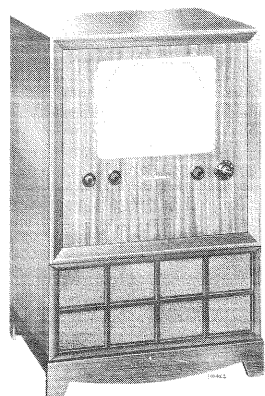
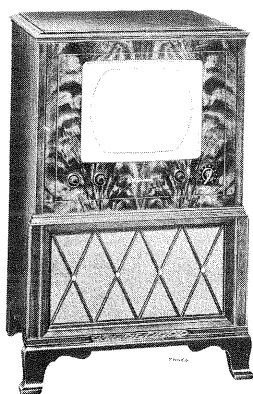




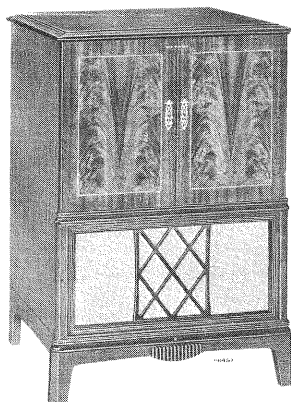
RCA VICTOR



Model 9TC245
Walnut,
Mahogany
or Oak



Model 9TC247
Walnut, Mahogany or
Toasted Mahogany



Model 9TC249
Walnut, Mahogany or
Toasted Mahogany

TELEVISION RECEIVERS

MODELS 9TC245, 9TC247, 9TC249

Chassis Nos. KCS 34 or KCS 34B

Mfr. No. 274

SERVICE DATA

—1949 No. T11—

RADIO CORPORATION OF AMERICA
RCA VICTOR DIVISION
CAMDEN, N. J., U. S. A.

GENERAL DESCRIPTION

Models 9TC245, 9TC247, and 9TC249 are twelve and one-half inch television receivers and are electrically identical except for cabinets. Receivers employing KCS34B have the kinescopes shipped in place in the cabinet. Those employing KCS34 have the kinescope shipped separately. These receivers employ twenty-one tubes plus two rectifiers and a 12LP4 kinescope.

Features of the television unit are full twelve channel coverage; FM sound system; improved picture brilliance; picture A-G-C; A-F-C horizontal hold; stabilized vertical hold; two stages of video amplification; noise saturation circuits; improved sync separator and clipper; four mc. band width for picture channel and reduced hazard high voltage supply. An auxiliary audio input jack is provided to permit the use of an external record playing attachment.

ELECTRICAL AND MECHANICAL SPECIFICATIONS

PICTURE SIZE..... 87 square inches on a 12LP4 Kinescope

TELEVISION R-F FREQUENCY RANGE

All 12 television channels, 54 mc. to 88 mc., 174 mc. to 216 mc.
Fine Tuning Range... ± 250 kc. on chan. 2, ± 650 kc. on chan. 13
Picture Carrier Frequency..... 25.75 mc.
Sound Carrier Frequency..... 21.25 mc.

VIDEO RESPONSE..... To 4 mc.

SWEEP DEFLECTION..... Magnetic

FOCUS..... Magnetic

POWER SUPPLY RATING..... 115 volts, 60 cycles, 230 watts

AUDIO POWER OUTPUT RATING..... 2.6 watts max.

LOUDSPEAKERS — 92569-7..... 12" PM Dynamic, 2.2 ohms

CHASSIS DESIGNATIONS

KCS34..... In Models 9TC247 and 9TC249
KCS34B..... In Models 9TC245, 9TC247 and 9TC249

DIMENSIONS (inches)	Width	Height	Depth
Cabinet (outside) 9TC245.....	23 $\frac{1}{2}$	37 $\frac{3}{4}$	20 $\frac{1}{4}$
Cabinet (outside) 9TC247.....	24 $\frac{1}{2}$	37 $\frac{3}{4}$	20 $\frac{1}{2}$
Cabinet (outside) 9TC249.....	24 $\frac{1}{2}$	37 $\frac{1}{4}$	22 $\frac{1}{4}$
Chassis Assembly (overall).....	19 $\frac{1}{2}$	14	20

WEIGHT

Chassis	9TC245	102 lbs.
with Tubes	9TC247	96 lbs.
in Cabinet	9TC249	108 lbs.
Shipping	9TC245	123 lbs.
Weight	9TC247	116 lbs.
	9TC249	128 lbs.

RECEIVER ANTENNA INPUT IMPEDANCE

Choice: 300 ohms balanced or 72 ohms unbalanced.

RCA TUBE COMPLEMENT

Tube Used	Function
(1) RCA 6AG5	R-F Amplifier
(2) RCA 6AG5	Converter
(3) RCA 6J6	R-F Oscillator
(4) RCA 6AU6	1st Sound I-F Amplifier
(5) RCA 6AU6	2nd Sound I-F Amplifier
(6) RCA 6AL5	Sound Discriminator
(7) RCA 6AV6	1st Audio Amplifier
(8) RCA 6K6GT	Audio Output
(9) RCA 6BA6	1st Picture I-F Amplifier
(10) RCA 6AG5	2nd Picture I-F Amplifier
(11) RCA 6BA6	3rd Picture I-F Amplifier
(12) RCA 6AG5	4th Picture I-F Amplifier
(13) RCA 6AL5	Picture 2nd Detector and Sync Limiter
(14) RCA 12AU7	1st and 2nd Video Amplifier
(15) RCA 6SN7GT	AGC Amplifier and Vertical Sweep Oscillator
(16) RCA 6SN7GT	AGC Rectifier and 1st Sync Separator
(17) RCA 6SN7GT	Sync Amplifier and 2nd Sync Separator
(18) RCA 6K6GT	Vertical Sweep Output
(19) RCA 6SN7GT	Horizontal Sweep Oscillator and Control
(20) RCA 6BG6G	Horizontal Sweep Output
(21) RCA 6W4GT	Damper
(22) RCA 1B3-GT/8016	High Voltage Rectifier
(23) RCA 5U4G	Power Supply Rectifier
(24) RCA 12LP4	Kinescope

Specifications continued on page 2

REFER TO PAGES 186 TO 201 FOR ALIGNMENT PROCEDURE, SERVICE HINTS, SUPPLEMENTARY DATA AND WAVEFORM PHOTOGRAPHS.

The following adjustments are necessary when turning the receiver on for the first time:

1. See that the TV-PH switch on the rear apron is in the "TV" position.

2. Turn the receiver "ON" and advance the SOUND VOLUME control to approximately mid-position.

3. Set the STATION SELECTOR to the desired channel.

4. Adjust the FINE TUNING control for best sound fidelity and the SOUND VOLUME control for suitable volume.

5. Turn the BRIGHTNESS control fully counter-clockwise, then clockwise until a light pattern appears on the screen.

6. Adjust the VERTICAL hold control until the pattern stops vertical movement.

7. Adjust the HORIZONTAL hold control until a picture is obtained and centered.

8. Turn the BRIGHTNESS control counter-clockwise until the retrace lines just disappear.

9. Adjust the PICTURE control for suitable picture contrast.

10. After the receiver has been on for some time, it may be necessary to readjust the FINE TUNING control slightly for improved sound fidelity.

11. In switching from one station to another, it may be necessary to repeat steps 4, 8 and 9.

12. When the set is turned on again after an idle period, it should not be necessary to repeat the adjustments if the positions of the controls have not been changed. If any adjustment is necessary, step number 4 is generally sufficient.

13. If the positions of the controls have been changed, it may be necessary to repeat steps 2 through 9.

14. To use the instrument with a record player, plug the record-player output cable into the PHONO jack on the rear apron, and set the TV-PH switch on "PH." Set the TV-PH switch back to TV on completion of the record program.

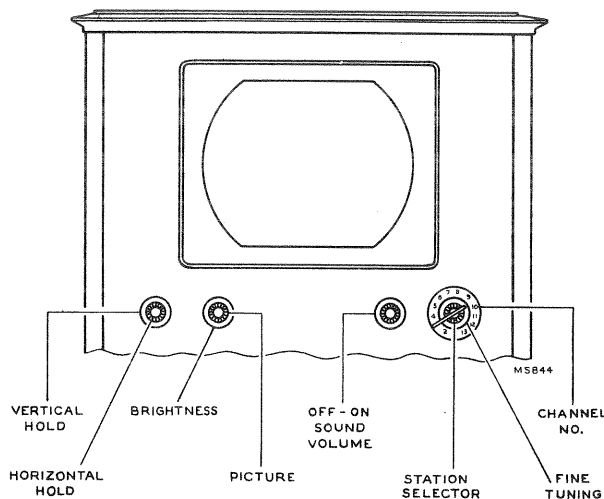


Figure 1—Receiver Operating Controls

HIGH VOLTAGE WARNING

OPERATION OF THIS RECEIVER OUTSIDE THE CABINET OR WITH THE COVERS REMOVED, INVOLVES A SHOCK HAZARD FROM THE RECEIVER POWER SUPPLIES. WORK ON THE RECEIVER SHOULD NOT BE ATTEMPTED BY ANYONE WHO IS NOT THOROUGHLY FAMILIAR WITH THE PRECAUTIONS NECESSARY WHEN WORKING ON HIGH VOLTAGE EQUIPMENT. DO NOT OPERATE THE RECEIVER WITH THE HIGH VOLTAGE COMPARTMENT SHIELD REMOVED.

KINESCOPE HANDLING PRECAUTIONS

DO NOT OPEN THE KINESCOPE SHIPPING CARTON, INSTALL, REMOVE OR HANDLE THE KINESCOPE IN ANY MANNER UNLESS SHATTERPROOF GOGGLES AND HEAVY GLOVES ARE WORN. PEOPLE NOT SO EQUIPPED SHOULD BE KEPT AWAY WHILE HANDLING KINESCOPES. KEEP THE KINESCOPE AWAY FROM THE BODY WHILE HANDLING.

The kinescope bulb encloses a high vacuum and, due to its large surface area, is subjected to considerable air pressure. For this reason, kinescopes must be handled with more care than ordinary receiving tubes.

The large end of the kinescope bulb—particularly that part at the rim of the viewing surface—must not be struck, scratched or subjected to more than moderate pressure at any time. In installation, if the tube sticks or fails to slip smoothly into its socket, or deflecting yoke, investigate and remove the cause of the trouble. Do not force the tube. Refer to the Receiver Installation section for detailed instructions on kinescope installation. All RCA kinescopes are shipped in special cartons and should be left in the cartons until ready for installation in the receiver. Keep the carton for possible future use.

INSTALLATION INSTRUCTIONS

9TC245, 9TC247, 9TC249

Models 9TC245, 9TC247 and 9TC249 receivers employing KCS34B are shipped complete in one carton with the kinescope in place in the cabinet. Model 9TC247 and 9TC249 receivers employing KCS34 have the kinescope shipped separately in a special carton which should not be opened until ready for installation.

UNPACKING.—These receivers are packed in a cardboard carton. To unpack, turn the shipping carton on its side and tear open the carton bottom flaps. Fold the flaps up along the side of the carton and turn the carton back up. Lift the carton up and off the cabinet.

Remove the cabinet back grille. Take off the two nuts on the bolts holding the cabinet on the skid. With a man on each side of the cabinet, lift the receiver up and off the skid.

Remove the protective cardboard shield from the 5U4G rectifier. Remove all shipping material. Remove the envelope containing the control knobs and ion trap magnet.

When installing receivers employing KCS34B, skip the remainder of the unpacking and kinescope installation instructions and proceed with antenna and power connections.

The following kinescope installation instructions are given for receivers employing KCS34 chassis:

To remove the front panel, loosen the two wingnuts inside the cabinet and turn the two locking plates to vertical as shown in Figure 2. Tilt the panel out at the top.

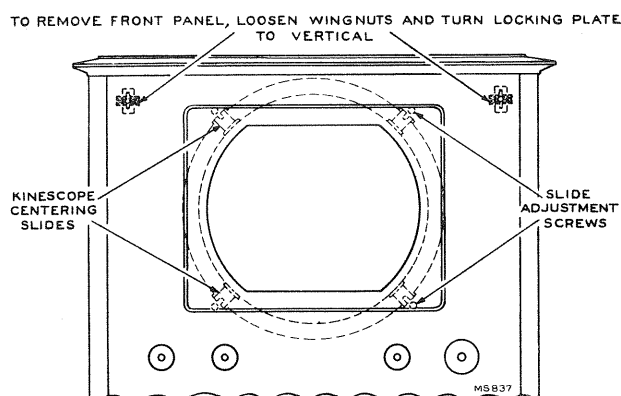


Figure 2—Cabinet, Front View

Remove the two self-tapping screws from the kinescope cushion slide as shown in Figure 3.

Loosen the two kinescope cushion adjustment wing screws and slide the cushion toward the rear of the chassis. Loosen the deflection yoke adjustment, slide the yoke toward the rear of the chassis and tighten.

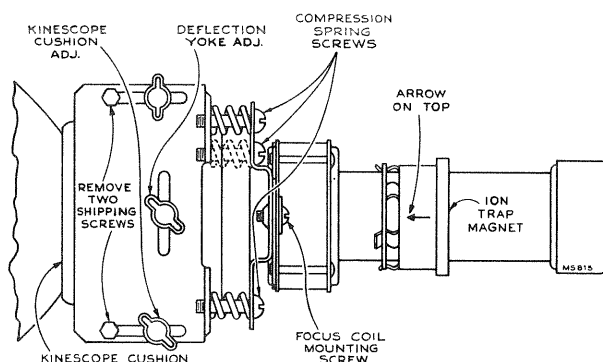


Figure 3—Yoke and Focus Coil Adjustments

From the front of the cabinet, look through the deflection yoke and check the alignment of the focus coil with the yoke. If the focus coil is not in line, loosen the two focus coil mounting screws and move the coil until alignment is obtained. Tighten the mounting screws with the coil in this position.

Loosen the two lower kinescope face centering slides, and set them at approximately mid-position. See Figure 2 for loca-

tion of the slides and their adjustment screws. Loosen the two upper slides, slip them up as far as possible and tighten.

KINESCOPE HANDLING PRECAUTION.—Do not open the kinescope shipping carton, install, remove, or handle the kinescope in any manner, unless shatter-proof goggles and heavy gloves are worn. People not so equipped should be kept away while handling the kinescope. Keep the kinescope away from the body while handling. The shipping carton should be kept for use in case of future moves.

INSTALLATION OF KINESCOPE.—The kinescope second anode contact is a recessed metal well in the side of the bulb. The tube must be installed so that this contact is up but rotated approximately 30 degrees toward the high voltage compartment.

Insert the neck of the kinescope through the deflection and focus coils as shown in Figure 4 until the base of the tube protrudes approximately two inches beyond the focus coil. If the tube sticks, or fails to slip into place smoothly, investigate and remove the cause of the trouble. Do not force the tube.

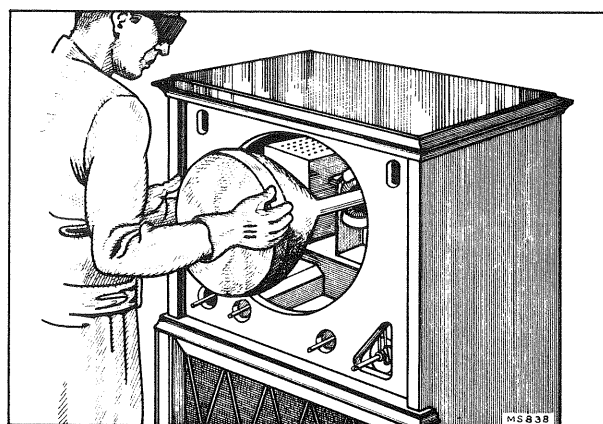


Figure 4—Kinescope Insertion

Slip the ion trap magnet assembly over the neck of the kinescope with the large magnet towards the base of the tube and with the arrow on the assembly up as shown in Figure 3.

Connect the kinescope socket to the tube base.

Insert the kinescope until the face of the tube protrudes approximately one-quarter of an inch outside the front of the cabinet. Adjust the four centering slides until the face of the kinescope is in the center of the cabinet opening. Tighten the four slides securely.

Wipe the kinescope screen surface and front panel safety glass clean of all dust and finger marks with a soft cloth moistened with the Drackett Co.'s "Windex" or similar cleaning agent.

Install the front panel by reversal of the procedure indicated in Figure 2.

Slip the kinescope as far forward as possible. Slide the kinescope cushion firmly up against the flare of the tube and tighten the adjustment wing screws. Slide the deflection yoke as far forward as possible. If this is not done, difficulty will be encountered in adjusting the ion trap magnet and focus coil due to shadows on the corners of the raster.

Connect the high voltage lead to the kinescope second anode contact.

Make sure all tubes are in place and are firmly seated in their sockets.

ANTENNA AND POWER CONNECTIONS.—Connect the leads from the antenna to the receiver antenna terminals.

Install the front panel control knobs.

Make sure that the receiver power switch is in the off position. Plug the receiver power cord into a 115 volt 60 cycle a-c outlet.

WARNING.—The high voltage supply in this receiver delivers 10,000 volts! A.C. interlocks are provided at the back of the set so that when the back is removed — so is the power.

9TC245, 9TC247, 9TC249

INSTALLATION INSTRUCTIONS

ION TRAP MAGNET ADJUSTMENT.—Looking at the kinescope gun structure, it will be observed that the second cylinder from the base inside the glass neck is provided with two small metal flags, as shown in Figure 5. The ion trap rear magnet poles should be approximately over the ion trap flags.

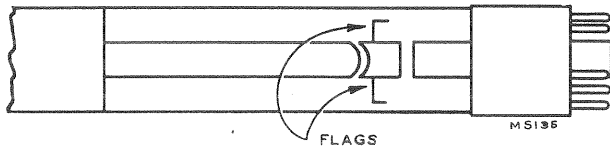


Figure 5—Ion Trap Flags

Turn the power switch to the "on" position, the brightness control three-quarters clockwise, and picture control fully counter-clockwise.

Immediately adjust the magnet by moving it forward or backward at the same time rotating it slightly around the neck of the kinescope for the brightest raster on the screen. Reduce the brightness control setting until the raster is slightly above average brilliance. Adjust the focus control (R191 on the chassis rear apron) until the line structure of the raster is clearly visible. Readjust the ion trap magnet for maximum raster brilliance. The final touches on this adjustment should be made with the brightness control at the maximum position with which good line focus can be maintained.

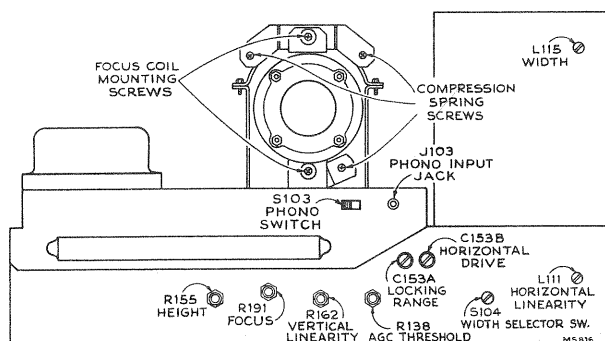


Figure 6—Rear Chassis Adjustments

DEFLECTION YOKE ADJUSTMENT.—If the lines of the raster are not horizontal or squared with the picture mask, rotate the deflection yoke until this condition is obtained. Tighten the yoke adjustment wing screw.

PICTURE ADJUSTMENTS.—It will now be necessary to obtain a test pattern picture in order to make further adjustments. See steps 3 through 9 of the receiver operating instructions on page 2.

If the Horizontal Oscillator and AGC System are operating properly, it should be possible to sync the picture at this point. However, if the AGC threshold control is misadjusted, and the receiver overloading, it may be impossible to sync the picture.

If the receiver is overloading, turn R138 (on the rear of the chassis, see Figure 6) clockwise until the set operates normally and the picture can be synced.

CHECK OF HORIZONTAL OSCILLATOR ALIGNMENT.—Turn the horizontal hold control to the extreme counterclockwise position. The picture should remain in horizontal sync. Momentarily remove the signal by switching off channel then back. Normally the picture will be out of sync. Turn the control clockwise slowly. The number of diagonal black bars will be gradually reduced and when only 3 bars sloping downward to the left are obtained, the picture will pull into sync upon slight additional clockwise rotation of the control. Pull-in should occur when the control is approximately 90 degrees from the extreme counterclockwise position. The picture should remain in sync for approximately 90 degrees of additional clockwise rotation of the control. At the extreme clockwise position, the picture should be out of sync and should show 1 vertical or diagonal black bar in the raster.

If the receiver passes the above checks and the picture is normal and stable, the horizontal oscillator is properly aligned. Skip "Alignment of Horizontal Oscillator" and proceed with "Focus Coil Adjustment."

ALIGNMENT OF HORIZONTAL OSCILLATOR.—If in the above check the receiver failed to hold sync with the hold control at the extreme counterclockwise position or failed to hold sync over 90 degrees of clockwise rotation of the control from the pull-in point, it will be necessary to make the following adjustments.

Horizontal Frequency Adjustment.—Turn the horizontal hold control to the extreme clockwise position. Tune in a television station and adjust the T109 horizontal frequency adjustment (under the chassis) until the picture is just out of sync and the horizontal blanking appears as a vertical or diagonal black bar in the raster.

Horizontal Lock in Range Adjustment.—Set the horizontal hold control to the full counterclockwise position. Momentarily remove the signal by switching off channel then back. Slowly turn the horizontal hold control clockwise and note the least number of diagonal bars obtained just before the picture pulls into sync.

If more than 3 bars are present just before the picture pulls into sync, adjust the horizontal locking range trimmer C153A slightly clockwise. If less than 3 bars are present, adjust C153A slightly counterclockwise. Turn the picture control counterclockwise, momentarily remove the signal and recheck the number of bars present at the pull-in point. Repeat this procedure until 3 bars are present.

Repeat the adjustments under "Horizontal Frequency Adjustment" and "Horizontal Locking Range Adjustment" until the conditions specified under each are fulfilled. When the horizontal hold operates as outlined under "Check of Horizontal Oscillator Alignment" the oscillator is properly adjusted.

If it is impossible to sync the picture at this point and the AGC system is in proper adjustment it will be necessary to adjust the Horizontal Oscillator by the method outlined in the alignment procedure. For field purposes paragraph "A" under Horizontal Oscillator Waveform Adjustment may be omitted.

FOCUS COIL ADJUSTMENTS.—The focus coil should be adjusted so that there is approximately one-quarter inch of space between the rear cardboard shell of the yoke and the flat of the front face of the focus coil. This spacing gives best average focus over the face of the tube. However, it may be necessary to change this distance slightly in order to compensate for small differences in strength of the permanent magnets in the coil. If the receiver focuses with the focus control at or near the clockwise end of its range, the focus coil should be moved toward the yoke and if focus is obtained at or near the counterclockwise end of the control, the coil should be moved away from the yoke.

The axis of the hole through the focus coil should be parallel with the axis of the kinescope neck.

CENTERING ADJUSTMENT.—No electrical centering controls are provided. Centering is obtained by loosening the two focus coil mounting screws and sliding the coil up or down or from side to side. If the focus coil was appreciably changed in position or if a corner of the raster is shadowed, check the position of the ion trap magnet. Reposition the magnet within the range of maximum raster brightness to eliminate the shadow and recenter the picture by sliding the coil. In no case should the magnet be adjusted to cause any loss of brightness since such operation may cause immediate or eventual damage to the tube. In extreme cases it may be necessary to adjust one or more of the three focus coil compression spring screws to eliminate a corner shadow.

WIDTH, DRIVE AND HORIZONTAL LINEARITY ADJUSTMENTS.—Adjust the horizontal drive control C153B to give a picture of maximum width within the limits of good linearity. Adjust the horizontal linearity control L111 to provide best linearity. Adjust the width control until the picture just fills the mask.

INSTALLATION INSTRUCTIONS

9TC245, 9TC247, 9TC249

A width control coil and a width selector switch are provided. With the switch in position 1 (fully counterclockwise), adjust the width coil until the picture fills the mask. On low line voltages it may not be possible to get sufficient width by adjustment of the width coil. In this case turn the width selector switch clockwise to position 2. In this position the width coil is disconnected, and adjustment of the width coil will have no effect. For still greater width, turn the width selector switch fully clockwise to position 3. In this position, the high voltage is reduced slightly thus permitting greater deflection.

Adjustments of the horizontal drive control affect horizontal oscillator hold and locking range. If the drive control was adjusted, recheck the oscillator alignment.

HEIGHT AND VERTICAL LINEARITY ADJUSTMENTS.— Adjust the height control (R155 on chassis rear apron) until the picture fills the mask vertically. Adjust vertical linearity (R162 on rear apron), until the test pattern is symmetrical from top to bottom. Adjustment of either control will require a readjustment of the other. Adjust centering to align the picture with the mask.

FOCUS.— Adjust the focus control (R191 on chassis rear apron) for maximum definition in the test pattern vertical "wedge" and best focus in the white areas of the pattern.

In some cases it may be possible to improve focus by a slight reposition of the ion trap magnet while staying within the range of maximum brightness.

Check to see that the cushion and yoke thumbscrews and the focus coil mounting screws are tight.

AGC THRESHOLD CONTROL.— The AGC threshold control R138 is adjusted at the factory and normally should not require readjustment in the field.

To check the adjustment of the AGC Threshold Control, tune in a strong signal, sync the picture and turn the picture control to the maximum clockwise position. Turn the brightness control counterclockwise until the vertical retrace lines are just invisible. Momentarily remove the signal by switching off channel then back. If the picture reappears immediately, the receiver is not overloading due to improper setting of R138. If the picture requires an appreciable portion of a second to reappear, R138 should be readjusted.

Set the picture control at the maximum clockwise position. Turn R138 fully clockwise. The top one-half inch of the picture may be bent slightly. This should be disregarded. Turn R138 counterclockwise until there is a very, very slight bend or change of bend in the top one-half inch of the picture. Then turn R138 clockwise just sufficiently to remove this bend or change of bend.

If the signal is very weak, the above method may not work as it may be impossible to get the picture to bend. In this case, turn R138 counterclockwise until the snow in the picture becomes more pronounced, then clockwise until the best signal to noise ratio is obtained.

The AGC control adjustment should be made on a strong signal if possible. If the control is set too far counterclockwise on a weak signal, then the receiver may overload when a strong signal is received.

Replace the cabinet back and make sure that the screws holding it are up tight, otherwise it may rattle or buzz when the receiver is operated at high volume.

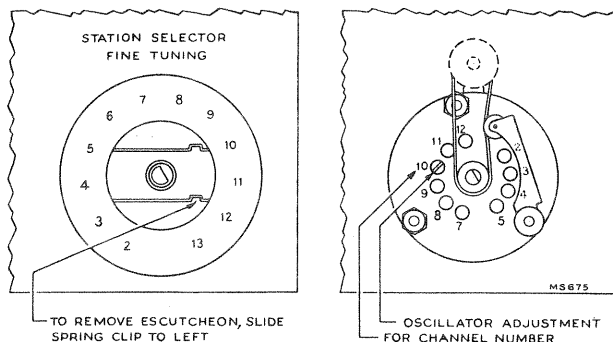


Figure 7—R-F Oscillator Adjustments

CHECK OF R-F OSCILLATOR ADJUSTMENTS.— Tune in all available stations to see if the receiver r-f oscillator is adjusted to the proper frequency on all channels. If adjustments are required, these should be made by the method outlined in the alignment procedure.

The adjustments for channels 2 through 5 and 7 through 12 are available from the front of the cabinet by removing the station selector escutcheon as shown in Figure 7. Adjustment for channel 13 is on top of the chassis and channel 6 adjustment is in the kinescope well.

CHASSIS REMOVAL.— To remove the KCS34B chassis for repair or installation of a new kinescope, remove the cabinet back and the control knobs, unplug the speaker cable, and remove the six chassis bolts under the cabinet. Withdraw the chassis from the back of the cabinet. The kinescope is held on the chassis by means of a special strap, so that the chassis and the kinescope can be handled together, as a unit.

To remove the kinescope, remove the kinescope socket, the ion-trap magnet, and the second-anode connector. Loosen the cross-recessed head screw on the kinescope strap. Withdraw the kinescope toward the front of the chassis.

INSTALLATION OF KINESCOPE.— The kinescope second anode contact is a recessed metal well in the side of the bulb. The tube must be installed so that this contact is up but rotated approximately 30 degrees toward the high-voltage compartment.

Insert the neck of the kinescope through the deflection and focus coils. If the tube sticks, or fails to slip into place smoothly, investigate and remove the cause of the trouble. Do not force the tube.

Slide the kinescope cushion toward the rear of the chassis. Loosen the deflection yoke adjustment, slide the yoke toward the rear of the chassis and tighten.

Slip the ion trap magnet assembly over the neck of the kinescope.

Connect the kinescope socket to the tube base.

Connect the high voltage lead to the kinescope second anode socket.

Wipe the kinescope screen surface and front panel safety glass clean of all dust and finger marks.

To replace the chassis in the cabinet, first tighten the cross-recessed head screw on the kinescope strap. Slide the chassis into the cabinet, then insert and tighten the six chassis bolts. Loosen the kinescope strap from the rear of the cabinet. Push the kinescope forward until the face of the tube is against the mask. Push the yoke cushion forward against the kinescope flare, then tighten the cushion adjusting screws. Tighten the kinescope strap, then replace the knobs. Repeat the installation adjustments starting with adjustment of ion trap magnet.

WEAK SIGNAL AREA OPERATION.— Since the vast majority of receivers are sold in strong signal areas the chassis are aligned to produce the cleanest pictures in those areas. However, if the receiver is to be operated in a weak signal area, better performance can be obtained by "peaking" the r-f unit.

To peak the r-f unit in these receivers, disconnect the 390 ohm resistor which is on top of the r-f unit chassis. Adjust L66 to obtain the best possible picture on the weakest low channel station received. By this action, the r-f gain is increased 50% at the expense of r-f bandwidth and an improvement in the weak signal picture results.

On early production receivers R11 was 1,000 ohms and R14 was omitted. In order to "peak" these units it will be necessary to remove the unit from the receiver and change R11 to 10,000 ohms. Once the unit is removed from the chassis R11 is easily accessible on the unit rear wafer. When making this change, if the channel number 2 r-f coil L62 consists of 5 3/4 turns, the outside turn should be "knifed" one wire diameter away from the rest of the coil in order to provide peak response on channel 2. The unit should then be replaced and L66 peaked as described above.

If the peaked receiver is subsequently taken to a strong signal area, the resistor R14 should be connected in place and L66 adjusted for "flat" response on the low channels.

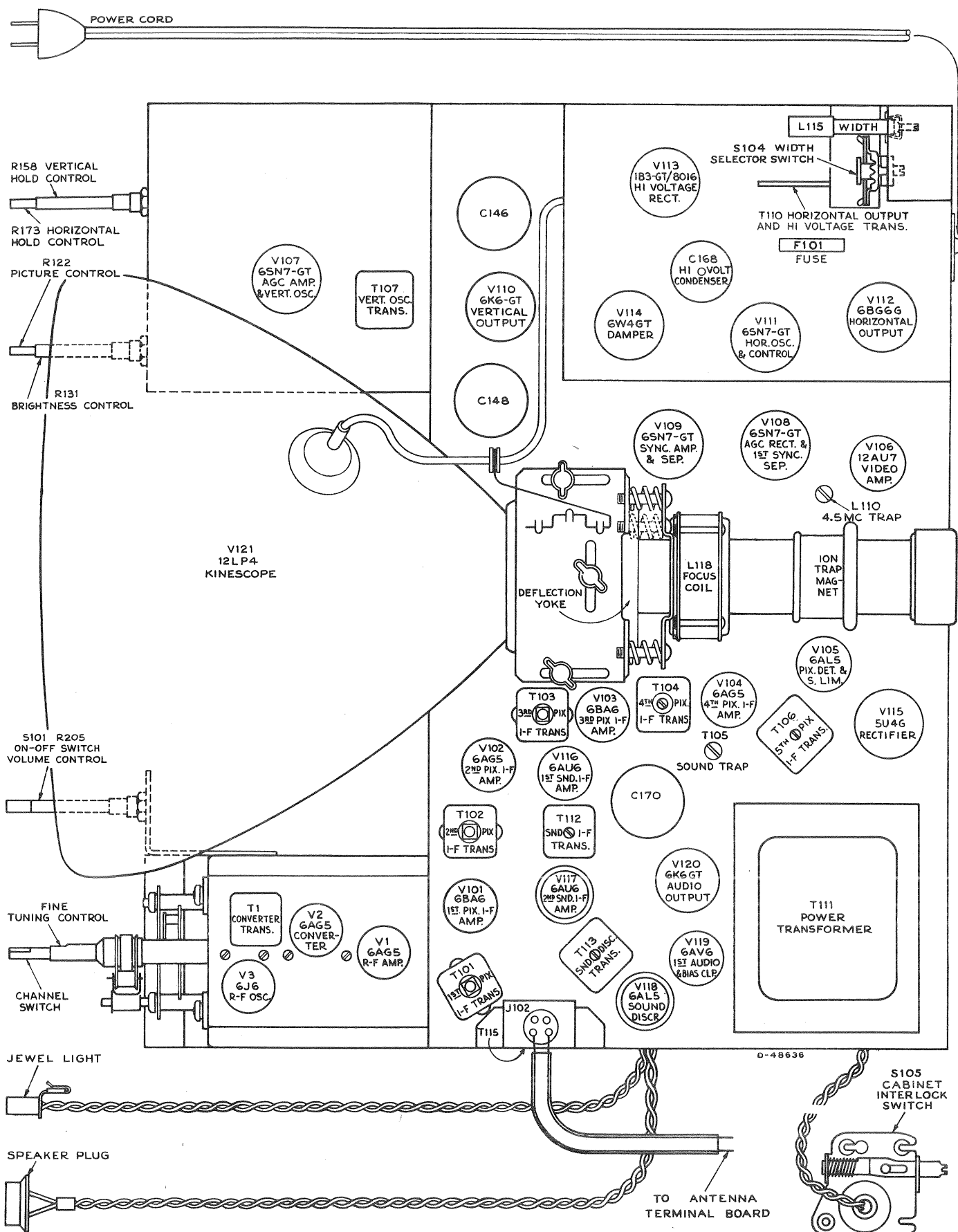


Figure 8—Chassis Top View

CHASSIS BOTTOM VIEW

9TC245, 9TC247, 9TC249

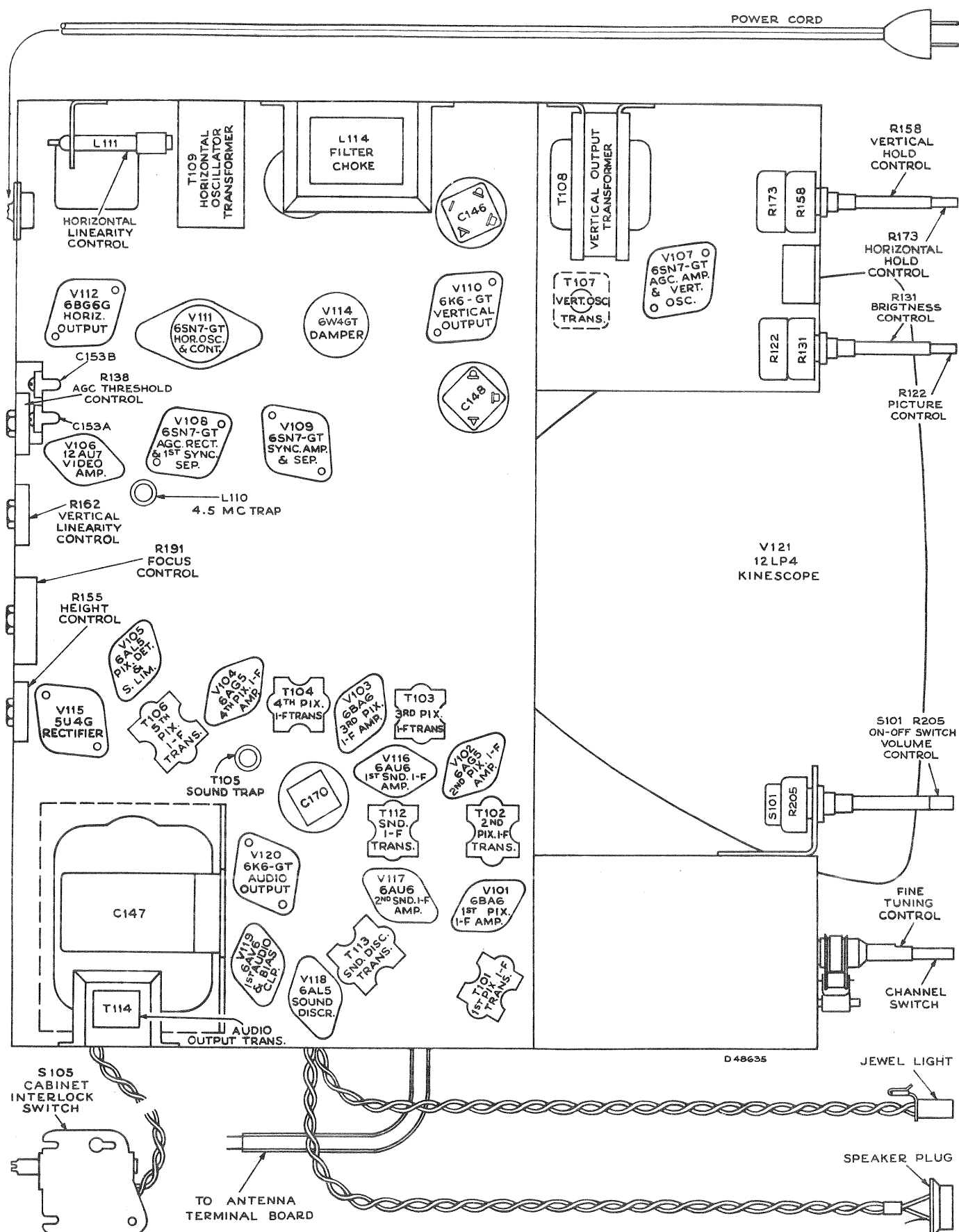


Figure 9—Chassis Bottom View

9TC245, 9TC247, 9TC249

VOLTAGE CHART

The following measurements represent two sets of conditions. In the first condition, a 2200 microvolt test pattern signal was fed into the receiver, the picture synced and the AGC threshold control properly adjusted. The second condition was obtained by removing the antenna leads and short circuiting the receiver antenna terminals. Voltages shown are read with "Jr. VoltOhmyst" between the indicated terminal and chassis ground and with the receiver operating on 117 volts, 60 cycles, a-c.

Tube No.	Tube Type	Function	Operating Condition	E. Plate		E. Screen		E. Cathode		E. Grid		I Plate (ma.)	I Screen (ma.)	Notes on Measurements
				Pin No.	Volts	Pin No.	Volts	Pin No.	Volts	Pin No.	Volts			
V1	6AG5	R-F Amplifier	2200 Mu.V. Signal	5	140	6	142	2 & 7	0	1	-2.4	5	2	
			No Signal	5	67	6	111	2 & 7	0	1	-0.4	14.0	5.0	
V2	6AG5	Converter	2200 Mu.V. Signal	5	*130 to 140	6	*130 to 140	2 & 7	0	1	*-3.0 to -7.0	*7.1 to 7.7	*2.3 to 2.7	*Depending upon channel
			No Signal	5	*104 to 109	6	*104 to 109	2 & 7	0	1	*-2.0 to -6.0	*5.3 to 5.9	*.8 to 1.0	
V3	6J6	R-F Oscillator	2200 Mu.V. Signal	1 & 2	*88 to 95	—	—	7	.19	5 & 6	*-5.1 to -7.3	*1.9 to 2.7	—	*Depending upon channel
			No Signal	1 & 2	*68 to 81	—	—	7	.16	5 & 6	*-4.5 to -6.6	*1.8 to 2.1	—	
V101	6BA6	1st Pix. I-F Amplifier	2200 Mu.V. Signal	5	125	6	125	7	.4	1	-12.5	2.8	1.3	
			No Signal	5	95	6	95	7	1.1	1	+3	7.5	3.5	
V102	6AG5	2d Pix. I-F Amplifier	2200 Mu.V. Signal	5	115	6	115	2 & 7	.75	1	0	8.2	2.5	
			No Signal	5	100	6	100	2 & 7	.65	1	0	6.8	2.1	
V103	6BA6	3d Pix. I-F Amplifier	2200 Mu.V. Signal	5	110	6	135	7	.25	1	-2.4	4.0	3.8	
			No Signal	5	60	6	100	7	.75	1	-0.4	11.0	4.8	
V104	6AG5	4th Pix. I-F Amplifier	2200 Mu.V. Signal	5	170	6	135	2 & 7	1.35	1	0	6.5	2.0	
			No Signal	5	175	6	120	2 & 7	1.2	1	0	5.9	1.8	
V105 A	6AL5	Picture 2d Det.	2200 Mu.V. Signal	7	-113	—	—	1	-112	—	—	.48	—	
			No Signal	7	-120	—	—	1	-120	—	—	—	—	
V105 B	6AL5	Sync Limiter	2200 Mu.V. Signal	2	-107	—	—	5	-56	—	—	—	—	
			No Signal	2	-80	—	—	5	-60	—	—	—	—	
V106	12AU7	1st Video Amplifier	2200 Mu.V. Signal	1	-23.2	—	—	3	-111	2	-113	4.38	—	
			No Signal	1	-19.2	—	—	3	-117	2	-120	3.82	—	
V106	12AU7	2d Video Amplifier	2200 Mu.V. Signal	6	*120	—	—	8	*-6.5	7	*-16	6.2	—	*At average contrast
			No Signal	6	*110	—	—	8	*-10.5	7	*-13.5	6.9	—	
V107 A	6SN7 GT	AGC Amplifier	2200 Mu.V. Signal	5	-12.5	—	—	6	-53	4	-54	.9	—	
			No Signal	5	+3	—	—	6	-60	4	-66	.3	—	
V107 B	6SN7 GT	Vertical Oscillator	2200 Mu.V. Signal	2	76	—	—	3	-111	1	-158	.2	—	
			No Signal	2	62	—	—	3	-120	1	-169	.2	—	
V108	6SN7 GT	AGC Rectifier	2200 Mu.V. Signal	5	97	—	—	6	-3.4	4	-23.2	.3	—	
			No Signal	5	81	—	—	6	-8.7	4	-19.2	.28	—	

VOLTAGE CHART

9TC245, 9TC247, 9TC249

Tube No.	Tube Type	Function	Operating Condition	E. Plate		E. Screen		E. Cathode		E. Grid		I Plate (ma.)	I Screen (ma.)	Notes on Measurements
				Pin No.	Volts	Pin No.	Volts	Pin No.	Volts	Pin No.	Volts			
V108	6SN7 GT	1st Sync Separator	2200 Mu.V. Signal	2	96	—	—	3	-1.8	1	-19.5	.1	—	
			No Signal	2	81	—	—	3	-9.7	1	-19.3	.1	—	
V109	6SN7 GT	Sync Amplifier	2200 Mu.V. Signal	2	158	—	—	3	0	1	-4.7	5.25	—	
			No Signal	2	154	—	—	3	0	1	-5.2	3.75	—	
V109	6SN7 GT	Sync Separator	2200 Mu.V. Signal	5	230	—	—	6	-51	4	-106	.4	—	
			No Signal	5	215	—	—	6	-59	4	-80	.35	—	
V110	6K6-GT	Vertical Output	2200 Mu.V. Signal	3	223	4	223	8	-67	5	-91		*7.85	*Screen connected to plate
			No Signal	3	208	4	208	8	-79	5	-101		*7.7	
V111	6SN7 GT	Horizontal Osc. Control	2200 Mu.V. Signal	2	*48	—	—	3	-110	1	-92	.2	—	*Variation of hold gives -21.9 to +56 volts on plate
			No Signal	2	*33	—	—	3	-108	1	-120	.2	—	
V111	6SN7 GT	Horizontal Oscillator	2200 Mu.V. Signal	5	70	—	—	6	-111	4	-185	2.4	—	
			No Signal	5	54	—	—	6	-120	4	-192	2.4	—	
V112	6BG6G	Horizontal Output	2200 Mu.V. Signal	Cap	*	8	*135	3	-90	5	-110	72	9.4	*6000 volt pulse present
			No Signal	Cap	Do Not Meas.	8	*130	3	-100	5	-115	70	9.2	
V113	1B3GT /8016	H. V. Rectifier	Brightness Min.	Cap	*	—	—	2 & 7	10200	—	—	0	—	*9700 volt pulse present
			Brightness Average	Cap	Do Not Meas.	—	—	2 & 7	9700	—	—	1	—	
V114	6W4GT	Damper	2200 Mu.V. Signal	5	*	—	—	3	300	—	—	66	—	*1200 volt pulse present
			No Signal	5	Do Not Meas.	—	—	3	295	—	—	65	—	
V115	5U4G	Rectifier	2200 Mu.V. Signal	4 & 6	335	—	—	2 & 8	240	—	—	210	—	*A-C measured from plate to trans. center tap
			No Signal	4 & 6	335	—	—	2 & 8	230	—	—	215	—	
V116	6AU6	1st Sound I-F Amplifier	2200 Mu.V. Signal	5	134	6	134	7	.9	1	0	8.2	3.3	
			No Signal	5	110	6	110	7	.7	1	0	5.7	2.6	
V117	6AU6	2d Sound I-F Amplifier	2200 Mu.V. Signal	5	148	6	90	7	0	1	-9	1.6	.8	
			No Signal	5	115	6	60	7	0	1	-.65	3.35	1.15	
V118	6AL5	Sound Discrim.	2200 Mu.V. Signal	2 7	-8.4 -3.7	—	—	5 1	5.8 0	—	—	—	—	
			No Signal	2 7	-2.0 -1.08	—	—	5 1	.41 0	—	—	—	—	
V119	6AV6	1st Audio Amplifier	2200 Mu.V. Signal	7	85	—	—	2	0	1	-.89	.49	—	
			No Signal	7	83	—	—	2	0	1	-.89	.4	—	
V120	6K6-GT	Audio Output	2200 Mu.V. Signal	3	102	4	113	8	-99	5	-108	19.3	3.3	
			No Signal	3	72	4	80	8	-111	5	-114	18	3	
V121	12LP4	Kinescope	2200 Mu.V. Signal	Cap	*9700	10	290	11	38	2	11	.1	—	*Average Brightness
			No Signal	Cap	—	10	285	11	34	2	10	—	—	

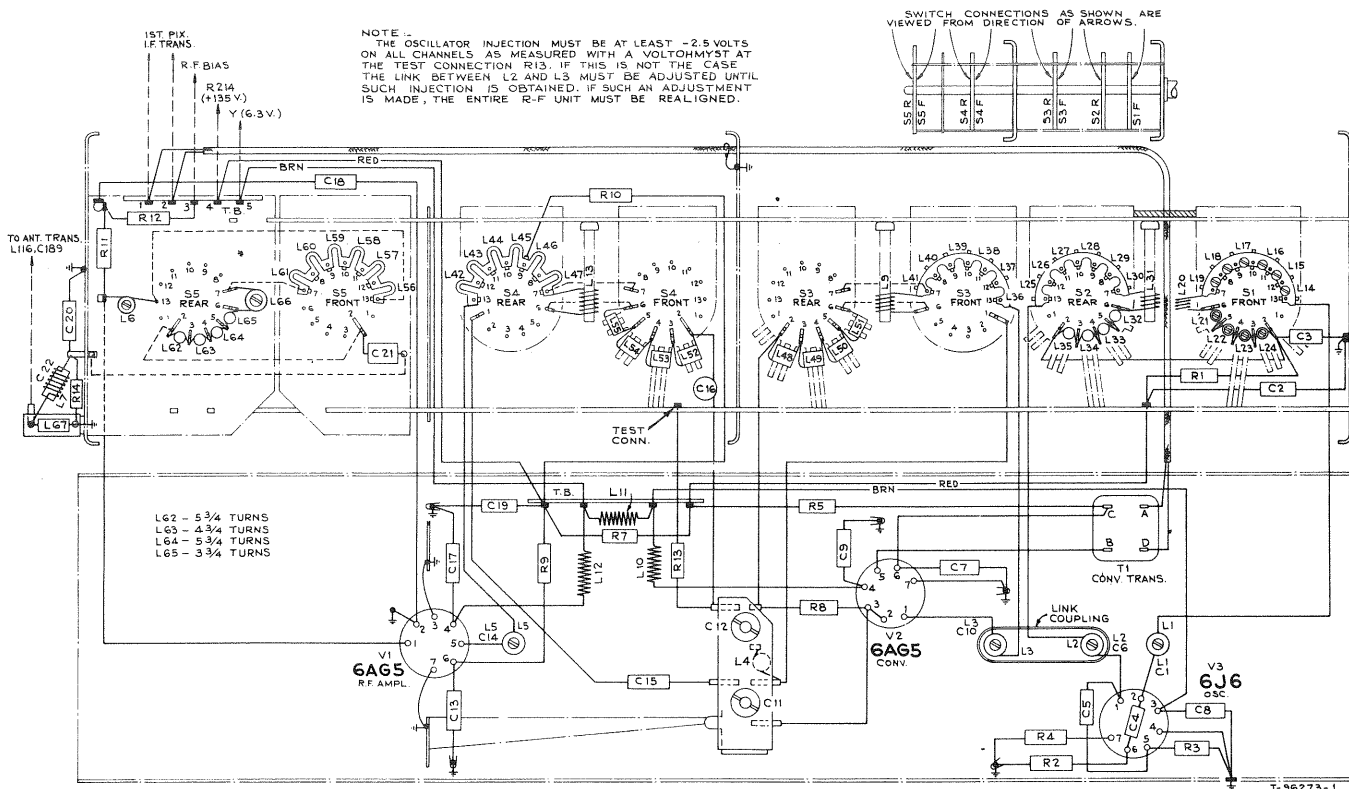


Figure 10—R-F Unit Wiring Diagram

CRITICAL LEAD DRESS:

1. The ground bus from pin 2 and the center shield of V117 socket should not be shortened or rerouted.
2. Do not change the dress of the filament leads or the bypass capacitors in the picture or sound i-f circuits. The filament leads between V117, V118 and V119 should be down against the chassis and away from grid or plate leads.
3. If it is necessary to replace any of the 1500 mmf capacitors in the picture i-f circuit, the lead length must be kept as short as possible.
4. Picture i-f coupling capacitors C106, C111, C115 and C121 should be up and away from the chassis and should be clear of the pix i-f transformer adjustments by at least 1/4 inch. If the dress of any of these capacitors is changed, the i-f alignment should be rechecked.
5. Leads to L102 and L103 must be as short as possible.
6. Dress peaking coils L105, L106 and L107 up and away from the chassis.
7. Dress C183 across tube pins 5 and 6 with leads not exceeding 3/8 inch.
8. Dress the blue lead from pin 5 of V119 down against the chassis.
9. Dress C129 and C130 up and away from the chassis.
10. Dress the yellow lead from the picture control away from the chassis and away from the volume-control leads. Dress the yellow lead from pin 8 of V106 away from the chassis.
11. Dress the green lead from pin 2 of V106 away from the chassis.
12. Dress R168, R169, R170, R176 and R178 up and away from the chassis.
13. The leads to the volume control should be dressed down against the chassis and away from V117 and V118.
14. Contact between the r-f oscillator frequency adjustment screws and the oscillator coils or channel switch eyelets must be avoided.
15. Dress leads from L115 (width control coil) away from the transformer frame.
16. Dress T110 winding leads as shown in Figure 11.

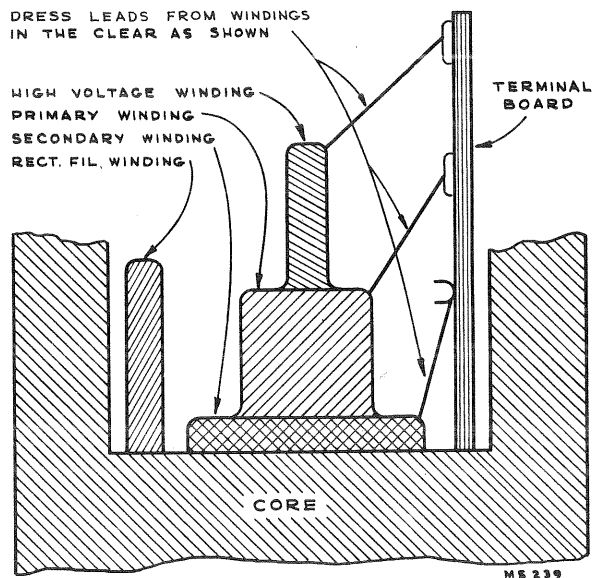
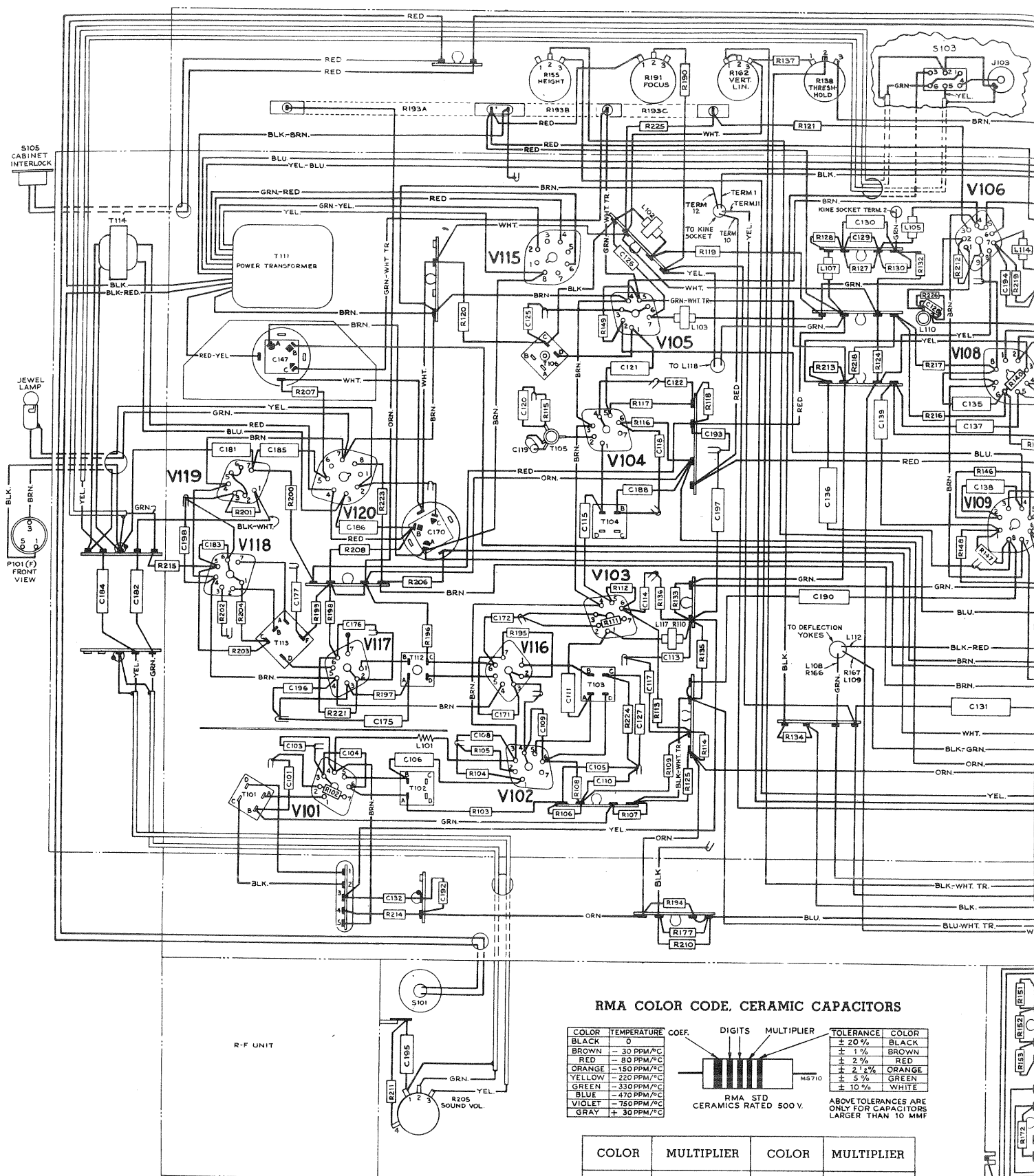


Figure 11—T110 Lead Dress



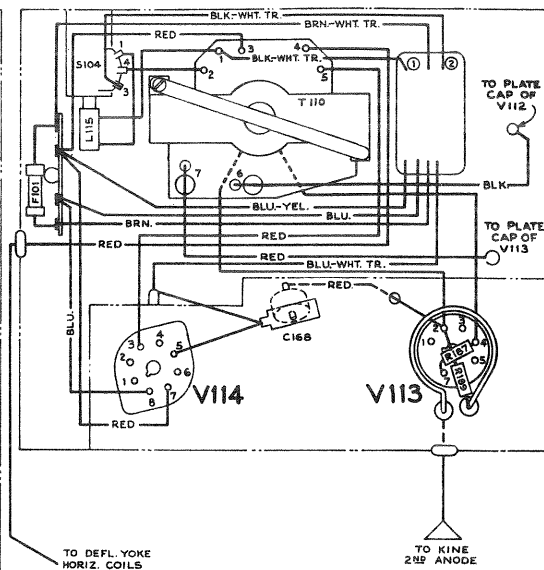
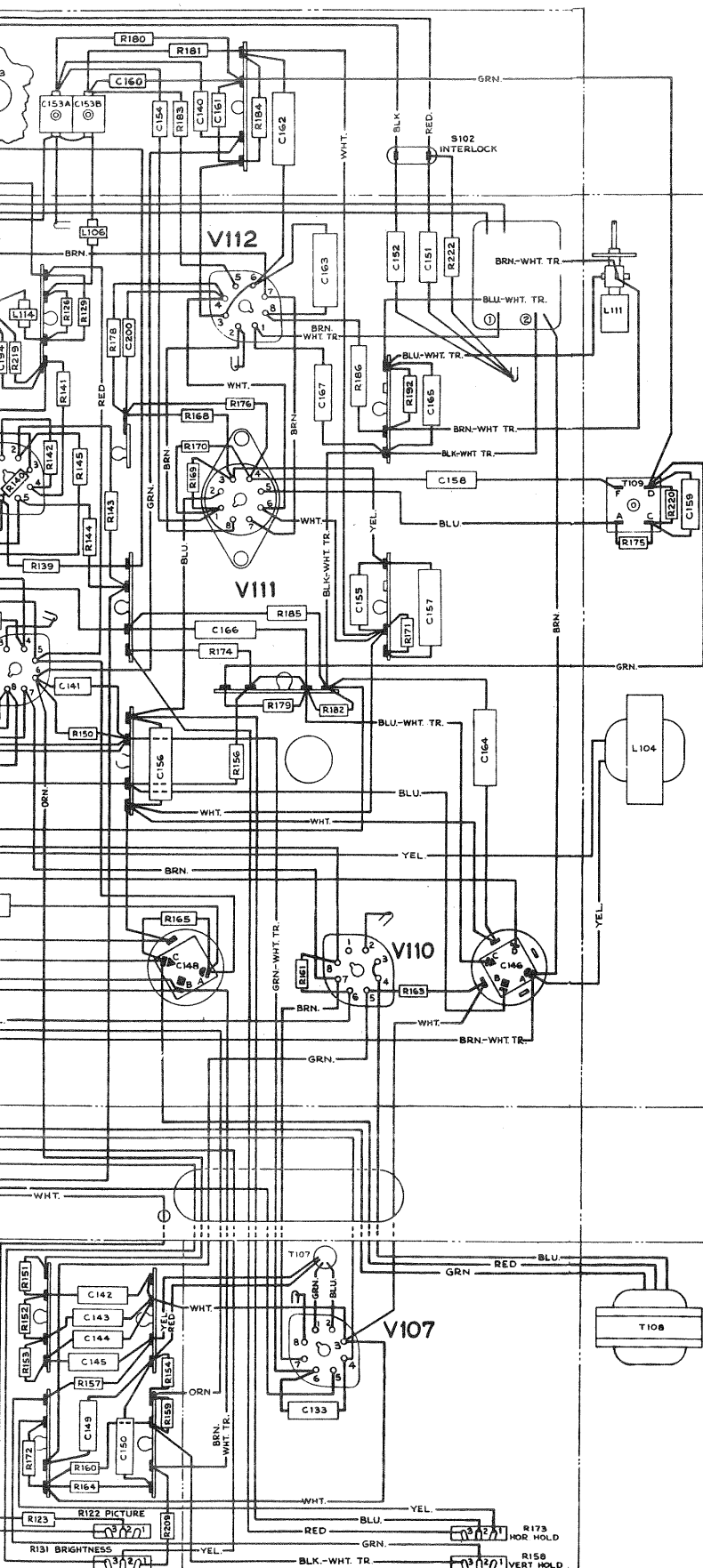
In some receivers, a four color ceramic capacitor color code is employed. It reads the same as the RMA color code except that the tolerance stripe is omitted.

If the coefficient stripe is silver, it indicates that the capacitor has a very large temperature coefficient and is to be employed for bypass or other usages where a wide variation of capacity is unimportant. Silver striped capacitors are rated at 350 volts unless otherwise marked.

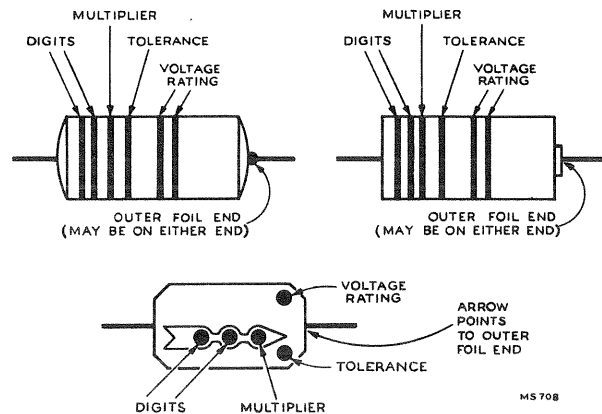
COLOR	MULTIPLIER	COLOR	MULTIPLIER
GRAY	.01	BROWN	10
WHITE	.1	RED	100
BLACK	1.	ORANGE	1,000

For digits, use digit column, page 12

CHASSIS WIRING DIAGRAM



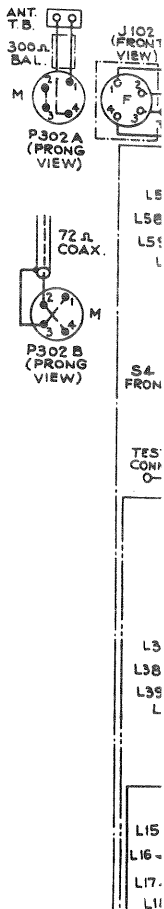
COLOR CODES, MOULDED PAPER CAPACITORS



CAPACITY VALUE IN MMF		
COLOR	DIGITS	MULTIPLIER
BLACK	0	1
BROWN	1	10
RED	2	100
ORANGE	3	1,000
YELLOW	4	10,000
GREEN	5	
BLUE	6	
VIOLET	7	
GRAY	8	
WHITE	9	

TOLERANCE	
COLOR	TOLERANCE
BLACK BAND OR NONE	$\pm 20\%$
WHITE OR SILVER	$\pm 10\%$
YELLOW OR GOLD	$\pm 5\%$

The Voltage Rating is given in hundreds of volts. Only one band is employed for ratings under 1,000 volts. Two bands are employed for ratings over 1,000 volts. Use digit column to read voltage rating.

REFE
SUPPLI

RMA

WHITE INDICATE

BLACK INDICATE

—



5

70

QUALITY

BMA FIXED MIC

RNA TILED RT-PCR

TOLEI

COLOR	TEXT
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100	100

RED

GREEN

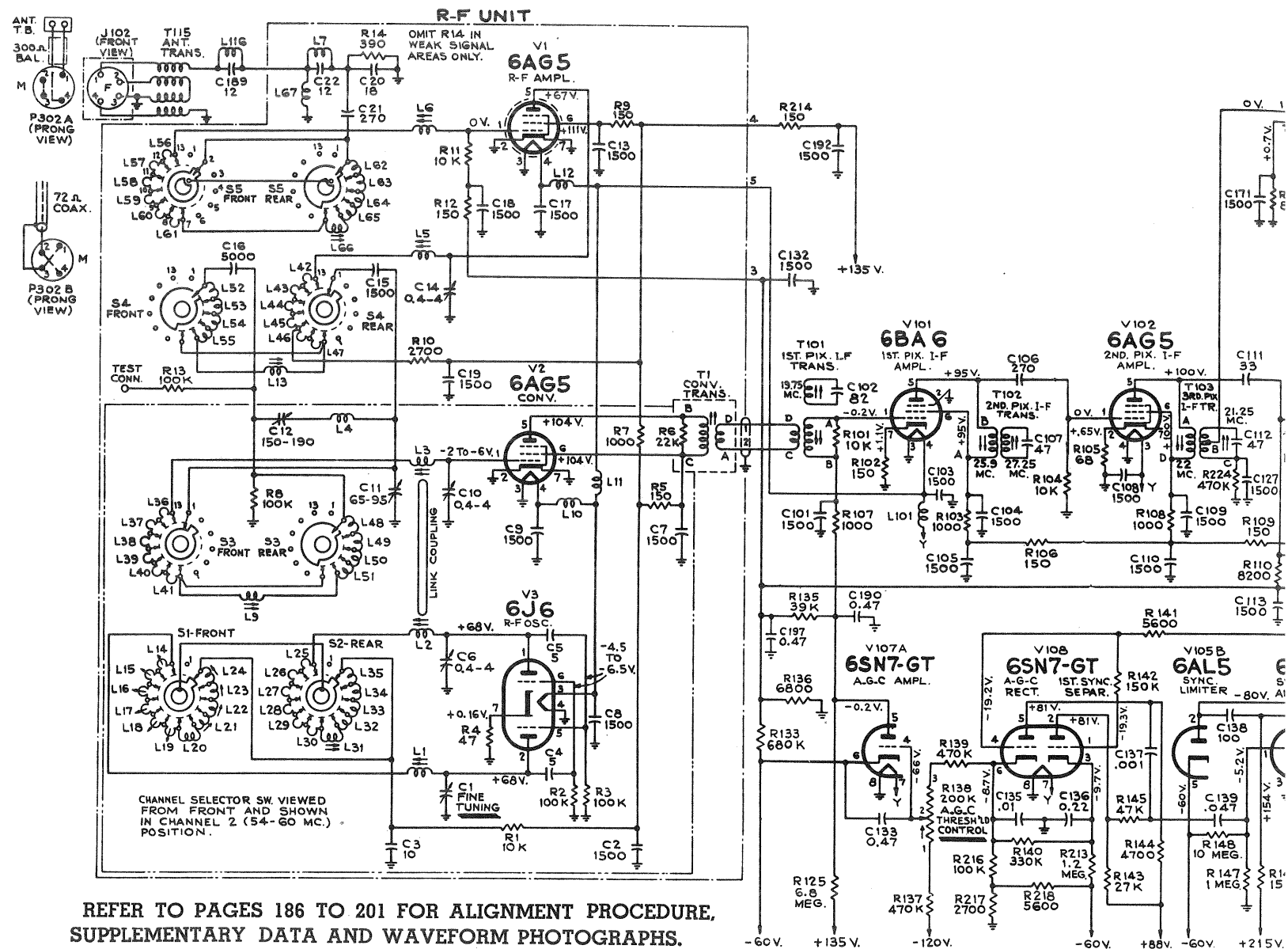
SILVER

Page 10 of 10

BLACK

BLACK

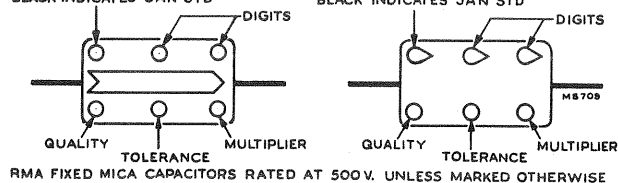
Figure 12—Chassis Wiring Diagram



RMA COLOR CODE, FIXED MICA CAPACITORS

WHITE INDICATES RMA STD
BLACK INDICATES JAN STD

WHITE INDICATES RMA STD
BLACK INDICATES JAN STD

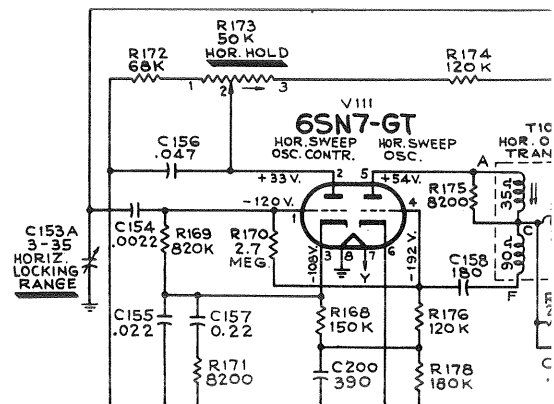


TOLERANCE

QUALITY

COLOR	TOLERANCE	COLOR	CLASS	COLOR	CLASS
RED	±2%	BLACK	A	YELLOW	D
GREEN	±5%	BROWN	B	GRAY	I
SILVER	±10%	RED	C	WHITE	J
BLACK	±20%	ORANGE	D		

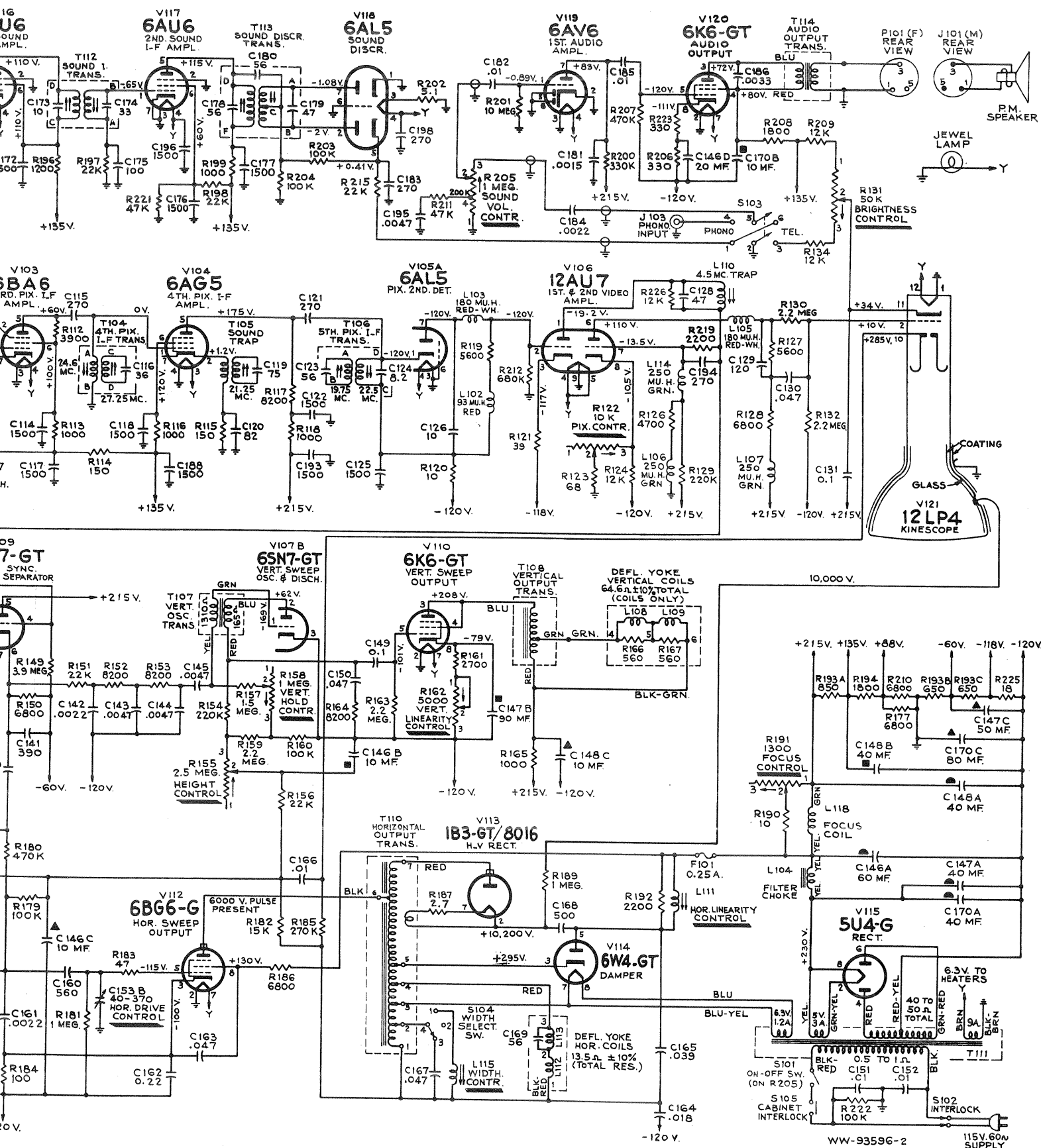
COLOR	DIGITS	MULTIPLIER
GOLD	—	.1
BLACK	0	1.
BROWN	1	10
RED	2	100
ORANGE	3	1,000
YELLOW	4	10,000
GREEN	5	
BLUE	6	
VIOLET	7	
GRAY	8	
WHITE	9	



All resistance values in ohms. K = 1,000.

All capacitance values less than 1 in MF and above 1 in MMF unless noted.

9TC245, 9TC247, 9TC249



distance values less than 1 ohm shown.

of arrows at controls indicates rotation.

All voltages measured with "VoltOhmyst," no signal input and with 117 v. a-c supply. In some receivers, R11 is 1K and R14 is omitted.

In some receivers, R226 was omitted. In some receivers, R212 was 560K. In some receivers, L117, R110 and C113 were connected to junction R135 and C190.

Figure 13—Circuit Schematic Diagram

STOCK No.	DESCRIPTION	STOCK No.	DESCRIPTION
71424	Transformer—Sound i-f transformer (T112, C173, C174)	71768	Decal—Trade mark decal for Model 9TC249
71427	Transformer—Sound discriminator transformer (T113, C178, C179, C180)	73642	Escutcheon—Channel marker escutcheon for walnut or mahogany instruments
73576	Transformer—Horizontal oscillator transformer (T109)	73740	Escutcheon—Channel marker escutcheon for toasted mahogany or oak instruments
73578	Transformer—Antenna matching transformer complete with connector (T115, J102)	73180	Emblem—"RCA Victor" emblem (metal) for Models 9TC247 and 9TC249
73577	Trap—4.5 mc video trap (L110, C128)	74809	Emblem—"RCA Victor" emblem (plastic)
71778	Trap—Sound trap (T105, C119)	74755	Glass—Safety glass
73476	Trap—I-F trap (L116, C189)	37396	Grommet—Rubber grommet for mounting speaker (4 required)
71420	Yoke—Deflection yoke (L108, L109, L112, L113, C169, R166, R167)	74308	Hinge—Cabinet door hinge (1 set) (2 required) for Model 9TC249
	SPEAKER ASSEMBLIES	73994	Knob—Fine tuning knob—dark—for walnut and mahogany instruments (outer)
	92569-7B	73995	Knob—Fine tuning knob—tan—for toasted mahogany or oak instruments (outer)
	or 92569-7K	73996	Knob—Channel selector knob—dark—for walnut and mahogany instruments (inner)
	or 92569-7W RL103-C4	73997	Knob—Channel selector knob—tan—for toasted mahogany or oak instruments (inner)
13867	Cap—Dust cap	73998	Knob—Brightness control or vertical hold control knob—dark—for walnut or mahogany instruments (outer)
75875	Cone—Cone and voice coil assembly for 92569-7B	73999	Knob—Brightness control or vertical hold control knob—tan—for toasted mahogany or oak instruments (outer)
75642	Cone—Cone and voice coil assembly for 92569-7K	74002	Knob—Volume control and power switch knob—dark—for mahogany or walnut instruments
73934	Cone—Cone and voice coil assembly for 92569-7W	74003	Knob—Volume control and power switch knob—tan—for toasted mahogany or oak instruments
5118	Plug—3 prong male plug for speaker	74000	Knob—Picture control or horizontal hold control knob—dark—for walnut or mahogany instruments (inner)
73635	Speaker—12" P-M speaker complete with cone and voice coil, less plug	74001	Knob—Picture control or horizontal hold control knob—tan—for toasted mahogany or oak instruments (inner)
71145	Suspension—Metal cone suspension for 92569-7W	11765	Lamp—Pilot lamp—Mazda 51
	NOTE: If stamping on speaker in instrument does not agree with above speaker number, order replacement parts by referring to model number of instruments, number stamped on speaker and full description of part required.	74730	Nail—Brass head decorative nail for grille bars (4 required) Model 9TC247
	MISCELLANEOUS	74808	Panel—Kine tube shield panel (masonite)
74812	Back—Cabinet back cover for Models 9TC247 and 9TC249	74162	Plate—Mounting plate for interlock switch
74807	Back—Cabinet back cover for Model 9TC245, also Models 9TC247 and 9TC249 employing KCS34B	74449	Plate—Stud and plate assembly for front panel (2 required) for Models 9TC247 and 9TC249 (KCS34)
72857	Board—"Ant" terminal board	74451	Pull—Door pull (2 required) for Model 9TC249
71599	Bracket—Pilot lamp bracket	74113	Screw—No. 8-32 x 1" trinit head screw for door pull for Model 9TC249
13103	Cap—Pilot lamp jewel	71539	Slide—Kinescope centering slide (4 required) (KCS34)
71892	Catch—Bullet catch and strike for doors (2 required) for Model 9TC249	72845	Spring—Retaining spring for knobs No. 73994 and 73995
X1998	Cloth—Grille cloth for mahogany or walnut cabinets for Models 9TC247 and 9TC249	14270	Spring—Retaining spring for knobs No. 73996, 73997, 73998, 73999, 74002 and 74003
X1999	Cloth—Grille cloth for toasted mahogany cabinets for Models 9TC247 and 9TC249	30330	Spring—Retaining spring for knobs No. 74000 and 74001
X3046	Cloth—Grille cloth for mahogany or walnut instruments for Model 9TC245	73643	Spring—Spring clip for channel marker escutcheon
X3047	Cloth—Grille cloth for oak instruments for Model 9TC245	72936	Stop—Door stop for Model 9TC249
39153	Connector—4 contact male connector for antenna cable (P102)	74161	Stud—Back cover locating stud (2 required)
74731	Decal—Control panel function decal for mahogany or walnut cabinets		
74732	Decal—Control panel function decal for toasted mahogany or oak instruments		

APPLY TO YOUR RCA DISTRIBUTOR FOR PRICES OF REPLACEMENT PARTS

REPLACEMENT PARTS (Continued)

9TC245, 9TC247, 9TC249

STOCK No.	DESCRIPTION	STOCK No.	DESCRIPTION
	Resistor—Fixed, composition, 6,800 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R150)		Resistor—Fixed, composition, 820,000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt (R169)
	Resistor—Fixed, composition, 6,800 ohms, $\pm 5\%$, 1 watt (R128)		Resistor—Fixed, composition, 1 megohm, $\pm 10\%$, $\frac{1}{2}$ watt (R147, R181)
	Resistor—Fixed, composition, 6,800 ohms, $\pm 10\%$, 2 watt (R177, R186, R210)		Resistor—Fixed, composition, 1 megohm, $\pm 20\%$, 1 watt (R189)
	Resistor—Fixed, composition, 8,200 ohms, $\pm 5\%$, $\frac{1}{2}$ watt (R164, R175)		Resistor—Fixed, composition, 1.2 megohm, $\pm 5\%$, $\frac{1}{2}$ watt (R213)
	Resistor—Fixed, composition, 8,200 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R152, R153, R171)		Resistor—Fixed, composition, 1.5 megohm, $\pm 5\%$, $\frac{1}{2}$ watt (R157)
	Resistor—Fixed, composition, 8,200 ohms, $\pm 5\%$, 1 watt (R117)		Resistor—Fixed, composition, 2.2 megohm, $\pm 10\%$, $\frac{1}{2}$ watt (R130, R132, R159, R163)
	Resistor—Fixed, composition, 10,000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt (R104)		Resistor—Fixed, composition, 2.7 megohm, $\pm 5\%$, 1 watt (R170)
	Resistor—Fixed, composition, 12,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R134, R209, R226)		Resistor—Fixed, composition, 3.9 megohm, $\pm 10\%$, $\frac{1}{2}$ watt (R149)
	Resistor—Fixed, composition, 12,000 ohms, $\pm 10\%$, 2 watt (R124)		Resistor—Fixed, composition, 6.8 megohm, $\pm 10\%$, $\frac{1}{2}$ watt (R125)
	Resistor—Fixed, composition, 15,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R182)		Resistor—Fixed, composition, 10 megohm, $\pm 10\%$, $\frac{1}{2}$ watt (R148)
	Resistor—Fixed, composition, 15,000 ohms, $\pm 10\%$, 1 watt (R146)		Resistor—Fixed, composition, 10 megohm, $\pm 20\%$, $\frac{1}{2}$ watt (R201)
	Resistor—Fixed, composition, 22,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R151, R156, R197, R220)	74601	Screw—No. 8-32 x $\frac{3}{8}$ " cross-recessed binder head screw for focus coil mounting (2 required)
	Resistor—Fixed, composition, 22,000 ohms, $\pm 20\%$, $\frac{1}{2}$ watt (R198, R215)	74602	Screw—No. 10-32 x $1\frac{1}{4}$ " cross-recessed round head screw for focus coil adjustment (3 required)
	Resistor—Fixed, composition, 27,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R143)	71456	Screw—No. 8-32 wing screw for deflection yoke
	Resistor—Fixed, composition, 39,000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt (R135)	74416	Screw—No. 10-32 x $1\frac{1}{4}$ " cross-recessed round head screw for holding kinescope retaining strap for KCS34B
	Resistor—Fixed, composition, 47,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R145, R211)	73584	Shield—Metal tube shield
	Resistor—Fixed, composition, 47,000 ohms, $\pm 20\%$, $\frac{1}{2}$ watt (R221)	74937	Sleeve—Rubber sleeve for focus coil
	Resistor—Fixed, composition, 68,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R172)	73117	Socket—Tube socket, 7 pin, miniature
	Resistor—Fixed, composition, 100,000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt (R203, R204)	72927	Socket—Tube socket, 9 pin, miniature
	Resistor—Fixed, composition, 100,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R160, R216)	31251	Socket—Tube socket, octal, wafer
	Resistor—Fixed, composition, 100,000 ohms, $\pm 10\%$, 1 watt (R179)	73249	Socket—Tube socket, octal, ceramic, plate mounted
	Resistor—Fixed, composition, 100,000 ohms, $\pm 20\%$, 1 watt (R222)	71508	Socket—Tube socket for 8016
	Resistor—Fixed, composition, 120,000 ohms, $\pm 5\%$, 1 watt (R176)	74834	Socket—Kinescope socket
	Resistor—Fixed, composition, 120,000 ohms, $\pm 10\%$, 1 watt (R174)	31364	Socket—Pilot lamp socket
	Resistor—Fixed, composition, 150,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R168)	73586	Spring—Hood and yoke pressure spring (3 required)
	Resistor—Fixed, composition, 150,000 ohms, $\pm 20\%$, $\frac{1}{2}$ watt (R142)	74595	Spring—Anode lead spring
	Resistor—Fixed, composition, 180,000 ohms, $\pm 5\%$, 1 watt (R178)	74936	Spring—Suspension spring (coil type) for kinescope tube socket leads
	Resistor—Fixed, composition, 220,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R129, R154)	74810	Strap—Kinescope retaining strap for KCS34B
	Resistor—Fixed, composition, 270,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R185)	74596	Support—Bakelite supports (1 set) for mounting hi-voltage plate assembly
	Resistor—Fixed, composition, 330,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R140, R200)	74147	Switch—Width selector switch (S104)
	Resistor—Fixed, composition, 470,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R137, R139, R180, R224)	46760	Switch—"TV-Phono" switch (S103)
	Resistor—Fixed, composition, 470,000 ohms, $\pm 20\%$, $\frac{1}{2}$ watt (R207)	74157	Switch—Interlock switch
	Resistor—Fixed, composition, 680,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R133, R212)	74586	Transformer—Power transformer, 115 v., 60 cycle (T111)
		74587	Transformer—Vertical output transformer (T108)
		73569	Transformer—Vertical oscillator transformer (T107)
		74588	Transformer—Horizontal output and hi-voltage transformer (T110)
		71419	Transformer—Audio output transformer (T114)
		74589	Transformer—First pix i-f transformer (T101, C102, R101)
		74590	Transformer—Second pix i-f transformer (T102, C107)
		74591	Transformer—Third pix i-f transformer (T103, C112)
		74592	Transformer—Fourth pix i-f transformer (T104, C116)
		73575	Transformer—Fifth pix i-f transformer (T106, C123, C124)

STOCK No.	DESCRIPTION	STOCK No.	DESCRIPTION
73583	Capacitor—Electrolytic comprising 1 section of 40 mfd., 450 volts, 1 section of 90 mfd., 150 volts, and 1 section of 50 mfd., 150 volts (C147A, C147B, C147C)	73590	Cushion—Rubber cushion for deflection yoke hood (2 required)
73581	Capacitor—Electrolytic comprising 1 section of 60 mfd., 450 volts, 2 sections of 10 mfd., 450 volts and 1 section of 20 mfd., 150 volts (C146A, C146B, C146C, C146D)	73600	Fuse—0.25 amp., 250 volts (F101)
73801	Capacitor—Tubular, paper, .001 mfd., 600 volts (C137)	71799	Grommet—Rubber grommet for yoke lead exit (2 required)
73802	Capacitor—Tubular, paper, .0015 mfd., 600 volts (C181)	37336	Grommet—Rubber grommet for mounting ceramic tube socket (2 required)
73595	Capacitor—Tubular, moulded paper, oil impregnated, .0022 mfd., 600 volts (C142, C161, C184)	35787	Jack—Phono input jack (J103)
73803	Capacitor—Tubular, moulded paper, .0022 mfd., 600 volts (C154)	18469	Plate—Bakelite plate for mounting electrolytics
73795	Capacitor—Tubular, paper, .0033 mfd., 600 volts (C186)	74594	Plug—Male plug for power cable
73920	Capacitor—Tubular, moulded paper, oil impregnated, .0047 mfd., 600 volts (C143, C144, C145, C195)	74823	Magnet—Ion trap magnet (PM type)
73594	Capacitor—Tubular, moulded paper, oil filled, .01 mfd., 600 volts (C159)	73587	Nut—Speed nut for mounting hi-voltage capacitor
73561	Capacitor—Tubular, moulded, .01 mfd., 400 volts (C135, C166, C182)	74598	Resistor—Wire wound, 2.7 ohms, 1/3 watt (R187)
73565	Capacitor—Tubular, paper, .01 mfd., 1,000 volts (C151, C152, C185)	72067	Resistor—Wire wound, 5.1 ohms, 1/2 watt (R202)
74727	Capacitor—Tubular, moulded paper, oil filled, .018 mfd., 1,000 volts (C164)	18471	Resistor—Wire wound, 10 ohms, 1/2 watt (R190)
73562	Capacitor—Tubular, paper, .022 mfd., 400 volts (C155)		Resistor—Fixed, composition, 10 ohms, $\pm 20\%$, 1/2 watt (R120)
74728	Capacitor—Tubular, moulded paper, oil filled, .039 mfd., 1,000 volts (C165)		Resistor—Fixed, composition, 18 ohms, $\pm 10\%$, 1/2 watt (R225)
73553	Capacitor—Tubular, moulded paper, .047 mfd., 400 volts (C130, C139, C167)		Resistor—Fixed, composition, 39 ohms, $\pm 10\%$, 1/2 watt (R121)
73592	Capacitor—Tubular, moulded paper, oil filled, .047 mfd., 600 volts (C150, C156)		Resistor—Fixed, composition, 47 ohms, $\pm 5\%$, 1/2 watt (R111)
73597	Capacitor—Tubular, paper, .047 mfd., 1,000 volts (C163)		Resistor—Fixed, composition, 47 ohms, $\pm 20\%$, 1/2 watt (R183)
73557	Capacitor—Tubular, paper, 0.1 mfd., 600 volts (C131)		Resistor—Fixed, composition, 68 ohms, $\pm 10\%$, 1/2 watt (R105)
73551	Capacitor—Tubular, paper, 0.1 mfd., 400 volts (C149)		Resistor—Fixed, composition, 68 ohms, $\pm 20\%$, 1/2 watt (R123)
73794	Capacitor—Tubular, paper, 0.22 mfd., 400 volts (C136, C157, C162)		Resistor—Fixed, composition, 82 ohms, $\pm 10\%$, 1/2 watt (R195)
73787	Capacitor—Tubular, paper, 0.47 mfd., 200 volts (C133, C190, C197)		Resistor—Fixed, composition, 100 ohms, $\pm 10\%$, 2 watt (R184)
73154	Choke—Filter choke (L104)		Resistor—Fixed, composition, 150 ohms, $\pm 5\%$, 1/2 watt (R102)
74585	Coil—Focus coil (L118)		Resistor—Fixed, composition, 150 ohms, $\pm 10\%$, 1/2 watt (R115)
71449	Coil—Horizontal linearity control coil (L111)		Resistor—Fixed, composition, 150 ohms, $\pm 20\%$, 1/2 watt (R106, R109, R114, R214)
71429	Coil—Width control coil (L115)		Resistor—Fixed, composition, 330 ohms, $\pm 10\%$, 1/2 watt (R206, R223)
71526	Coil—Peaking coil (250 mh) (L106, L107, L114)	73588	Resistor—Voltage divider comprising 1 section of 850 ohms, 12 watt and 2 sections of 650 ohms, 6 watt (R193A, R193B, R193C)
73477	Coil—Filament choke coil (L101)		Resistor—Fixed, composition, 1,000 ohms, $\pm 20\%$, 1/2 watt (R103, R107, R108, R113, R116, R118, R199, R165)
71527	Coil—Peaking coil (93 mh) (L102)		Resistor—Fixed, composition, 1,200 ohms, $\pm 10\%$, 1/2 watt (R196)
74214	Coil—Peaking coil (180 mh) (L103, L105)		Resistor—Fixed, composition, 1,800 ohms, $\pm 10\%$, 2 watt (R194, R208)
74170	Coil—Peaking coil (36 mh) (L117, R110)		Resistor—Fixed, composition, 2,200 ohms, $\pm 10\%$, 1/2 watt (R219)
5119	Connector—3 contact female connector for speaker cable		Resistor—Fixed, composition, 2,200 ohms, $\pm 10\%$, 1 watt (R192)
71789	Connector—Anode connector		Resistor—Fixed, composition, 2,700 ohms, $\pm 10\%$, 1/2 watt (R161, R217)
71521	Connector—Hi-voltage capacitor connector		Resistor—Fixed, composition, 3,900 ohms, $\pm 5\%$, 1/2 watt (R112)
72734	Control—Horizontal and vertical hold control (R158, R173)		Resistor—Fixed, composition, 4,700 ohms, $\pm 5\%$, 1/2 watt (R126)
74047	Control—Picture and brightness control (R122, R131)		Resistor—Fixed, composition, 4,700 ohms, $\pm 10\%$, 1/2 watt (R144)
38408	Control—Volume control and power switch (R205, S101)		Resistor—Fixed, composition, 5,600 ohms, $\pm 5\%$, 1/2 watt (R119)
71441	Control—Vertical linearity control (R162)		Resistor—Fixed, composition, 5,600 ohms, $\pm 10\%$, 1/2 watt (R141, R218)
71440	Control—Height control (R155)		Resistor—Fixed, composition, 5,600 ohms, $\pm 10\%$, 1 watt (R127)
74597	Control—Focus control (R191)		Resistor—Fixed, composition, 6,800 ohms, $\pm 5\%$, 1/2 watt (R136)
74475	Control—AGC Threshold control (R138)		
71457	Cord—Power cord and plug		
71437	Cover—Insulating cover for electrolytics, RCA 71432, 73581 and 73582		
74811	Cushion—Rubber cushion for kinescope mounting for KCS34B		

REPLACEMENT PARTS

9TC245, 9TC247, 9TC249

STOCK No.	DESCRIPTION	STOCK No.	DESCRIPTION
	RF UNIT ASSEMBLIES KRK 5		
73465	Belt—Drive belt	73437	Shaft—Channel selector shaft complete with pawl and stud
75069	Board—R-F unit power connection terminal board (5 contact)	73438	Shaft—Fine tuning control shaft and pulley
75067	Bracket—Vertical bracket for holding r-f oscillator tube shield	73439	Shaft—Actuating shaft for fine tuning control
73478	Cable—I-F transmission cable (W1)	72951	Shield—Metal tube shield for V3
73441	Cam—Fine tuning adjustment	73454	Shield—Metal shield for drive belt
74035	Capacitor—Ceramic, 5 mmf. (C4, C5)	73632	Shield—Metal tube shield for V1
53511	Capacitor—Ceramic, 10 mmf. (C3)	75443	Shield—"U" shape shield for bottom of r-f unit
54207	Capacitor—Ceramic, 18 mmf. (C20)	71494	Socket—Tube socket, moulded, 7 prong, saddle mounted
73449	Capacitor—Ceramic trimmer comprising 1 section of 150-190 mmf. and 1 section of 65-95 mmf. (C11, C12)	73450	Socket—Tube socket, ceramic, 7 prong, bottom mounted
73091	Capacitor—Ceramic, 270 mmf. (C21)	74576	Spacer—Insulating spacer for front plate (4 required)
71501	Capacitor—Ceramic, 1,500 mmf. (C2, C7, C8, C9, C13, C15, C17, C18, C19)	73457	Spring—Return spring for fine tuning control core
73473	Capacitor—Ceramic, 5,000 mmf. (C16)	75068	Spring—Retaining spring for r-f oscillator tube shield
73460	Coil—R-F plate coil for channel 6 (L13)	74188	Spring—Retaining spring for adjustable core RCA 74187
73461	Coil—Rear section—Oscillator plate coil for channel 6 (L20)	74578	Spring—Retaining spring for adjusting screws RCA 73640 and RCA 74575
73462	Coil—Coupling inductance coil (L4)	73468	Stator—Front oscillator section stator complete with rotor, segment, coils and adjusting screws (S1, L14, L15, L16, L17, L18, L19, L21, L22, L23, L24)
73475	Coil—Antenna filter shunt coil (C67)	73469	Stator—Rear oscillator section stator complete with rotor and coils (S2, L25, L26, L27, L28, L29, L30, L32, L33, L34, L35)
73476	Coil—I-F trap (L7, C22)	73633	Stator—Antenna stator complete with rotor and coils (S5, L6, L56, L57, L58, L59, L60, L61, L62, L63, L64, L65, L66, C21)
73477	Coil—Choke coil (L10, L11, L12)	73470	Stator—Converter stator complete with rotor and coils (S3, L9, L36, L37, L38, L39, L40, L41, L48, L49, L50, L51)
73874	Coil—Front section—Oscillator plate coil for channel 6 (L31)	73471	Stator—R-F amplifier stator complete with rotor and coils (S4, L13, L42, L43, L44, L45, L46, L47, L52, L53, L54, L55, C15, C16, R10)
74108	Coil—Fine tuning coil (1½ turns) with adjustable inductance core and capacitor stud (plunger adjustment) (L1, S1)	75446	Stud—Capacitor stud—brass No. 4-40 x 13/16" with 3/64" screw driver slot for trimmer coils 74109 and 74110 uncoded or coded "ER"
74109	Coil—Trimmer coil (1½ turns) with adjustable inductance core and capacitor stud (screw adjustment for oscillator section or converter section) (L2, L3, C6, C10)	75447	Stud—Capacitor stud—brass No. 4-40 x 13/16" with 3/64" screw driver slot for trimmer coils 74109 and 74110 coded numerically or "Hi Q"
74110	Coil—Trimmer coil (3 turns) with adjustable inductance core and capacitor stud (screw adjustment) for r-f amplifier section (L5, C14)	73448	Transformer—Converter transformer (T1, R6)
73455	Core—Sliding core for fine tuning control trimmer	73466	Washer—Insulating washer for front shield (1 set)
74187	Core—Adjustable core for coil L9	2917	Washer—"C" washer for channel selector shaft or fine tuning shaft and cam
71493	Connector—Oscillator segment connector		CHASSIS ASSEMBLIES
73440	Dentent—R-F unit detent mechanism and fibre shaft		KCS34—9TC247 and 9TC249
71487	Form—Coil form for coil L31		KCS34B—9TC245
73453	Form—Coil form assembly for L9, L13	74593	Capacitor—Mica trimmer comprising 1 section of 3-35 mmf. and 1 section of 40-370 mmf. (C153A, C153B)
73442	Link—Link assembly for fine tuning	72615	Capacitor—Mica, 10 mmf. (C126)
71462	Loop—Oscillator to converter trimmer loop connector	74105	Capacitor—Mica, 33 mmf. (C111)
73634	Nut—Speed nut for drive belt shield	74726	Capacitor—Mica, 39 mmf. (C140)
73436	Plate—Front plate and bushing	64082	Capacitor—Ceramic, 82 mmf. (C120)
73464	Pulley—Idler pulley	39396	Capacitor—Ceramic, 100 mmf. (C175)
	Resistor—Fixed, composition, 47 ohms, ±20%, ½ watt (R4)	75060	Capacitor—Mica, 100 mmf. 1,000 volts (C138)
	Resistor—Fixed, composition, 150 ohms, ±20%, ½ watt (R5, R9, R12)	73921	Capacitor—Ceramic, 120 mmf. (C129)
	Resistor—Fixed, composition, 390 ohms, ±10%, ½ watt (R14)	73102	Capacitor—Mica, 180 mmf. (C158)
	Resistor—Fixed, composition, 1,000 ohms, ±20%, ½ watt (R7)	73922	Capacitor—Ceramic, 270 mmf. (C183, C194, C198)
	Resistor—Fixed, composition, 2,700 ohms, ±10%, ½ watt (R10)	73091	Capacitor—Mica, 270 mmf. (C106, C115, C121)
	Resistor—Fixed, composition, 10,000 ohms, ±20%, ½ watt (R1, R11)	68542	Capacitor—Mica, 390 mmf. (C141, C200)
	Resistor—Fixed, composition, 100,000 ohms, ±20%, ½ watt (R2, R3, R8, R13)	74153	Capacitor—Ceramic, 500 mmf., 15,000 volts (C168)
14343	Retainer—Channel selector shaft retaining ring for KRK 5	74250	Capacitor—Mica, 560 mmf. (C160)
30340	Retainer—Retainer ring for fine tuning stud	71501	Capacitor—Ceramic, 1,500 mmf. (C101, C103, C104, C105, C108, C109, C110, C113, C114, C117, C118, C122, C125, C127, C132, C171, C172, C176, C177, C188, C192, C193, C196)
70881	Screw—No. 4-40 x ¼" binder head screw for adjusting coils L14, L15, L16, L17, L18, L19	71432	Capacitor—Electrolytic comprising 2 sections of 40 mfd., 450 volts and 1 section of 10 mfd., 450 volts (C148A, C148B, C148C)
73640	Screw—No. 4-40 x 5/8" adjusting screw for L66	73582	Capacitor—Electrolytic comprising 1 section of 40 mfd., 450 volts, 1 section of 10 mfd., 450 volts and 1 section of 80 mfd., 200 volts (C170A, C170B, C170C)
71475	Screw—No. 4-40 x 15/32" adjusting screw for coils L21, L22, L23, L24		
74575	Screw—No. 4-40 x 17/32" adjusting screw for L6		