

RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)

TRADE NAME	RCA Victor Model 21-CT-55 (Ch. CTC2B & CTC3A)	
MANUFACTURER	Radio Corp. of America, RCA Victor Television Div., Camden 2, N.J.	
TYPE SET	Color Television Receiver	
TUBES	Thirty-seven	
POWER SUPPLY	110-120 Volts AC-60 Cycles	RATING 4.6 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF,	Video IF 45.75MC, Sound IF 41.25MC (Inter-carrier)

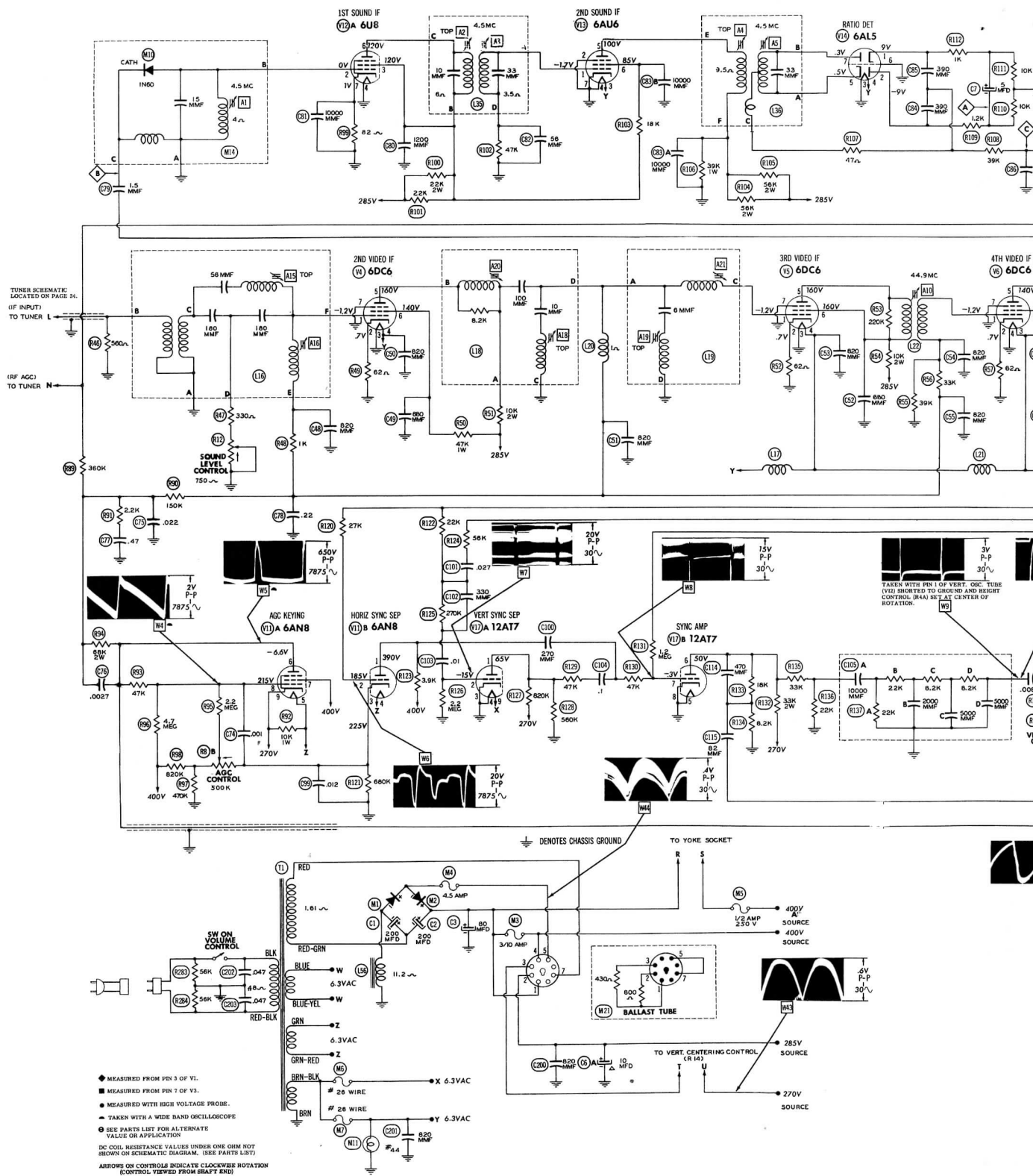
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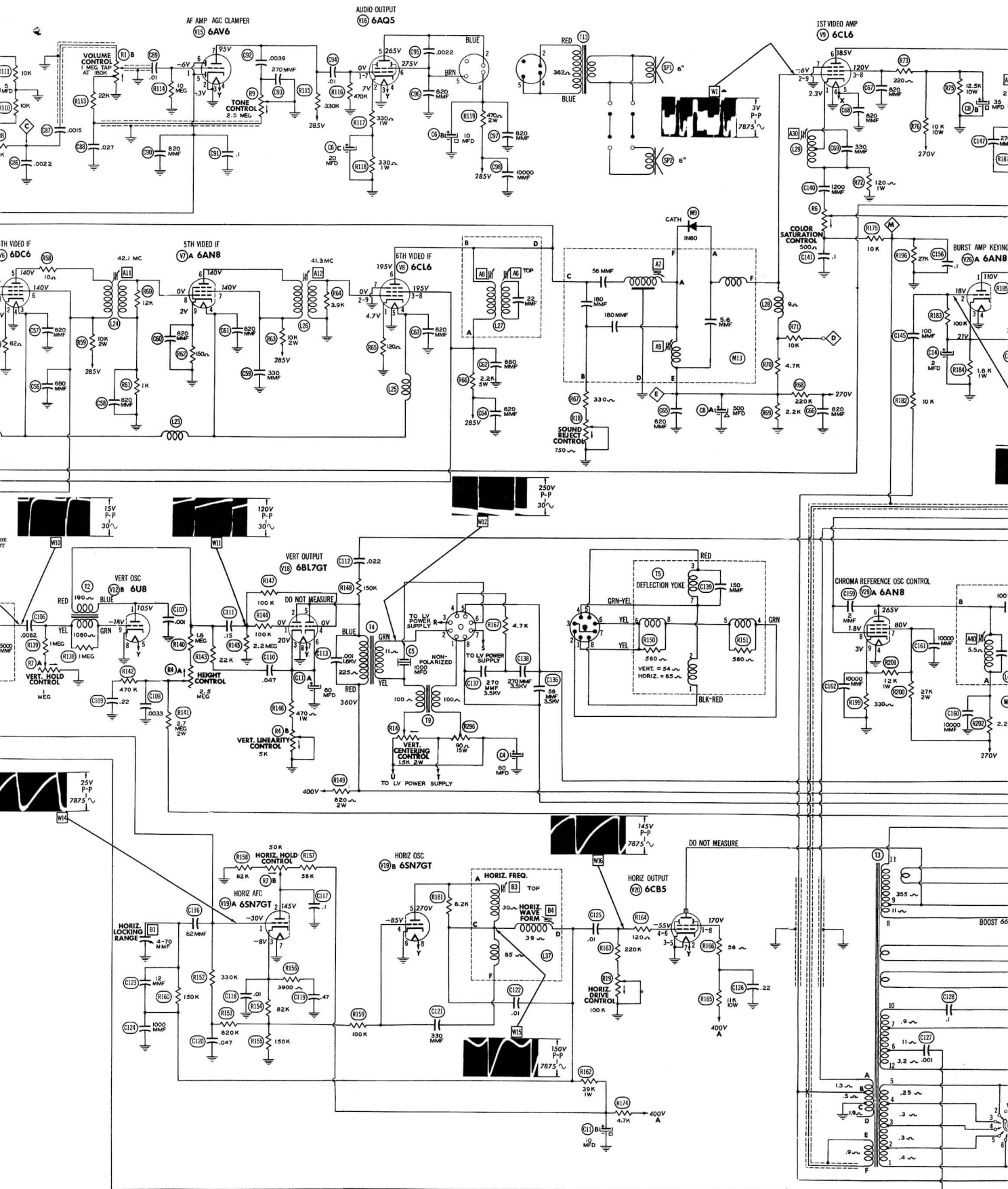
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

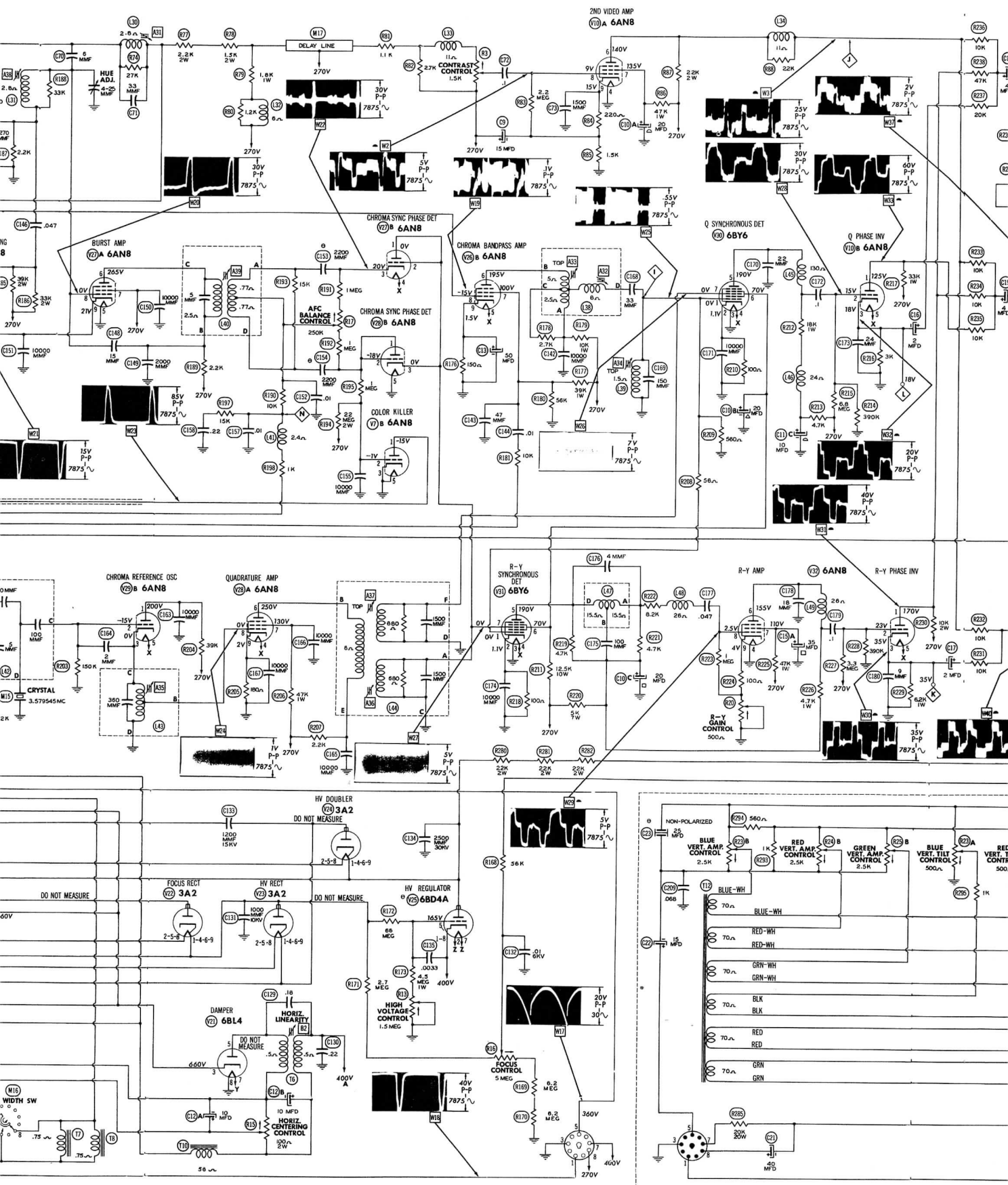
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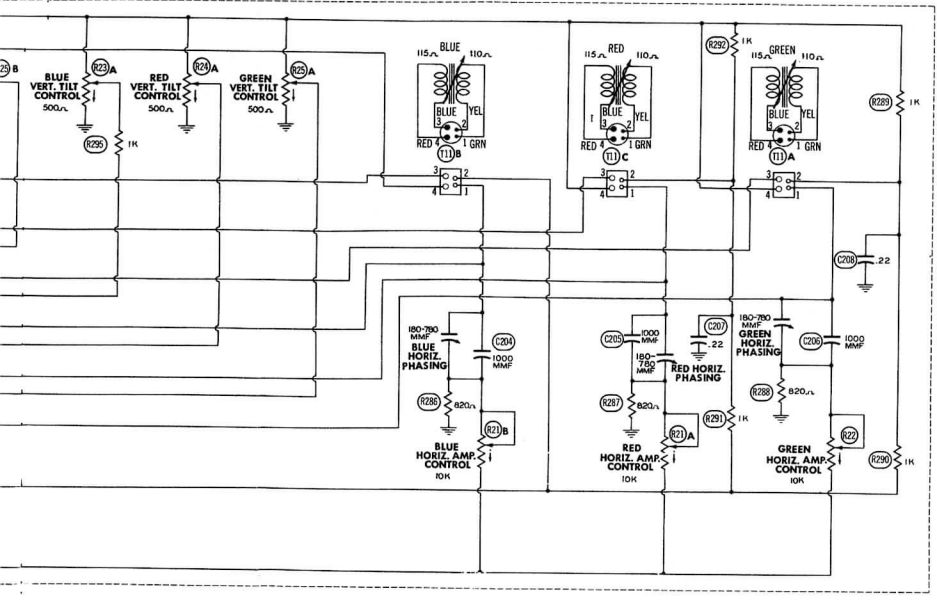
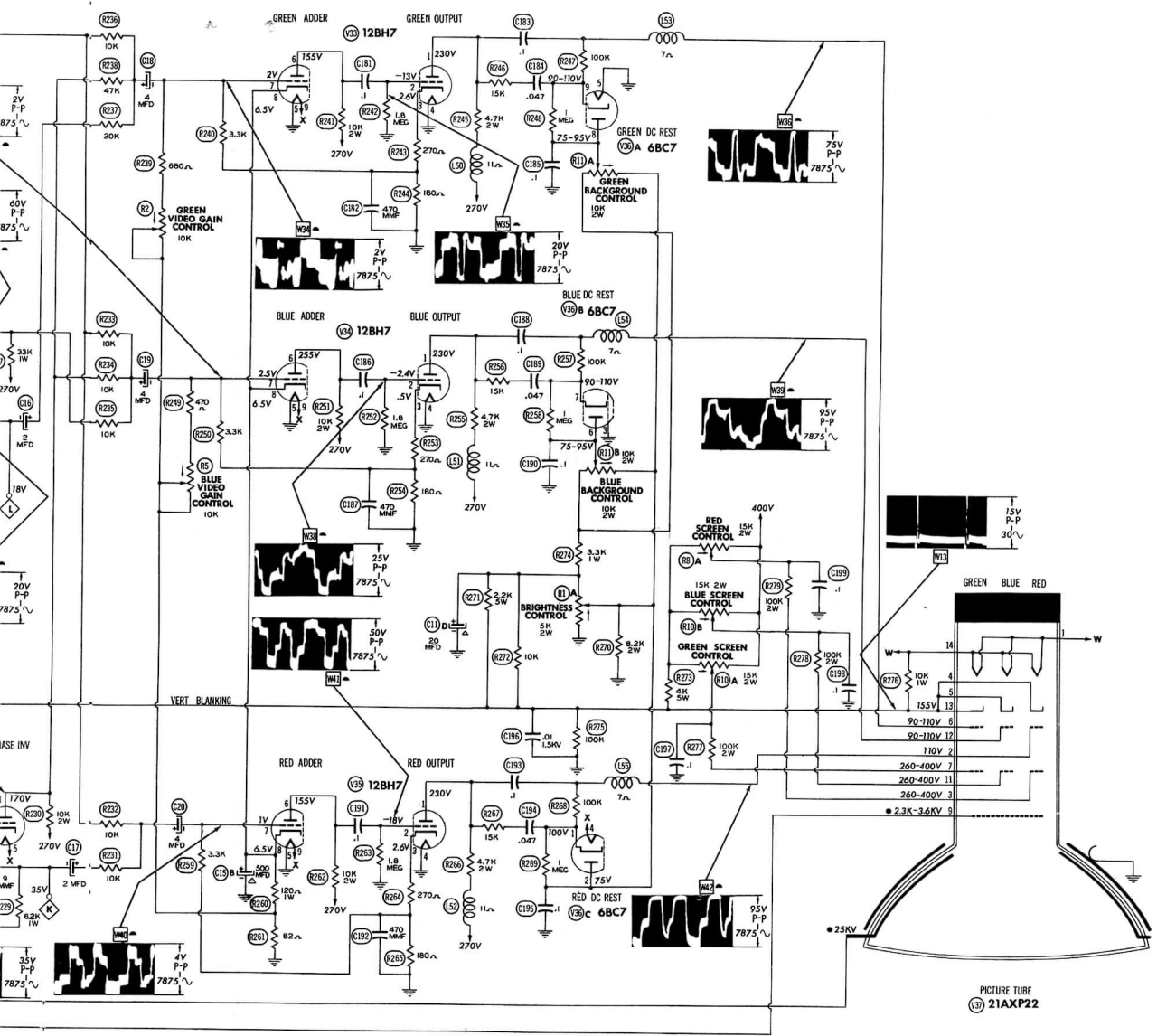


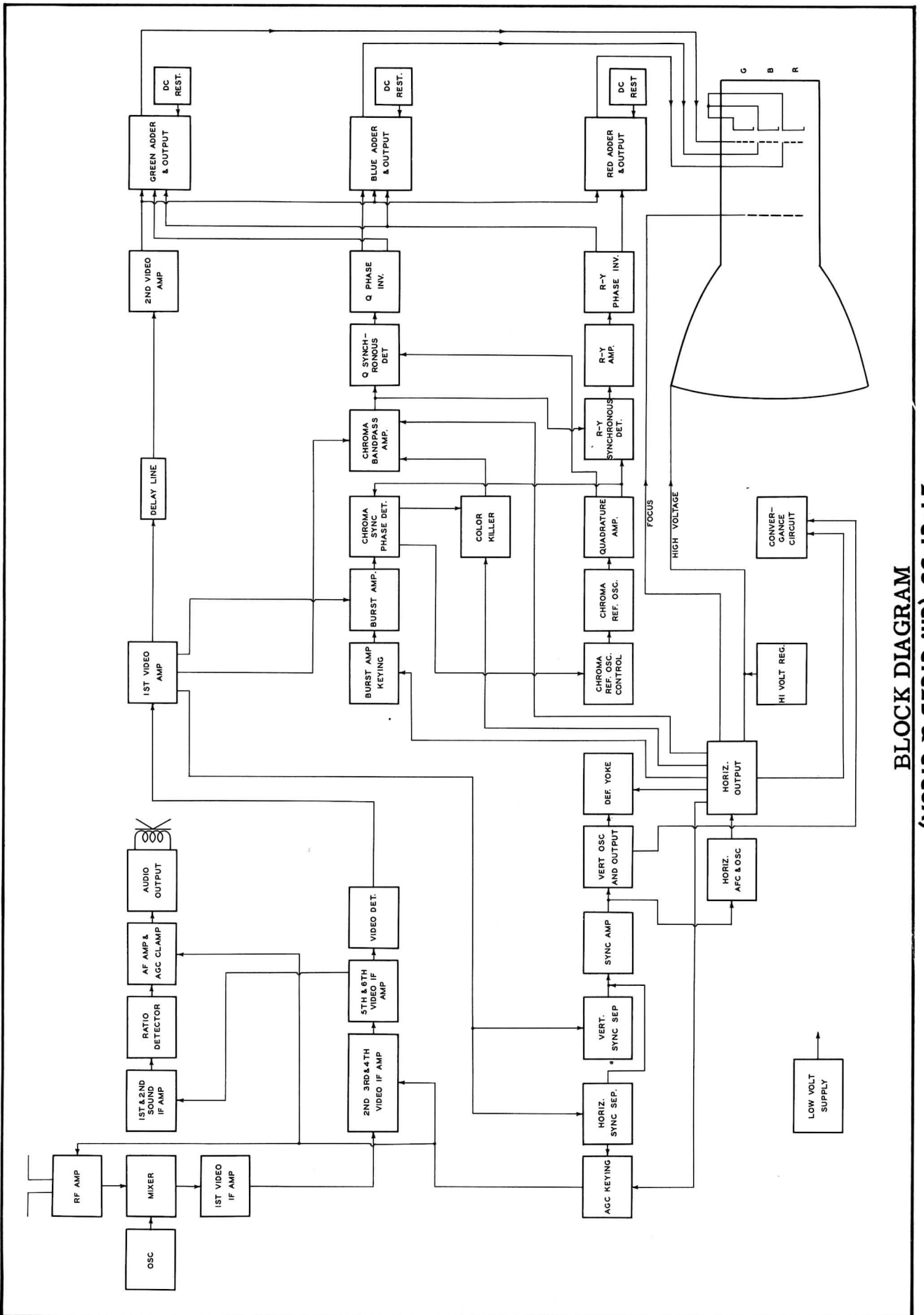
- ◆ MEASURED FROM PIN 3 OF V1.
 - MEASURED FROM PIN 7 OF V3.
 - MEASURED WITH HIGH VOLTAGE PROBE.
 - ▲ TAKEN WITH A WIDE BAND OSCILLOSCOPE.
 - ◎ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION.
- DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM. (SEE PARTS LIST)
- ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)
- ALL WAVEFORMS TAKEN WITH CONTRAST CONTROL (C10) SET AT MAXIMUM, AND COLOR SATURATION CONTROL (R10) AND HUE ADJUSTMENT SET TO PRODUCE PROPER PRESENTATION FROM A NTSC SATURATED COLOR-BAR GENERATOR CONSISTING OF RED, YELLOW, GREEN, CYAN, BLUE, MAGENTA AND WHITE BARS.
1. DC voltage measurements taken with vacuum tube voltmeter; AC voltage measured at 1,000 ohms per volt.
 2. Pin numbers are counted in a clockwise direction on bottom of socket.
 3. Measured values are from socket pin to common negative unless otherwise stated.
 4. Line voltage maintained at 117 volts for voltage readings.
 5. All controls set for normal operation; no signal applied.



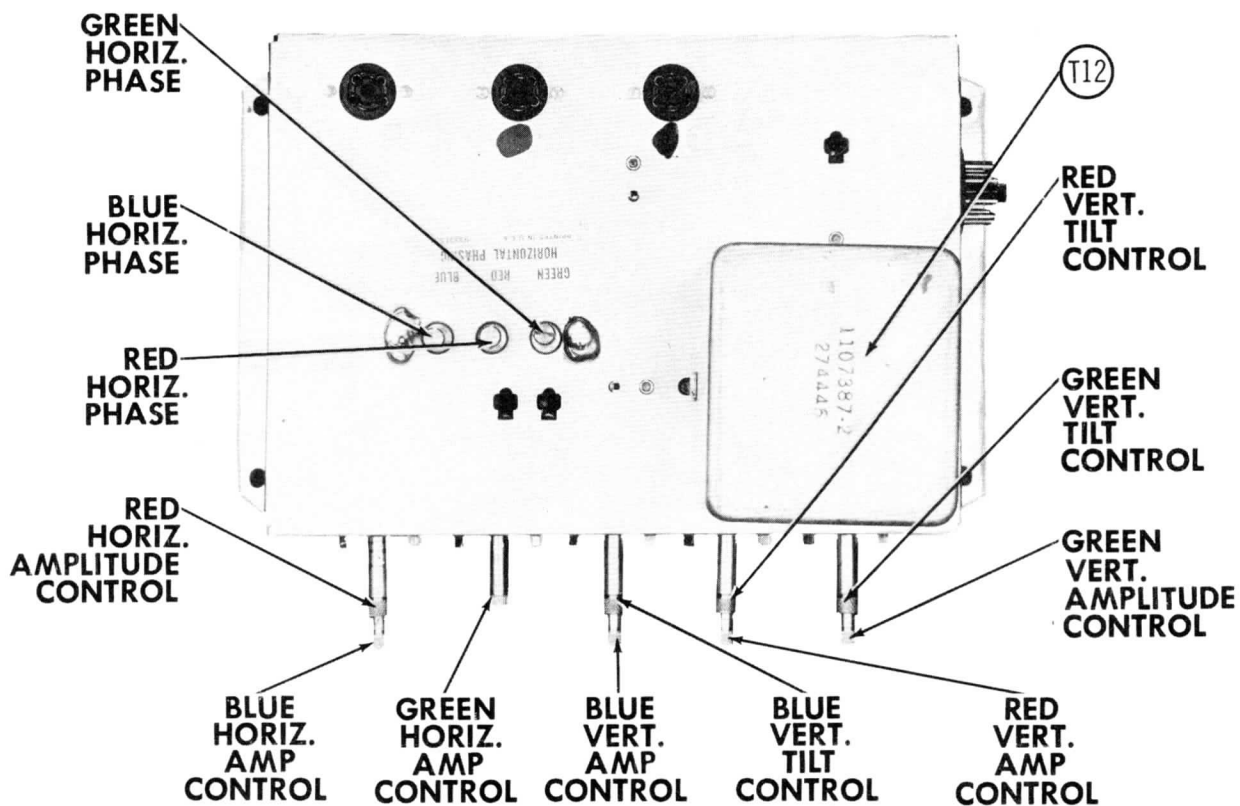


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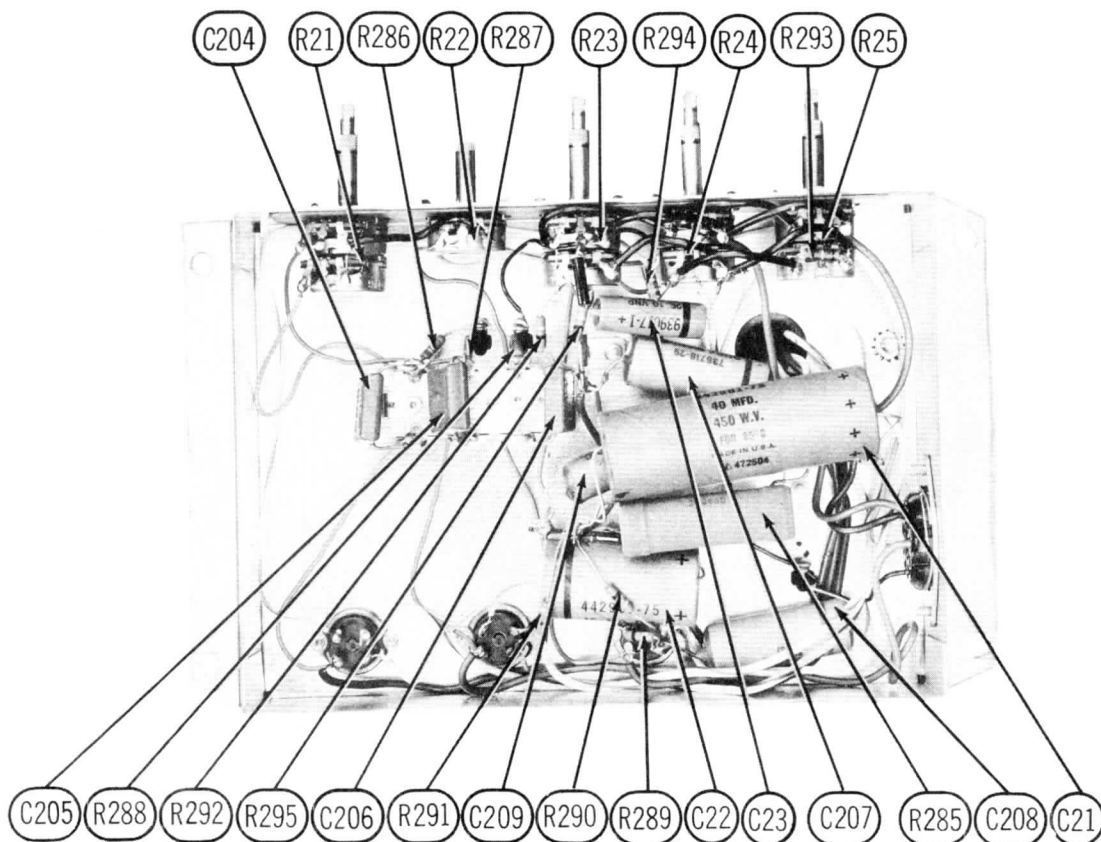




RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)
BLOCK DIAGRAM



CONVERGENCE CHASSIS TOP VIEW



CONVERGENCE CHASSIS BOTTOM VIEW

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The high voltage should be disabled by removing the fuse (M5) in series with pin 7 of the deflection yoke socket. Allow time for test equipment & receiver to warm up.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Ground pin 2 (grid) of 6CL6 (V8).

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1. .01MFD	High side to point ⊕ . Low side to chassis.	4.5MC (Unmod)	Any	DC probe to point ⊕ . Common to chassis.	A1, A2, A3, A4	Adjust for maximum deflection. Attenuate generator output for -2 volts on VTVM for final peaking of A1 thru A4.
2. "	"	"	"	DC probe to point ⊕ . Common to chassis.	A5	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting. Move VTVM to point ⊕ and retouch A4 for maximum deflection and then repeat step 2.
3. "	"	"	"	DC probe to point ⊕ . Common to chassis.		Connect a 1500Ω resistor across terminals "C" and "B" (primary) of L35. Readjust A3 for maximum deflection. Disconnect the 1500Ω resistor and reconnect it across terminals "A" and "D" of L35 and adjust A2 for maximum deflection. Remove the 1500Ω resistor and the jumper from pin 2 of V8 to ground.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Ground pin 2 (grid) of 6CL6 (V8).

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. .01MFD	High side to point ⊕ . Low side to chassis.	4.5MC (450KC Swp)	4.5MC	Any	Vert. Amp. to point ⊕ . Low side to chassis.	A1, A2, A3, A4	Disconnect stabilizing capacitor C7. Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
2. "	"	"	"	"	Vert. Amp. to point ⊕ . Low side to chassis.	A5	Reconnect stabilizing capacitor (C7). Adjust so that 4.5MC occurs at center of crossover lines as in Fig. 2. SLIGHTLY retouch A4 for maximum amplitude and straightness of crossover lines. Remove jumper from pin 2 of V8. Continue alignment with step 4.

VIDEO IF ALIGNMENT

If a scope to be used does not have a sensitivity of .1 millivolt per inch a suitable preamplifier may be necessary. A VHF signal generator of crystal accuracy should be used to provide markers. Beginning with step 7 the sweep or signal generators will be connected to the front terminal of the K3E crystal mixer (M8). Since extremely short leads must be used in making these connections it is recommended that the KRK I2C input head shown in Fig. 4 should be constructed and used in order to obtain reliable response curves.

Three 7.5 volt batteries capable of withstanding considerable current drain are required. Connect two 7.5 volt batteries in series with a 1000 potentiometer across the 15 volt combination. Also, connect a 1000Ω potentiometer across the third 7.5 volt battery. Connect the positive side of the 7.5 volt battery to chassis and the potentiometer arm to the ungrounded side of C55 and adjust for -6 volts.

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
4. .01MFD	High side to pin 2 (grid) of 6CL6 (V8). Low side to chassis.	Not used	47.25MC (400%Mod)	Any	Vert. Amp. (thru preamplifier if necessary) to point ⊕ . Low side to chassis.	A6	Connect pin 8 (grid) of 6AN8 (V7A) to chassis using a short jumper. Adjust for MINIMUM 400% indication on scope.
5. "	"	"	41.25MC	"	"	A7	"
6. Direct	High side to pin 2 (grid) of 6CL6 (V8). Low side to chassis. Use very short leads.	44MC (10MC Swp)	41.25MC 41.65MC 45.75MC 47.25MC	"	Vert. Amp. to point ⊕ . Low side to chassis.	A8, A9	Adjust sweep generator output for 6 volts peak to peak on scope. Couple marker generator loosely to pin 2 of V8. Adjust A8 and A9 for maximum gain with response similar to Fig. 3. While observing response on scope, adjust the sound rejection control (R18) for maximum rejection at 41.25MC. Remove short from pin 8 of V7A to chassis.
7. Fig. 4	Thru input head (Fig. 4) to front terminal of K3E crystal (M8) and chassis.	Not used	44.9MC	Any non-interfering channel	Use VTVM. DC probe to point ⊕ . Common to point ⊕ .	A10	Connect the junction of R90 and R91 to chassis with a short jumper. Adjust for maximum deflection. Attenuate generator output to maintain -6 volts on VTVM.
8. "	"	"	42.1MC	"	"	A-11	"
9. "	"	"	41.3MC	"	"	A12	Adjust for maximum deflection. Attenuate generator output for -6 volts on VTVM. Remove test equipment and 7.5 volts bias supply.
10. Fig. 4	Thru input head (Fig. 4) to front terminal of K3E crystal (M8) and chassis.	43MC (20MC Swp)	41.25MC 45.75MC	Any non-interfering channel	Vert. Amp. thru detector (detector lead of Fig. 5) to point ⊕ . Low side to chassis.	A13, A14	Connect a 56Ω carbon resistor between terminals "C" and "B" of L15 (on tuner). Couple marker generator loosely to pin 3 (grid) of 6U8 (V3). Attenuate sweep generator output for .3 volts peak to peak on scope. Adjust A13 and A14 for maximum gain with response similar to Fig. 6. Remove 56Ω resistor from L15.
11. "	"	Not used	41.25MC (400%Mod)	"	Vert. Amp. thru detector (detector lead of Fig. 5) to pin 5 (plate) of 6DC6 (V4). Low side to chassis. (Use scope preamp. if necessary.)	A15	Connect the load resistor of IF test block (Fig. 5) to pin 5 (plate) of V5 (6DC6) and V6 (6DC6). Connect the ungrounded side of C55 to chassis. Adjust A15 for MINIMUM 400% indication on scope. Remove jumper from ungrounded side of C55 to chassis.

RCA VICTOR MODELS
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VIDEO IF ALIGNMENT (Cont)

ALIGNMENT INS

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
12. "	"	44MC (10MC Swp)	41.25MC 41.65MC 45.75MC	"	Vert. Amp. thru detector (detector lead of Fig. 5) to pin 5 (plate) of 6DC6 (V4). Low side to chassis. (Do not use scope pre-amp.)	A16, A17	Couple marker generator loosely to pin 1 (grid) of 6DC6 (V4). Connect the load leads of IF test block (Fig. 5) to pin 5 (plate) of V5 (6DC6) and V6 (6DC6). Attenuate generator output for .3 volt peak to peak on scope. Adjust A16 and A17 for maximum gain with response similar to Fig. 7. While observing response on scope, adjust the sound level control (R12) for maximum rejection at 41.25MC.
13. Fig. 4	Thru input head (Fig. 4) to front terminal of K3E crystal and chassis.	Not used	40.7MC (400%Mod)	Any non-interfering channel	Vert. Amp. thru detector (detector lead of Fig. 5) to pin 5 (plate) of 6DC6 (V5). Low side to chassis.	A18	Connect the load leads of the IF test block (Fig. 5) to pin 5 (plate) of 6DC6 (V6) and pin 6 (plate) of 6AN8 (V7). Connect the ungrounded side of C55 to chassis. Adjust for MINIMUM 400% response on scope.
14. "	"	"	47.25MC (400%Mod)	"	"	A19	Adjust for MINIMUM 400% response on scope. Remove jumper from ungrounded side of C55 to chassis.
15. "	"	44MC (10MC Swp)	40.7MC 41.65MC 45.75MC 47.25MC	"	Vert. Amp. thru detector (detector lead of Fig. 5) to pin 5 (plate) of 6DC6 (V5). Low side to chassis. (Do not use preamp.)	A20, A21	Connect the potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive side to chassis. Adjust the potentiometer arm for -6 volts at C55. Connect a jumper from the junction of R90 and R91 to chassis. Couple the signal generator loosely to pin 1 (grid) of 6DC6 (V4). Adjust for response similar to Fig. 8.
16. Fig. 9 & Fig. 4	Signal generator in series with sound attenuator pad thru input head (Fig. 4) to front terminal of K3E crystal and chassis.	Not used	43.0MC (400%Mod)	"	Vert. Amp. thru detector (detector lead of Fig. 5) to pin 5 (plate) of 6DC6 (V5). Low side to chassis. (Use preamp. if necessary).		Note and mark output level of response on scope. This output level is to be used as reference in step 18.
17. Fig. 4	Thru input head (Fig. 4) to front terminal of K3E crystal and chassis.	"	41.25MC (400%Mod)	"	"	A15	Readjust A15 for MINIMUM response.
18. Fig. 4	Thru input head (Fig. 4) to front terminal of K3E crystal and chassis.	Not used	43.0MC (400%Mod)	Any non-interfering channel	Vert. Amp. thru detector (detector lead to Fig. 5) to pin 5 (plate) of 6DC6 (V5). Low side to chassis. (Use pre-amp. if necessary).		Turn sound level control (R12) counter clockwise (from position set in step 12) until output level indication on scope is same as obtained in step 16. Remove IF test block (Fig. 5) and scope.

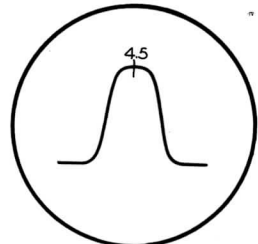


FIG. 1

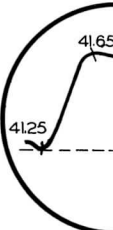


FIG. 10

OVERALL VIDEO IF RESPONSE CHECK

Connect the potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive side to chassis. Adjust for -9 volts at C55. Couple the marker generator loosely to the grid of the second video IF amplifier tube (V4). Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
19. Fig. 4	Thru input head (Fig. 4) to front terminal of K3E crystal and chassis.	43MC (10MC Swp)	41.25MC 41.65MC 45.0MC 45.75MC 46.5MC	Any non-interfering channel	Vert. Amp. to point ⊕ . Common to chassis.		Attenuate sweep generator output for 6 volt peak to peak on scope. Check for response curve similar to Fig. 10. If necessary, retouch A10, A11 and A12 to obtain desired response. Exercise care to obtain marker response exactly as shown in Fig. 10.

KRK12C VHF TUNER ALIGNMENT

In step 20 choose the proper pad (See Fig. 11) to match the output impedance of the sweep generator to be used. If the sweep generator does not have built-in markers, couple a VHF signal generator loosely to antenna terminals to provide markers. Connect the negative lead of the 7.5 volt bias supply to the tuner AGC terminal. Connect the positive side to chassis. Adjust the potentiometer arm for -2 volts at tuner AGC terminal. To minimize RF-IF interaction remove the RF oscillator tube (V2/6AF4) from its socket. Tuner alignment as outlined below requires the use of a heterodyne frequency meter. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. The sweep generator output lead should be terminated with its characteristic impedance, usually 50Ω.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
20. Fig. 11	Thru attenuator pad (Fig. 11) to VHF antenna terminals.	57MC (20MC Swp)	55.25MC 59.75MC	2	Vert. Amp. to point ⊕ . Low side to tuner chassis. (Use preamp. if necessary)	A22, A23, A24, A25 (see remarks)	Adjust for symmetrical response with maximum gain of center of bandpass as in Fig. 12 (The curves will have a deep valley due to crystal loading and non-linear detector characteristics). Do not exceed limits shown in Figs 12A and 12C. Each channel strip adjustment for an individual channel strip has a corresponding adjustment on all other channel strips. Since these adjustments are identical in position and function they are indicated by same "A" number in the interest of simplification. Adjustments A22, A23 and A24 are accessible thru holes in the top of the tuner as the channel switch is turned to each channel. Adjustment A25 refers to coupling capacitor whose positioning affects bandwidth of response curve. Note: The valley in the response curve (Fig. 12B) may vary from 0-50% (lower dashed curve). If the valley rises above 50% (upper dashed curve) this is an indication of excessive sweep generator output and the sweep generator output should be attenuated. Oscillator injection voltage is adjusted on UHF channel inserts only. Remove test equipment and replace oscillator tube (V2) in its socket.
		63MC (20MC Swp)	61.25MC 65.75MC	3			
		69MC (20MC Swp)	67.25MC 71.75MC	4			
		75MC (20MC Swp)	73.25MC 77.75MC	5			
		81MC (20MC Swp)	79.25MC 83.75MC	6			
		87MC (20MC Swp)	85.25MC 89.75MC	7			
		93MC (20MC Swp)	91.25MC 95.75MC	8			
		99MC (20MC Swp)	97.25MC 101.75MC	9			
		105MC (20MC Swp)	103.25MC 107.75MC	10			
		111MC (20MC Swp)	109.25MC 113.75MC	11			
		117MC (20MC Swp)	115.25MC 119.75MC	12			
		123MC (20MC Swp)	121.25MC 125.75MC	13			

21. Connect the potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive side to chassis. Adjust potentiometer arm for -9 volts at C55. Use only enough sweep generator output to provide usable response curve on scope. Set the fine tuning control to its mid-range position. Connection for the heterodyne meter is made as follows: Insert the end of an insulated piece of wire into either of two holes next to the oscillator tube at the right top front corner of the tuner. Use care so that the wire does not touch any tuned circuits. Connect other end of wire to RF input of frequency meter.

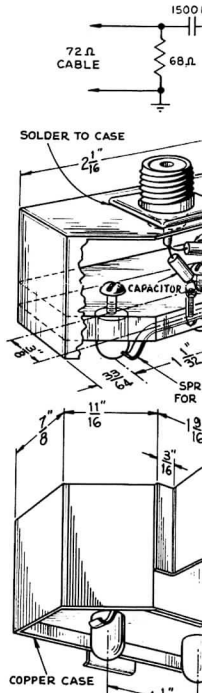
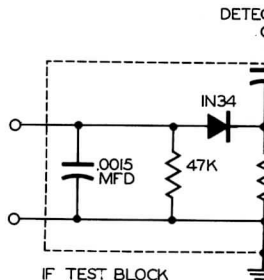


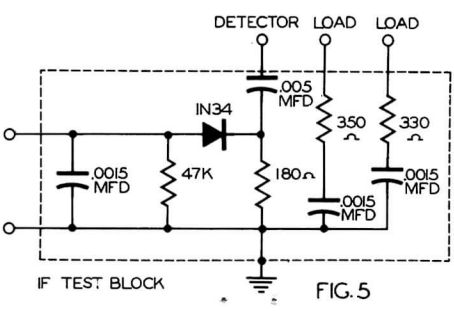
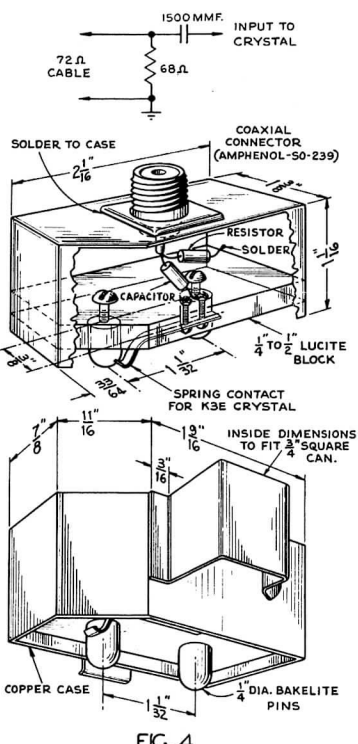
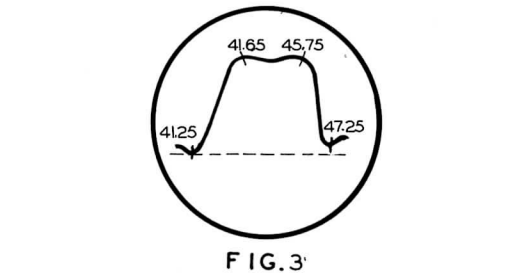
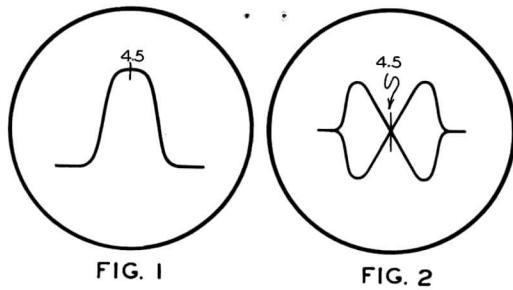
FIG. 4



IF TEST BLOCK

ALIGNMENT INSTRUCTIONS (cont)

ADJUST	REMARKS
A16, A17	Couple marker generator loosely to pin 1 (grid) of 6DC6 (V4). Connect the load leads of IF test block (Fig. 5) to pin 5 (plate) of V5 (6DC6) and V6 (6DC6). Attenuate generator output for .3 volt peak to peak on scope. Adjust A16 and A17 for maximum gain with response similar to Fig. 7. While observing response on scope, adjust the sound level control (R12) for maximum rejection at 41.25MC.
A18	Connect the load leads of the IF test block (Fig. 5) to pin 5 (plate) of 6DC6 (V6) and pin 6 (plate) of 6AN8 (V7). Connect the ungrounded side of C55 to chassis. Adjust for MINIMUM 400% response on scope.
A19	Adjust for MINIMUM 400% response on scope. Remove jumper from ungrounded side of C55 to chassis.
A20, A21	Connect the potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive side to chassis. Adjust the potentiometer arm for -6 volts at C55. Connect a jumper from the junction of R90 and R91 to chassis. Couple the signal generator loosely to pin 1 (grid) of 6DC6 (V4). Adjust for response similar to Fig. 8.
A15	Note and mark output level of response on scope. This output level of response on scope. This output level is to be used as reference in step 18.
A15	Readjust A15 for MINIMUM response.
	Turn sound level control (R12) counter clockwise from position set in step 12) until output level indication on scope is same as obtained in step 16. Remove IF test block (Fig. 5) and scope.



DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY
22	Connect frequency meter as in step 21.	Not used	Freq. meter to 257MC
23	Fig. 11 Thru attenuator pad (Fig. 11) to VHF antenna terminals.	213MC (10MC Swp)	211.25MC 215.75MC
24	Connect frequency meter as in step 21.	Not used	Freq. meter to 251MC 245MC 239MC 233MC 227MC 221MC 215MC 209MC 203MC 197MC 191MC
25	Direct High side to point \otimes . Low side to chassis.	"	43.5MC (400% Mod)

Alignment of the UHF portion of the tuner should not be attempted with this equipment: UHF sweep generator covering the frequency range 200 to 257 MC. Remove the RF Oscillator tube (V2/6AF4) from its socket. Connect the potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the synchronized sweep voltage from the sweep generator to the UHF antenna terminals. The sweep generator output lead should be terminated with its characteristic impedance. Set the fine tuning control to the mid-position of its range. If strong interference is encountered from an FM station adjust the fine tuning control to the receiver cabinet on the tuner.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY
26	10DB Attenuator Pad Thru attenuator pad to UHF antenna terminals. Connect UHF marker generator loosely to UHF antenna terminals.	Set sweep to cover channel being aligned (See chart) Use 20MC sweep width	Set to video and sound freq. of channel being aligned (see chart)
27	"	"	Set to video carrier freq. of channel being aligned.

Connect the synchronized sweep voltage from the sweep generator to the UHF antenna terminals.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY
28	.01MFD High side to pin 2 (grid) of 6CL6 (V9). Low side to chassis.	Not used	4.5MC (400% Mod)
29	This step requires the use of a 100% saturated color bar generator. Connect the color bar generator to the vertical amplifier of a wide band oscilloscope to red grid (pin 2) of 6CL6 (V9). Low side to chassis. Adjust A31 for MINIMUM response on scope.		
30	.1MFD High side to pin 2 (grid) of 6CL6 (V9). Low side to chassis.	2.5MC (3MC Swp)	.5MC 1.5MC 3MC 3.58MC

These circuits are not adjustable. The response check is made with the sweep generator connected as in step 30. Remove the 3.58MC crystal (M15). Turn the color saturation control (Fig. 5) to each picture tube grids (2, 12 and 6). Check generator output to prevent overload.

Connect a short clip lead from pin 2 (grid) of V8 to chassis. These circuits are not adjustable. The response check is made with the detector (Fig. 5) to Point \otimes . Low side to chassis. Connect the color saturation control (R8A) to chassis. Turn the color saturation control (R8A) maximum. Connect the vertical amplifier of the color bar generator to pin 1 (grid) of 6BY6 (V30). Connect the vertical amplifier of the color bar generator to chassis. Remove test equipment and replace the 3.58MC crystal (M15).

Connect the positive side to chassis. Adjust for -9 volts at C55. Connect the potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive side to chassis. Adjust the potentiometer arm for -6 volts at C55. Connect a jumper from the junction of R90 and R91 to chassis. Couple the signal generator loosely to pin 1 (grid) of 6DC6 (V4). Adjust for response similar to Fig. 8.

ADJUST	REMARKS
A15	Attenuate sweep generator output for 6 volt peak to peak on scope. Check for response curve similar to Fig. 10. If necessary, retouch A10, A11 and A12 to obtain desired response. Exercise care to obtain marker response exactly as shown in Fig. 10.

Adjust for symmetrical response with maximum gain of center of bandpass as in Fig. 12 (The curves will have a deep valley due to crystal loading and non-linear detector characteristics). Do not exceed limits shown in Figs 12A and 12C. Each channel strip adjustment for an individual channel strip has a corresponding adjustment on all other channel strips. Since these adjustments are identical in position and function they are indicated by same "A" number in the interest of simplification. Adjustments A22, A23 and A24 are accessible thru holes in the top of the tuner as the channel switch is turned to each channel. Adjustment A25 refers to coupling capacitor whose positioning affects bandwidth of response curve. Note: The valley in the response curve (Fig. 12B) may vary from 0-50% (lower dashed curve). If the valley rises above 50% (upper dashed curve) this is an indication of excessive sweep generator output and the sweep generator output should be attenuated. Oscillator injection voltage is adjusted on UHF channel inserts only. Remove test equipment and replace oscillator tube (V2) in its socket.

ADJUST	REMARKS
A22, A23, A24, A25 (see remarks)	Adjust for symmetrical response with maximum gain of center of bandpass as in Fig. 12 (The curves will have a deep valley due to crystal loading and non-linear detector characteristics). Do not exceed limits shown in Figs 12A and 12C. Each channel strip adjustment for an individual channel strip has a corresponding adjustment on all other channel strips. Since these adjustments are identical in position and function they are indicated by same "A" number in the interest of simplification. Adjustments A22, A23 and A24 are accessible thru holes in the top of the tuner as the channel switch is turned to each channel. Adjustment A25 refers to coupling capacitor whose positioning affects bandwidth of response curve. Note: The valley in the response curve (Fig. 12B) may vary from 0-50% (lower dashed curve). If the valley rises above 50% (upper dashed curve) this is an indication of excessive sweep generator output and the sweep generator output should be attenuated. Oscillator injection voltage is adjusted on UHF channel inserts only. Remove test equipment and replace oscillator tube (V2) in its socket.
	Connect the positive side to chassis. Adjust potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive side to chassis. Adjust the potentiometer arm for -6 volts at C55. Connect a jumper from the junction of R90 and R91 to chassis. Couple the signal generator loosely to pin 1 (grid) of 6DC6 (V4). Adjust for response similar to Fig. 8.
	Turn sound level control (R12) counter clockwise from position set in step 12) until output level indication on scope is same as obtained in step 16. Remove IF test block (Fig. 5) and scope.
	Readjust A15 for MINIMUM response.
	Note and mark output level of response on scope. This output level of response on scope. This output level is to be used as reference in step 18.
	Turn sound level control (R12) counter clockwise from position set in step 12) until output level indication on scope is same as obtained in step 16. Remove IF test block (Fig. 5) and scope.

Connect the positive side to chassis. Adjust potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive side to chassis. Adjust the potentiometer arm for -6 volts at C55. Connect a jumper from the junction of R90 and R91 to chassis. Couple the signal generator loosely to pin 1 (grid) of 6DC6 (V4). Adjust for response similar to Fig. 8.

INSTRUCTIONS (cont)

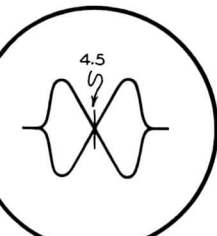


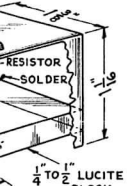
FIG. 2



3

INPUT TO CRYSTAL

COAXIAL CONNECTOR AMPHENOL-50-239)



CONTACT TO CRYSTAL

INSIDE DIMENSIONS TO FIT 3/4 SQUARE CAN.



1/4 DIA. BAKELITE PINS

DR LOAD LOAD

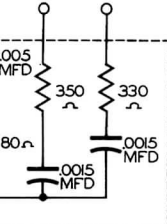


FIG. 5

KRK12C VHF TUNER ALIGNMENT (Cont)

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS	
22	Connect frequency meter as in step 21.	Not used	Freq. meter to 257MC	13	Not used	A26	Adjust audible beat on freq. meter.	
23	Fig. 11 Thru attenuator pad (Fig. 11) to VHF antenna terminals.	213MC (10MC Swp)	211.25MC 215.75MC	"	Vert. Amp. to point \odot . Low side to chassis.	A27, A24	Adjust A27 for maximum gain on scope. Adjust A24 for maximum gain and flat-topped curve. Recheck A27 for maximum gain at center of band with flat-topped response.	
24	Connect frequency meter as in step 21.	Not used	Freq. meter to 251MC	12	Not used	A26, A24	Adjust A26 on each channel for audible beat. Connect sweep generator and scope as in step 23. Set sweep generator and marker to proper frequencies (see chart) for each channel and adjust A24 if necessary for maximum gain and proper response. Do not readjust A27.	
			245MC	11				
			239MC	10				
			233MC	9				
			227MC	8				
			221MC	7				
			215MC	6				
			209MC	5				
			203MC	4				
			197MC	3				
191MC	2							
25	Direct	High side to point \odot . Low side to chassis.	"	43.5MC (400% Mod)	Any	Vert. Amp. to point \odot . Low side to chassis.	A28	Adjust for MINIMUM 400% indication on scope. Remove test equipment.

KRK12C UHF TUNER ALIGNMENT

Alignment of the UHF portion of the tuner should not be attempted unless the following test equipment is available, in addition to the usual VHF test equipment: UHF sweep generator covering the frequency range of 470MC to 890MC. A marker generator, of crystal accuracy, covering the same frequency range.

Remove the RF Oscillator tube (V2/6AF4) from its socket.

Connect the potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive lead to chassis. Adjust the potentiometer arm for -9 volts at C55.

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

The sweep generator output lead should be terminated with its characteristic impedance, usually 50Ω.

Set the fine tuning control to the mid-position of its range.

If strong interference is encountered from an FM station adjust the FM trap to minimize this interference. This trap is fastened to the transmission line inside the receiver cabinet on the tuner.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
26	10DB Attenuator Pad Thru attenuator pad to UHF antenna terminals. Connect UHF marker generator loosely to UHF antenna terminals.	Set sweep to cover channel being aligned (See chart) Use 20MC sweep width	Set to video and sound freq. of channel being aligned (see chart)	14 thru 83	Vert. Amp. to point \odot . Low side to tuner chassis. (Use pre-amp. if necessary)	A29, A23, A24	Adjust A29, A23 and A24 for response similar to Fig. 13 for all UHF channel strip inserts. Remove test equipment and replace the 6AF4 (V2) in its socket.
27	"	"	Set to video carrier freq. of channel being aligned.	14 thru 83	Vert. Amp. to point \odot . Low side to chassis.	A26	Attenuate sweep generator for 6 volts peak to peak on scope. Set fine tuning control to its mid-range position. Connect VHF generator to point \odot using very short leads. Set generator frequency to 45.75MC. Adjust A26 for channel strip being aligned until 45.75MC and video carrier marker coincides on response curve as in Fig. 14. Adjust A24 of channel strip being aligned for maximum gain with proper waveshape. Connect the DC probe of VTVM to point \odot . Common to chassis. Set the oscillator injection adjustment for reading on VTVM between 0.1 volt and 0.3 volt on all UHF channels. Remove all test equipment.

VIDEO TRAP ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
28	.01MFD High side to pin 2 (grid) of 6CL6 (V9). Low side to chassis.	Not used	4.5MC (400% Mod)	Any	Vert. Amp. thru detector (detector lead of Fig. 5) to point \odot . Low side to chassis.	A30	Ground pin 2 (grid) of 6CL6 (V8). Short the ungrounded side of C156 (in plate circuit of V7B) to chassis. Turn color saturation control fully clockwise. Adjust A30 for MINIMUM 400% response on scope. Remove jumpers from pin 2 of V8 and C156.
29	This step requires the use of a 100% saturated color bar generator (If this is not available use the alternate method given in step 30). Connect the vertical amplifier of a wide band oscilloscope to red grid (pin 2) of the picture tube. Connect the high side of the color bar generator to pin 2 (grid) of 6CL6 (V9). Low side to chassis. Adjust A31 for MINIMUM color sub-carrier indication in the video signal.						
30	.1MFD High side to pin 2 (grid) of 6CL6 (V9). Low side to chassis.	2.5MC (3MC Swp)	.5MC 1.5MC 3MC 3.58MC	Any	Vert. Amp. thru detector (detector lead of Fig. 5) to point \odot . Low side to chassis.	A31	To prevent noise from second detector appearing on scope connect pin 2 (grid) of 6CL6 (V8) to chassis. Turn contrast control maximum clockwise. Check for response similar to Fig. 15. Increase sweep output so that the 3.58MC portion of trace is raised above the scope base line. Adjust A31 for MINIMUM marker amplitude.

RESPONSE CHECK VIDEO CIRCUIT

These circuits are not adjustable. The response check is made to determine if the circuits are operating properly.

Leave the sweep generator connected as in step 30.

Remove the 3.58MC crystal (M15). Turn the color saturation control (R6A) to its maximum counter clockwise position. Connect the scope thru detector (Fig. 5) to each picture tube grids (2, 12 and 6). Check for response similar to Fig. 16 at each picture tube grid. Attenuate sweep generator output to prevent overload.

RESPONSE CHECK OF "R-Y" AND "Q" CHANNELS

Connect a short clip lead from pin 2 (grid) of V8 to chassis.

These circuits are not adjustable. The response check is made to determine if the circuits are operating satisfactorily. Connect the scope through the detector (Fig. 5) to Point \odot . Low side to chassis. Connect the high side of sweep generator thru .1MFD to pin 1 (grid) of 6BY6 (V31). Low side to chassis. Turn the color saturation control (R6A) maximum clockwise. Check for response similar to Fig. 17A. Move sweep generator to pin 1 (grid) of 6BY6 (V30). Connect the vertical amplifier of scope through detector (Fig. 5) to point \odot . Check for response similar to Fig. 17B. Remove test equipment and replace the 3.58MC crystal (M15). Remove short from pin 2 (grid) of V8.

RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)

ALIGNMENT INSTRUCTIONS (cont)

FIRST VIDEO AMPLIFIER AND BANDPASS AMPLIFIER ALIGNMENT

Remove 6CL6 V8 from socket (or short pin 2 of V8 to chassis.
Turn contrast control and color saturation control fully clockwise.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
31. .1MFD	High side to pin 2 (grid) of 6CL6 (V9). Low side to chassis.	3MC (3MC Swp)	2.5MC 3.58MC 4.1MC	Any	Vert. Amp. thru detector (Fig.5) to pin 1 (grid) of 6BY6 (V30). Low side to chassis.	A32, A33, A34	Adjust for maximum gain and response similar to Fig. 19. Remove test equipment and replace V8 (or remove short from pin 2 of V8) in its socket. Switch off receiver power and replace fuse (M5).

ALTERNATE FIRST VIDEO AMPLIFIER AND BANDPASS AMPLIFIER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Connect the potentiometer arm of the 7.5 volt bias supply to pin 5 or 6 (diode plates) of 6AV6 (V15). Connect the positive side to chassis. Adjust the potentiometer arm for -2 volts at pin 5 of V15. Connect the potentiometer arm of the 15 volt bias supply to the ungrounded side of C55. Connect the positive side to chassis. Adjust the potentiometer arm for -9 volts at C55. Connect a jumper across the terminals of the 4.5MC trap (L29).

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
32. Direct	Connect signal generator and video sweep modulator across antenna terminals. (See remarks)	3MC (3MC Swp)	67.25MC	4	Vert. Amp. thru detector (Fig.5) to pin 1 (cathode) of 6CL6 (V9). Low side to chassis.		Signal generator should provide channel 4 video carrier frequency (67.25MC) with crystal accuracy. Connect DC probe of VTVM to point Ⓛ. Common to point Ⓧ. With zero video sweep modulation adjust signal generator output (67.25MC for 3 volts on VTVM) Remove VTVM and apply video sweep modulation, being careful not to overload. Couple VHF signal generator loosely to pin 1 (grid) of 6DC6 (V4) to provide 45.75MC marker. To set the local oscillator exactly on frequency, adjust fine tuning until a beat pattern is obtained on scope. Remove VHF generator from pin 1 of V4. Response on scope should be similar to Fig. 18.
33. "	"	"	"	"	Vert. Amp. thru detector (Fig.5) to pin 2 (cathode) of 6BY6 (V30). Low side to chassis.	A32, A33, A34	Remove jumper across terminals of L29. Connect short jumper from point Ⓜ to chassis. Turn contrast control fully clockwise. Adjust A32, A33 and A34 for maximum gain and response similar to Fig. 19. Remove test equipment. Switch off receiver power and replace fuse (M5). Remove jumper from point Ⓨ to chassis.

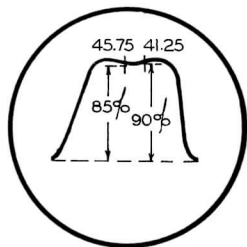


FIG. 6

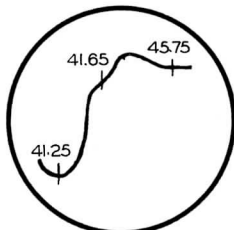


FIG. 7

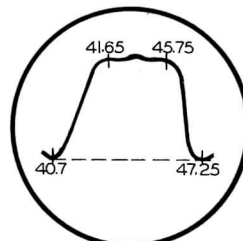
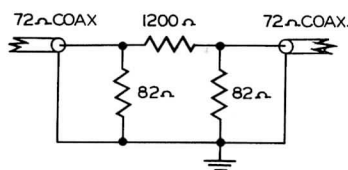


FIG. 8



SOUND ATTENUATOR PAD
FIG. 9

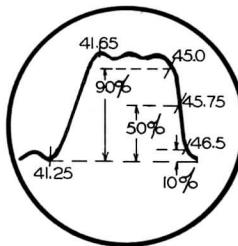


FIG. 10

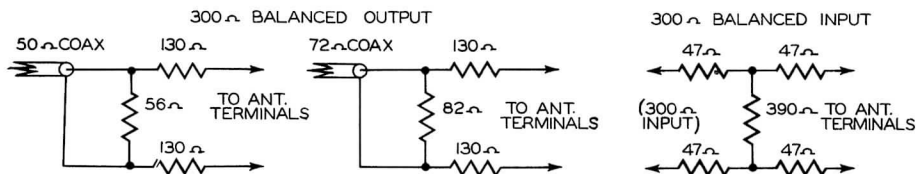
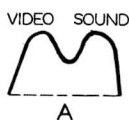


FIG. 11



A

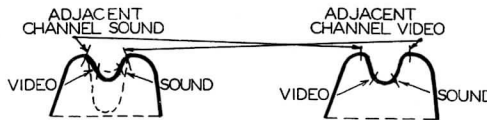
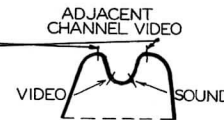


FIG. 12



C

ALIGNMENT INSTRUCTIONS (cont)

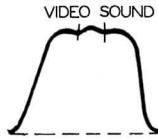


FIG. 13

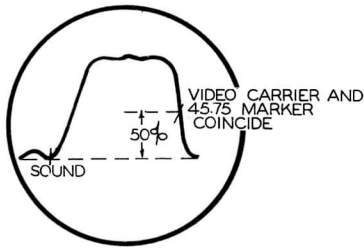
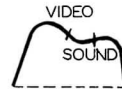


FIG. 14

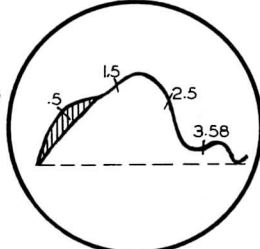


FIG. 15

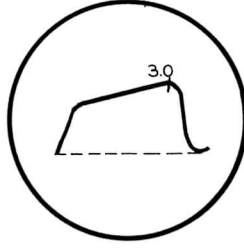


FIG. 16



FIG. 17

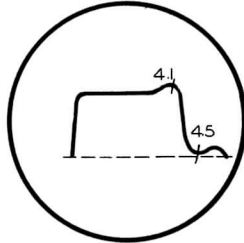


FIG. 18

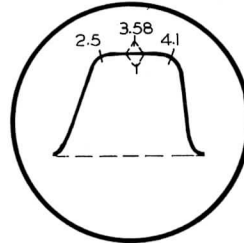
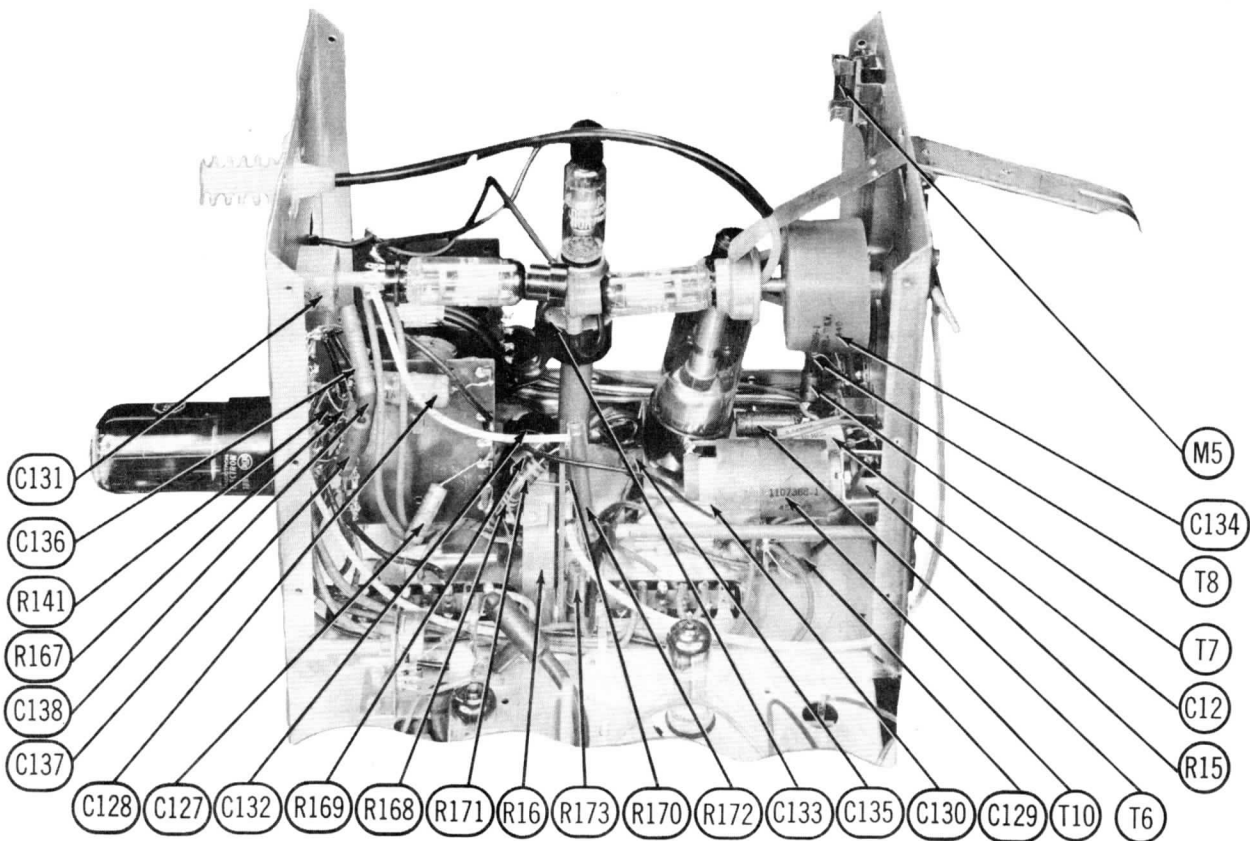


FIG. 19

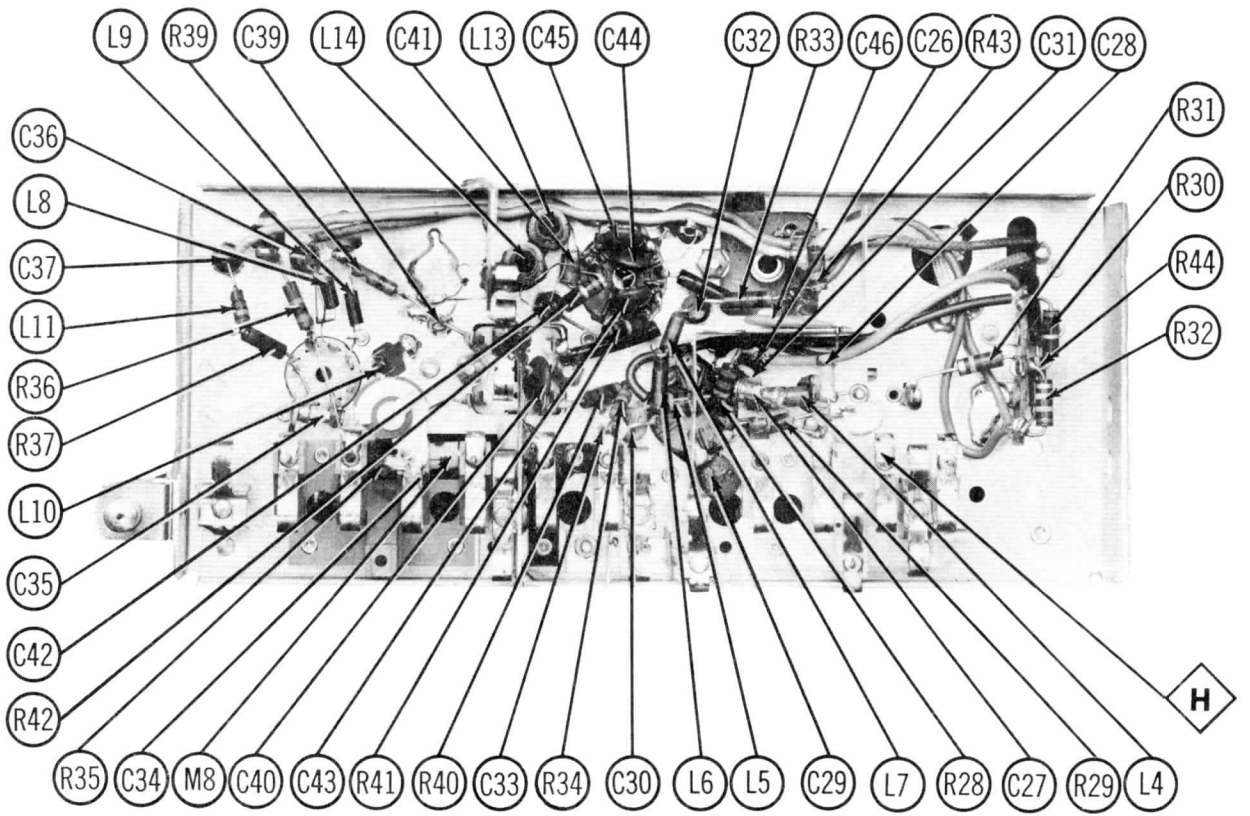
TELEVISION CHANNEL FREQUENCIES

Channel No.	Frequency Band (Mc)	Video Carrier	Sound Carrier	Channel No.	Frequency Band (Mc)	Video Carrier	Sound Carrier	Channel No.	Frequency Band (Mc)	Video Carrier	Sound Carrier	Channel No.	Frequency Band (Mc)	Video Carrier	Sound Carrier
2	54-60	55.25	59.75	23	524-530	525.25	529.75	44	650-656	651.25	655.75	64	770-776	771.25	775.75
3	60-66	61.25	65.75	24	530-536	531.25	535.75	45	656-662	657.25	661.75	65	776-782	777.25	781.75
4	66-72	67.25	71.75	25	536-542	537.25	541.75	46	662-668	663.25	667.75	66	782-788	783.25	787.75
5	76-82	77.25	81.75	26	542-548	543.25	547.75	47	668-674	669.25	673.75	67	788-794	789.25	793.75
6	82-88	83.25	87.75	27	548-554	549.25	553.75	48	674-680	675.25	679.75	68	794-800	795.25	799.75
7	174-180	175.25	179.75	28	554-560	555.25	559.75	49	680-686	681.25	685.75	69	800-806	801.25	805.75
8	180-186	181.25	185.75	29	560-566	561.25	565.75	50	686-692	687.25	691.75	70	806-812	807.25	811.75
9	186-192	187.25	191.75	30	566-572	567.25	571.75	51	692-698	693.25	697.75	71	812-818	813.25	817.75
10	192-198	193.25	197.75	31	572-578	573.25	577.75	52	698-704	699.25	703.75	72	818-824	819.25	823.75
11	198-204	199.25	203.75	32	578-584	579.25	583.75	53	704-710	705.25	709.75	73	824-830	825.25	829.75
12	204-210	205.25	209.75	33	584-590	585.25	589.75	54	710-716	711.25	715.75	74	830-836	831.25	835.75
13	210-216	211.25	215.75	34	590-596	591.25	595.75	55	716-722	717.25	721.75	75	836-842	837.25	841.75
14	470-476	471.25	475.75	35	596-602	597.25	601.75	56	722-728	723.25	727.75	76	842-848	843.25	847.75
15	476-482	477.25	481.75	36	602-608	603.25	607.75	57	728-734	729.25	733.75	77	848-854	849.25	853.75
16	482-488	483.25	487.75	37	608-614	609.25	613.75	58	734-740	735.25	739.75	78	854-860	855.25	859.75
17	488-494	489.25	493.75	38	614-620	615.25	619.75	59	740-746	741.25	745.75	79	860-866	861.25	865.75
18	494-500	495.25	499.75	39	620-626	621.25	625.75	60	746-752	747.25	751.75	80	866-872	867.25	871.75
19	500-506	501.25	505.75	40	626-632	627.25	631.75	61	752-758	753.25	757.75	81	872-878	873.25	877.75
20	506-512	507.25	511.75	41	632-638	633.25	637.75	62	758-764	759.25	763.75	82	878-884	879.25	883.75
21	512-518	513.25	517.75	42	638-644	639.25	643.75	63	764-770	765.25	769.75	83	884-890	885.25	889.75
22	518-524	519.25	523.75	43	644-650	645.25	649.75								

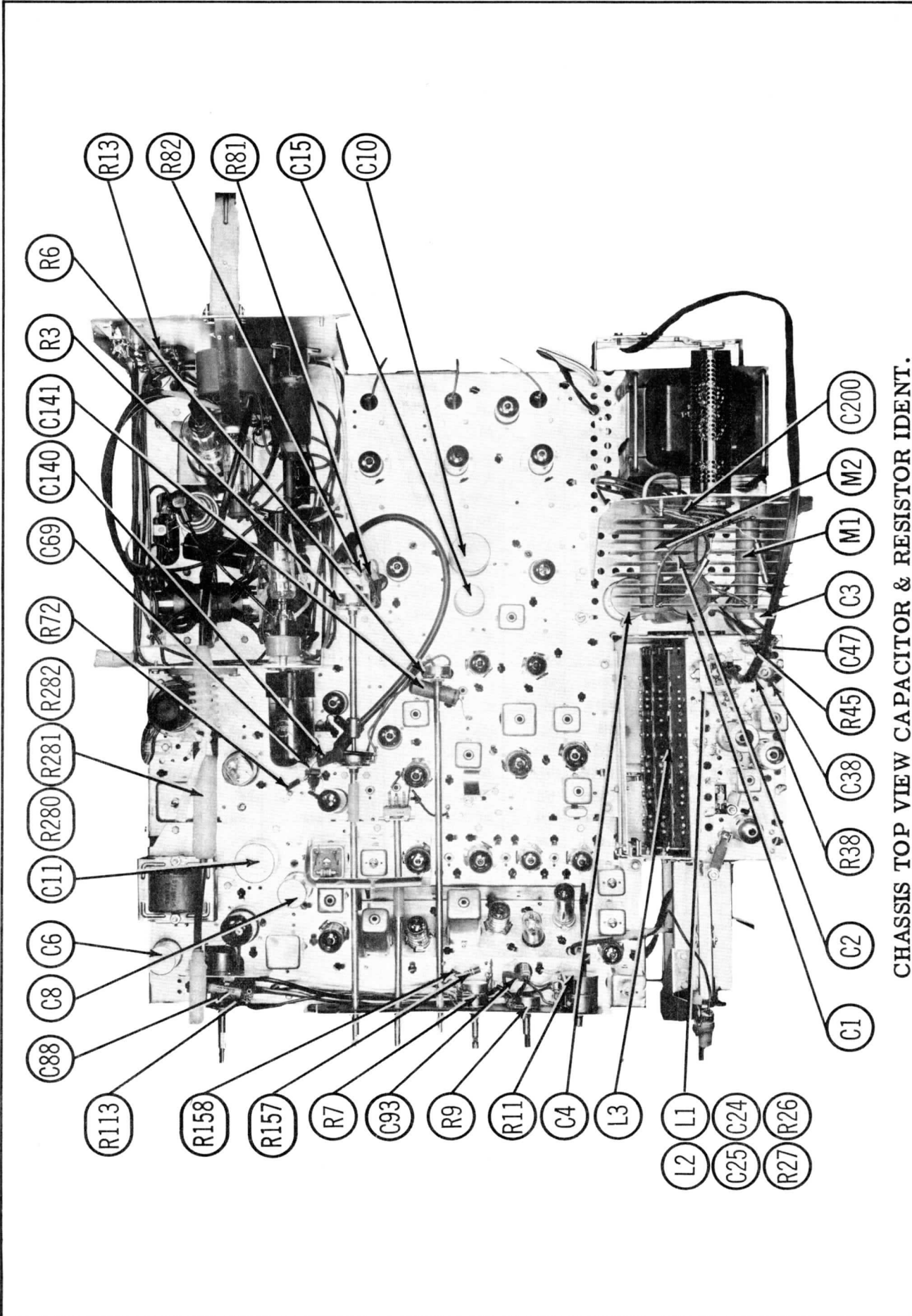
RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)



HIGH VOLTAGE COMPARTMENT



RF TUNER-BOTTOM VIEW



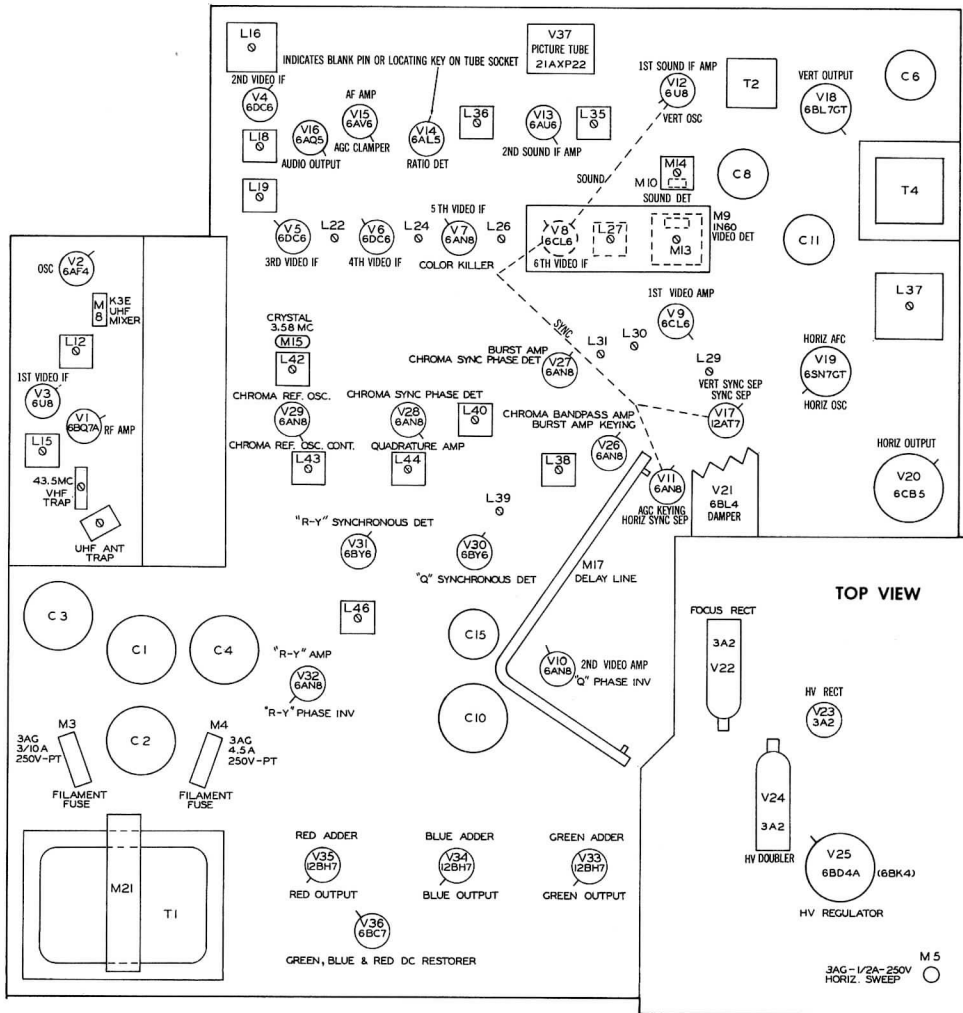
RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)
CHASSIS TOP VIEW CAPACITOR & RESISTOR IDENT.

RESISTANCE MEASUREMENTS

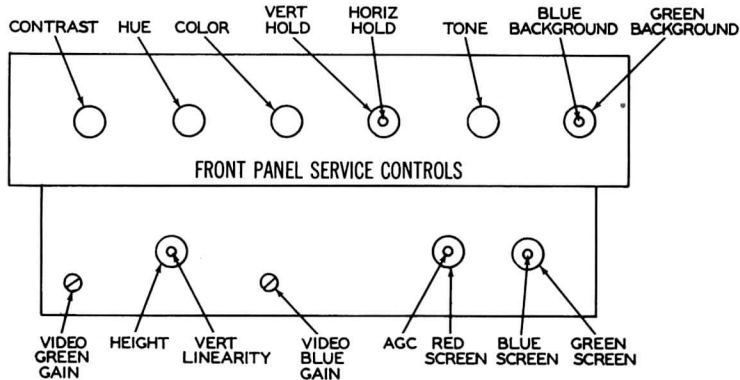
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	
V 1	6BQ7A	†1.7KΩ	10Meg	10Meg	0Ω	.1Ω	10Meg	600KΩ	120Ω	0Ω	
V 2	6AF4	†12KΩ	10KΩ	.1Ω	0Ω	0Ω	10KΩ	†12KΩ			
V 3	6U8	INF	INF	†13KΩ	0Ω	.1Ω	†700Ω	INF	56Ω	0Ω	
V 4	6DC6	75KΩ	62Ω	0Ω	.1Ω	†11KΩ	†47KΩ	0Ω			
V 5	6DC6	75KΩ	62Ω	0Ω	.1Ω	†11KΩ	†11KΩ	0Ω			
V 6	6DC6	40KΩ	62Ω	.1Ω	0Ω	†11KΩ	†11KΩ	0Ω			
V 7	6AN8	27KΩ	†22Meg	0Ω	.1Ω	0Ω	†11KΩ	†11KΩ	1KΩ	150Ω	
V 8	6CL6	120Ω	.1Ω	†3KΩ	.1Ω	0Ω	†3KΩ	0Ω	†3KΩ	.1Ω	
V 9	6CL6	120Ω	7KΩ	†7KΩ	0Ω	.1Ω	†5.5KΩ	0Ω	†7KΩ	7KΩ	
V 10	6AN8	†15KΩ	390KΩ	3KΩ	0Ω	.1Ω	†11KΩ	†47KΩ	2.2Meg	1.7KΩ	
V 11	6AN8	†3.9KΩ	†35KΩ	400KΩ	†10KΩ	†10KΩ	300KΩ	†3.6Ω	1.7Meg	†600Ω	
V 12	6U8	•5Meg	4Ω	†12KΩ	0Ω	.1Ω	†12KΩ	82Ω	0Ω	1.6Meg	
V 13	6AU6	47KΩ	0Ω	.1Ω	0Ω	†18KΩ	†30KΩ	0Ω			
V 14	6AL5	11KΩ	11KΩ	0Ω	.1Ω	INF	0Ω	INF			
V 15	6AV6	10Meg	0Ω	0Ω	.1Ω	600KΩ	600KΩ	†330KΩ			
V 16	6AQ5	470KΩ	700Ω	0Ω	.1Ω	†1.6KΩ	†1.3KΩ	470KΩ			
V 17	12AT7	360KΩ	2.2Meg	0Ω	0Ω	0Ω	†13KΩ	†1.2Meg	0Ω	.1Ω	
V 18	6BL7GT	2.9Meg	†1.1KΩ	1KΩ	2.3Meg	†1.1KΩ	1KΩ	.1Ω	0Ω		
V 19	6SN7GT	1.3Meg	†55KΩ	230KΩ	250KΩ	†45KΩ	0Ω	0Ω	.1Ω		
V 20	6CB5	†11KΩ	.1Ω	0Ω	500KΩ	500KΩ	0Ω	0Ω	†11KΩ		
V 21	6BL4	NC	NC	INF	TP	†44Ω	NC	.1Ω	0Ω		
V 22	3A2	20Meg	20Meg	NC	20Meg	20Meg	20Meg	NC	20Meg	20Meg	TOP CAP •11Ω
V 23	3A2	INF	INF	INF	INF	INF	INF	INF	INF	INF	TOP CAP 20Meg
V 24	3A2	INF	INF	INF	INF	INF	INF	INF	INF	INF	TOP CAP INF
V 25	6BD4A	†1.6Ω	†10KΩ	NC	NC	5Meg	NC	†10KΩ	NC	INF	TOP CAP INF
V 26	6AN8	†20KΩ	100KΩ	1.8KΩ	0Ω	.1Ω	†11KΩ	†25KΩ	40KΩ	150Ω	
V 27	6AN8	.5Ω	.5Ω	†25Meg	.1Ω	0Ω	†2.8KΩ	†600Ω	2.2KΩ	1.8KΩ	
V 28	6AN8	†22Meg	†22Meg	.5Ω	.1Ω	0Ω	†2.8KΩ	†47KΩ	.2Ω	180Ω	
V 29	6AN8	†39KΩ	150KΩ	.4Ω	0Ω	.1Ω	†2.8KΩ	†11KΩ	†22Meg	330Ω	
V 30	6BY6	1.5Ω	100Ω	0Ω	.1Ω	†25KΩ	†13KΩ	.5Ω			
V 31	6BY6	58Ω	100Ω	0Ω	.1Ω	†8KΩ	†13KΩ	.5Ω			
V 32	6AN8	†8KΩ	390KΩ	6.2KΩ	0Ω	.1Ω	†10KΩ	†47KΩ	1Meg	350Ω	
V 33	12BH7	†5.3KΩ	1.8Meg	450Ω	0Ω	0Ω	†11KΩ	1.6KΩ	200Ω	.1Ω	
V 34	12BH7	†5.3KΩ	1.8Meg	450Ω	0Ω	0Ω	†11KΩ	600Ω	200Ω	.1Ω	
V 35	12BH7	†5.3KΩ	1.8Meg	450Ω	0Ω	0Ω	†11KΩ	3.5KΩ	200Ω	.1Ω	
V 36	6BC5	1Meg	8.2K	0Ω	.1Ω	0Ω	7.5KΩ	1Meg	5KΩ	1Meg	
V 37	21AXP22	†16KΩ PIN 10 NC	1Meg PIN 11 †100KΩ	†100KΩ PIN 12 1Meg	†5KΩ PIN 13 †5KΩ	†5KΩ PIN 13 †16KΩ	1Meg	†100KΩ	NC	20Meg	

†MEASURED FROM OUTPUT OF M2.
•MEASURED FROM PIN 3 OF V21.
TP-TIE POINT.
NC-NO CONNECTION.

TUBE PLACEMENT CHART



**RCA VICTOR MODELS
 21-CT-55 (Ch. CT-2B & CT-3A)**



HORIZONTAL OSCILLATOR ALIGNMENT

Turn the set on and tune in a TV station, preferably a test pattern. If necessary, synchronize the picture with the horizontal hold control (R7B).

1. Preset the horizontal drive control (R19A) until the white foldover just disappears from the raster.
2. Adjust the horizontal locking range trimmer (B1) one fourth turn from maximum clockwise position. Set the width switch on rear of H. V. compartment to its center position.
3. Adjust the horizontal linearity slug (B2) clockwise for maximum inductance. Set the horizontal hold control to the center of its range.
4. If necessary, adjust the horizontal frequency slug (B3) until the picture synchronizes horizontally.
5. Connect the vertical amplifier of the oscilloscope to terminal "C" of L37. Adjust the horizontal waveform slug (B4) for response similar to Fig. 20. While adjusting B4 keep the picture in sync by readjusting the horizontal hold control. Remove the oscilloscope connect from L37.
6. Set the horizontal hold control to its maximum counter clockwise position. Momentarily remove signal by switching off channel and back again. If picture remains in sync adjust B3 slightly and again switch off channel and back. If necessary, repeat this process until picture falls out of sync with diagonal bars sloping down to the left. Turn the horizontal hold control clockwise noting the least number of diagonal bars obtained just before the picture falls into sync.

Adjust B1 slightly clockwise, if more than three diagonal bars were present before picture pulled into sync. If less than two bars were present, adjust B1 slightly counter clockwise.

7. Turn the horizontal hold control fully counter clockwise and switch off channel and back again and recheck the number of bars present at the pull-in point (70° clockwise rotation). Repeat the above procedure until 2 or 3 bars are present at the pull-in point.

HIGH VOLTAGE ADJUSTMENT

Turn the contrast control and brightness control to their maximum counter clockwise positions.

Connect the probe end of a high voltage probe through a short length of high voltage anode lead to the corona cup on the base of the 3A2 (V24). Common to chassis. Set the meter for a 25KV reading. Turn the high voltage control (R13A on rear of HV cage) for 25KV on VTVM. Turn contrast and brightness controls clockwise until picture appears on picture tube. Adjust the focus control for best focus. Set the width switch for 1/2 inch horizontal over scan of the viewing area. Turn the horizontal drive control clockwise as far as possible without the presence of white foldover lines in the raster. Adjust the horizontal linearity slug (B2) for a picture symmetrical from left to right. Recheck the operation of horizontal hold control for proper pull-in action as outlined under "Horizontal Oscillator Alignment" (steps 6 and 7).

HIGH VOLTAGE PERFORMANCE CHECK

Connect a 0-1MA DC milliammeter in the cathode circuit (pins 1 & 8) of the 6BD4A (V25). A reading of .7 MA should be obtained when the high voltage is 25KV. Remove milliammeter and high voltage probe.

Adjust the vertical height and vertical linearity controls so that after final adjustment a vertical overscan of 1/4 inch at top and bottom of viewing area is obtained.

COLOR AFC ALIGNMENT

Connect a 100% saturated color bar generator across the antenna terminals (a TV color signal may be used if available).

ADJUST FOR

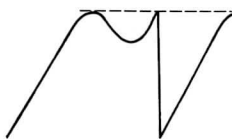


FIG.

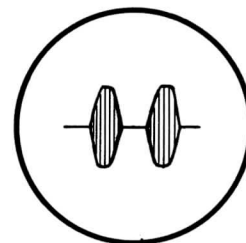


FIG.21

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
34. Direct	Use color bar generator. Connect across antenna terminals.			DC probe thru detector probe wide band scope may be used in place of VTVM to terminal "B" of L43. Common to chassis.	A35	Adjust for 5 volts peak to peak on VTVM (or scope)
35. "	"			DC probe thru detector probe to pin 3 (cathode) of 6AN8 (V28B). Common to chassis.	A36, A37	Connect pin 8 (grid) of burst amp. 6AN8 (V27A) to chassis with a short jumper. Adjust A36 for maximum deflection, then adjust A37 for minimum deflection. Remove short from pin 8 of V27A.
36. "	"			DC probe to pins 1 & 2 (plate and grid) of phase det. (6AN8/V28A). Common to chassis.	A38, A39	Set the hue trimmer control to its mid-range position. Adjust for maximum deflection. A39 will tune very broadly. Adjust A39 near the approximate center of the range at which maximum deflection occurs.
Note: The burst signal should be checked at this point. Connect the vertical amplifier of the wide band scope to pins 1 and 2 (plate and grid) of 6AN8 (V28A). Check for burst signal waveform similar to Fig. 21. Rotation of horizontal hold control throughout its holding range should not alter waveform shape.						
37. "	Couple color bar generator across antenna terminals.			DC probe to pins 1 and 2 (plate and grid) of 6AN8 (V28A).	A40	Connect point \diamond to chassis, with short jumper. Adjust A40 for zero beat (indicated by slow swing of VTVM pointer. Zero beat may also be observed on scope or picture tube screen. Remove short from point \diamond .
38. "	"			DC probe to point \diamond . Common to chassis.		Shunt 3.58MC crystal (M15) with 15MMF capacitor. Adjust AFC balance control (R17A) for zero reading on VTVM. Remove 15MMF capacitor across M15.

MATRIX ALIGNMENT USING 100% SATURATED COLOR BAR GENERATOR

Connect a 100% saturated color bar generator providing R-Y, B-Y, "Q" and "I" signals across antenna terminals. Adjust contrast and color saturation controls to their mid-range positions. Turn the channel selector switch to the correct channel (channel which crystal has been supplied with color bar generator).

Connect the vertical amplifier of scope to point \diamond . Low side to chassis. Observe the +R-Y signal on scope. Adjust the hue control to its center range position. Switch on B-Y channel and adjust A38 for zero B-Y on scope. Move the vertical amplifier of scope to point \diamond . Low side to chassis.

Observe the -"Q" signal on scope. Switch on the "I" signal and adjust A37 for zero "I" signal on scope.

Connect the vertical amplifier of scope to blue grid of picture tube. Low side to chassis.

Adjust the color saturation control and the R-Y gain control until all color bars containing blue are of equal amplitude and all other color bars are at zero axis on scope. Repeat procedure for green, yellow and red to obtain best cancellation.

MISCELLANEOUS ADJUSTMENTS

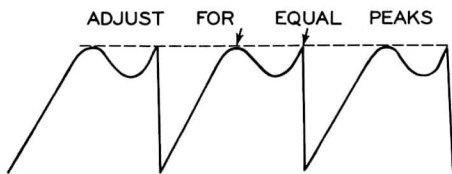


FIG. 20

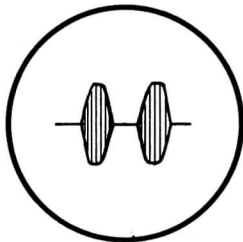


FIG. 21

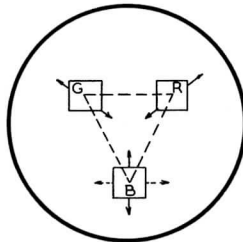


FIG. 22

with the horizontal hold control (R7B).

et the width switch on rear of H. V.

ontrol to the center of its range.

orm slug (B4) for response similar

e the oscilloscope connect from L37.

l by switching off channel and back

repeat this process until picture

ting the least number of diagonal

If less than two bars were present,

check the number of bars present at

pull-in point.

na cup on the base of the 3A2 (V24).

age), for 25KV on VTVM. Turn

for best focus. Set the width

far as possible without the

metrical from left to right. Recheck

Alignment" (steps 6 and 7).

MA should be obtained when the high

of 1/4 inch at top and bottom of

d if available).

REMARKS

r 5 volts peak to peak on VTVM (or scope

pin 8 (grid) of burst amp. 6AN8 (V27A) to
with a short jumper. Adjust A36 for maxi-
deflection, then adjust A37 for minimum
t. Remove short from pin 8 of V27A.

the trimmer control to its mid-range.
Adjust for maximum deflection. A39
very broadly. Adjust A39 near the
ate center of the range at which maxi-
deflection occurs.

wide band scope to
. 21. Rotation of

point $\text{\textcircled{X}}$ to chassis, with short jumper.
0 for zero beat (indicated by slow swing
pointer. Zero beat may also be observed
or picture tube screen. Remove short
t $\text{\textcircled{X}}$.

8MC crystal (M15) with 15MMF capacitor.
C balance control (R17A) for zero reading
. Remove 15MMF capacitor across M15.

terminals. Adjust contrast and color

(channel which crystal has been

scope. Adjust the hue control to its

mplifier of scope to point $\text{\textcircled{X}}$.

ual amplitude and all other color

MATRIX ALIGNMENT USING 100% SATURATED COLOR BAR G

Move high side of scope to green grid of picture tube and check

picture tube and check cancellation of green, blue and cyan bars

If necessary repeat matrix adjustments until best overall cancel

COMPLETE SETUP PROCEDURE

Before making any picture tube adjustments the "High Voltage A

INITIAL ADJUSTMENTS

Tune in a TV station, preferably a test pattern. It should be po

operating normally. If the picture will not sync or is the pictur

to readjust the AGC control.

Remove the metal control cover box and snap in cabinet panel be

two round head screws holding the cover box in place. Carefull

cabinet panel by pulling the panel free from its snap mounts.

The AGC control adjustment is now accessible. Do not attempt

Turn AGC control (R8B) counter clockwise until normal receive

Adjust the focus control (R16) for best definition of fine picture o

CHECK OF HORIZONTAL OSCILLATOR ALIGNMENT

Turn the horizontal hold control fully counter clockwise. The pl

Momentarily remove signal by switching off channel and back ag

control in a clockwise direction. The picture should pull in sync

remain in sync throughout the balance of clockwise rotation of th

normal and steady the horizontal oscillator is properly aligned.

Alignment" under "Horizontal Sweep Circuit Adjustments".

CENTERING ADJUSTMENT

Adjust the vertical and horizontal centering controls (rear panel

not cover the masked area, adjust the positioning of equal blank

HEIGHT AND VERTICAL LINEARITY ADJUSTMENTS

Adjust the height and vertical linearity controls (front panel) fo

oversean the picture mask by 1/4" at top and bottom. Recheck ho

HORIZONTAL WIDTH, DRIVE AND LINEARITY ADJUSTMENTS

Adjust the width switch (rear panel of HV compartment) to overs

Refer to "Horizontal sweep circuit adjustments" for correct sett

If the picture mask cannot be filled by the above adjustments ref

PRELIMINARY CONVERGENCE ADJUSTMENTS

Connect the RF output of a white dot generator across the antenn

amplitude controls (located inside cabinet by removing top) maxi

controls to their center range position. Turn dot generator on a

on picture tube from the dot generator. Adjust the three converg

position).

Note which of these three dots requires positioning then adjust m

In Fig. 22 the dashed lines indicate the direction of dot movemen

The solid lines indicate the direction of dot movement when the a

effect on the two beams other than the one it is intended to contro

over blue gun next to picture tube socket) to produce a white dot

Complete convergence should be obtained at the center of the scr

COLOR PURITY ADJUSTMENT

Switch channel selector to an unused channel. Turn contrast and

Turn the brightness control maximum clockwise. Set the eight m

clockwise positions.

Set the red screen control fully clockwise and the blue screen an

holding yoke assembly so yoke may be moved back and forth. SI

yoke clearance.

Alternately slide the yoke assembly forward or back and adjust t

obtained with minimum color contamination of the red field. TI

adjust all three (red, blue and green) screen controls for a low

controls for proper view of raster.

ADJUSTMENTS

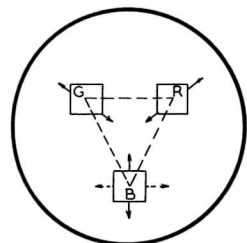
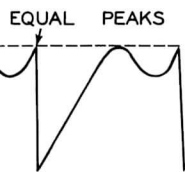


FIG. 22

MATRIX ALIGNMENT USING 100% SATURATED COLOR BAR GENERATOR (Cont)

Move high side of scope to green grid of picture tube and check cancellation of red magenta and blue bars. Move high side to red grid of picture tube and check cancellation of green, blue and cyan bars.

If necessary repeat matrix adjustments until best overall cancellation is obtained.

COMPLETE SETUP PROCEDURE

Before making any picture tube adjustments the "High Voltage Adjustments" under "Horizontal Sweep Circuit Adjustments" should be made.

INITIAL ADJUSTMENTS

Tune in a TV station, preferably a test pattern. It should be possible to sync the picture if the horizontal oscillator and AGC system are operating normally. If the picture will not sync or is the picture is overloading due to misadjustment of the AGC control it may be necessary to readjust the AGC control.

Remove the metal control cover box and snap in cabinet panel below the cover box. Remove the four knobs under the control cover and the two round head screws holding the cover box in place. Carefully remove the cover box by sliding the assembly outward. Remove the cabinet panel by pulling the panel free from its snap mounts.

The AGC control adjustment is now accessible. Do not attempt adjustment of the other accessible controls at this time.

Turn AGC control (R8B) counter clockwise until normal receiver operation is obtained, and the picture can be synchronized.

Adjust the focus control (R16) for best definition of fine picture detail.

CHECK OF HORIZONTAL OSCILLATOR ALIGNMENT

Turn the horizontal hold control fully counter clockwise. The picture should not lose sync.

Momentarily remove signal by switching off channel and back again. Normally the picture will lose sync. Slowly turn the horizontal hold control in a clockwise direction. The picture should pull in sync before the horizontal hold control has been turned 70 degrees and should remain in sync throughout the balance of clockwise rotation of the control. If the receiver passes the above checks and the picture remains normal and steady the horizontal oscillator is properly aligned. If the receiver does not pass the above checks see "Horizontal Oscillator Alignment" under "Horizontal Sweep Circuit Adjustments".

CENTERING ADJUSTMENT

Adjust the vertical and horizontal centering controls (rear panel) until the picture is centered in the picture tube mask. If the picture does not cover the masked area, adjust the positioning of equal blank areas at top and bottom and each side of picture.

HEIGHT AND VERTICAL LINEARITY ADJUSTMENTS

Adjust the height and vertical linearity controls (front panel) for a picture that is symmetrical from top to bottom. Final adjustment should overscan the picture mask by 1/4" at top and bottom. Recheck horizontal and vertical centering of the picture.

HORIZONTAL WIDTH, DRIVE AND LINEARITY ADJUSTMENTS

Adjust the width switch (rear panel of HV compartment) to overscan the picture mask by 3/4" horizontally.

Refer to "Horizontal sweep circuit adjustments" for correct setting of horizontal drive control and horizontal linearity coil adjustments.

If the picture mask cannot be filled by the above adjustments refer to the procedure outlined under "High Voltage Adjustments".

PRELIMINARY CONVERGENCE ADJUSTMENTS

Connect the RF output of a white dot generator across the antenna terminals. Preset the Red, Green, and Blue horizontal and vertical amplitude controls (located inside cabinet by removing top) maximum counter clockwise. Preset the Red, Green, and Blue vertical tilt controls to their center range position. Turn dot generator on and set channel selector switch to correct channel to receive a dot pattern on picture tube from the dot generator. Adjust the three converging magnets (small magnets mounted on a knurled nut in a horizontal position).

Note which of these three dots requires positioning then adjust magnet corresponding to that color to correct the position of that dot.

In Fig. 22 the dashed lines indicate the direction of dot movement.

The solid lines indicate the direction of dot movement when the associated converging magnets is adjusted. Each magnet has a slight effect on the two beams other than the one it is intended to control. Adjust the three magnets and the blue beam positioning magnet (located over blue gun next to picture tube socket) to produce a white dot near the center of the screen.

Complete convergence should be obtained at the center of the screen indicated by a white dot with no color fringing around its edges.

COLOR PURITY ADJUSTMENT

Switch channel selector to an unused channel. Turn contrast and color saturation controls to their maximum counter clockwise position.

Turn the brightness control maximum clockwise. Set the eight magnets on the field equalizing assembly to their maximum counter clockwise positions.

Set the red screen control fully clockwise and the blue screen and green screen controls fully counter clockwise. Loosen the two wing nuts holding yoke assembly so yoke may be moved back and forth. Slide purity magnet assembly toward neck of tube, if necessary, to provide yoke clearance.

Alternately slide the yoke assembly forward or back and adjust the two purity magnet tabs (or rotate entire assembly) until red purity is obtained with minimum color contamination of the red field. Tighten yoke. Rotate the blue and green screen controls clockwise and adjust all three (red, blue and green) screen controls for a low brightness white raster. If necessary, readjust contrast and brightness controls for proper view of raster.

MISCELLANEOUS ADJUSTMENTS (cont.)

COLOR PURITY ADJUSTMENT (Cont)

Adjust the eight magnets on the field equalizing assembly for the best overall white field over the entire picture tube screen. Adjustment of the magnets will have the most effect near the edges of the screen.

Remove the dot generator from antenna terminals and tune in a black and white picture, preferably a test pattern. Adjust the brightness and contrast control for a normal picture.

Adjust the blue and green video gain controls for a normal black and white picture with minimum overall color cast. Do not try to eliminate any localized color fringing in the picture with the video gain controls.

Adjust the brightness control for a dark picture on the screen. Adjust the blue and green background controls for a uniform black and white picture free of any color cast. Adjust the brightness controls over its brightness viewing range. The picture on the screen should be black and white over the brightness controls full viewing range, if necessary repeat adjustment of the video gain and background controls until this condition is achieved.

VERTICAL DYNAMIC CONVERGENCE ADJUSTMENTS

Recheck "Preliminary Convergence Adjustment" for correct setting of the three converging magnet and the blue beam positioning magnet to produce a white dot near center of the screen (using white dot generator).

Connect the RF output of a color dot generator across antenna terminals, adjust for color dots on screen of picture tube. Refer only to a vertical row of dots near the center of the screen. Adjust the red vertical amplitude control maximum clockwise. Adjust the red vertical tilt control for maximum displacement of the red dots near the center of the screen from the cyan dots. Adjust the green vertical amplitude control maximum clockwise and adjust the green vertical tilt control for maximum displacement of the green dots, opposite to red.

Connect a clip lead from blue grid of picture tube to chassis. (Terminals are provided to ground blue, green and red grids at rear on top of chassis). Adjust the green and red vertical tilt and vertical amplitude controls for straight vertical rows of the green and red dots equally displaced. Adjust the green and red convergence magnets (small magnets mounted on a knurled nut in a horizontal position) for convergence of the green and red vertical rows of dots. Note: Convergence magnets have correct color (red, green and blue) painted near the adjustments. If necessary, readjust green and red vertical tilt and amplitude controls to produce a single vertical row of (yellow) dots from top to bottom of screen. Remove clip lead from blue grid lead and chassis. Adjust the blue vertical amplitude control maximum clockwise. Adjust the blue vertical tilt and blue vertical amplitude controls alternately until the displacement of the blue dots are uniform with respect to the yellow dots in a vertical line.

Adjust the blue beam positioning magnet and the blue convergence magnet to converge vertically on the row of yellow dots. There should be one single row of dots (white) vertically from top to bottom of screen. If necessary, repeat above adjustments of vertical convergence.

HORIZONTAL DYNAMIC CONVERGENCE ADJUSTMENTS

Connect color dot generator as under "Vertical Dynamic Convergence". Use a horizontal row of dots near center of screen as reference. Adjust the blue horizontal amplitude control maximum clockwise. Adjust the blue horizontal phasing trimmer for the maximum downward displacement of the blue dots. Adjust the blue horizontal amplitude control and blue horizontal phasing trimmer alternately for a straight horizontal line across the screen, downward from the green and red dots. See Fig. 22 for correct dot movement.

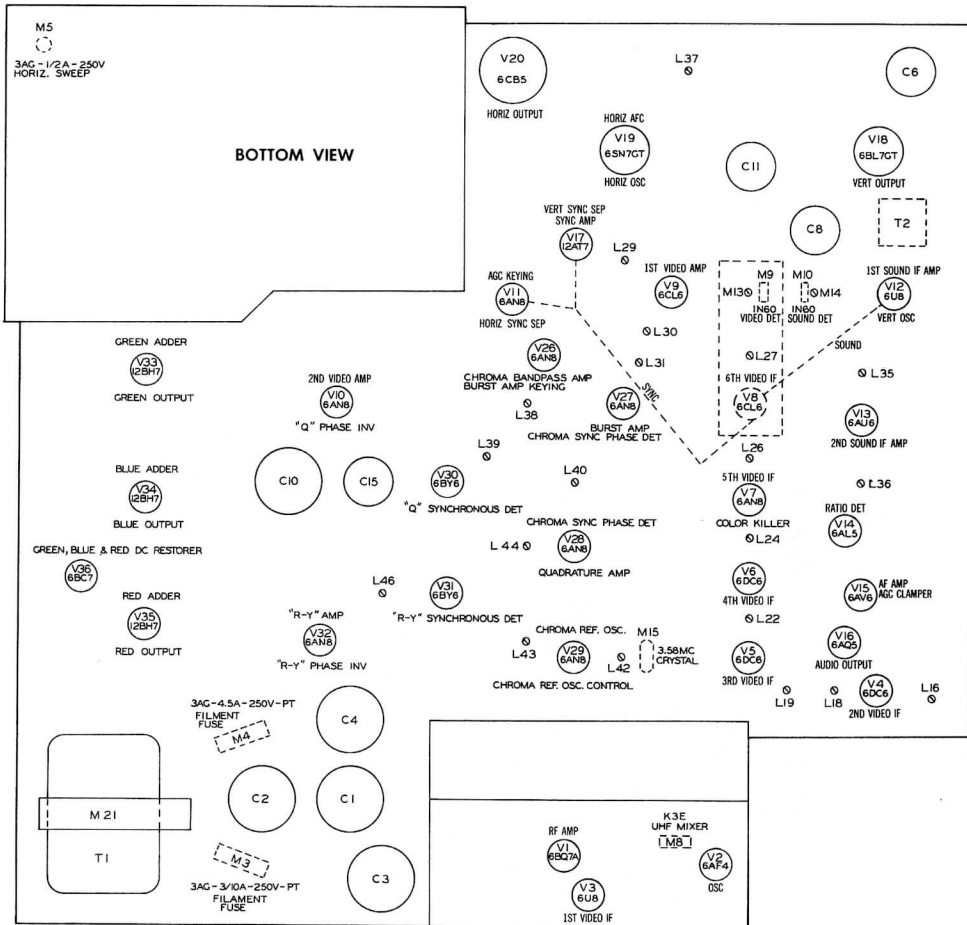
Connect a clip lead from red grid lead to chassis. Adjust the green horizontal amplitude control and green horizontal phasing trimmer to provide a uniform displacement of the horizontal green dots with respect to the blue dots.

Remove the clip lead from the red grid lead and connect it to the blue grid lead and chassis.

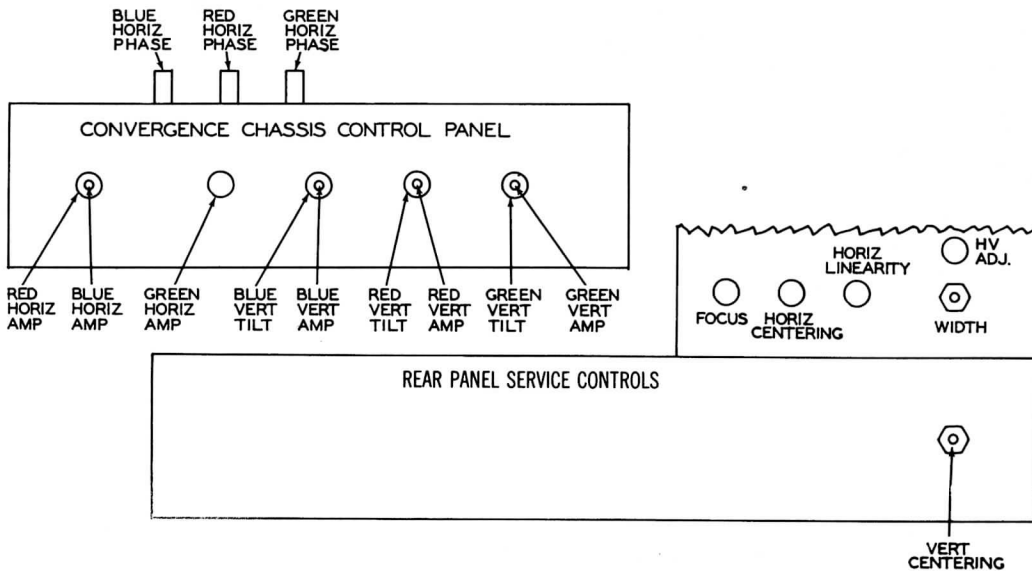
Adjust the red horizontal amplitude control and red horizontal phasing trimmer to provide a uniform displacement of the horizontal red dots with respect to the green dots.

Adjust the red and green convergence magnet adjustments for convergence of the red and green dots horizontally near center line of screen. There should now be a single horizontal row of yellow dots near center of screen. Remove clip lead from blue grid lead and chassis. Adjust the blue convergence magnet and the blue beam positioning magnet (over blue gun near picture tube socket) to converge horizontally on the row of horizontal yellow dot, providing white dots. The vertical and horizontal dots should now show maximum coverage over the entire picture tube screen, providing white dots. Repeat, if necessary, adjustments under "Horizontal and Vertical Dynamic Convergence Adjustments" until maximum convergence is obtained.

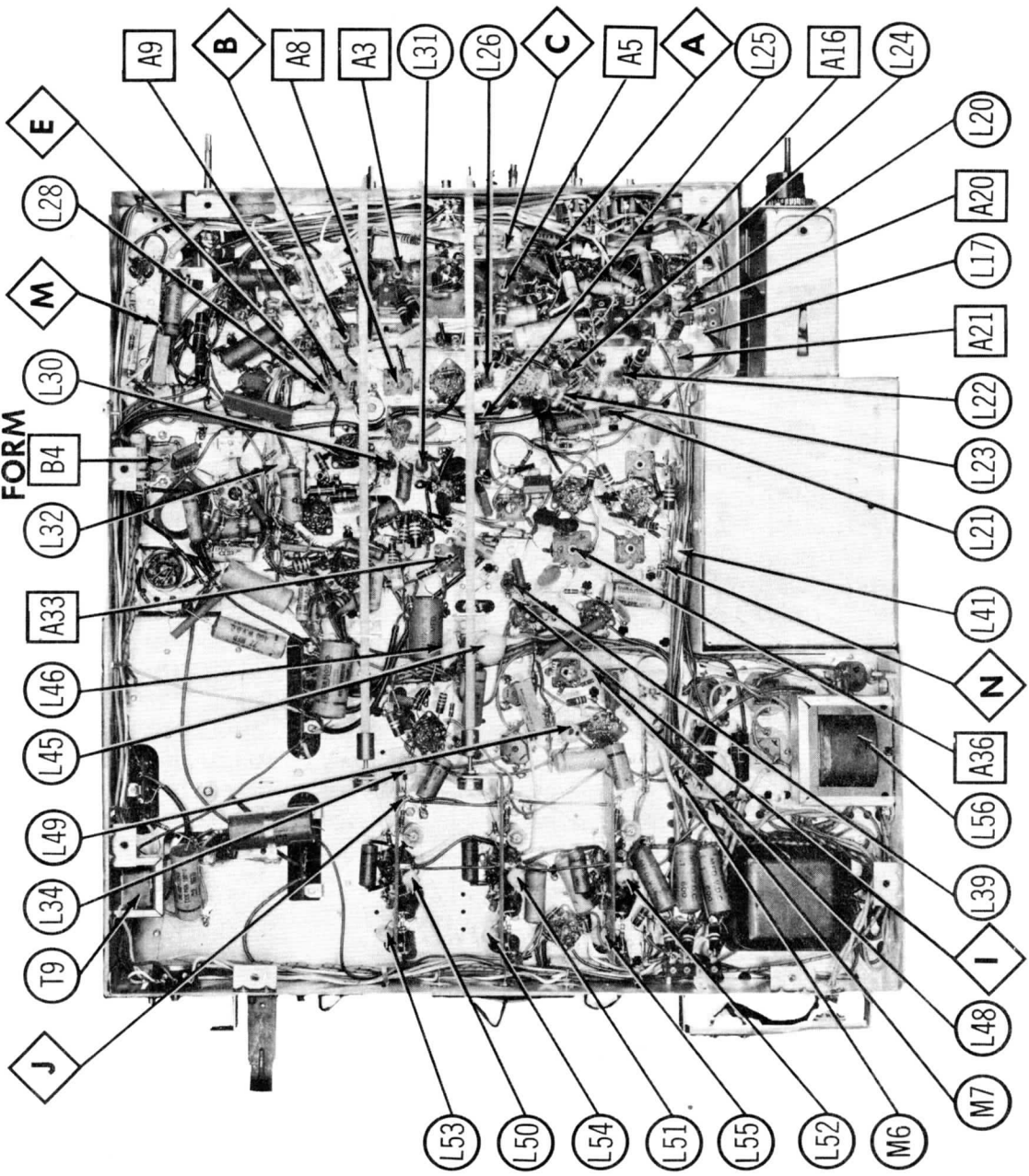
TUBE PLACEMENT CHART



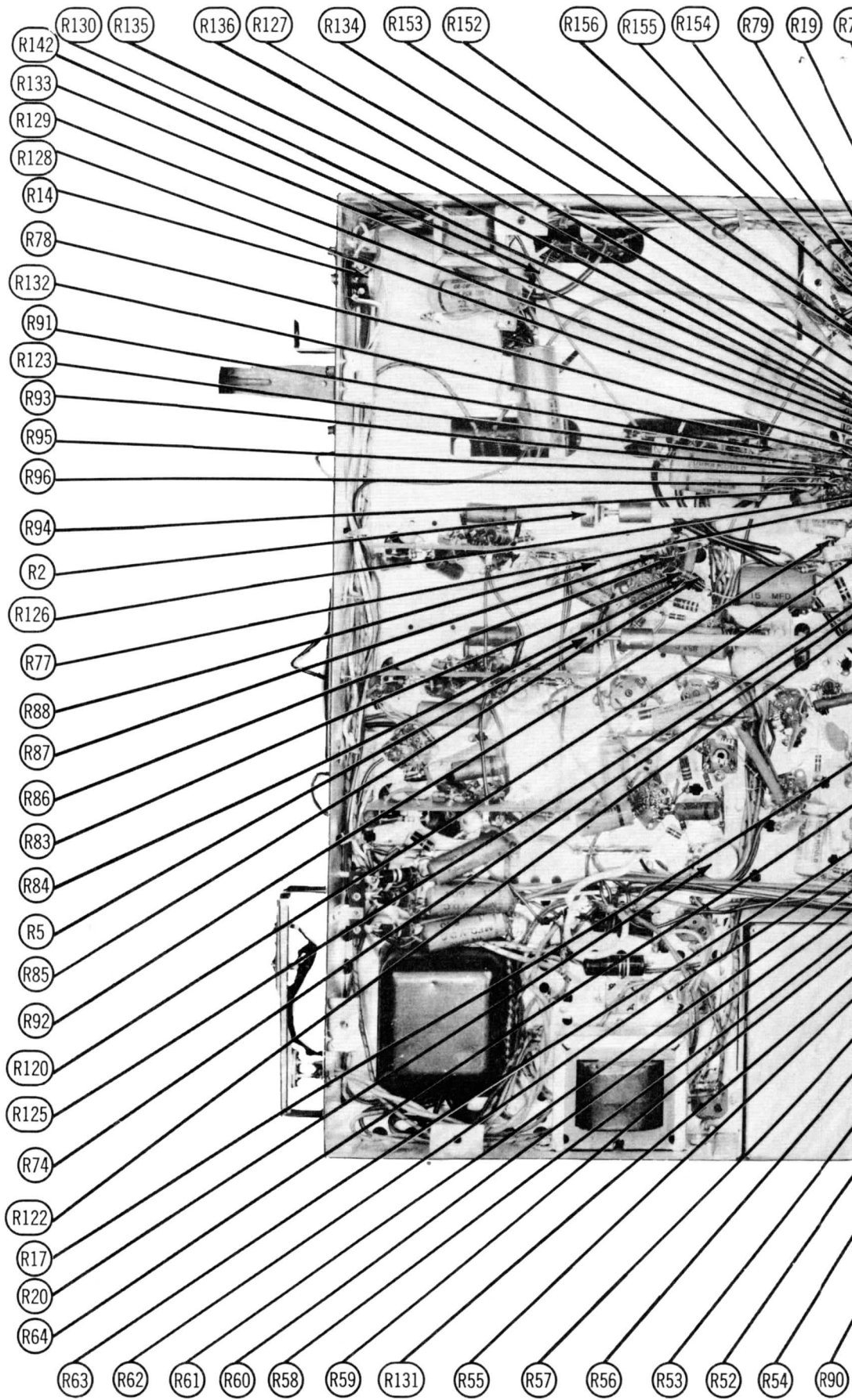
RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)



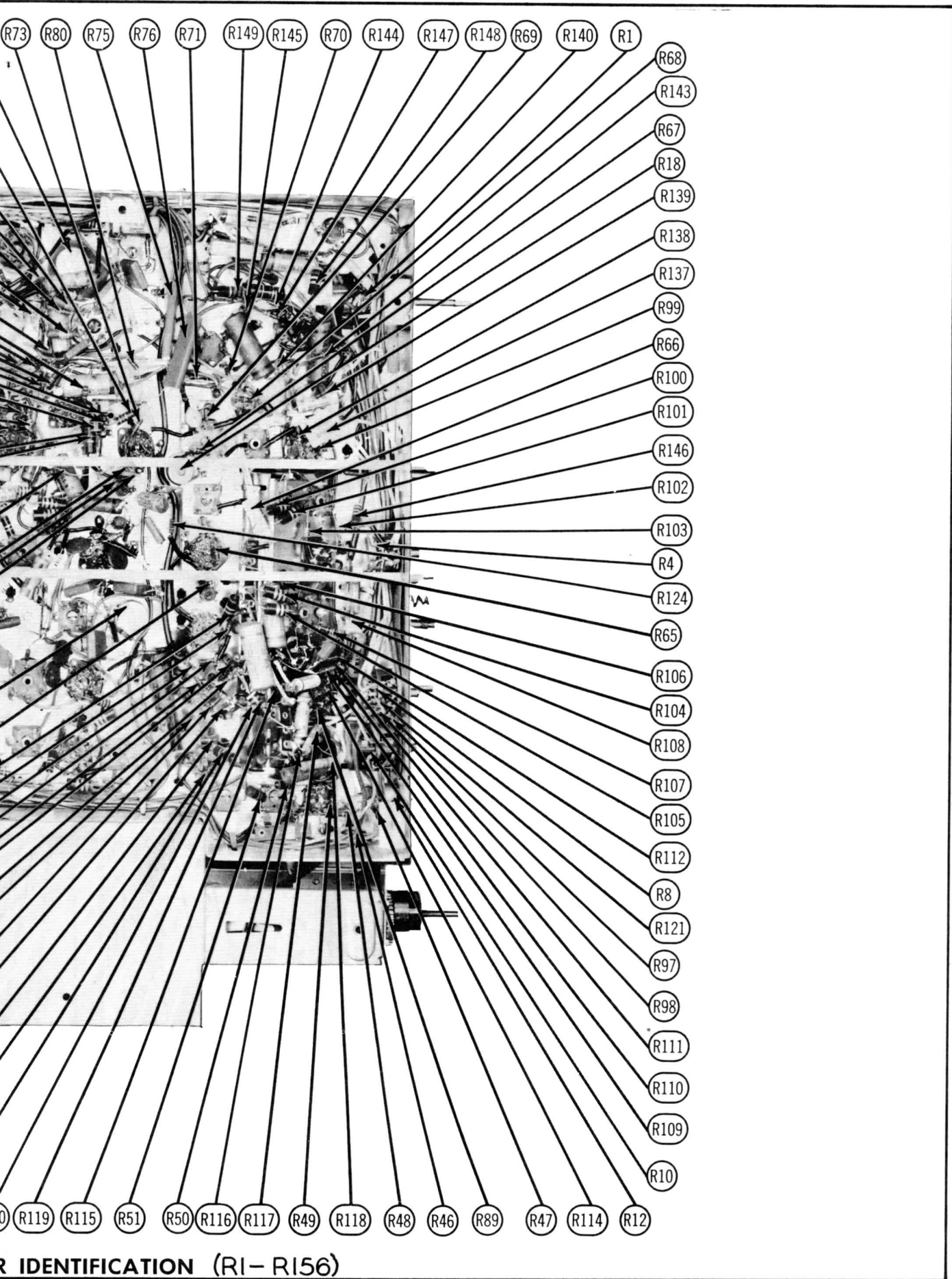
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CHASSIS BOTTOM VIEW-TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION



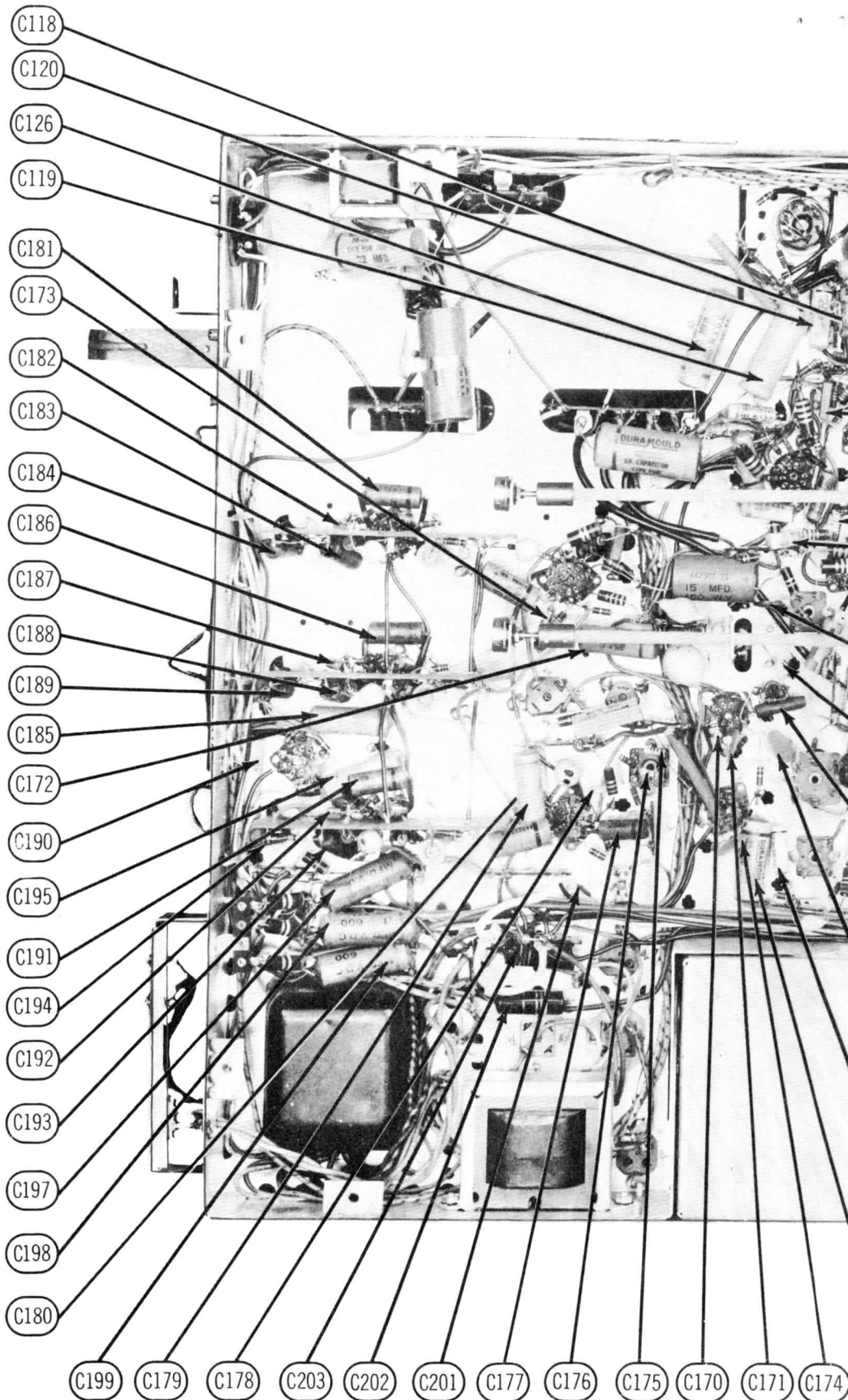
CHASSIS BOTTOM VIEW-RESISTOR



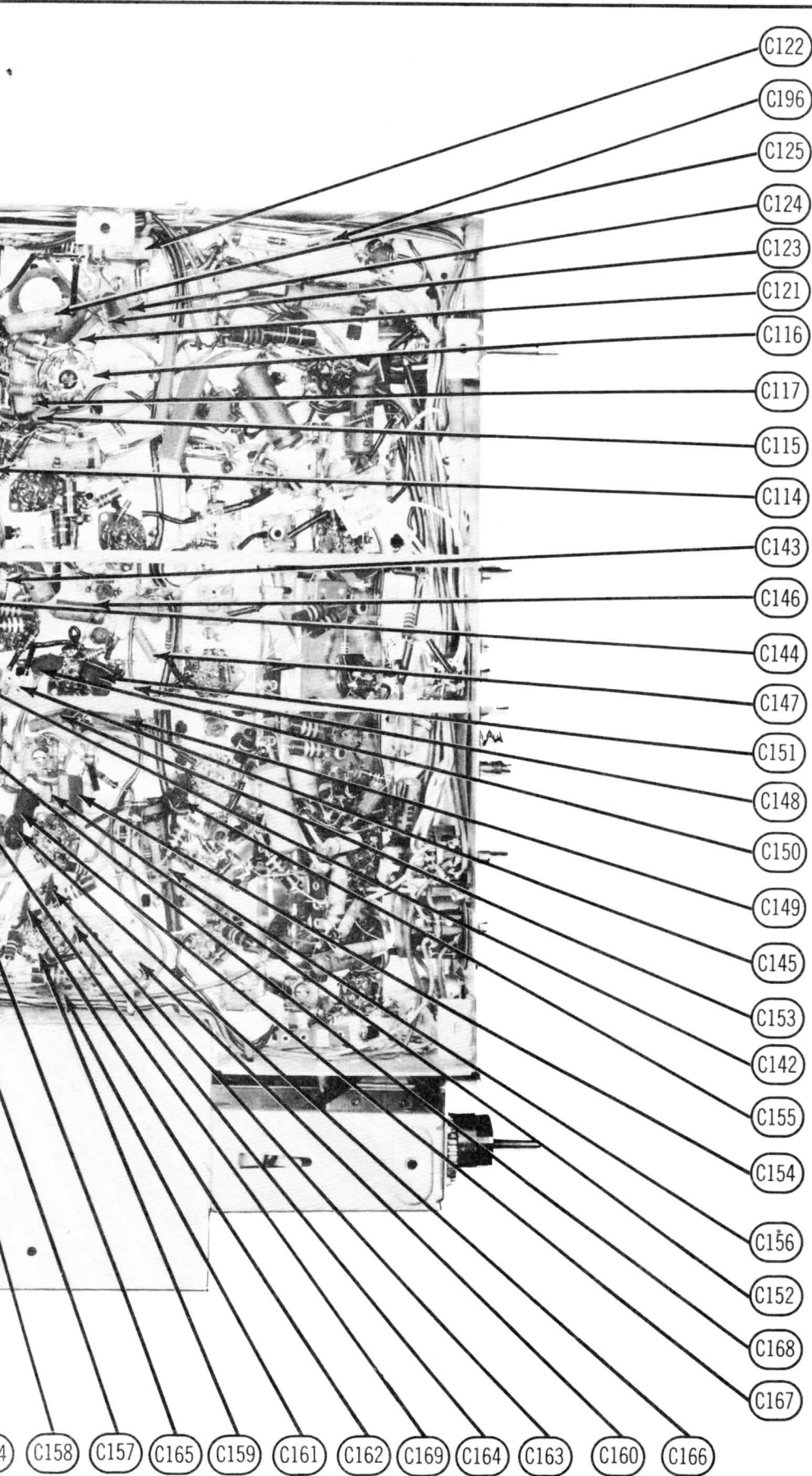
RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)

IDENTIFICATION (R1 - R156)

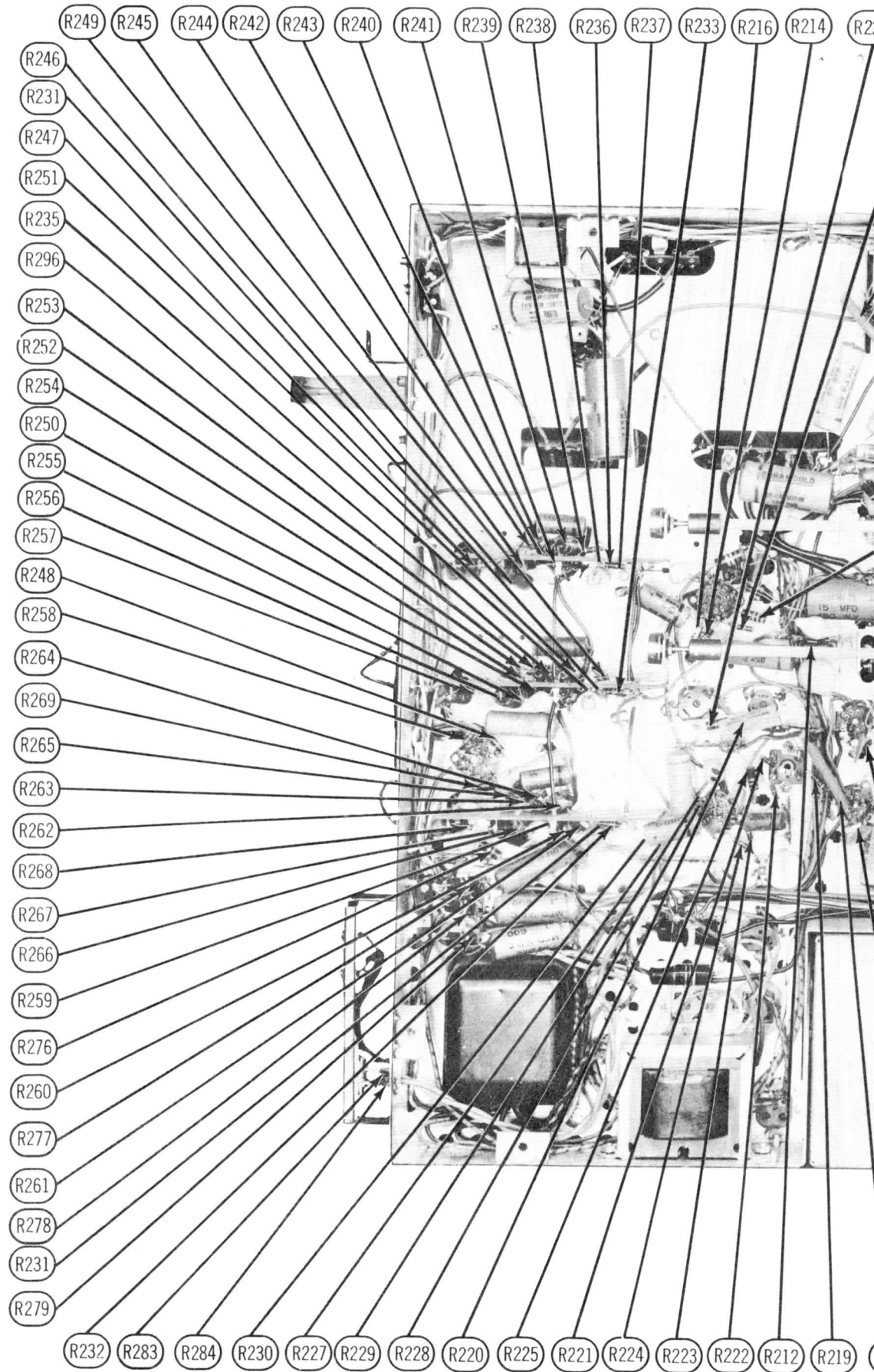
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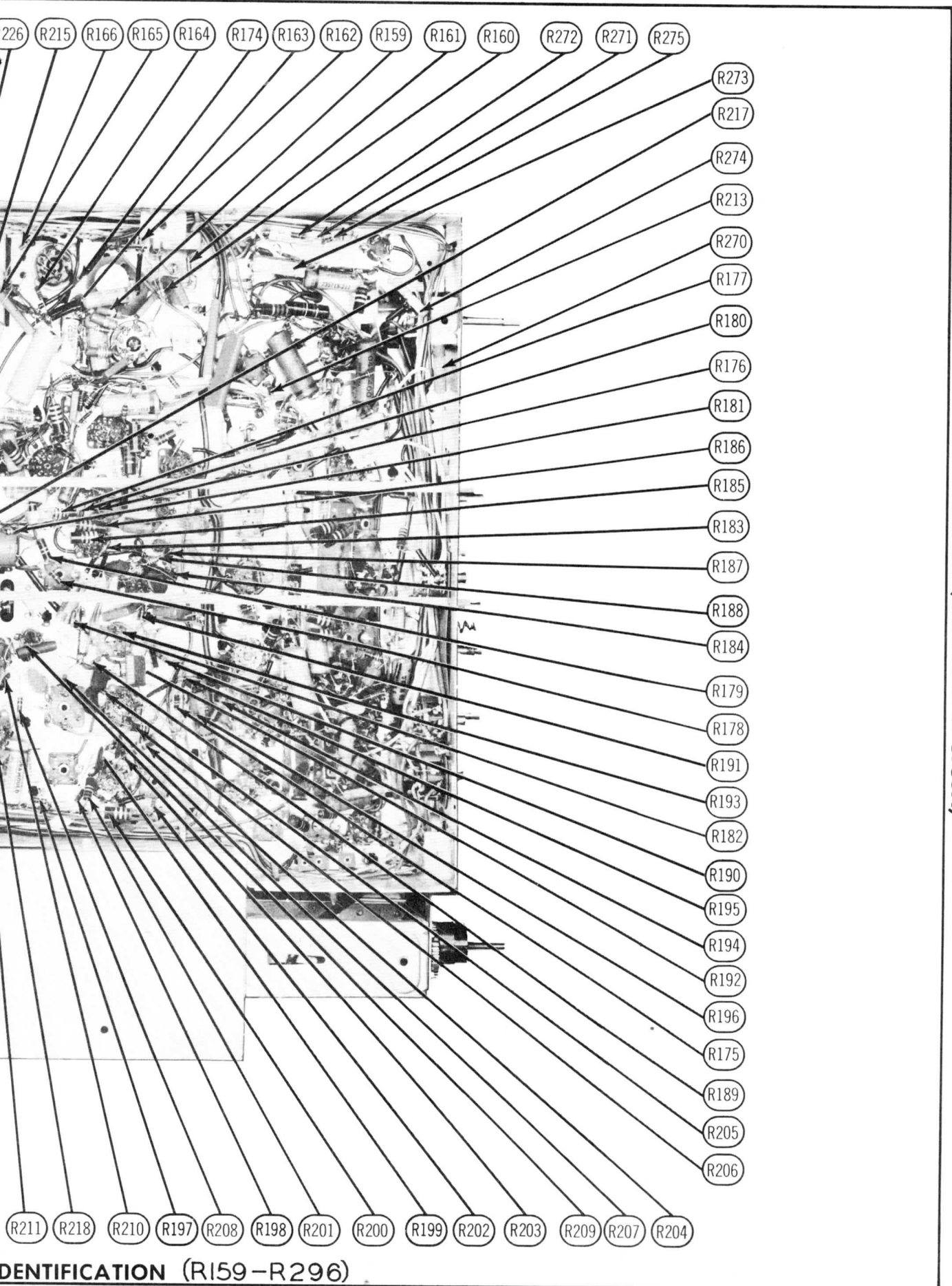
CHASSIS BOTTOM VIEW-CAPACITOR



COMPONENT IDENTIFICATION (C114-C203)

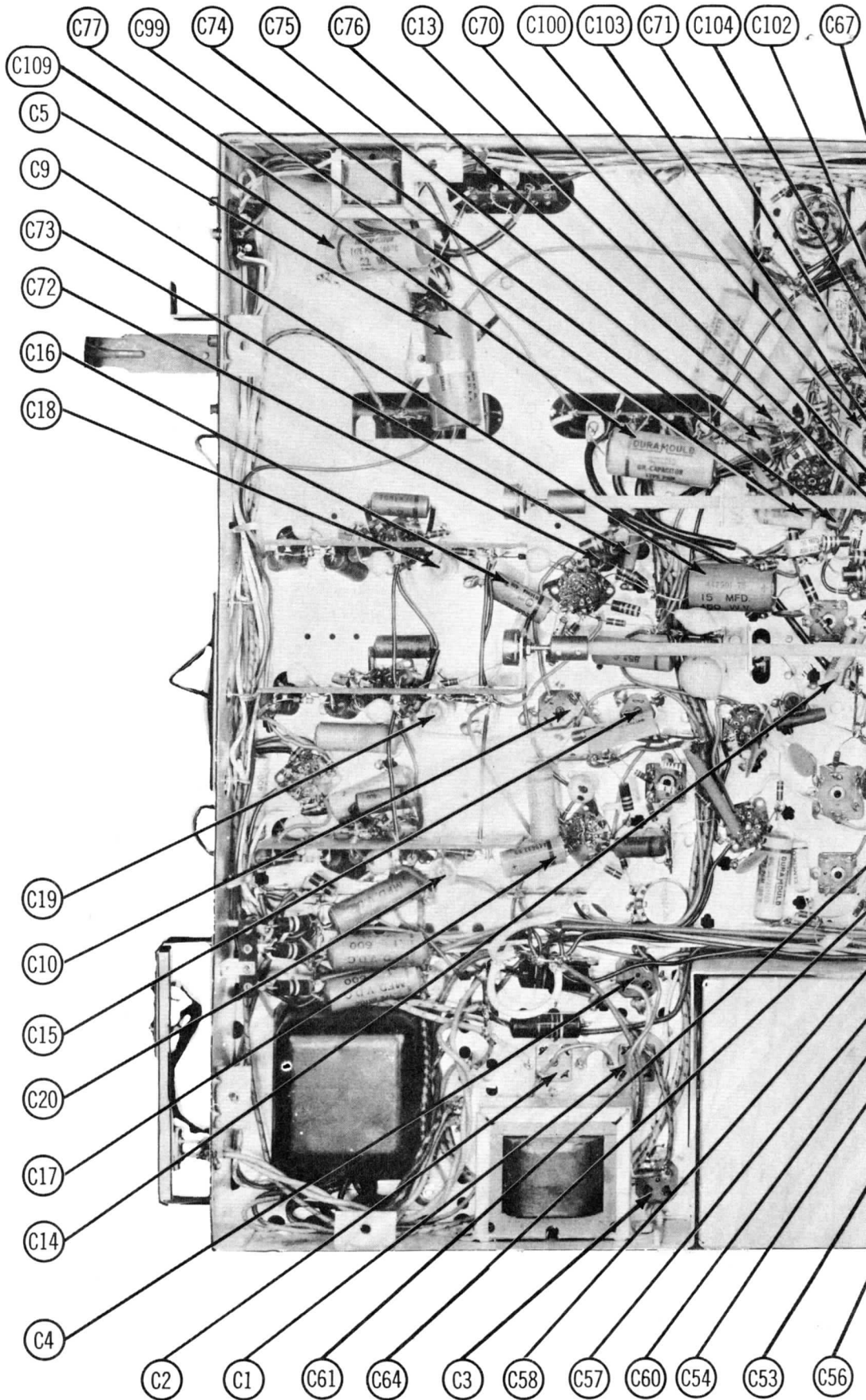


CHASSIS-BOTTOM VIEW-RESISTOR ID

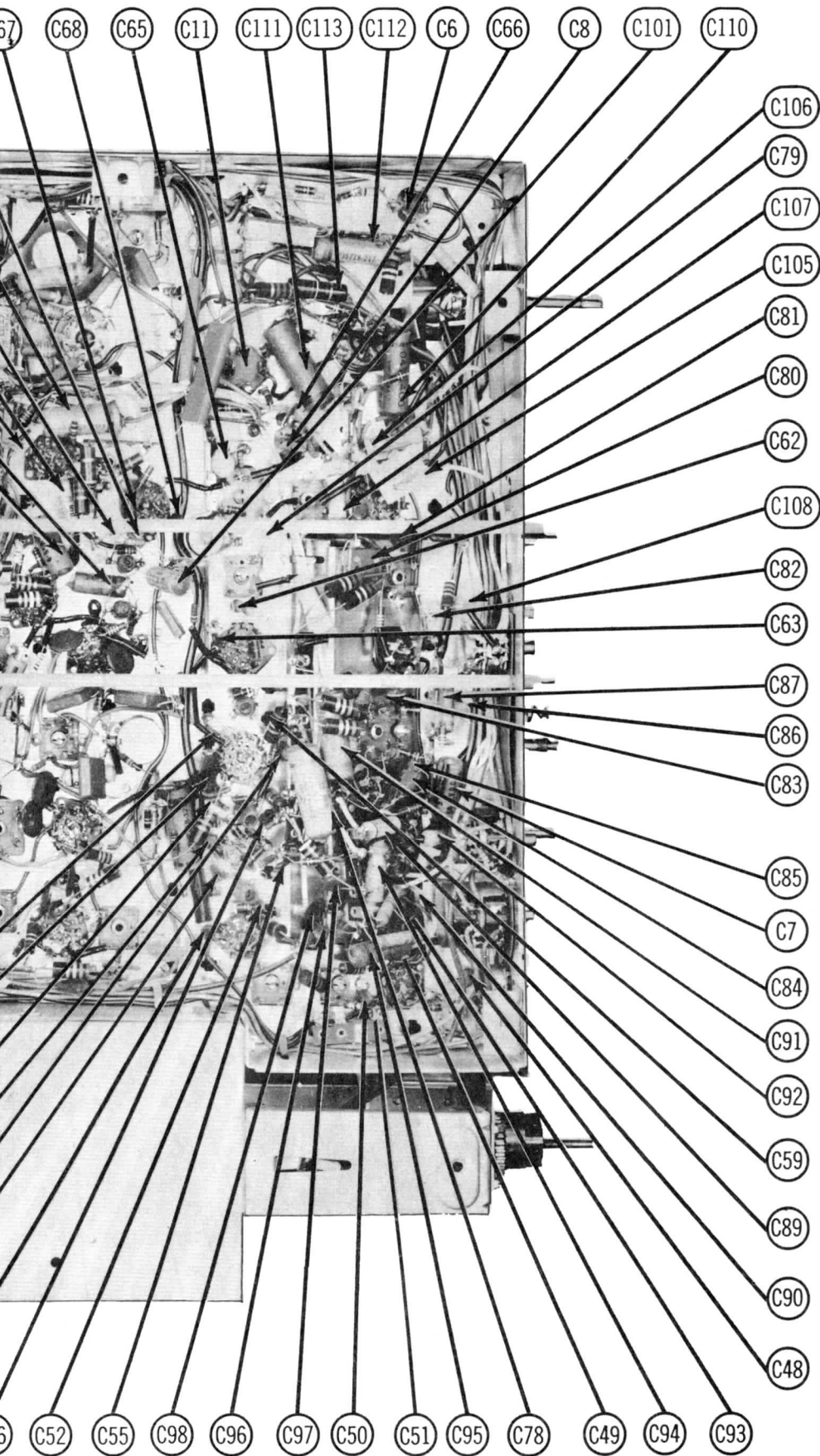


**RCA VICTOR MODELS
 21-CT-55 (Ch. CTC2B & CTC3A)**

IDENTIFICATION (R159-R296)



CHASSIS-BOTTOM VIEW-CAPACITOR IDENTIFICATION



IDENTIFICATION (C1-C113)

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

ITEM No.	USE	REPLACEMENT DATA		RETMA BASE TYPE	NOTES
		RCA Victor PART No.	STANDARD REPLACEMENT		
V1	RF Amp	6BQ7A	6BQ7A	9AJ	
V2	Osc.	6AF4	6AF4	7DK	
V3	1st Video IF Amp.	6U8	6U8	9AE	
V4	2nd Video IF Amp.	6DC6	6DC6	7CM	
V5	3rd Video IF Amp.	6DC6	6DC6	7CM	
V6	4th Video IF Amp.	6DC6	6DC6	7CM	
V7	5th Video IF Amp. - Color Killer	6AN8	6AN8	9DA	
V8	6th Video IF Amp.	6CL6	6CL6	9BV	
V9	1st Video Amp.	6CL6	6CL6	9BV	
V10	2nd Video Amp. - "Q" Phase Inv.	6AN8	6AN8	9DA	
V11	AGC Keying- Horiz. Sync Sep.	6AN8	6AN8	9DA	
V12	1st Sound IF Amp. - Vert. Osc.	6U8	6U8	9AE	
V13	2nd Sound IF Amp.	6AU6	6AU5	7BK	
V14	Ratio Det.	6AL5	6AL5	6BT	
V15	AF Amp. - AGC Clamper	6AV6	6AV6	7BT	
V16	Audio Output	6AQ5	6AQ5	7BZ	
V17	Vert. Sync Sep. - Sync Amp.	12AT7	12AT7	9A	
V18	Vert. Output	6BL7GT	6BL7GT	8BD	
V19	Horiz. AFC- Horiz. Osc.	6SN7GT	6SN7GT	8BD	
V20	Horiz. Output	6CB5	6CB5		
V21	Damper	6BL4	6BL4		
V22	Focus Rect.	3A2	3A2	9DT	
V23	HV Rect.	3A2	3A2	9DT	
V24	HV Doubler	3A2	3A2	9DT	
V25	HV Regulator	6BD4A	6BD4A		6BK4 used as alternate.
V26	Chroma Bandpass Amp. -Burst Amp. Keying	6AN8	6AN8	9DA	
V27	Burst Amp. - Chroma Sync Phase Det.	6AN8	6AN8	9DA	
V28	Chroma Sync Phase Det. - Quadrature Amp.	6AN8	6AN8	9DA	
V29	Chroma Ref. Osc. - Chroma Ref.Osc. - Control	6AN8	6AN8	9DA	
V30	"Q" Synchronous Detector	6BY6	6BY6	7CH	
V31	"R-Y" Synchronous Detector	6BY6	6BY6	7CH	
V32	"R-Y" Amp. - "R-Y" Phase Inv.	6AN8	6AN8	9DA	
V33	Green Adder- Green Output	12BH7	12BH7	9A	
V34	Blue Adder- Blue Output	12BH7	12BH7	9A	
V35	Red Adder- Red Output	12BH7	12BH7	9A	
V36	Green, Blue & Red DC Restorer	6BC7	6BC7	9AX	

CATHODE-RAY TUBE

ITEM No.	REPLACEMENT DATA					RETMA BASE TYPE	NOTES
	RCA Victor PART No.	CBS PART No.	GENERAL ELECTRIC PART No.	SYLVANIA PART No.	WESTINGHOUSE PART No.		
V37	21AXP22			21AXP22			

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	RCA Victor PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	
C1	200	250	78957	FP126	TM-200-250	T-375	
C2	200	250	78957	FP126	TM-200-250	T-375	
C3	80	450	18950	FP149	TM-80-450	S-280	
C4	80	450	18950	FP149	TM-80-450	S-280	
C5	1000	3	79625	TC308	TD-1000-3NP		
C6A	▲10	450	78929	FP345.2	TM-3045	T-645	
B	■10	450					
C	20	25					
C7	5	50	78943	TC30	TD-5-50	MMT-0505	
C8A	▲500	6	78930	WP057	TM-500-25	S-170	
B	■35	300		TC78	TD-40-350	MTH-0650	
C9	15	450	78917	TC74	TD-16-450	FM-4516	
C10A	▲20	450	78976	FP376.5	TM-T20-450	T-140	
B	▲20	450					
C	■20	450					
C11A	80	25	78931	FP433	TM-4026	Q-430	
B	■10	450					
C	▲10	450					
D	▲20	150					
C12A	10	25	79786	TN111	TDL-D10-25	MTD-0210	
B	10	25					
C13	50	6	78573	TC29	TD-50-6	MMT-650	
C14	2	50	79181	TC302	TD-2-50	MMT-1505	
C15A	■35	300	78930	FP217.85	TM-500-25	S-040	
B	▲500	6			TD-40-350	FM-4540	
C16	2	350	78920	TC60	TD-2-450	FM-4504	
C17	2	350	78920	TC60	TD-2-450	FM-4504	
C18	4	350	78919	TC60	TD-4-450	FM-4504	
C19	4	350	78919	TC60	TD-4-450	FM-4504	
C20	4	350	78919	TC60	TD-4-450	FM-4504	
C21	40	450		TC78	TD-40-450	FM-4540	
C22	15	450	78917	TC74	TD-16-450	FM-4516	
C23	25	10	78924	TC1025	TD-25-10NP	MT-0250	* Note 1

Note 1. Non-polarized unit.
* Connect negative leads together.

PARTS LIST AND DESCRIPTIONS (Continued)

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	RCA Victor PART No.	CENTRALAB PART No.	ERIE PART No.	MALLORY PART No.	
C24	56			TCN-56	N750K-560	NT-5456	
C25	56			TCN-56	N750K-560	NT-5456	
C26	1000		77615				
C27	2		77210				
C28	6		74182				
C29	680		77624	DD-681	811-681	UC-5368	
C30	1000		77252	DD-102	801-001	DC-521	
C31	1000		77252	DD-102	801-001	DC-521	
C32	1000		77615				
C33	56		71924	D6-560	831-560	UC-5456	
C34	22		77621				
C35A	2		77667				
C35B	22						
C36	1000		77615				
C37	1000		77615				
C38	10000		73960	DD-103	811-01	DC-511	
C39	1000		77084	MFT-1000			
C40	680		77624	DD-681	811-681	UC-5368	
C41	.62		79166				
C42	1000		77615				
C43	680		77624	DD-681	811-681	UC-5368	
C44	680		77624	DD-681	811-681	UC-5368	
C45	680		77624	DD-681	811-681	UC-5368	
C46	10000		73960	DD-103	811-01	DC-511	
C47	470		77293	DD-471	813-471	UC-5347	
C48	820		78944	DD-801	831-801	DC-521	
C49	680		79980	DD-681	811-681	UC-5368	
C50	820		78944	DD-801	831-801	DC-521	
C51	820		78944	DD-801	831-801	DC-521	
C52	680		79980	DD-681	811-681	UC-5368	
C53	820		78944	DD-801	831-801	DC-521	
C54	820		78944	DD-801	831-801	DC-521	
C55	820		78944	DD-801	831-801	DC-521	
C56	680		79980	DD-681	811-681	UC-5368	
C57	820		78944	DD-801	831-801	DC-521	
C58	820		78944	DD-801	831-801	DC-521	
C59	330		79979	DD-331	811-331	UC-5333	
C60	820		78944	DD-801	831-801	DC-521	
C61	820		78944	DD-801	831-801	DC-521	
C62	680		79980	DD-681	811-681	UC-5368	
C63	820		78944	DD-801	831-801	DC-521	
C64	820		78944	DD-801	831-801	DC-521	
C65	820		78944	DD-801	831-801	DC-521	
C66	820		78944	DD-801	831-801	DC-521	
C67	820		78944	DD-801	831-801	DC-521	
C68	820		78944	DD-801	831-801	DC-521	
C69	330	500	79191				
C70	6						
C71	33		70596	D6-330	GPIK-330	UC-5433	
C72	.1	400	78922	DF-104		PT401	
C73	1500	500	39652			MCE456	
C74	.001	600	75643	D6-102	GP2L-102	PT621	
C75	.022	600		DF-203	817-02	PT6122	
C76	.0027	600	73599	D6-272	GP2-333-272	UC-5227	
C77	.47	400	78977			PT4047	
C78	.22	200	78905			PT4022	
C79	1.5		78928	TCZ-IR5	NP0A-IR5	ZT-5515	
C80	1200	500	39654				
C81	10000		73960	DD-103	811-01	DC-511	
C82	56		71924	D6-560	GPIK-560	UC-5456	
C83A	10000		75877	DD3-103	811-01	DC-511	
C83B	10000				811-01	DC-511	
C84	390	500	79988			MCB243	
C85	390	500	79988			MCB243	
C86	.0022	600	73595	D6-222	GP2-333-222	PT6222	
C87	.0015	600	73802	D6-152	GP2L-152	PT6215	
C88	.027	200	79989				
C89	.01	400	73561	D6-103	GP2-333-103	PT411	
C90	820		78944	DD-801	831-801	DC-521	
C91	.1	400	73551	DF-104		PT401	
C92	.0039	400	78221	D6-402	GP2-333-402	PT624	
C93	270	500	39638	D6-271	GP2K-271	UC-5327	
C94	.01	600	73594	D6-103	GP2-333-103	PT611	
C95	.0022	1600	73817	DD30-222	3KV-222	PT16222	
C96	820		78944	DD-801	831-801	DC-521	
C97	820		78944	DD-801	831-801	DC-521	
C98	10000		73960	DD-103	811-01	DC-511	
C99	.012	400	79781				
C100	270		78916	D6-271	GP2K-271	UC-5327	
C101	.027	400	73554				
C102	330	500	79191				
C103	.01	400	73561	D6-103	GP 2-333-103	PT411	
C104	.1	400	73551	DF-104		PT401	
C105A	10000				811-01	DC-511	
C105B	2000		79246	*PC-101	801-002	DC-522	
C105C	5000				811-005	DC-525	
C105D	5000				811-005	DC-525	
C106	.0082	600	78979				
C107	.001	600	75249	D6-102	GP2L-102	PT621	
C108	.0033	600	73795	D6-332	GP2-333-332	PT6233	
C109	.22	600	74957			PT6022	
C110	.047	400	73557	DF-503		PT4147	
C111	.15	400	73793			PT4015	
C112	.022	600	73798	DF-203	817-02	PT6122	
C113	.001	1600	73849	DD16-102	IR5KV-102	PT1621	
C114	470	500	39644			MCB245	
C115	82	500	76474	TCZ-82	NP0-337-820		
C116	82		71514	TCN-82	N750L-820		
C117	.1	400	73551	DF-104		PT401	
C118	.01	400	73561	D6-103	GP2-333-103	PT411	
C119	.47	200	73787			PT4047	
C120	.047	400	73553	DF-503		PT4147	

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	RCA Victor PART No.	CENTRALAB PART No.	ERIE PART No.	MALLORY PART No.	
C121	330	500	76476				
C122	.01	600	73594				
C123	12		33380	TCN-12	N750K-120		
C124	1000	500	39652			MCE255	
C125	.01	600	73594	D6-103	GP2-333-103	PT611	
C126	.22	400	73794			PT4022	
C127	.001	600	75643	D6-102	GP2L-102	PT621	
C128	.1	400	78922	DF-104		PT401	
C129	.18	400	79041				
C130	.22	600	74957			PT6022	
C131	1000	10000	79646				
C132	.01	6000	78918				
C133	1200	15000	79647				
C134	2500	30000	79643				
C135	.0033	400	79315	D6-332	GP2-333-332	PT6233	
C136	56	3500		DD60-560			
C137	270	3500	100104	DD60-271			
C138	270	3500	100104	DD60-271			
C139	150			DD60-151	6KV-151		
C140	1200	500	39654				
C141	.1	400	73551	DF-104		PT401	
C142	10000		73960	DD-103	811-01	DC-511	
C143	47		78913	D6-470	GPIK-470	UC-5447	
C144	.01	400	73561	D6-103	GP2-333-103	PT411	
C145	100			D6-101	GPIK-101	UC-531	
C146	.047	400	78921	DF-503		PT4147	
C147	270	500	39638	TCZ-271	NP0-333-271	MCE241	
C148	15		79993	TCZ-15	NP0K-150	ZT-5415	
C149	2000	500	39659			MCE457	
C150	10000		73960	DD-103	811-01	DC-511	
C151	10000		73960	DD-103	811-01	DC-511	
C152	.01	400	73561	D6-103	GP2-333-103	PT411	
C153	2200	500	78901				
C154	2200	500	78901				
C155	10000		73960	DD-103	811-01	DC-511	
C156	.1	600	73551	DF-104		PT601	
C157	.01	400	73561	D6-103	GP2-333-103	PT411	
C158	.22	200	78905			PT4022	
C159	2		79992	TCZ-2R2	NP0A-2R2		
C160	10000		73960	DD-103	811-01	DC-511	
C161	10000		73960	DD-103	811-01	DC-511	
C162	10000		73960	DD-103	811-01	DC-511	
C163	10000		73960	DD-103	811-01	DC-511	
C164	2		79992	TCZ-2R2	NP0A-2R2		
C165	10000		73960	DD-103	811-01	DC-511	
C166	10000		73960	DD-103	811-01	DC-511	
C167	10000		73960	DD-103	811-01	DC-511	
C168	33		70596	TCZ-33	NP0K-330	ZT-5433	
C169	150		79991	TCZ-150	NP0-333-151	ZT-5315	
C170	22		33101	D6-220	GPIK-220	UC-5422	
C171	10000		73960	DD-103	811-01	DC-511	
C172	.1	400	73551	DF-104		PT401	
C173	24		78915	TCN-24	N750K-240		
C174	10000		73960	DD-103	811-01	DC-511	
C175	100		39396	TCZ-100	NP0L-101	ZT-541	
C176	4		78912				
C177	.047	400	78921	DF-503		PT4147	
C178	18		39041	D6-180	GPIK-180	UC-5418	
C179	.1	400	73551	DF-104		PT401	
C180	9		78914				
C181	.1	400	78922	DF-104		PT401	
C182	470	500	76992			MCE245	
C183	.1	400	78922	DF-104		PT401	
C184	.047	400	78921	DF-503		PT4147	
C185	.1	400	73551	DF-104		PT401	
C186	.1	400	78922	DF-104		PT401	
C187	470	500	76992			MCE245	
C188	.1	400	78922	DF-104		PT401	
C189	.047	400	78921	DF-503		PT4147	
C190	.1	400	73551	DF-104		PT401	
C191	.1	400	78922	DF-104		PT401	
C192	470	500	76992			MCE245	
C193	.1	400	78922	DF-104		PT401	
C194	.047	400	78921	DF-503		PT4147	
C195	.1	400	73551	DF-104		PT401	
C196	.01	1600	73822	DD16-103		PT1611	
C197	.1	600	73557	DF-104		PT601	
C198	.1	600	73557	DF-104		PT601	
C199	.1	600	73557	DF-104		PT601	
C200	820		78944	DD-801	831-801	DC-521	
C201	820		78944	DD-801	831-801	DC-521	
C202	.047	600	73592	D6-503		PT6147	
C203	.047	600	73592	D6-503		PT6147	
C204	1000	500	39652			MCE255	
C205	1000	500	39652			MCE255	
C206	1000	500	39652			MCE255	
C207	.22	200	73794			PT4022	
C208	.22	200	73794			PT4022	
C209	.068	200	79016				

Note 2
Note 2

RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)

Note 2. C153 and C154 are matched pair.

♦ Items C105A, C105B, C105C, C105D, R137A, R137B, R137C and R137D are combined in one unit.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESIST-ANCE	WATTS	RCA Victor PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.		MALLORY PART No.
RIA	5000Ω	2	78940	*QJ-555			WF53	Brightness-Panel(Wire-Wound) Volume tapped at 180K-Rear Attach to R1B.
B	1Meg	1/2					UR16-T25	
C	Switch						US-26	
R2	10KΩ	1/2	78949	Q11-109	A47-1500-S	AB-6	U5L	Green Video Gain
R3A	1500Ω			79622	Not Req.	RS-5	AK-25	DS-36
B	Shaft		Not Req.	Not Req.	Not Req.	AK-16	Not Req.	Attach to R3A.
C	Coupler		Not Req.	C3				Attach to R3A.

CONTROLS (cont)

PARTS LIST AND DESCR RESISTORS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	RCA Victor PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R4A	2.5Meg		79628	*QJ-658		F1-76	UF255L } ††
B	5000K					R2-19	UR53L }
R5	10K		78949				
R6A	500K		78951	Q11-103	A47-500-S	B-4	U-2
B	1M		Not Req.	Not Req.	F8-3	Not Req.	Not Req.
R7A	15K		78934	**QJ-552		F1-51	UF16L } †††
B	50K					R2-29	UR54L }
R8A	15K		78938				WF153 } ■
B	500K						UR55L }
R9A	2.5Meg		78941	Q11-239	A47-2.5Meg-S	B-83	U-255
B	Shaft		Not Req.	Not Req.	F8-3	Not Req.	Not Req.
R10A	15K	2	78939				UE789W
B	15K	2					
R11A	10K	2	78935				UE705W
B	10K	2					
R12	750K		78933				
R13A	1.5Meg		79649	Q11-138	A47-1.5Meg-S	BX-742	U-155
B	Shaft		Not Req.	Not Req.	FKS-1/4	Not Req.	Not Req.
R14A	1500K	2	79448	WK-1500	A47-1500	VK-130	R1500L
B	Shaft		Not Req.	Not Req.	FKS-1/4	Not Req.	Not Req.
R15A	100K	2	79650	W-100	A43-1000	VK-121	M100PK
B	Shaft		Not Req.	Not Req.	FKS-1/4	Not Req.	Not Req.
R16	5Meg		79028				
R17A	25K		79592	Q11-130	A47-250K-S	AB-50	U-46
B	Shaft		Not Req.	Not Req.	KSS-3	AK-4	Not Req.
R18	750K		78933				
R19A	100K		78950	Q11-128	A 7-100K-S	AB-40	U-41
B	Shaft		Not Req.	Not Req.	KSS-3	AK-4	Not Req.
R20A	500K		78951	Q11-103	A47-500-S	B-4	U-2
B	Shaft		Not Req.	Not Req.	F8-3	Not Req.	Not Req.
R21A	10K		100007	+QJ-650		F1-25	UF14R
B	10K		Not Req.	Not Req.		R2-25	UR14R
R22A	10K		79659	Q17-116	A47-10K-V	U-19	U-19
B	Shaft		Not Req.	Not Req.	KSS-3	AK-4	Not Req.
R23A	500K		100006	+QJ-651		F1-1	UF52L
B	2500K					R2-12	UR252L
R24A	500K		100006	+QJ-651		F1-1	UF52L
B	2500K					R2-12	UR252L
R25A	500K		100006	+QJ-651		F1-1	UF52L
B	2500K					R2-12	UR252L

† CONCENTRIKIT EQUIVALENT: K-2 KIT, BASE ELEMENTS & SHAFTS: B17-116 & P9-101 (Panel)
 †† CONCENTRIKIT EQUIVALENT: K-2 KIT, BASE ELEMENTS & SHAFTS: B17-116 & R11-112 (Rear)
 ††† CONCENTRIKIT EQUIVALENT: K-2 KIT, BASE ELEMENTS & SHAFTS: B11-103 & P9-101 (Panel)
 * CONCENTRIKIT EQUIVALENT: K-3 KIT, BASE ELEMENTS & SHAFTS: B11-111 & R11-112 (Rear)
 ** CONCENTRIKIT EQUIVALENT: K-2 KIT, BASE ELEMENTS & SHAFTS: W11-114 & P3-118 (Panel)
 *** CONCENTRIKIT EQUIVALENT: K-2 KIT, BASE ELEMENTS & SHAFTS: B13-137X & R1-207 (Rear)
 †††† CONCENTRIKIT EQUIVALENT: K-2 KIT, BASE ELEMENTS & SHAFTS: 76-1 Switch
 ††††† CONCENTRIKIT EQUIVALENT: K-5 KIT, BASE ELEMENTS & SHAFTS: B11-137 & P9-104 (Panel)
 †††††† CONCENTRIKIT EQUIVALENT: K-5 KIT, BASE ELEMENTS & SHAFTS: B11-123 & R11-112 (Rear)
 ††††††† CONCENTRIKIT EQUIVALENT: K-5 KIT, BASE ELEMENTS & SHAFTS: B11-139 & P11-018 (Panel)
 †††††††† CONCENTRIKIT EQUIVALENT: K-5 KIT, BASE ELEMENTS & SHAFTS: B11-114 & R15-014 (Rear)

† Universal Replacement (Mallory Exact Duplicate Part No. UE502WS)
 †† Universal Replacement (Mallory Exact Duplicate Part No. UE-3050)
 ††† Universal Replacement (Mallory Exact Duplicate Part No. UE-1519)
 ■ Universal Replacement (Mallory Exact Duplicate Part No. UE915W)
 * Universal Replacement (Mallory Exact Duplicate Part No. UE665)
 ** Universal Replacement (Mallory Exact Duplicate Part No. UE14)

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	RCA Victor PART No.	IRC PART No.	
R127	820K		503482	BTS-820K	
R128	560K		563456	BTS-560K	
R129	47K		503347	BTS-47K	
R130	47K		503347	BTS-47K	
R131	1.2Meg		503512	BTS-1.2Meg	
R132	33K		522333	BTB-33K	
R133	18K		503318	BTS-18K	
R134	8200K		503282	BTS-8200	
R135	33K		503333	BTS-33K	
R136	22K		502322	BTS-22K	
R137A	22K				
B	22K				
C	8200K		*79246	BTS-8200	
D	8200K				
R138	1Meg		503510	BTS-1Meg	
R139	1Meg		503510	BTS-1Meg	
R140	1.2Meg		503518	BTS-1.2Meg	
R141	2.7Meg		523527	BTB-2.7Meg	
R142	470K		503447	BTS-470K	
R143	22K 5%		502322	BTS-22K 5%	
R144	100K		503410	BTS-100K	
R145	2.2Meg		503522	BTS-2.2Meg	
R146	470K	1	513147	BTA-470	
R147	100K				
R148	150K	2	522415	BTS-150K	
R149	820K	1	522182	BTB-820	
R150	560K	2			
R151	560K	1			
R152	330K	1	512433	BTA-330K	
R153	820K	1	513482	BTS-820K	
R154	82K	1	512382	BTA-82K	
R155	150K 5%	1	512415	BTA-150K 5%	
R156	3900K 5%	1	502239	BTS-3900 5%	
R157	56K	1	512356	BTA-56K	
R158	82K	1	512382	BTA-82K	
R159	100K 5%	1	512410	BTA-100K 5%	
R160	150K 5%	1	503415	BTS-150K 5%	
R161	8200K 5%	1	502282	BTS-8200 5%	
R162	39K	1	513339	BTA-39K	
R163	220K 5%	1	502422	BTS-220K 5%	
R164	120K		503112	BTS-120	
R165	11K	10	79987		
R166	560K	1	502056	BTS-56	
R167	470K	1	512415	BTA-470	
R168	56K	2			
R169	6.2Meg	2	522562	BTB-6.2Meg	
R170	5%	2	522562	BTB-6.2Meg	
R171	2.7Meg	2	522527	BTB-2.7Meg	
R172	66Meg	2	100010		
R173	4.5Meg	1	100009	BTA-4.7Meg	
R174	4700K	1	503247	BTS-4700	
R175	10K	5	503310	BTS-10K	
R176	150K	3	502115	BTS-150	
R177	39K	1	513339	BTA-39K	
R178	2700K	1	503227	BTS-2700	
R179	10K	1	513130	BTA-10K	
R180	56K	1	503356	BTS-56K	
R181	10K	1	503310	BTS-10K	
R182	22K	1	502322	BTS-22K	
R183	100K	1	503410	BTS-100K	
R184	1800K	1	512218	BTA-1800	
R185	39K 5%	2	522339	BTB-39K 5%	
R186	33K 5%	2	522330	BTB-33K 5%	
R187	2200K 5%	2	502222	BTB-2200 5%	
R188	33K				
R189	2200K		503222	BTS-2200	
R190	10K		503310	BTS-10K	
R191	1Meg 5%		502510	BTS-1Meg 5%	
R192	1Meg 5%		502510	BTS-1Meg 5%	
R193	15K		503315	BTS-15K	
R194	22Meg 5%	2	522622	BTB-22Meg 5%	
R195	1Meg 5%	2	503327	BTS-1Meg 5%	
R196	27K	1	503310	BTS-27K	
R197	15K	1	503315	BTS-15K	
R198	1000K 5%	1	503315	BTS-1000 5%	
R199	330K 5%	1	502133	BTS-330K 5%	
R200	27K	2	512327	BTB-27K	
R201	12K	1	513132	BTA-12K	
R202	2200K	2	503222	BTS-2200	
R203	150K	1	502415	BTS-150K	
R204	39K 5%	2	522339	BTB-39K 5%	
R205	180K		503118	BTS-180	
R206	47K	1	512347	BTA-47K	
R207	2200K		502310	BTS-2200	
R208	56K		502056	BTS-56	
R209	560K 5%				

* Items R137A, R137B, R137C, R137D, C105A, C105B, C105C

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	RCA Victor PART No.	IRC PART No.	
R26	100K		503410	BTS-100K	
R27	100K		503410	BTS-100K	
R28	22K		503322	BTS-22K	
R29	120K		503112	BTS-120	
R30	8.2Meg		503582	BTS-8.2Meg	
R31	220K		502422	BTS-220K	
R32	270K		503427	BTS-270K	
R33	1000K		503210	BTS-1000	
R34	10K		503310	BTS-10K	
R35	47K		503047	BTS-47K	
R36	10K		503310	BTS-10K	
R37	1000K		503210	BTS-1000	
R38	10K	10	79937	1 1/2A-10K	
R39	100K		503110	BTS-100	
R40	56K		503056	BTS-56	
R41	68K		503068	BTS-68	
R42	4700K		503247	BTS-4700	
R43	12K		503312	BTS-12K	
R44	100K		503110	BTS-100	
R45	3.3Meg		502533	BTS-3.3Meg	
R46	560K 5%		502156	BTS-560 5%	
R47	330K 5%		502133	BTS-330 5%	
R48	1000K		503210	BTS-1000	
R49	62K 5%		3579	BTS-62 5%	
R50	47K	1	513347	BTA-47K	
R51	10K		522310	BTB-10K	
R52	62K 5%		3579	BTS-62 5%	
R53	220K 5%		502422	BTS-220K 5%	
R54	10K		522310	BTB-10K	
R55	39K 5%				
R56	33K 5%		502333	BTS-33K 5%	
R57	62K 5%		3579	BTS-62 5%	
R58	10K		502010	BTS-10	
R59	10K		522310	BTB-10K	
R60	12K 5%				
R61	1000K				
R62	150K		502115	BTS-150	
R63	10K		522310	BTB-10K	
R64	3900K 5%		502239	BTS-3900 5%	
R65	120K 5%		502112	BTS-120 5%	
R66	220K		78908		
R67	330K 5%		502133	BTS-330 5%	
R68	220K 5%		502422	BTS-220K 5%	
R69	2200K 5%		502222	BTS-2200 5%	
R70	4700K 5%		502247	BTS-4700 5%	
R71	10K		503310	BTS-10K	
R72	120K 5%		512112	BTA-120 5%	
R73	220K		503122	BTS-220	
R74	27K		503327	BTS-27K	
R75	12500K	10	79184		
R76	10K	10	79182		
R77					

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	RCA Victor	IRC	
			PART No.	PART No.	
R127	820KΩ	1/2	503482	BTS-820K	
R128	560KΩ	1/2	563456	BTS-560K	
R129	47KΩ	1/2	503347	BTS-47K	
R130	47KΩ	1/2	503347	BTS-47K	
R131	1.2Meg	1/2	503512	BTS-1.2Meg	
R132	33KΩ	1/2	522333	BTB-33K	
R133	18KΩ	1/2	503318	BTS-18K	
R134	8200Ω	1/2	503282	BTS-8200	
R135	33KΩ	1/2	503333	BTS-33K	
R136	22KΩ	1/2	502322	BTS-22K	
R137A	22KΩ	1/2	479246	BTS-22K	
B	22KΩ	1/2		BTS-22K	
C	8200Ω	1/2		BTS-8200	
D	8200Ω	1/2		BTS-8200	
R138	1Meg	1/2	503510	BTS-1Meg	
R139	1Meg	1/2	503510	BTS-1Meg	
R140	1.8Meg	1/2	602518	BTS-1.8Meg	
R141	2.7Meg	1/2	523527	BTB-2.7Meg	
R142	470KΩ	1/2	503447	BTS-470K	
R143	22KΩ 5%	1/2	502322	BTS-22K 5%	
R144	100KΩ	1/2	503410	BTS-100K	
R145	2.2Meg	1/2	503522	BTS-2.2Meg	
R146	470Ω	1/2	513147	BTA-470	
R147	100KΩ	1/2		BTS-100K	
R148	150KΩ	1/2	522415	BTB-150K	
R149	820Ω	1/2	522182	BTB-820	
R150	560Ω	1/2		BTA-560	
R151	560Ω	1/2		BTA-560	
R152	330KΩ	1/2	512433	BTA-330K	
R153	820KΩ	1/2	513482	BTS-820K	
R154	82KΩ	1/2	512382	BTA-82K	
R155	150KΩ 5%	1/2	512415	BTA-150K 5%	
R156	3900Ω 5%	1/2	502239	BTS-3900 5%	
R157	56KΩ	1/2	512356	BTA-56K	
R158	82KΩ	1/2	513382	BTA-82K	
R159	100KΩ 5%	1/2	512410	BTA-100K 5%	
R160	150KΩ	1/2	503415	BTS-150K	
R161	8.200Ω 5%	1/2	502282	BTS-8200 5%	
R162	39KΩ	1/2	513339	BTA-39K	
R163	220KΩ	1/2	502422	BTS-220K	
R164	120Ω	1/2	503112	BTS-120	
R165	11KΩ	1/2	79987		
R166	56Ω	1/2	502056	BTS-56	
R167	4700Ω	1/2	512247	BTA-4700	
R168	56KΩ	1/2		BTB-56K	
R169	6.2Meg	1/2	522562	BTB-6.2Meg	
R170	8.2Meg	1/2	522562	BTB-6.2Meg	
R171	2.7Meg	1/2	522527	BTB-2.7Meg	
R172	68Meg	1/2	100010		
R173	4.5Meg	1/2	100009	BTA-4.5Meg	
R174	4700Ω	1/2	503247	BTS-4700	
R175	10KΩ	1/2	503310	BTS-10K	
R176	150Ω	1/2	502115	BTS-150	
R177	39KΩ	1/2	513339	BTA-39K	
R178	2700Ω	1/2	503227	BTS-2700	
R179	10KΩ	1/2	513310	BTA-10K	
R180	56KΩ	1/2	503356	BTS-56K	
R181	10KΩ	1/2	503310	BTS-10K	
R182	22KΩ	1/2	502322	BTS-22K	
R183	100KΩ	1/2	503410	BTS-100K	
R184	1800Ω	1/2	512218	BTA-1800	
R185	39KΩ 5%	1/2	522339	BTB-39K 5%	
R186	33KΩ 5%	1/2	522330	BTB-33K 5%	
R187	2200Ω 5%	1/2	502222	BTS-2200 5%	
R188	33KΩ	1/2		BTS-33K	
R189	2200Ω	1/2	503222	BTS-2200	
R190	10KΩ	1/2	503310	BTS-10K	
R191	1Meg 5%	1/2	502510	BTS-1Meg 5%	
R192	1Meg 5%	1/2	502510	BTS-1Meg 5%	
R193	15KΩ	1/2	503315	BTS-15K	
R194	22Meg 5%	1/2	522622	BTB-22Meg 5%	
R195	1Meg 5%	1/2	502510	BTS-1Meg 5%	
R196	27KΩ	1/2	503327	BTS-27K	
R197	15KΩ	1/2	503315	BTS-15K	
R198	1000Ω 5%	1/2	502210	BTS-1000 5%	
R199	330Ω 5%	1/2	502133	BTS-330 5%	
R200	27KΩ	1/2	523327	BTA-27K	
R201	12KΩ	1/2	513312	BTA-12K	
R202	2200Ω	1/2	503222	BTS-2200	
R203	150KΩ	1/2	502415	BTS-150K	
R204	39KΩ	1/2	522339	BTS-39K	
R205	180Ω	1/2	503118	BTS-180	
R206	47KΩ	1/2	512347	BTA-47K	
R207	2200Ω	1/2	502310	BTS-2200	
R208	56Ω	1/2	502056	BTS-56	
R209	560Ω 5%	1/2		BTS-560 5%	

* Items R137A, R137B, R137C, R137D, C105A, C105B, C105C, C105D are combined in one unit.

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA						
	PRI.	SEC. 1	SEC. 2	RCA Victor	Haldorson	Merit	RCA	Stancor	Thordarson	Triad
				PART No.	PART No.	PART No.	TYPE No.	PART No.	PART No.	PART No.
T1	117VAC @4.6A	170VAC .695ADC	6.3VAC @1A	79971						
	SEC. 3	SEC. 4	SEC. 5							
	6.3VAC @1.72A									

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	RCA Victor	IRC	
			PART No.	PART No.	
R210	100Ω	1	503110	BTS-100	
R211	12.5KΩ	1/2	79184		
R212	18KΩ 5%	1/2	512318	BTA-18K 5%	
R213	4700Ω	1/2	503247	BTS-4700	
R214	390KΩ	1/2	503439	BTS-390K	
R215	6.8Meg	1/2	502568	BTS-6.8Meg	
R216	3000Ω 5%	1/2	19794	BTS-3000 5%	
R217	35KΩ 5%	1/2	512333	BTA-35K 5%	
R218	100Ω	1/2	503110	BTS-100	
R219	4700Ω 5%	1/2	502247	BTS-4700 5%	
R220	5000Ω	1/2	79183	PW7-5000	
R221	4700Ω 5%	1/2	502247	BTS-4700 5%	
R222	8200Ω	1/2	503282	BTS-8200	
R223	1Meg	1/2	503510	BTS-1Meg	
R224	100Ω	1/2	503110	BTS-100	
R225	47KΩ	1/2	512347	BTA-47K	
R226	4700Ω 5%	1/2	512247	BTA-4700 5%	
R227	3.3Meg	1/2	503533	BTS-3.3Meg	
R228	390KΩ	1/2	503439	BTS-390K	
R229	6200Ω 5%	1/2	35255	BTA-6200 5%	
R230	10KΩ 5%	1/2	522310	BTB-10K 5%	
R231	10KΩ 5%	1/2	502310	BTS-10K 5%	
R232	10KΩ 5%	1/2	502310	BTS-10K 5%	
R233	10KΩ 5%	1/2	502310	BTS-10K 5%	
R234	10KΩ 5%	1/2	502310	BTS-10K 5%	
R235	10KΩ 5%	1/2	502310	BTS-10K 5%	
R236	10KΩ 5%	1/2	502310	BTS-10K 5%	
R237	20KΩ 5%	1/2	502320	BTS-20K 5%	
R238	47KΩ 5%	1/2	502347	BTS-47K 5%	
R239	680Ω	1/2	502168	BTS-680	
R240	3300Ω 5%	1/2	502233	BTS-3300 5%	
R241	10KΩ 5%	1/2	522310	BTB-10K 5%	
R242	1.8Meg	1/2	502518	BTS-1.8Meg	
R243	2700Ω 5%	1/2	502127	BTS-270 5%	
R244	180Ω 5%	1/2	502118	BTS-180 5%	
R245	4700Ω 5%	1/2	522247	BTB-4700 5%	
R246	15KΩ	1/2	503315	BTS-15K	
R247	100KΩ	1/2	503410	BTS-100K	
R248	1Meg	1/2	503510	BTS-1Meg	
R249	470Ω	1/2	503147	BTS-470	
R250	3300Ω 5%	1/2	502233	BTS-3300 5%	
R251	10KΩ 5%	1/2	522310	BTB-10K 5%	
R252	1.8Meg	1/2	502518	BTS-1.8Meg	
R253	2700Ω 5%	1/2	502127	BTS-270 5%	
R254	180Ω 5%	1/2	502118	BTS-180 5%	
R255	4700Ω 5%	1/2	522247	BTB-4700 5%	
R256	15KΩ	1/2	503315	BTS-15K	
R257	100KΩ	1/2	503410	BTS-100K	
R258	1Meg	1/2	503510	BTS-1Meg	
R259	3300Ω 5%	1/2	502233	BTS-3300 5%	
R260	120Ω 5%	1/2	512112	BTA-120 5%	
R261	82Ω 5%	1/2	502082	BTS-82 5%	
R262	10KΩ 5%	1/2	522310	BTB-10K 5%	
R263	1.8Meg	1/2	502518	BTS-1.8Meg	
R264	2700Ω 5%	1/2	502127	BTS-270 5%	
R265	180Ω 5%	1/2	502118	BTS-180 5%	
R266	4700Ω 5%	1/2	522247	BTB-4700 5%	
R267	15KΩ	1/2	503315	BTS-15K	
R268	100KΩ	1/2	503410	BTS-100K	
R269	1Meg 5%	1/2	503510	BTS-1Meg	
R270	8200Ω 5%	1/2	79783		
R271	2200Ω	1/2			
R272	10KΩ 5%	1/2		BTS-10K 5%	
R273	4000Ω	1/2	78907	PW7-4000	
R274	3300Ω	1/2	179782		
R275	100KΩ	1/2	502410	BTS-100K	
R276	10KΩ	1/2	512310	BTA-10K	
R277	100KΩ	1/2	522410	BTB-100K	
R278	100KΩ	1/2	522410	BTB-100K	
R279	100KΩ	1/2	522410	BTB-100K	
R280	22KΩ	1/2		BTB-22K	
R281	22KΩ	1/2		BTB-22K	
R282	22KΩ	1/2		BTB-22K	
R283	56KΩ	1/2	503356	BTS-56K	
R284	56KΩ	1/2	503356	BTS-56K	
R285	20KΩ	1/2		2D-20K	
R286	820Ω	1/2		BTS-820	
R287	820Ω	1/2		BTS-820	
R288	820Ω	1/2		BTS-820	
R289	1000Ω	1/2	502210	BTS-1000	
R290	1000Ω	1/2	502210	BTS-1000	
R291	1000Ω	1/2	502210	BTS-1000	
R292	1000Ω	1/2	502210	BTS-1000	
R293	1000Ω	1/2	502210	BTS-1000	
R294	560Ω	1/2	502156	BTS-560	
R295	1000Ω	1/2	502210	BTS-1000	
R296	90Ω	15	79973		

ITEM No.	USE	RCA PART No.
T2	Vert. Osc. Trans.	7414
T3	Horiz. Output Trans.	7964
T4	Vert. Output Trans.	7963
T5A	Yoke-Horiz. (11.5MH)	7960
B	Vert. (80MH)	
T6	Horiz. Lin. Coil (.045-.34MH) ④	7964
T7	Width Choke(1.0MH)	7978
T8	Width Choke(1.0MH)	7978
T9	Vert. Centering Choke	7880
T10	Horiz. Centering Choke	7984
T11A	Green] Dynamic Con-	10000
B	Blue }vergence Yoke	10000
C	Red } Assy.	10000
T12	Dynamic Convergence Inductor Assy.	7966

- ① Drill one mounting hole(s).
- ② Use 9 to 1 turns ratio.
- ③ Includes capacitor C139, resistor R139.
- ④ Two coils, bifilar wound. Total 1.0MH.
- ⑤ Pole piece exciter coil (3 used).
- ⑥ Control magnet and knob assembly.
- ⑦ Pole piece magnet assembly (3 used).
- ⑧ Male plug for exciter coil (3 used).

ITEM No.	IMPEDANCE		RCA Victor PART No.
	PRI.	SEC.	
T13	6KΩ	1.73Ω	79986

ITEM No.	RATINGS		
	SIZE	FM	V. C. IMP.
SP1	8"	PM	3.3Ω
SP2	8"	PM	3.3Ω

ITEM No.	USE	DC RES.	
		PRI.	SEC.
L1	IF Trap	0Ω	
L2	IF Trap	0Ω	
L3A	VHF Ant., RF, Mixer & Osc. Coils	0Ω	
B	VHF Ant., RF, Mixer & Osc. Coils	0Ω	
C	VHF Ant., RF, Mixer & Osc. Coils	0Ω	
D	VHF Ant., RF, Mixer & Osc. Coils	0Ω	
E	UHF Ant., RF, Mixer & Osc. Coils	0Ω	
F	UHF Ant., RF, Mixer & Osc. Coils	0Ω	
G	UHF Ant., RF, Mixer & Osc. Coils	0Ω	
L4	IF Trap	.2Ω	
L5	Neut. Coil	0Ω	
L6	RF Choke	1.4Ω	
L7	RF Choke	1.4Ω	

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (cont)

ITEM No.	USE	DC RES.		REPLACEMENT DATA				NOTES
				RCA Victor PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
		PRI.	SEC.					
L29	4.5MC Trap	.4ΩCT		78897	17-3402		1469	
L30	3.58MC Trap	2.8Ω		78892	17-6016 ♦		1469	
L31	Chroma Sync							
	Take-off	2.8Ω		78892			1470	
L32	Shunt Peak- ing Coil	6Ω		71527	19-3093	TV-181	6177	83 Microhenries
L33	Shunt Peak- ing Coil	11Ω		71526	19-3250	TV-185	6181	250 Microhenries
L34	Series Peak- ing Coil	11Ω		71526	19-3250	TV-185	6181	250 Microhenries
L35	2nd. Sound IF	6Ω	3.5Ω	78996	17-1021 *	TV-108 *	1466 *	
L36	RatioDet.	9.5Ω	.9ΩCT	78929	17-1033	TV-110	1468	Tertiary winding-.3Ω
L37	Horiz. Osc.	115Ω		75213	20-1402 ■	TV-162 ■	6183 ■	Primary tapped @.85Ω Horiz. Waveform wind- ing -37Ω
L38	Bandpass Primary Coil	7.5Ω		78887	17-6010			Primary tapped @2.5Ω tertiary winding-6Ω
L39	Bandpass Secondary Coil	1.5Ω		78888	17-6011			
L40	Burst Amp. Trans.	2.5Ω	1.5ΩCT	78886	17-6012			
L41	Series Peak- ing Coil	2.4Ω		72618	19-6022		6152	20 Microhenries
L42	Reactance Coil	5.5Ω		78891	17-6015			
L43	Chroma Reference Osc. Coil	.4ΩCT		78889	17-6013			
L44	Quadrature Trans.	6Ω	.5Ω	79623				Includes 2 - 680Ω resistors, & 2 - 1500 MMF capacitors Tertiary winding -.5Ω
L45	Series Peak- ing Coil	130Ω		78902	19-5102		4670	6.7 Microhenries
L46	Shunt Peak- ing Coil	24Ω		78903	19-5101		4664	1.9 Microhenries
L47	Delay Filter	31ΩCT		78890				
L48	Series Peak- ing Coil	26Ω		79185			4652	1 Microhenry
L49	Series Peak- ing Coil	26Ω		79185			4652	1 Microhenry
L50	Shunt Peak- ing Coil	11Ω		71526	19-3250	TV-185	6181	250 Microhenries
L51	Shunt Peak- ing Coil	11Ω		71526	19-3250	TV-185	6181	250 Microhenries
L52	Shunt Peak- ing Coil	11Ω		71526	19-3250	TV-185	6181	250 Microhenries
L53	Series Peak- ing Coil	7Ω		75253	19-3125		6153	120 Microhenries
L54	Series Peak- ing Coil	7Ω		75253	19-3125		6153	120 Microhenries
L55	Series Peak- ing Coil	7Ω		75253	19-3125		6153	120 Microhenries

- * Drill one new mounting hole.
- Reverse coil mounting in can.
- ▲ Detune trap.
- ♦ Two coils required - 2nd. coil part #17-6017.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 C _U)	RCA Victor PART No.	Haldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L56	.695ADC	11.2Ω	.64HY	79974					

SELENIUM RECTIFIER

ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT	RCA Victor PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.	
M1	.695ADC	78894	1267A			9A2	759	
M2	.695ADC	78894	1267A			9A2	759	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			RCA Victor PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M3	3AG P/T	3/10A 250V	77935					GJV 3/10	
M4	3AG P/T	4.5A 250V	79357					MTH5	
M5	3AG P/T	250V	78798	79641	312.500 (3AG 1/2A)	357001		AGC 1/2	4405
M6	#26 AWG Wire	1/2A 250V	79358						
M7	#26 AWG Wire		79358						

PARTS LIST AND DESCRIPTIONS (Continued)

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA		NOTES
		RCA Victor PART No.	SYLVANIA PART No.	
M8	K3E	78972	1N82 or 1N82A	VHF-UHF Mixer
M9	1N60		1N60 or 1N132	Video Det.
M10	1N60		1N60 or 1N132	Sound Det.

MISCELLANEOUS

ITEM No.	PART NAME	RCA Victor PART No.	NOTES
M11	Dial Light	11891	#44
M12	Tuner	KRK12C	VHF-UHF
M13	Video Det. Assy.	78994	Includes M9, coils and capacitors
M14	Sound Det. Assy.	78995	Includes M10, coils and capacitors
M15	Crystal	78896	3.579545MC Oscillator
M16	Switch	79651	Width (Rotary - wafer type)
M17	Delay Line	79998	Luminance Channel
M18	Magnet	79669	Blue Lateral Beam Positioning
M19	Magnet	79604	Purity Ring Assy.
M20	Magnetic Shield		Yoke
M21	Ballast Tube	79972	
A28	Trimmer Cap.	77616	Tuner - IF Trap (4-40MMF)
B1	Trimmer Cap.	74923	Horiz. Locking Range (4-70MMF)
	Trimmer Cap.	79621	Hue (4-25MMF)
	Trimmer Cap.	100008	3 Section (180-780MMF), Blue, red and green horiz. phasing
	Trimmer Cap.	938206-501	Ant. Matching Stub Trimmer
	Knob	79470	Brightness
	Knob	79588	Channel Selector
	Knob	75945	Contrast hue color saturation and tone
	Knob	100000	Fine tuning
	Knob	79471	On-off-volume
	Safety Glass	79591	
	Mask	79587	

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove 4 push-on type control knobs from front panel of cabinet.
2. Remove 2 metal and 7 wood screws. Remove rear cover.
3. Disconnect 4 plugs from convergence chassis, speaker plug, picture tube socket, HV lead and deflection yoke plug.
4. Remove 7 chassis bolts. Remove chassis.

CONVERGENCE CHASSIS REMOVAL

1. Remove 4 plugs from chassis.
2. Remove 4 wood screws. Remove chassis.

SPEAKER REMOVAL

1. Remove speaker plug.
2. Remove 8 speaker nuts. Remove 2 speakers.

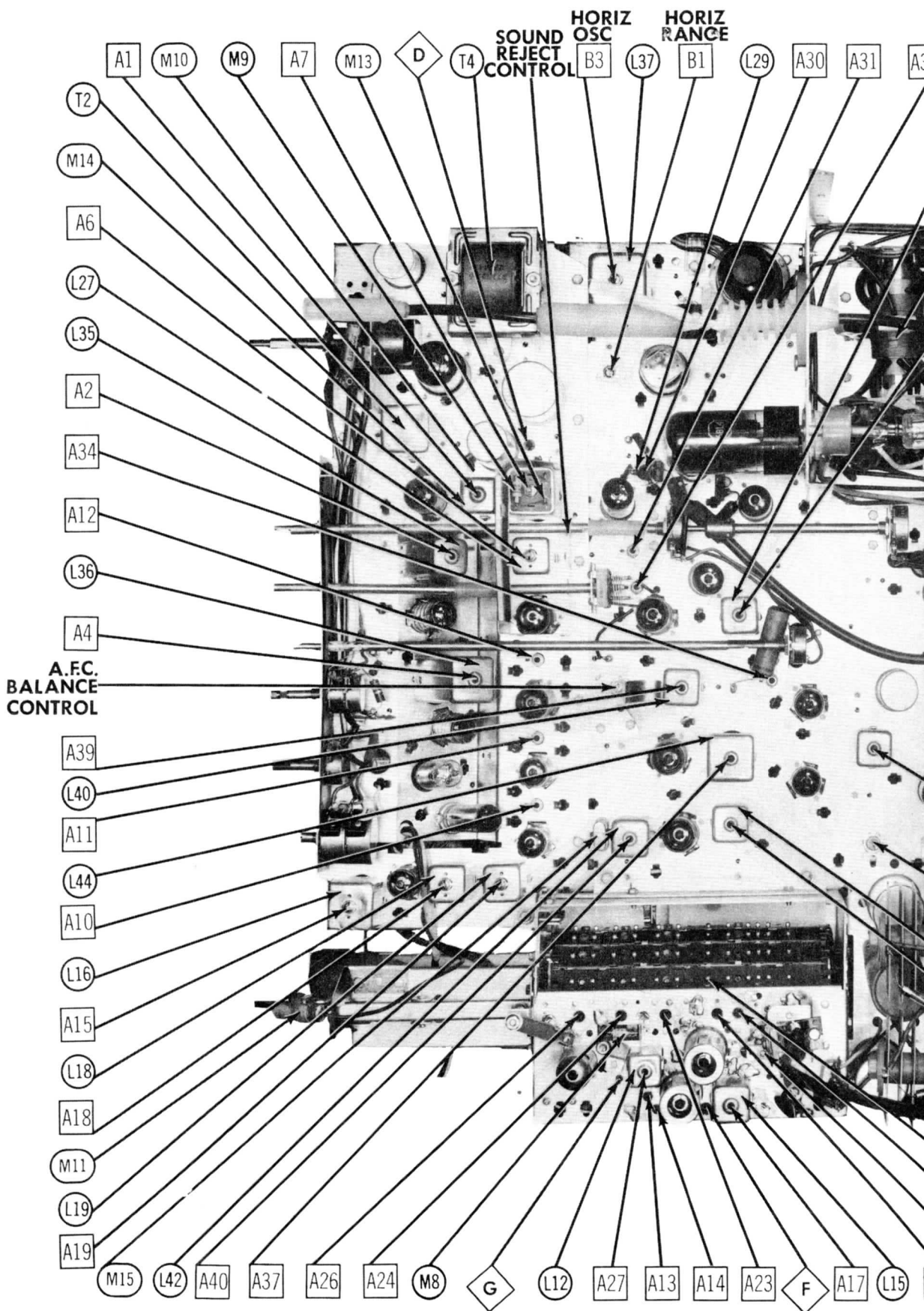
CABINET TOP REMOVAL

1. Remove rear cover.
2. Remove 4 top bolts.
3. Slide top to the rear about 1/2 inch and lift up and off.

PICTURE TUBE REMOVAL

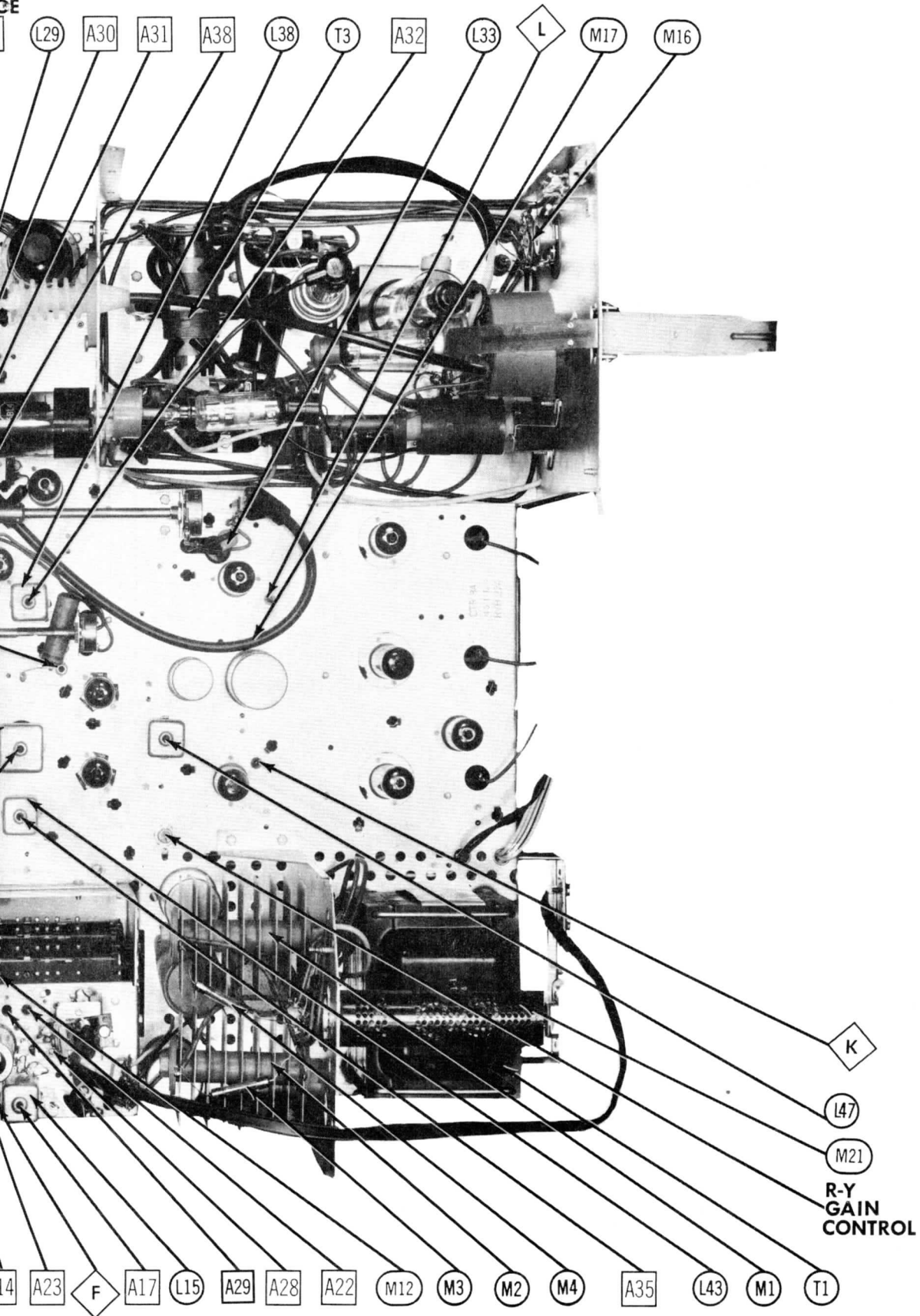
1. Remove main chassis and convergence chassis.
2. Lay cabinet face down on soft surface to protect cabinet finish.
3. Remove blue beam positioning magnet and purity magnet assembly.
4. Disconnect ground lead between yoke and convergence coil assembly.
5. Loosen 3 thumb screws holding convergence coil and magnet assembly. Remove from neck of picture tube.
6. Loosen 4 retaining rod thumb screws and disengage rods from retaining ring. Remove retaining ring and yoke assembly from neck of tube.
7. Unclip ground lead to front mask trim. Loosen screw holding field equalizing magnet assembly.
8. Slide the equalizing magnet assembly from around front end of tube insulator and remove.
9. Lift insulating shield and HV lead from tube.
10. Lift picture tube up and out of cabinet.

RCA VICTOR MODELS
21-CT-55 (Ch. CTC2B & CTC3A)

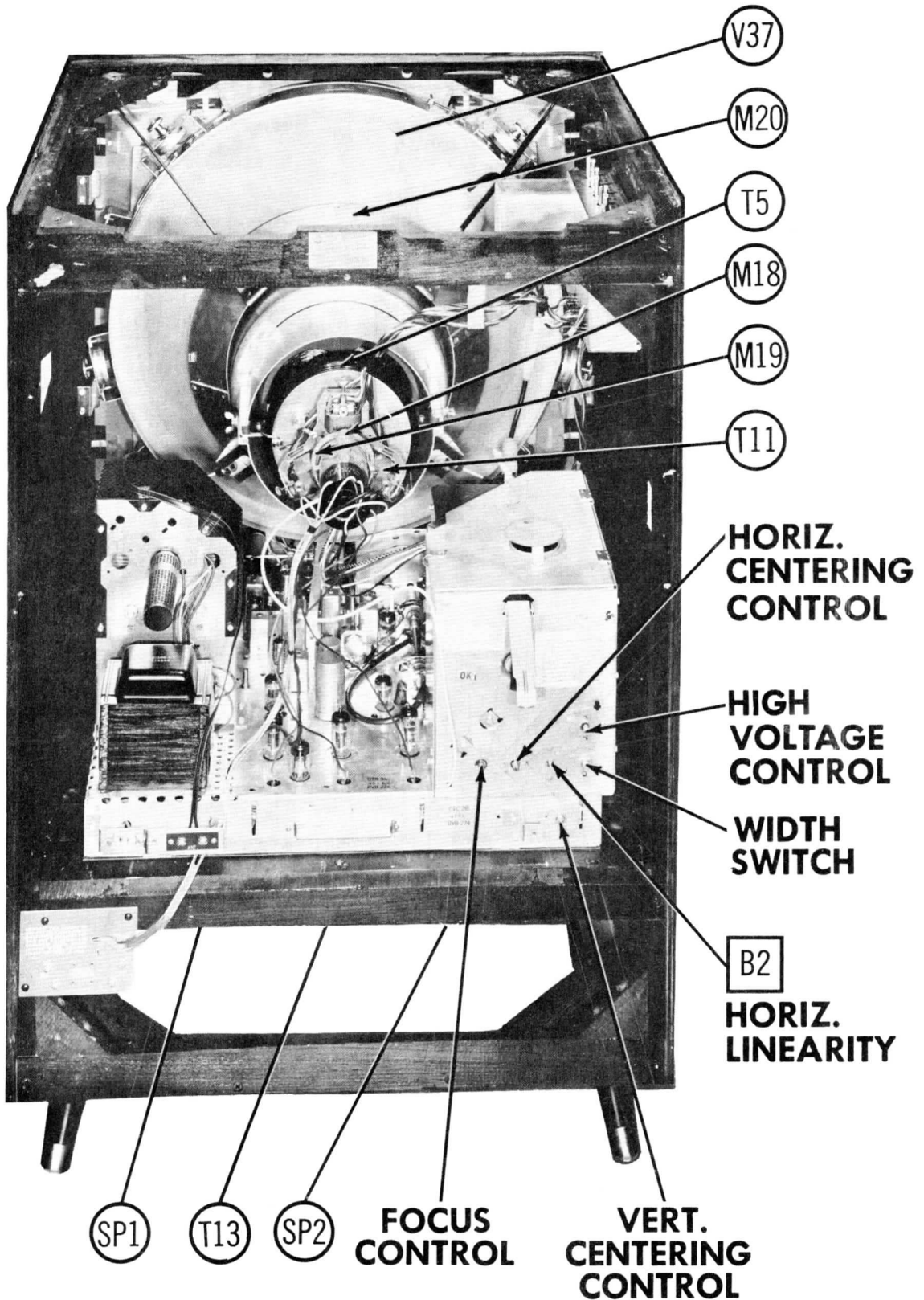


CHASSIS-TOP VIEW-TRANS., INDUCTOR AND ALIGNM

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CTOR AND ALIGNMENT IDENTIFICATION



CABINET-REAR VIEW