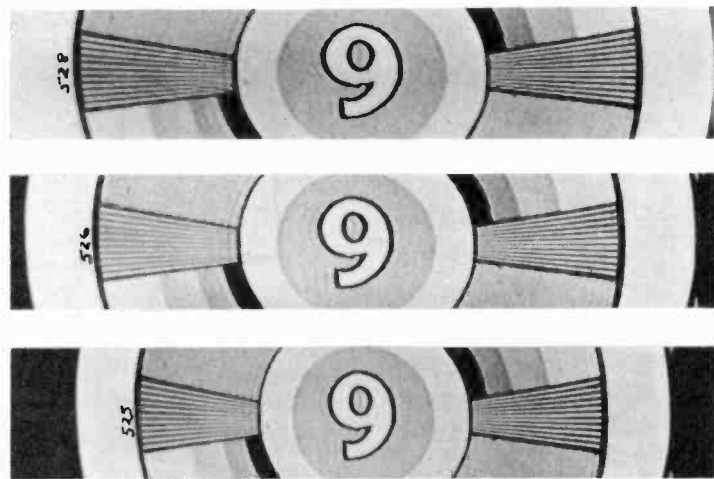


Fig. 5. Effect on width of picture produced by adjustment of width coil in model 630TS type of horizontal-deflection circuit.
 a. Coil adjusted for minimum width.
 b. Coil adjusted for maximum width.
 c. Increased width, obtained by opening the width coil, with some sacrifice in horizontal linearity.

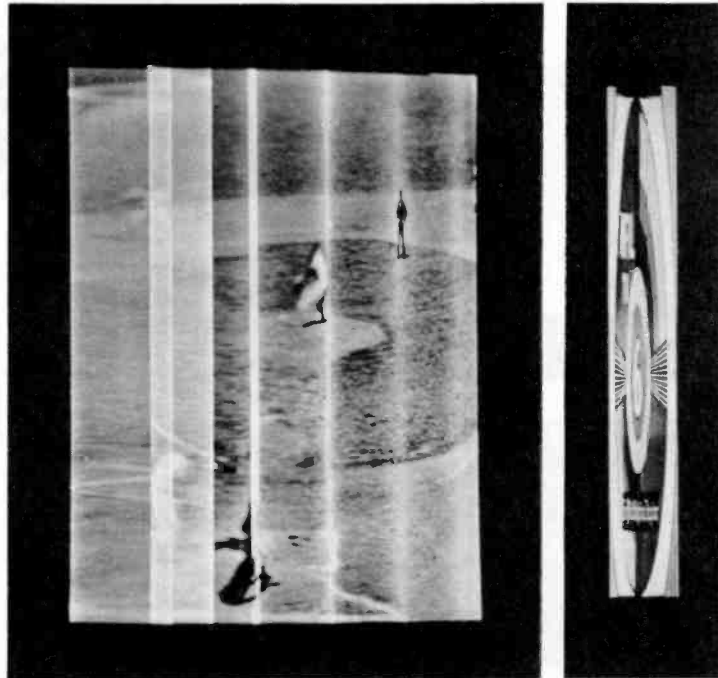


Fig. 6. Fold-over and bright vertical bars produced by an open 0.018- μ f capacitor in the damper circuit of Fig. 1. Fig. 7. Extremely narrow picture produced by a shorted 0.018- μ f capacitor in the damper circuit of Fig. 1.

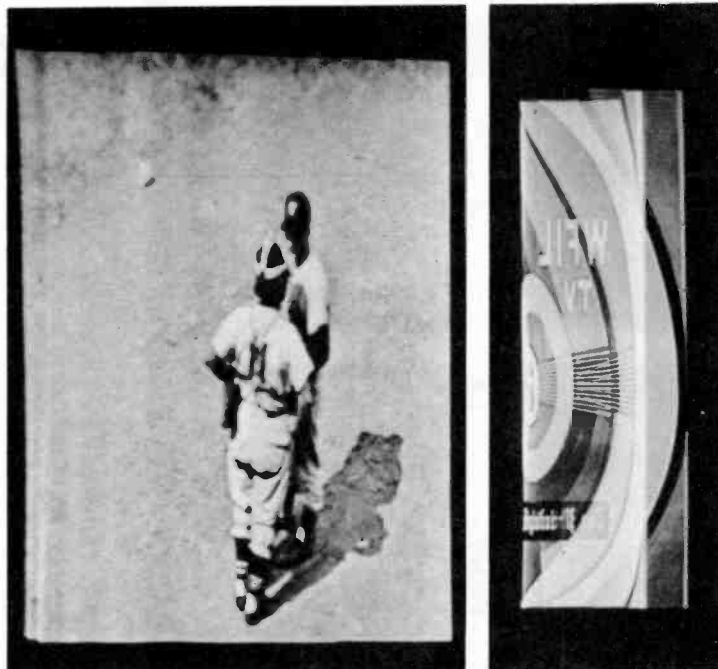


Fig. 8. Narrow picture produced by an open 0.022- μ f capacitor in the damper circuit of Fig. 1. Fig. 9. Fold-over at left and narrow picture produced by a shorted 0.022- μ f capacitor in the damper circuit.

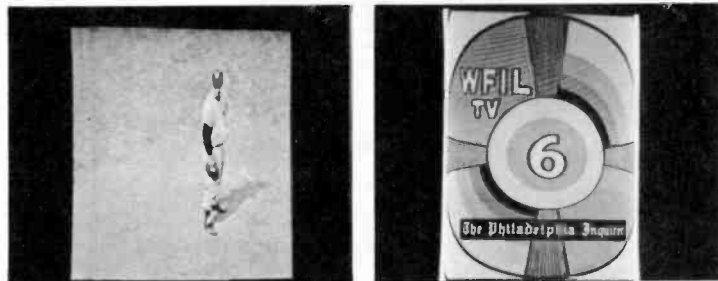
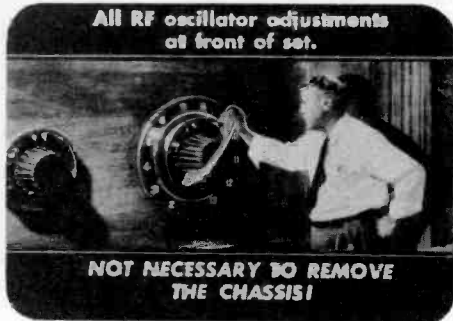


Fig. 10. Narrow picture width produced by an open linearity coil in the damper circuit of Fig. 1. This fault may affect the horizontal-output tube and the 12,000-ohm screen resistor, and result in complete absence of raster. Fig. 11. Fold-over at left and right sides of raster produced by changing the grid resistor of the horizontal output tube from 1.0 megohm to 60,000 ohms. Circuit shown in Fig. 1.

RCA VICTOR'S NEW CHASSIS IS ENGINEERED FOR T

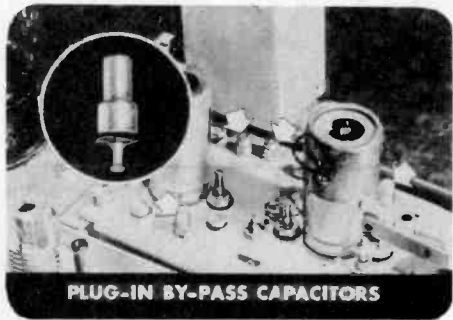


Improved, wider range, positive action fine tuning control.



All RF oscillator adjustments at front of set.

NOT NECESSARY TO REMOVE THE CHASSIS!

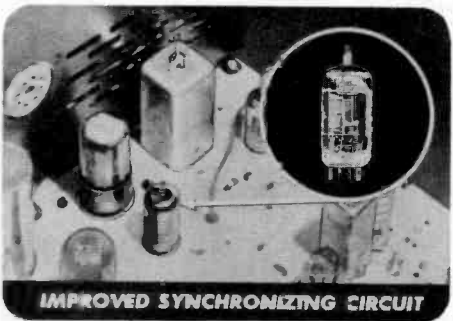


PLUG-IN BY-PASS CAPACITORS



AM FILTER

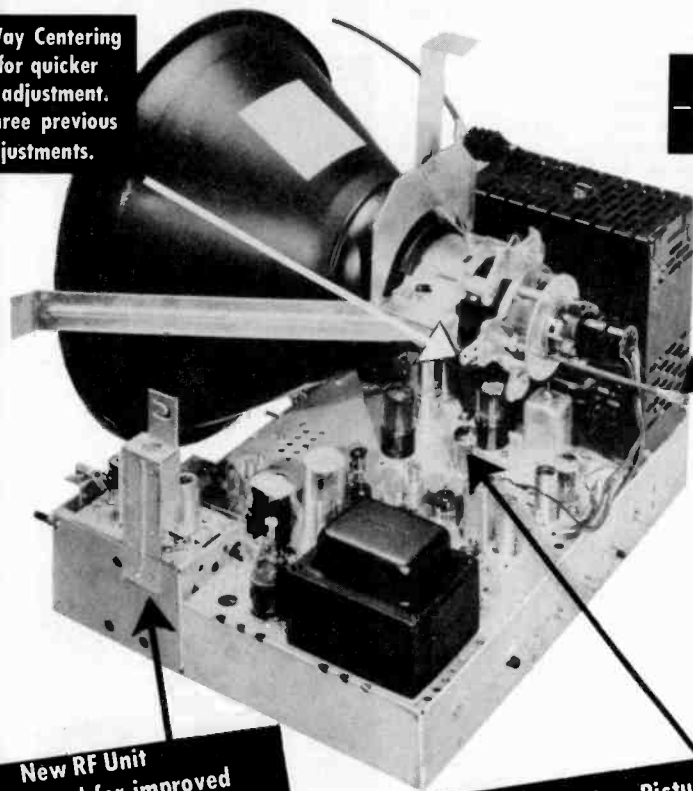
FM TRAP



IMPROVED SYNCHRONIZING CIRCUIT

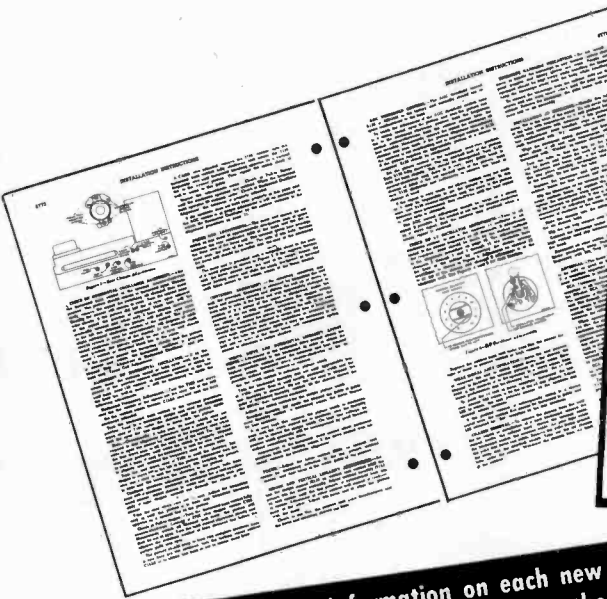
New Two-Way Centering Lever —for quicker locked-in adjustment. Replaces three previous screw adjustments.

Vernier Focus —More accessible wider range ad



New RF Unit —Redesigned for improved sensitivity, selectivity, and minimum oscillator radiation. Better signal-to-noise ratio for improved fringe-area reception.

Better Than Ever Picture Stability —Improved synchroguide circuit for better stability in fringe areas and in noisy locations.



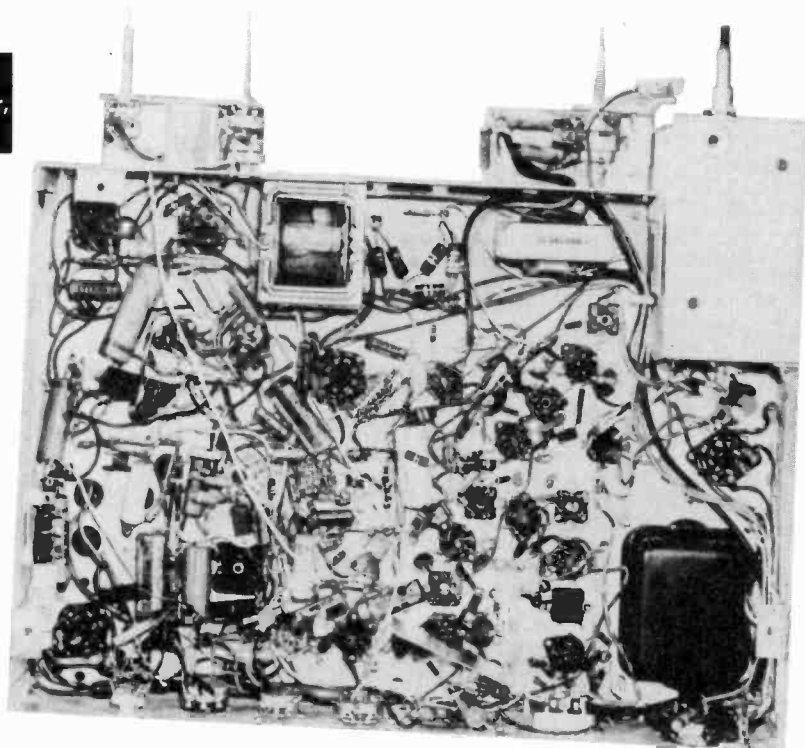
RCA VICTOR TELEVISION RECEIVER MODEL 6772	
SERVICE DATA	
RADIO CORPORATION OF AMERICA CAMDEN, N. J. U.S.A.	
GENERAL DESCRIPTION	
ELECTRICAL AND MECHANICAL SPECIFICATIONS	
Model	6772
Frequency Range	54-88 Mc.
Bandwidth	12 Mc.
Gain	40 db
Attenuation	20 db
Rejection Ratio	20 db
Image Rejection	20 db
Intermodulation Distortion	20 db
Harmonic Distortion	20 db
Spurious Emission	20 db
Power Output	100 mW
Efficiency	10%
Temperature Coefficient	0.1%
Humidity Coefficient	0.1%
Vibration Coefficient	0.1%
Shock Coefficient	0.1%
Life	10,000 hours
Warranty	1 year

Complete information on each new RCA TV receiver is contained in the authentic RCA Service Data Booklets. (Available to all servicemen from the local RCA Distributors or from Commercial Engineering, Harrison, N. J.)

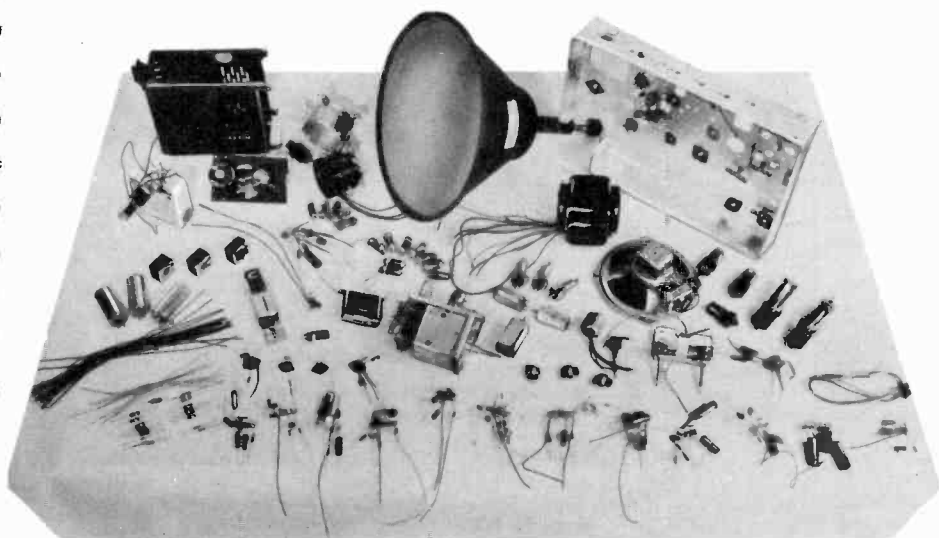
THE NEW RCA KCS40B CHASSIS is typical of the developments being engineered by TV m incorporation of genuine RCA TV components, RCA speakers, RCA receiving tubes and RC

TOP PERFORMANCE AND SIMPLIFIED MAINTENANCE!

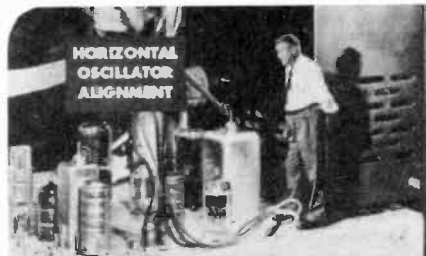
Control for quicker, adjustment.



All Parts and Connections are Easily Accessible.



30% Fewer Parts! 20% Fewer Connections!



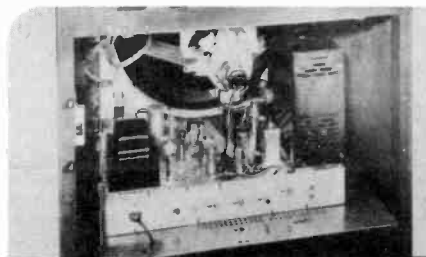
HORIZONTAL OSCILLATOR ALIGNMENT

NOW IN MORE ACCESSIBLE LOCATION

INSTALLATION SET-UP TIME REDUCED UP TO 25%



NORMAL SERVICE WITHOUT REMOVING CHASSIS FROM CABINET!



ENORMOUS REDUCTION OF INTERMITTENTS ... CALL-BACKS

OVER 1/2 OF THE SET-UP STEPS HAVE BEEN SIMPLIFIED!

- 1 ION TRAP
- 2 DEFLECTION YOKE
- 3 BRIGHTNESS-CONTRAST
- 4 HORIZONTAL OSCILLATOR ALIGNMENT
- 5 FOCUS COIL
- 6 CENTERING
- 7 HORIZONTAL WIDTH LINEARITY
- 8 VERTICAL HEIGHT LINEARITY
- 9 FOCUS CONTROL
- 10 AGC THRESHOLD
- 11 RF OSCILLATOR

Shown here are only a few of many new features which are typical of the simplified service adjustments in the new RCA Victor chassis.

Manufacturers to simplify servicing. Greater accessibility, circuit improvements, and wide A kinescopes will enable the service technician to make maximum utilization of his time.

PRIZES AWARDED IN RCA TEST-EQUIPMENT CONTEST

The first prize in the recent RCA "You Name It" contest was awarded to Mrs. Elizabeth French of Washington, D. C. Mrs. French suggested the name "Scanalyst" for the new RCA WO-57A Oscilloscope.

Mrs. French won a Blue Ribbon RCA Oscilloscope and an RCA WG-214 Probe and Cable Kit. This entry also won a \$50 cash prize for Bill Williams of Capitol Wholesalers, Washington, D. C., whom Mrs. French named as her distributor salesman.

Three other contestants submitted the name "Scanalyst," but Mrs. French's entry bore the earliest

postmark and, according to the rules, she was adjudged the winner. However, a consolation prize of an RCA WP-25A TV Isotap has been awarded by the judges to each of these three entrants: John M. Hussey, Long Beach, Calif.; Robert A. Jensen, Flushing, N. Y.; and P. M. Rosenblatt, Hoboken, N. J.

Second prize, an RCA 195-A VoltOhmyst, was awarded to James S. Bennett, Newington, Conn. Third prize, an RCA WP-23A Regulated Power Supply, went to Paul Silverman, Brooklyn, N. Y. Ten runners-up in the contest received RCA WP-25A Isotaps.

HIGH-FIDELITY SPEAKER ANNOUNCED BY RCA TUBE DEPARTMENT

(Continued from Page 1, Col. 1)

each air gap with equal flux density.

Another outstanding feature of the 515S2 speaker is the directivity which is approximately uniform over the entire frequency range within a total angle of approximately 60 degrees.

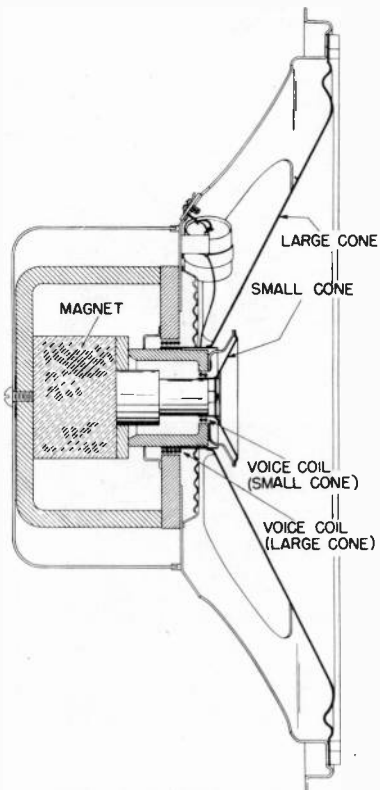
For highest operating efficiency, the new 515S2 should be flange-mounted with the front edge of the large cone-section flush with the front of the baffle. Recommended baffle for the new speaker is an enclosure made of 3/4-inch plywood lined with a one-inch thickness of sound-absorbent material. Recom-

mended inside volume of the enclosure is approximately 5 to 10 cubic feet with a port-hole opening of approximately 30 to 100 square inches placed below the speaker mounting hole. The new 515S2 is designed for standard RMA rim mounting, and thus can be used as a direct replacement for existing 15-inch rim-mounted speakers. The 515S2 can also be mounted on a flat baffle.

Structurally engineered for ruggedness and durability, the new speaker is dust proof and rust resistant. Cones, voice coils, and suspensions are moisture resistant.

Two output transformers have been designed especially for the 515S2 speaker. For operation from line to voice coil, the RCA-213T1 transformer is recommended; for operation from tube to voice coil, the RCA-214T1 transformer is recommended. Both transformers are multi-tapped for several input impedances.

The new RCA 515S2 15-Inch, Duo-Cone Speaker is now available from RCA Parts Distributors. Suggested list price is \$82.50.



Constructional details of the new 515S2 Duo-Cone Speaker.

RCA RELINQUISHES SOME WELL-KNOWN TRADE-MARKS

Three of television's best known trade-marks and a famous miniature tube name are being voluntarily surrendered to the public domain by RCA, it was announced by Frank M. Folsom, president. The U. S. Patent office has been requested by RCA to cancel its registration of these registered trade names: Iconoscope, first electronic "eye" of the television camera; Kinescope, picture tube of television home receivers; Orthicon, improved television camera pick-up tube; and Acorn, tiny radio tube now common place in portables.

"Now that television has become established," Mr. Folsom declared, "RCA finds gratification in the fact that the industry uses these names in a generic and descriptive manner. In relinquishing our registrations for the benefit of the industry, we are following RCA's traditional policy of stimulating progress in the radio and electronic fields."

RCA AWARDS NEW FORDS TO WINNERS

25 RCA Battery Retailers and 25 Distributor Salesmen Win Prizes in RCA Battery "Get the Facts" Contest

\$10,000 worth of prizes, including two new Ford Custom sedans, have been awarded to 25 RCA Battery retailers and 25 Distributor salesmen in the RCA Battery "Get the Facts" contest, which closed June 30th.

Ray J. Becker, of Leite's, Volga, S. D., was the grand-prize winner among battery dealers. Verne Larson, Warren Radio Supply, Sioux Falls, S. D., named as supplying distributor by Becker on his official entry coupon, received the other Ford.

Both Becker and Larson were overwhelmed by their selection as

listed first):

3rd Prize (\$619 Drexel dining room suite): Don Mills, Morgan Hill, Calif.; Ralph L. Boyer, Frank Quement, Inc., San Jose, Calif.

4th Prize (\$450 deep-freeze unit): Walter L. Stone, Los Angeles; David Silverberg, Universal Radio Supply Co., Los Angeles.

5th Prize (\$350 Rogers sterling, service for 12): Russell Plunkett, Hanceville, Ala.; E. P. Calvin, Keith-Simmons Co., Nashville, Tenn.

6th Prize (\$260 Kaufman cowhide luggage set): Nathan Diffler, Knoxville, Tenn.; Ben W. Peters, C. M.



HAD THE FACTS, WON THE FORDS—Raymond J. Becker of Leite's, Volga, S. D., first prize winning dealer in the RCA Battery "Get The Facts" contest discusses his good fortune with winning distributor salesman Verne Larson (left) of Warren Radio Supply, Sioux Falls, S. D. Both received handsome, 8-cylinder, Ford Custom sedans. Louis Warren of Warren Radio Supply is in the center.

first-prize winners in this widely-publicized national contest which drew more than 20,000 dealer entries from every state in the nation.

Furniture Winners

Second-prize winners, each receiving a \$700 Drexel bedroom suite, were Lester Cheek, Woodfin Radio Co., Asheville, N. C., and his distributor salesman, H. W. Robinson, of Freck Radio Supply Co., Asheville.

Other winners, and the prizes they won, are as follows (dealers are

McClung & Co., Knoxville.

7th Prize (\$233 Kroydon golf clubs and bag): R. C. Donovan, Sharon, Conn.; W. J. Syse, Chief Electronics Inc., Poughkeepsie, N. Y.

8th Prize (\$145 Kaufman travel luggage): A. J. Smith, Malden, Mass.; A. L. Robbs, The Eastern Co., Cambridge, Mass.

Longines watches valued at \$110 were awarded as the 9th-25th prizes, and \$25 U. S. Savings Bonds were sent to the remaining ten winners.

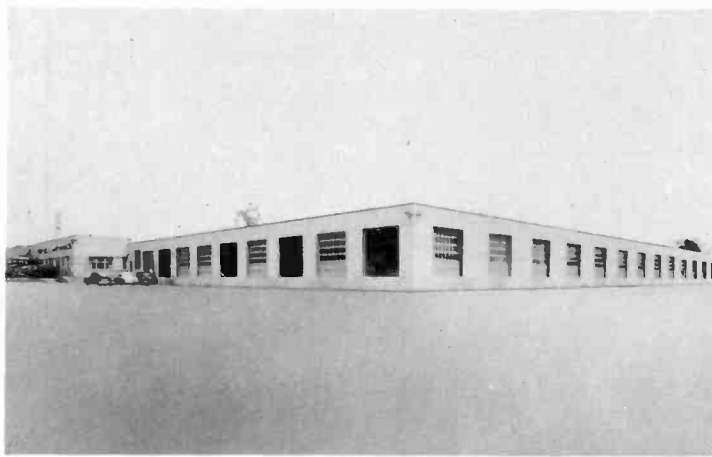
RCA BATTERY REPLACEMENT GUIDE BROUGHT UP-TO-DATE

A new and completely revised RCA Battery Replacement Guide, form number BRG-1021, showing RCA Battery types used in more than 250 portable radio models made during the 1948, 1949, and

1950 seasons by 47 leading set manufacturers, is available from your RCA Distributors.

TVI

For the latest information on TVI don't miss the Fall 1950 issue of RCA HAM TIPS. This issue contains a down-to-earth article on the design and application of high-pass filters.



New Cincinnati Plant for Manufacture of Miniature Tubes.

RCA ACQUIRES PLANT IN CINCINNATI

A new plant for the manufacture of miniature-type receiving tubes will be established by the RCA Victor Division of the Radio Corporation of America in Cincinnati, Ohio.

The plant, to be operated by the RCA Tube Department, is scheduled to be in full production by the autumn of 1951. Orders for high-speed tube-making machinery have already been placed by RCA in anticipation of the acquisition of the new plant.

The property includes almost 17 acres and the buildings approximately 180,000 square feet of floor space.

The Cincinnati plant will be the third RCA factory devoted to the

manufacture of receiving tubes, the others being located in Harrison, N. J., and Indianapolis, Ind. Miniature receiving tubes, originally developed by RCA in 1939 for use in a pocket-size radio set, are now in wide use throughout the radio-electronics field. The excellent operating characteristics and small size of the miniature tubes make them especially valuable for radio and television receivers as well as for other industrial and communications equipment.

The new plant will be designed to keep pace with the needs of the expanding electronics industry and to provide for increased military requirements.

NEW RC-16 TUBE MANUAL (Continued from Page 1)

similar characteristics and the same filament or heater voltages and shows miniature types and their GT equivalents. The circuit section has been expanded and contains many new audio amplifier and receiver circuit designs. A complete section on resistance-coupled amplifiers is provided.

The new RCA Receiving Tube Manual, RC-16, may be obtained through RCA tube and parts distributors, or from the Commercial Engineering Section, RCA Tube Dept., Harrison, N. J. It has a suggested list price of fifty cents.

RCA VICTOR SERVICE DATA (Continued from Page 1)

now list at \$3.50 and \$4.00, respectively. With these recent price reductions on Volumes I and II, no well equipped service shop can afford to be without these accurate sources of service information. The busy serviceman will find the RCA Victor Service Data Books to be invaluable service references for accurate schematic diagrams, wiring

diagrams and parts lists, detailed alignment and adjustment procedures, circuit descriptions, chassis-layout drawings, voltage charts, and

complete specifications.

New prices of the RCA Victor Service Data, together with ordering information are given below:

RCA VICTOR SERVICE DATA BOOKS

Description	Sugg. User Price	Stock No.
I (880 pages) 1923-37	\$3.50	112
II (816 pages) 1938-42	4.00	113
III (290 pages) 1943-46	4.00	114
IV (566 pages) 1947-48	6.00	115

RCA VICTOR SERVICE DATA BOOKLETS (Order by set model no.)

1950 TV RECEIVERS

Model	Sugg. User Price
T100, T120, T121, TA128, TA129, TA169, S1000, 6T72, (TC124, TC125, TC127)*	\$0.50 .50

PRELIMINARY BOOKLETS ON 1950 TV RECEIVERS

Model	Sugg. User Price
(2T51, 2T60)*, 2T81	\$0.25
(6T54, 6T64, 6T65, 6T71, 6T74, 6T75, 6T76)*	.25
(6T84, 6T86, 6T87)*	.25
(9T57, 9T77, 9T79)*, 9T89	.25

1950 RADIOS AND PHONOGRAPHS

Model	Sugg. User Price
A55, A78, BX55, BX57, 45EY, 45J, (960282-1, 960282-2)*, A106, BX6, 960285-1, (X551, X552)* X711, RP-190, (960284-1, 960284-2)*	\$0.25 .25 .25 .25

* Covered in one booklet.

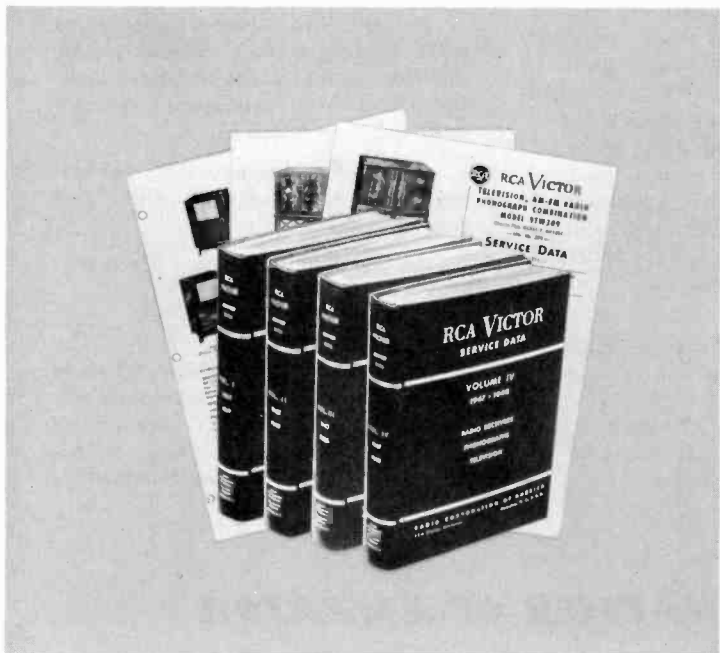
NEW PARCEL POST RULING ON C-R TUBES ANNOUNCED

As a result of tests performed in the Bureau of Standards' Laboratories in Washington, D. C., the U.S. Post Office Department has authorized parcel post shipments of cathode-ray tubes, up to and including 12½ inches in diameter.

In view of the economies that can be effected by the use of parcel post, it is recommended that this method of shipment be used wherever possible, especially for shipments of single tubes to outlying areas, and for tubes being returned for adjustment consideration.

At the present time, parcel post shipment of cathode-ray tubes larger than 12½ inches in diameter has not been authorized, and it is suggested that other means of transportation be used for these tubes.

Basis for the Post Office Department's new ruling were rigorous tests carried out by the Bureau of Standards which determined effects of cathode-ray tube breakage. These tests were sponsored by the RTMA Packaging Committee.



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A Senior VoltOhmyst being presented to David Kusner (left) by J. B. Coleman, assistant director of engineering, RCA Victor, at the recent National Science Fair which was sponsored by the Science Clubs of America. Mr. Kusner's exhibit of an rf heating unit won the second prize. As the second-prize winner, he specified the VoltOhmyst on his wish list as the most desired prize.

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From

RCA TUBE DEPARTMENT
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