

**RCA VICTOR MODELS 2T51, 2T60**  
(Ch. KCS45, KCS45A)

RCA VICTOR MODEL 2T60

TRADE NAME	RCA Victor, Models 2T51 (Ch. KCS45), 2T60 (Ch. KCS45A)	
MANUFACTURER	RCA Victor Div., Radio Corp. of America, Camden, New Jersey	
TYPE SET	Television Receiver	
TUBES	Twenty One	
POWER SUPPLY	110-120 Volts AC 60 Cycle	RATING 1.5 Amp. at 117 Volts AC
TUNING RANGE	Channels 2 thru 13	

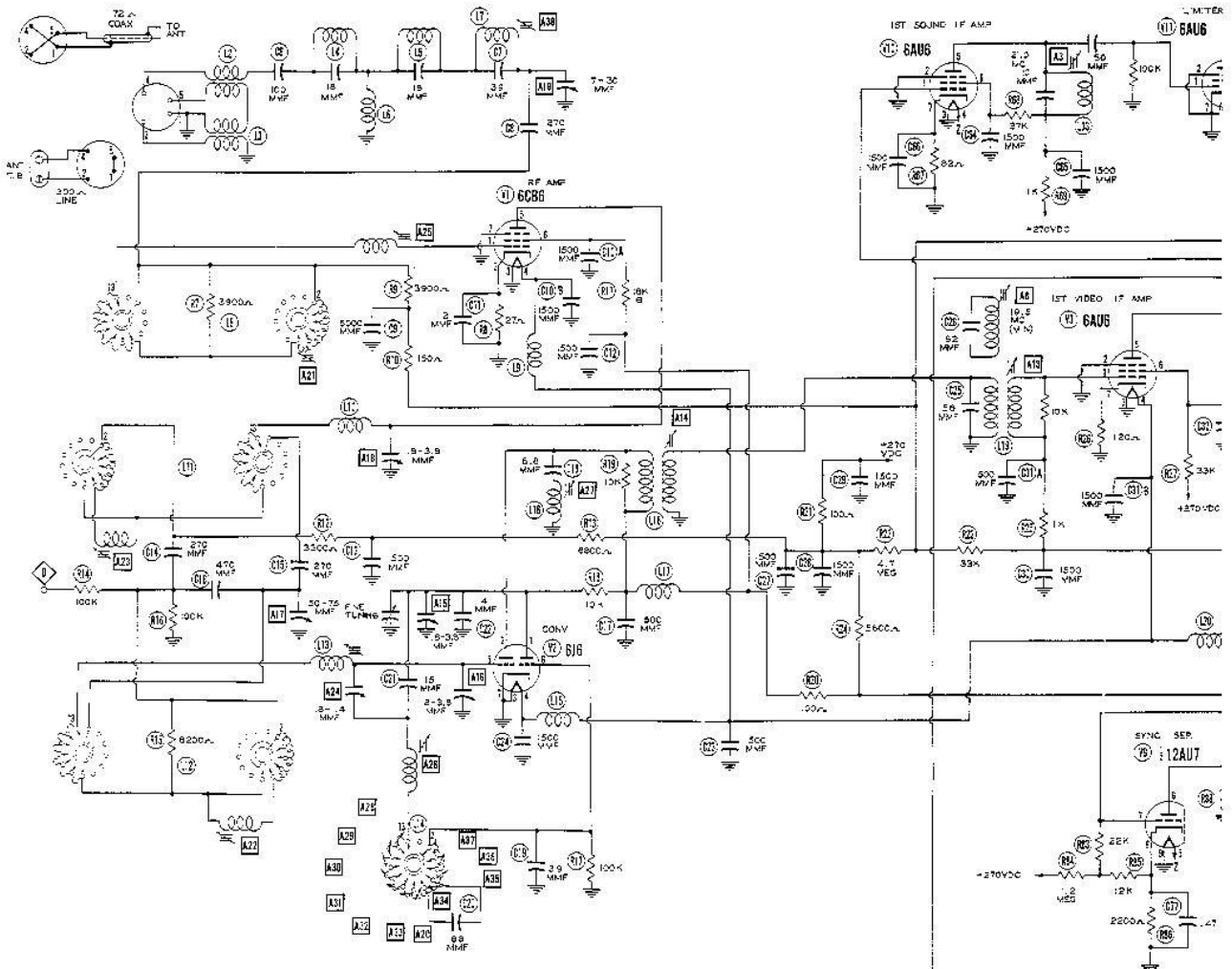
**INDEX**

AGC Switch Settings .....	20	Photographs (continued)	
Alignment Instructions .....	6, 7	Chassis-Top View .....	3, 19
Disassembly Instructions .....	20	RF Tuner .....	10, 16
Horiz. Oscillator Waveform Adjustment .....	20	Resistor Identification .....	12, 17
Horiz. Sweep Circuit Adjustment .....	20	Trans., Inductor and Alignment Identification .....	4, 9
Parts List and Description .....	13, 14, 15, 16	Schematic .....	2
Photographs		Tube Placement Chart .....	5
Cabinet-Rear View .....	19	Voltage and Resistance Measurements .....	8
Capacitor Identification .....	11, 18		

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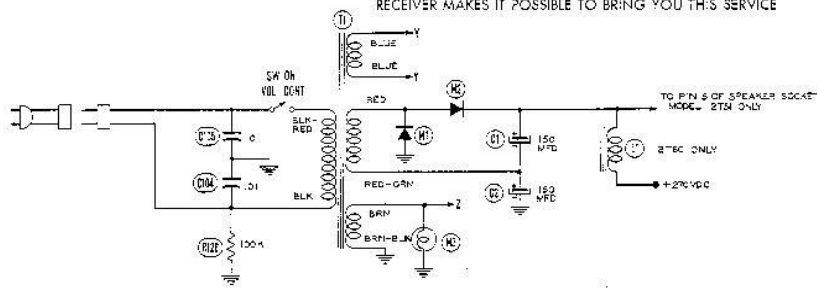
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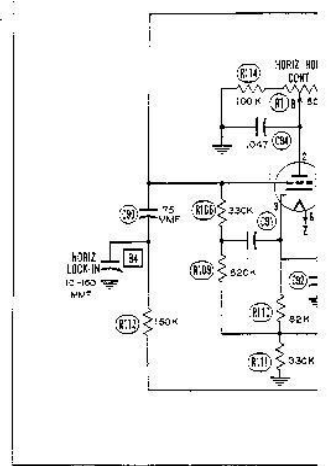
CHANNEL SW SHOWN IN CHANNEL 2 POSITION

THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

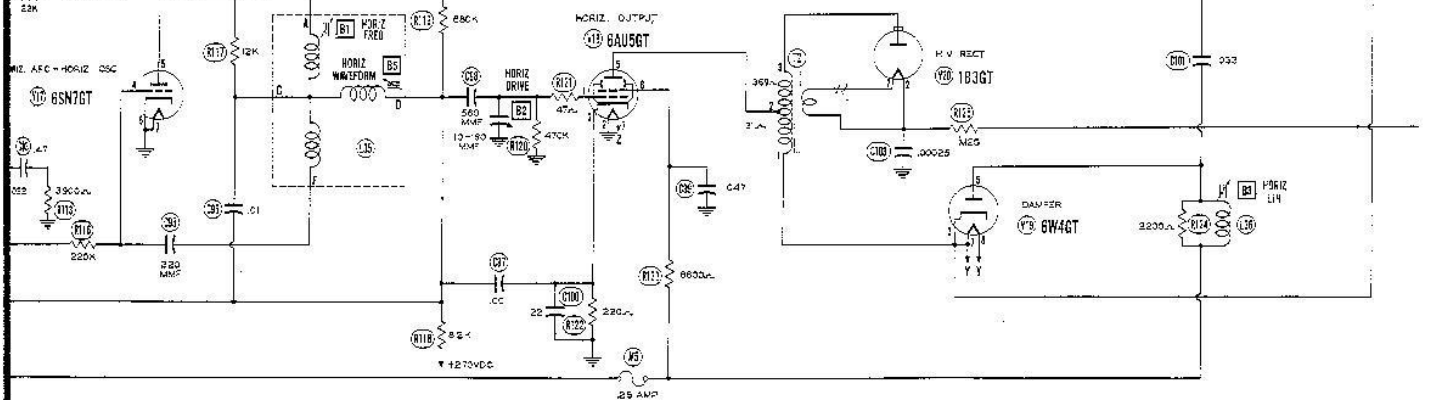
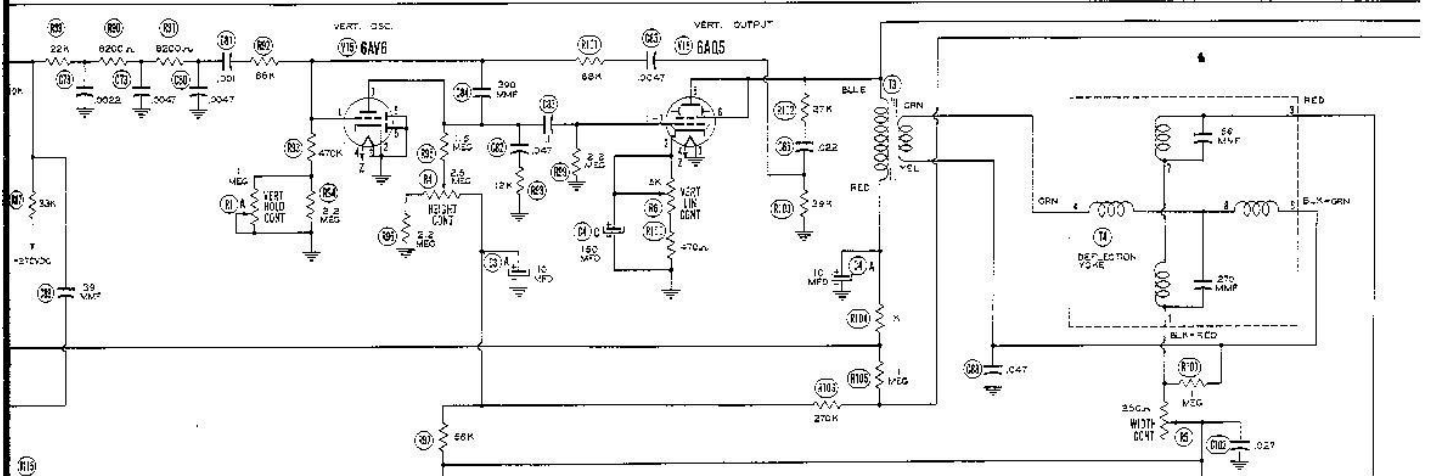
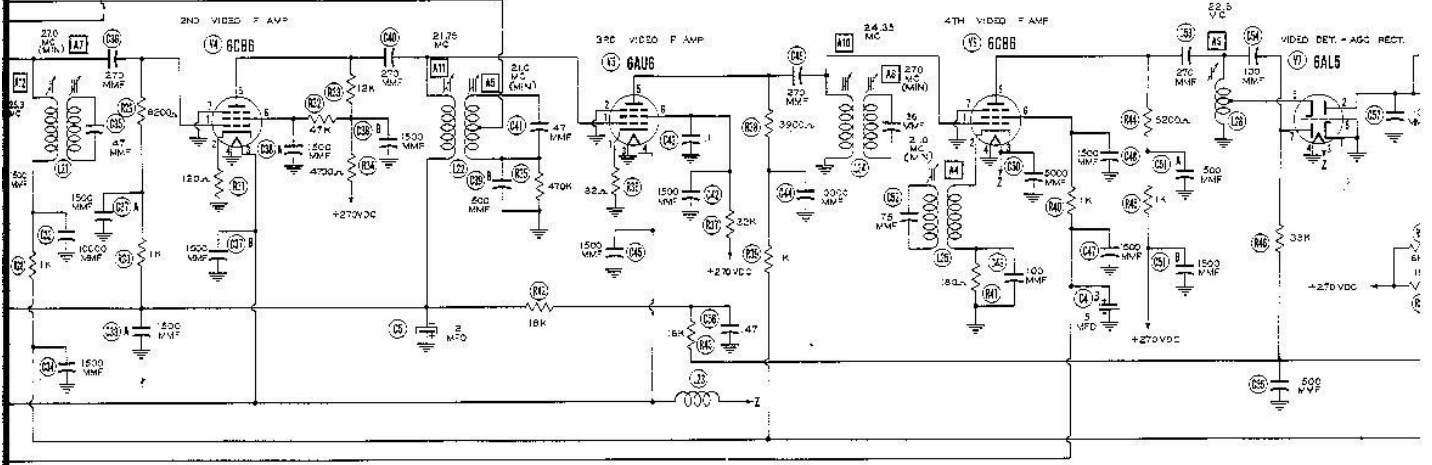
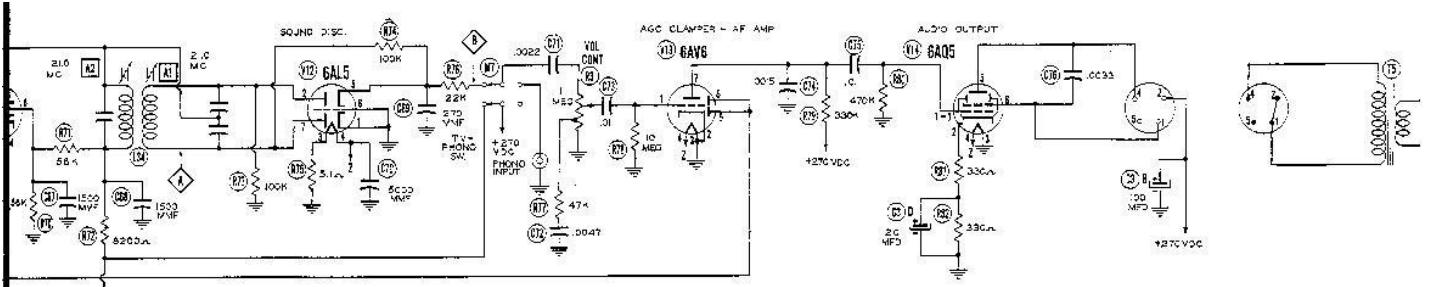


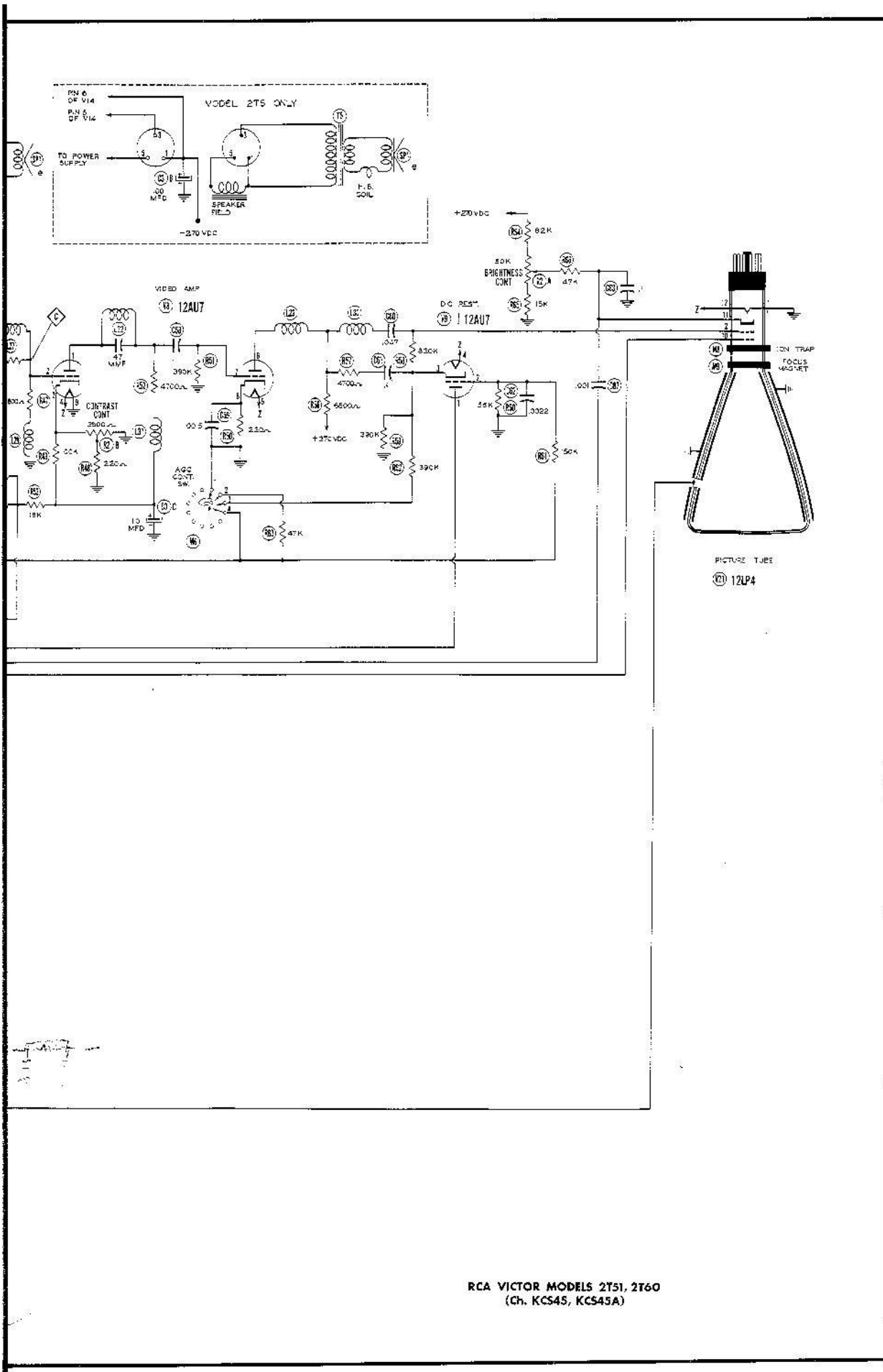
DOTTED PARTS ARE NOT USED IN ALL MODELS. WHEN DOTTED PARTS ARE USED POINTS MARKED X ARE BROKEN.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION



A PHOTOFACT STANDARD NOTATION SCHEMATIC  
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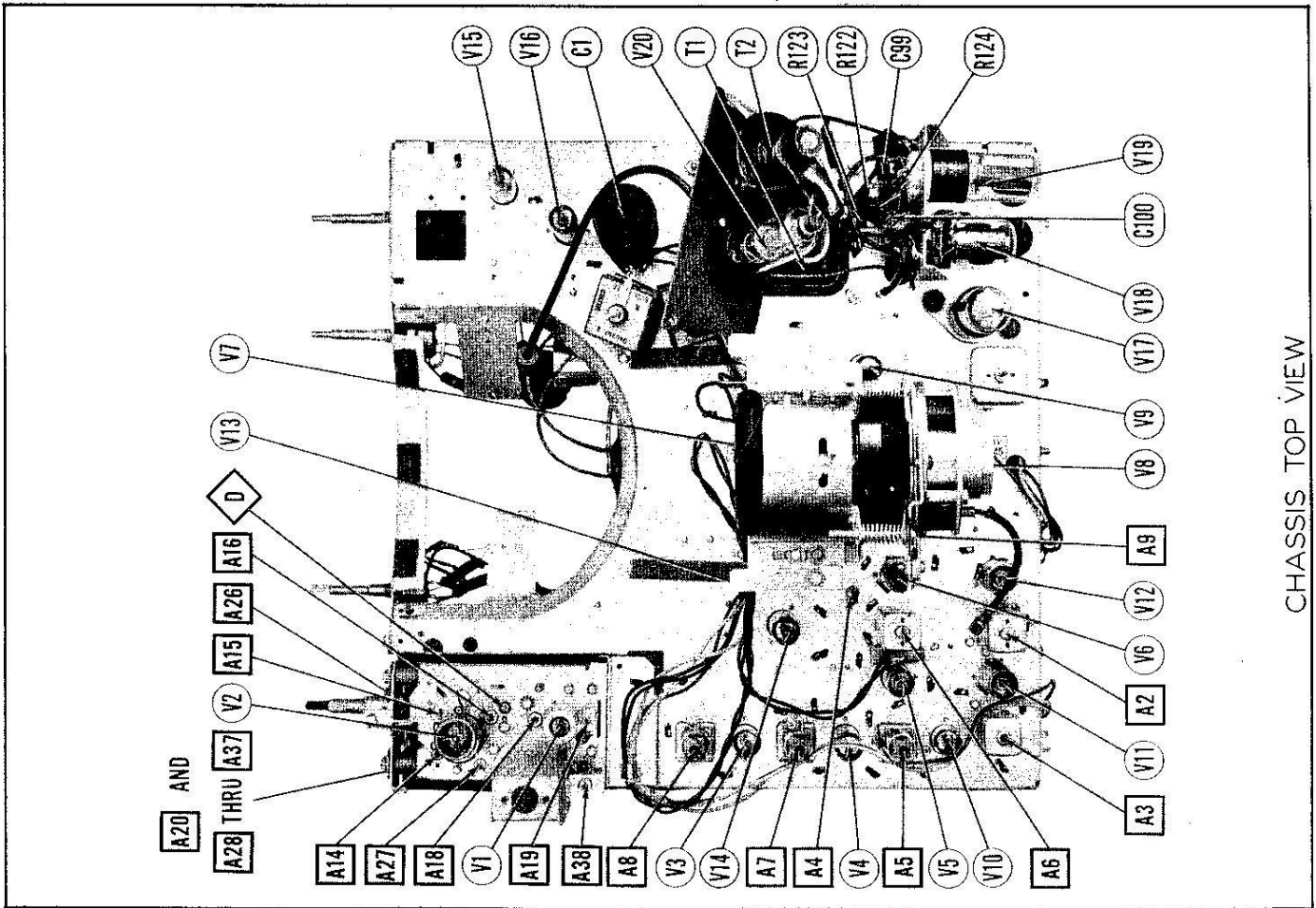




**RCA VICTOR MODELS 2T51, 2T60**  
 (Ch. KCS45, KCS45A)

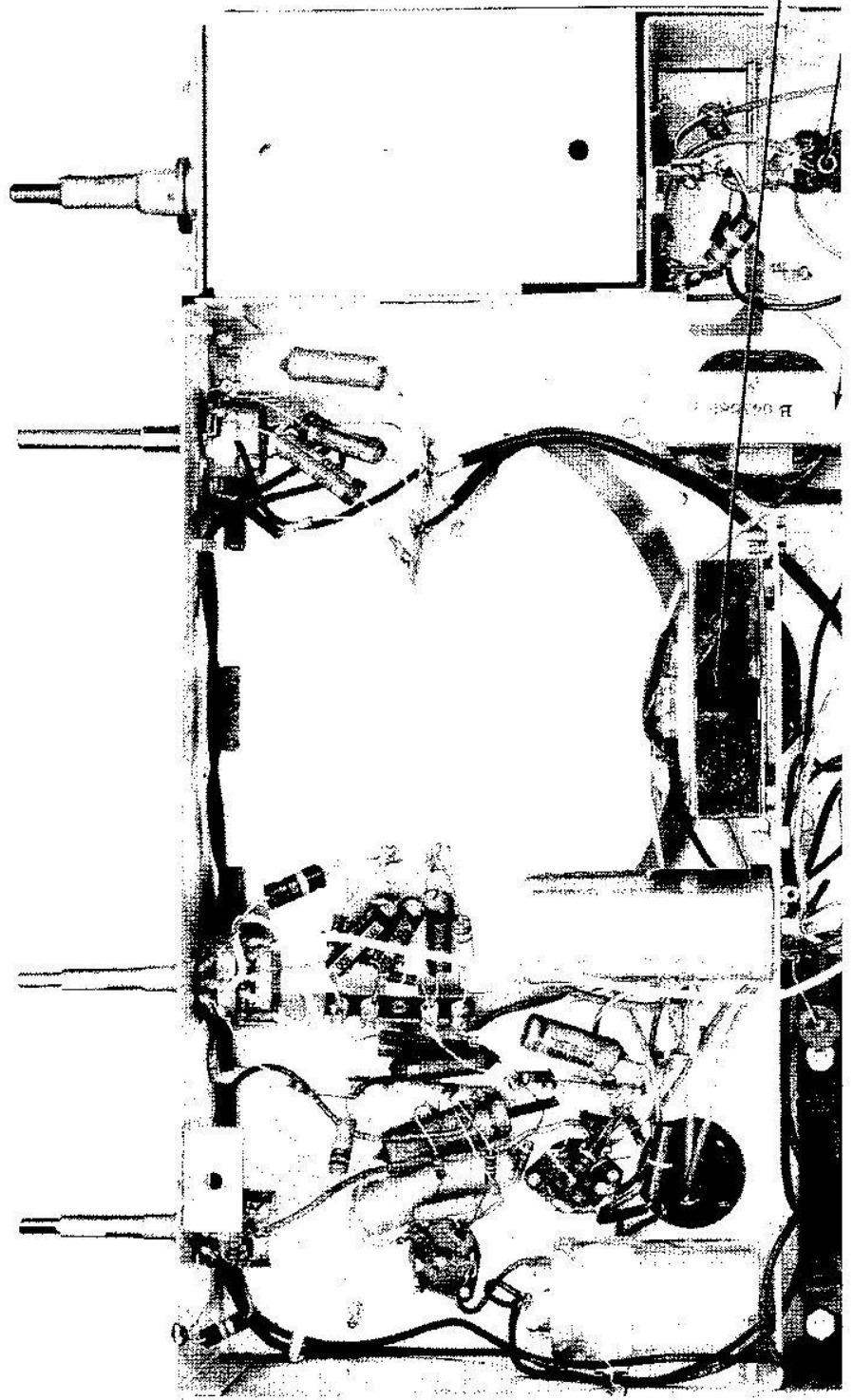
RCA VICTOR MODELS 2T51, 2T60  
 (Ch. KCS45, KCS45A)

RCA VICTOR MODELS 2T51, 2T60  
(Ch. KCS45, KCS545A)



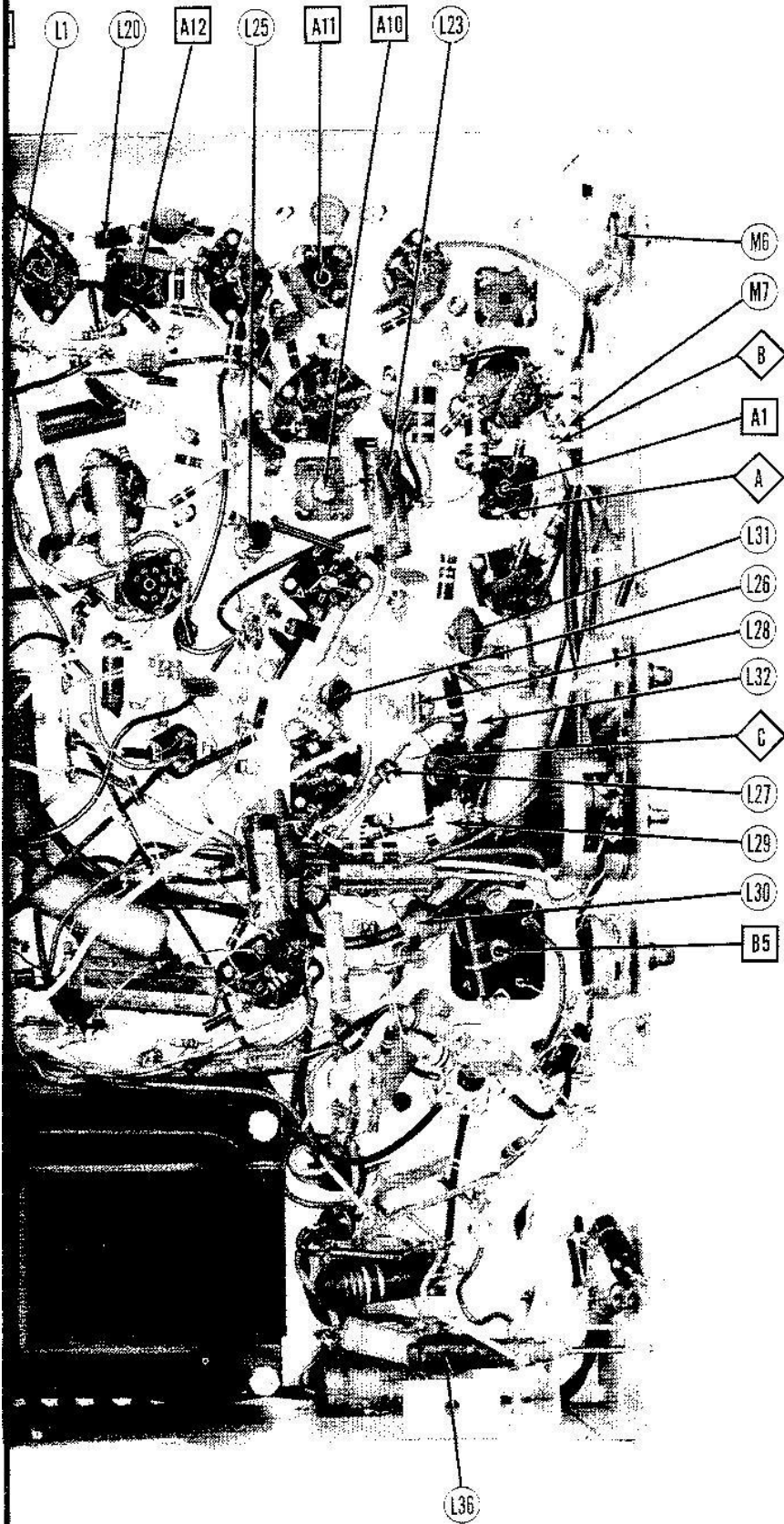
CHASSIS TOP VIEW

13

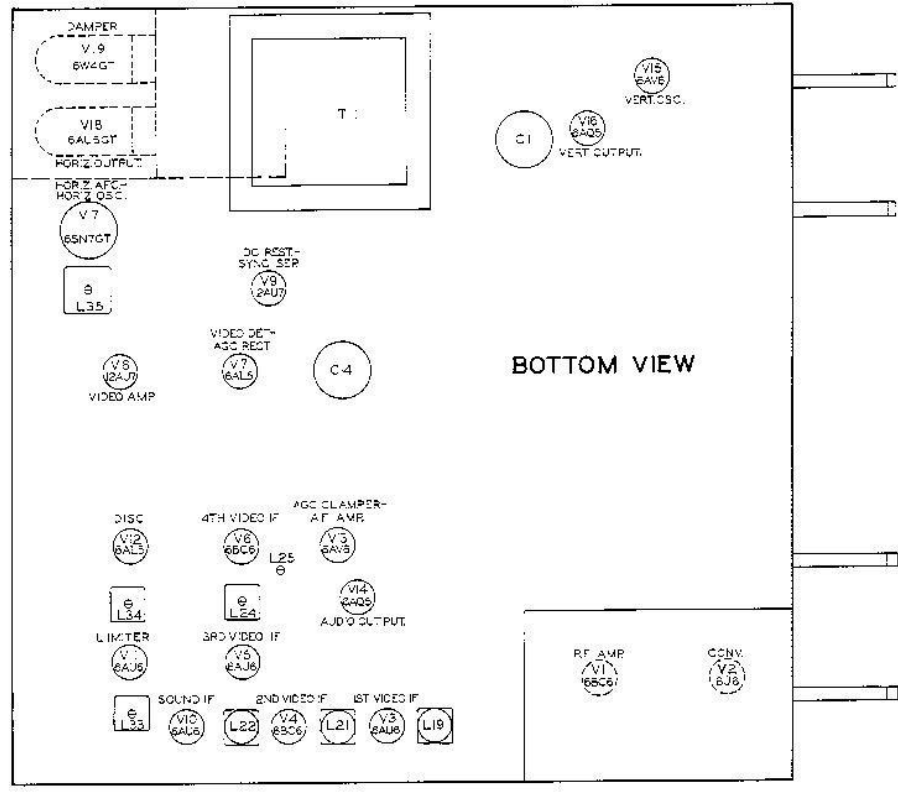
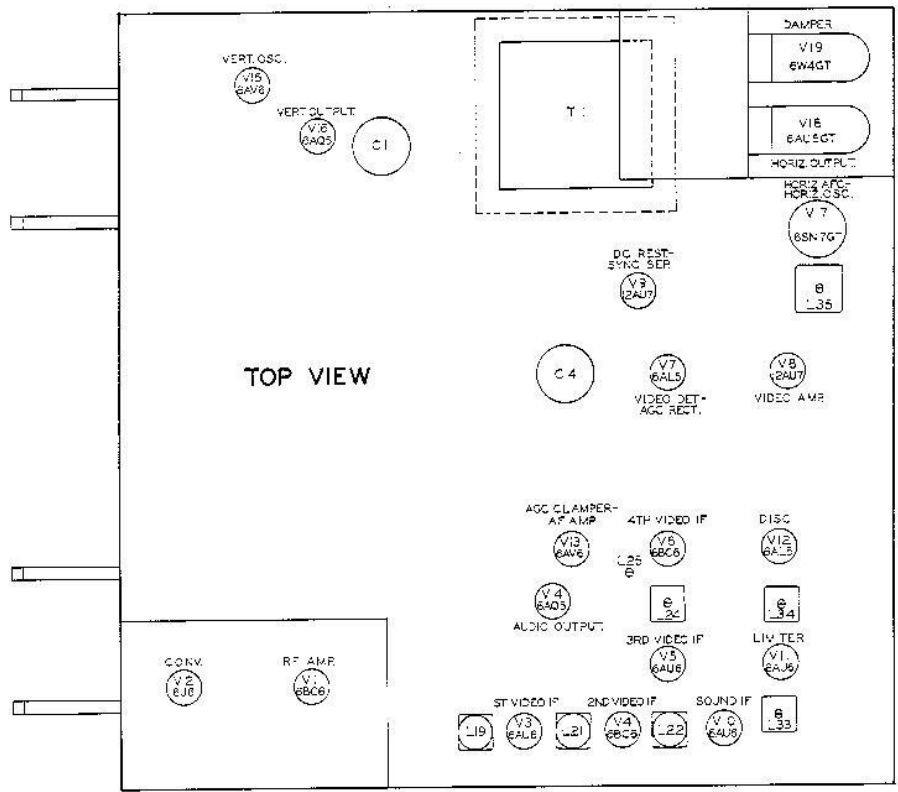


CHASSIS BOTTOM VIEW-TRANS., INDI

RCA VICTOR MODELS 2151, 2160  
(Ch. KCS45, KCS545A)



RECTOR AND ALIGNMENT IDENTIFICATION



TUBE PLACEMENT CHART

RCA VICTOR MODELS 2151, 2160  
 (Ch. KCS45, KCS45A)



# ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT						
To prevent the high voltage shock hazard remove the horizontal output tube (V18) from its socket.						
SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM						
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1. Direct	High side to pin 1 (Grid) of 6AU6 (V11). Low side to chassis.	21MC (Unmod.)	Any	DC Probe to Point $\text{Ⓧ}$ Common to chassis.	A1, A2	Detune A1. Adjust A2 for maximum deflection.
2. Direct	"	"	"	DC Probe to Point $\text{Ⓧ}$ Common to chassis.	A1	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
3. Direct	High side to pin 1 (Grid) of 6AU6 (V10). Low side to chassis.	"	"	DC Probe thru 100K $\Omega$ to pin 1 (Grid) of 6AU6 (V11). Common to chassis.	A3	Adjust for maximum deflection.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE							
Connect the synchronized sweep voltage from the signal 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
1. Direct	High side to pin 1 (Grid) of 6AU6 (V10). Low side to chassis.	21MC (450KC SWP)	21MC	Any	Vert. Amp. thru 100K $\Omega$ to pin 1 (Grid) of 6AU6 (V11). Low side to chassis.	A3	Adjust for maximum amplitude and symmetry as per figure 1.
2. Direct	"	"	"	"	Vert. Amp. to Point $\text{Ⓧ}$ Low side to chassis.	A1, A2	Adjust A1 to place 21MC at center of diagonal line as per figure 2. Adjust A2 for maximum amplitude and straightness of diagonal line. Continue with step 4.

**VIDEO IF ALIGNMENT**

Remove the converter tube (V2) from its socket and replace with a 6J6 with pin 1 removed to prevent erroneous indications. In steps 4 thru 10 connect the negative terminal of a 3 volt battery to the junction of R22 and R25. Connect the positive terminal to chassis. In step 11 reduce the 3 volts bias to 1 volt. In step 12 connect a 4.5 volt battery as in steps 4 thru 10. Before attempting step 11 connect 330 $\Omega$  resistors across R29, R33, R38 and R44.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
4. Direct	High side to ungrounded tube shield floating over dummy converter tube (V2). Low side to chassis.	Not used	21MC (Unmod.)	Any	Use VTVM. DC Probe to Point $\text{Ⓧ}$ Common to chassis.	A4, A5	Adjust for MINIMUM deflection.
5. Direct	"	"	27MC	"	"	A6, A7	"
6. Direct	"	"	19.5MC	"	"	A8	"
7. Direct	"	"	22.5MC	"	"	A9	Adjust for maximum deflection.
8. Direct	"	"	24.35MC	"	"	A10	"
9. Direct	"	"	21.75MC	"	"	A11	"
10. Direct	"	"	25.3MC	"	"	A12	"
11. Direct	"	23.5MC (10MC SWP)	22.3MC 25.4MC	"	Vert. Amp. to Point $\text{Ⓧ}$ Low side to chassis.	A13, A14	Adjust for response curve similar to figure 3 with markers as shown. Remove the 330 $\Omega$ resistors.
12. Direct	"	"	21.85MC 24.75MC 25.5MC 26.25MC	"	"	"	Check for response curve similar to figure 4 with markers as shown. If necessary, slightly retouch A9 thru A14 for proper response.

**RF TUNER ALIGNMENT**

Remove the dummy converter tube and replace original 6J6 in its socket. Disconnect the co-ax link from terminal 2 of the terminal board on the RF tuner and connect a 390 carbon resistor between terminals 1 and 2. Loosely couple the link to the terminal board of the RF tuner. Turn the AGC control fully counter-clockwise. Connect the negative terminal of a 3 volt battery to terminal 3 on the terminal board of the RF tuner and the positive terminal to chassis. Set the fine tuning control to the mid-position of its range.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE OR CONNECT VTVM	ADJUST	REMARKS
13. Two 120 $\Omega$ carbon res.	Across antenna terminals with 120 $\Omega$ in each lead.	Not used	215.75MC	13	VTVM DC Probe to Point $\text{Ⓧ}$ Common to chassis.	A15	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
14. "	"	183MC (10MC SWP)	181.25MC 183.75MC	8	SCOPE Vert. Amp. to Point $\text{Ⓧ}$ Low side to chassis.	A16, A17, A18, A19	Adjust for shape of response curve and band width as shown in figure 5.
15. "	"	Not used	87.75MC	8	VTVM DC Probe to Point $\text{Ⓧ}$ Common to chassis.	A20	Adjust as in step 13.
16. "	"	85MC (10MC SWP)	83.25MC 87.75MC	6	SCOPE Vert. Amp. to Point $\text{Ⓧ}$ Low side to chassis.	A21, A22, A23	Adjust for response curve similar to figure 6.
17.	Connect the VTVM to Point D and adjust A24 for -3 volts reading. If necessary, slightly retouch A21, A22, A23 and A17 for proper response on channel 8. Repeat these retouching adjustments until proper response is obtained and a -3 volts is obtained at point $\text{Ⓧ}$ .						

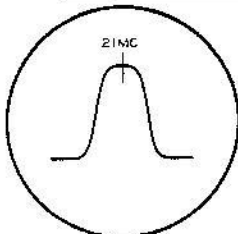


FIG. 1

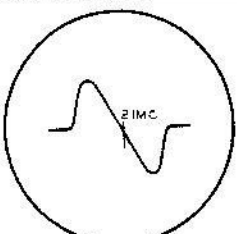


FIG. 2

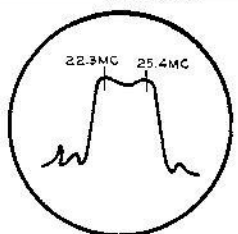


FIG. 3

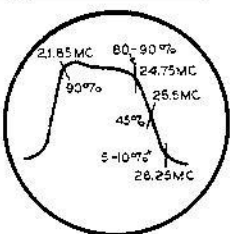


FIG. 4

# ALIGNMENT INSTRUCTIONS (CONT.)

18.	Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	Not used	185.75MC	8	VTVM DC Probe to Point B Common to chassis.	A15	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
19.	"	"	183MC (10MC SWP)	181.25MC 185.75MC	8	SCOPE Vert. Amp. to Point D. Low side to chassis.		Readjust A16, A17 and A19 for correct shape of response curve, frequency, and bandwidth as shown in figure 5. If necessary, readjust A18.
20.	"	"	213MC (10MC SWP)	211.25MC 215.75MC	13	"	A25	Adjust for maximum amplitude of response curve midway between the markers. Then overshoot adjustment by turning slug in same direction a little more than the turning required to reach maximum amplitude from the initial setting. Adjust A19 for maximum amplitude.
21.	"	"	Not used	215.75MC	13	VTVM DC Probe to Point C Low side to chassis.	A26	Adjust for zero reading as in step 18. Then overshoot adjustment as in step 20. Adjust A15 to reset oscillator to proper frequency.
22.	"	"	213MC (10MC SWP) 207MC (10MC SWP) 201MC (10MC SWP) 195MC (10MC SWP) 189MC (10MC SWP) 183MC (10MC SWP) 177MC (10MC SWP)	211.25MC 215.75MC 205.25MC 209.75MC 199.25MC 203.75MC 193.25MC 197.75MC 187.25MC 191.75MC 181.25MC 185.75MC 175.25MC 179.75MC	13 12 11 10 9 8 7	SCOPE Vert. Amp. to Point D. Low side to chassis.		Check all high band channels for proper response with markers above 80%. If markers do not appear well within 80%, repeat step 14. If A19 is adjusted, the adjustment should be overshoot a small amount and compensated for by adjusting A25 for maximum amplitude between the sound and video markers. If the valley in the top of the curves for the high channels is deeper than normal, adjust A27 to flatten the curve. In later productions A24 may be fixed and will not require adjustment.
23.	Check the oscillator frequency for the high band channels. If the oscillator is off frequency, overshoot the adjustment of A15 and compensate for by adjusting A26 for zero voltage at Point B.							
24.	Repeat step 15.							
25.	Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	85MC (10MC SWP)	83.25MC 87.75MC	6	SCOPE Vert. Amp. to Point D. Low side to chassis.		Check for response curves similar to figure 6. If necessary, slightly readjust A21, A22 and A23 for proper response.
26.	Check the voltage at Point D. If necessary adjust A24 for a -3 volt reading. If A24 is adjusted, turn the channel switch to channel 8 and readjust A16 for proper response.							
27.	Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	85MC (10MC SWP)	83.25MC 87.75MC	6	SCOPE Vert. Amp. to Point D. Low side to chassis.		Check all low band channels for proper shape of response curves as shown in figure 6 and the injection voltage at Point D which should be -3 volts. Also recheck channels 7 thru 13.
28.	"	"	Not used	215.75MC	13	VTVM DC Probe to Point C Common to chassis.		If necessary adjust A15 for zero reading as in step 13.
29.	"	"	"	209.75MC 203.75MC 197.75MC 191.75MC 185.75MC 179.75MC 87.75MC 81.75MC 71.75MC 65.75MC 59.75MC	12 11 10 9 8 7 6 5 4 3 2	"	A28 A29 A30 A31 A32 A33 A20 A34 A35 A36 A37	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
30.	Turn channel switch to channel 8 and adjust A14 for proper response. When A14 is properly adjusted the curve will be slightly wider with a slightly deeper valley at the top. Check all channels for proper response, oscillator injection voltage at Point D, and oscillator frequency. Slight touch-up adjustments may be made if necessary. If A16 and A24 are changed considerably, a recheck of the oscillator frequency on all channels should be made.							
31.	Disconnect the 38Ω resistor from terminals 1 and 2 on the terminal board of the RF Tuner and reconnect the co-ax link. Repeat steps 11 and 12 of Video IF Alignment.							

RCA VICTOR MODELS 2151, 2160  
(Ch. KCS45, KCS45A)

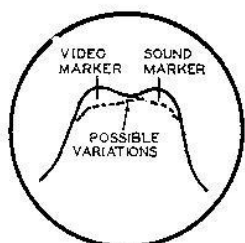


FIG. 5

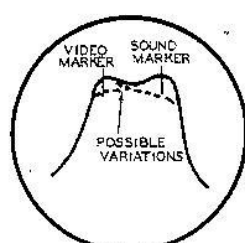
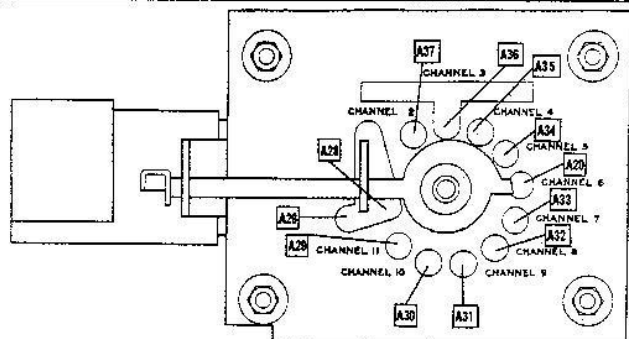


FIG. 6



OSC. ALIGNMENT POINTS

# VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BC6	-1VDC	3VDC	0V	6.3VAC	180VDC	95VDC	0V		
V 2	6J6	65VDC	130VDC	0V	6.3VAC	-5VDC	5-2.7VDC	0V		
V 3	6AU6	0V	0V	0V	6.3VAC	105VDC	160VDC	1.2VDC		
V 4	6BC6	0V	1.2VDC	6.3VAC	0V	120VDC	105VDC	0V		
V 5	6AU6	0V	0V	6.3VAC	6.3VAC	75VDC	185VDC	1VDC		
V 6	6BC6	0V	1.7VDC	6.3VAC	0V	195VDC	195VDC	0V		
V 7	6AL5	0V	-2VDC	6.3VAC	0V	0V	0V	-3VDC		
V 8	12AU7	35VDC	2VDC	4.8VDC	6.3VAC	6.3VAC	170VDC	0V	3VDC	0V
V 9	12AU7	9VDC	0V	1.4VDC	6.3VAC	6.3VAC	40VDC	9VDC	9VDC	0V
V 10	6AU6	0V	0V	0V	6.3VAC	250VDC	160VDC	9VDC		
V 11	6AU6	-7VDC	0V	0V	6.3VAC	215VDC	65VDC	0V		
V 12	6AL5	0V	-1VDC	1.3VAC	6.3VAC	1VDC	0V	-1VDC		
V 13	6AV6	-6VDC	0V	0V	6.3VAC	-3VDC	-3VDC	100VDC		
V 14	6AG5	0V	1VDC	0V	6.3VAC	260VDC	270VDC	0V		
V 15	6AV6	-7.4VDC	0V	0V	6.3VAC	0V	0V	245VDC		
V 16	6AG5	0V	2.3VDC	0V	6.3VAC	0V	100VDC	0V		
V 17	6SN7GT	1.2VDC	5.4VDC	0V	6.3VAC	245VDC	245VDC	0V		
V 18	6AU6GT	-3.8VDC	40VDC	8.8VDC	43VDC	175VDC	0V	6V	6.3VAC	
V 19	6W4GT	0V	0V	20VDC	Inf.	*	Inf.	5.3VAC	180VDC	
V 20	12L4	0V	0V	420VDC	0V	250VDC	0V	420VDC	420VDC	
V 21	12L4	0V	0V	370VDC	PIN 11 110VDC	PIN 12 6.3VAC				

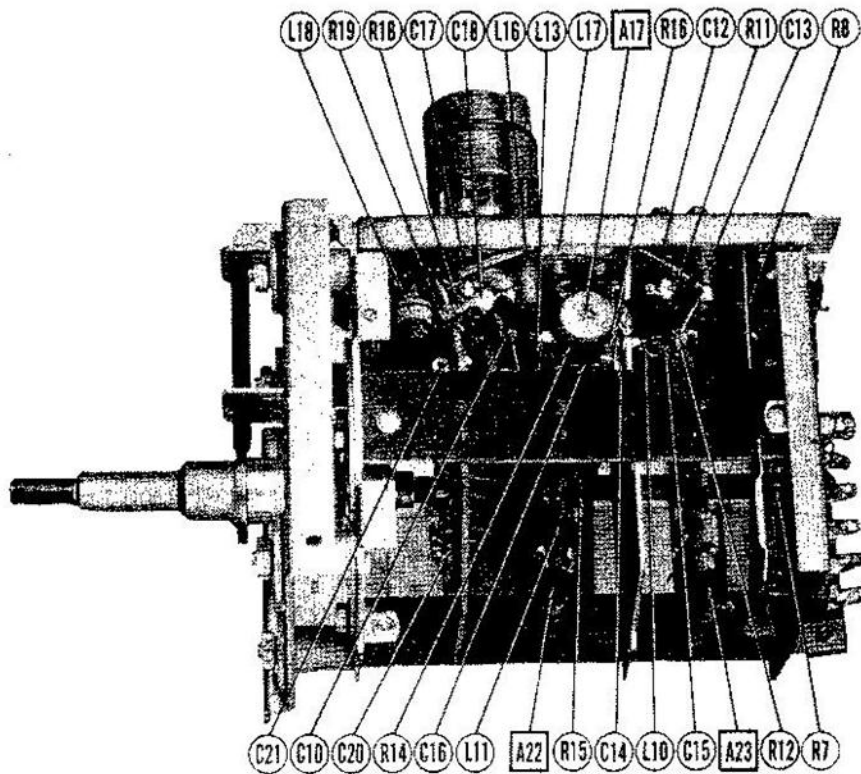
\* DO NOT MEASURE.  
 † TURN "AGC" SWITCH CLOCKWISE.  
 ‡ TURN TV-PHONO SWITCH TO "TV" POSITION.  
 § TAKEN WITH VACUUM TUBE VOLTMETER.  
 \* DO NOT MEASURE.

RESISTANCE READINGS

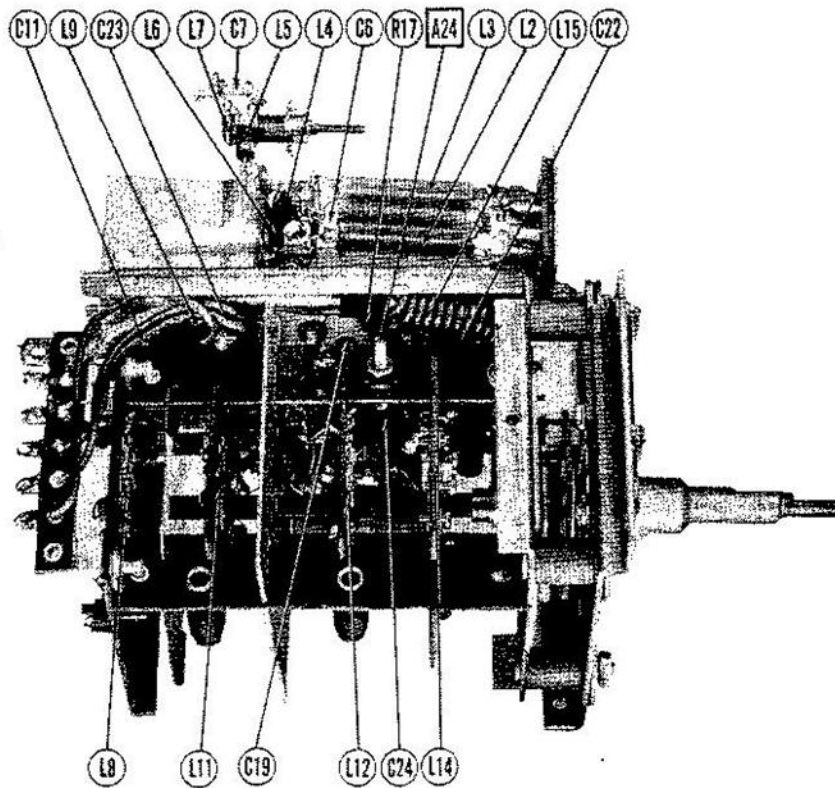
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BC6	75KΩ	27Ω	0Ω	.1Ω	110KΩ	12.8KΩ	0Ω		
V 2	6J6	110KΩ	15-8KΩ	0Ω	.1Ω	108KΩ	100KΩ	0Ω		
V 3	6AU6	37KΩ	0Ω	0Ω	.1Ω	110KΩ	139KΩ	120Ω		
V 4	6BC6	45KΩ	120Ω	.1Ω	0Ω	117KΩ	150KΩ	0Ω		
V 5	6AU6	30KΩ	0Ω	0Ω	.1Ω	114KΩ	133KΩ	22Ω		
V 6	6BC6	.1Ω	180Ω	.1Ω	0Ω	19.25KΩ	16.7KΩ	0Ω		
V 7	6AL5	0Ω	5.6KΩ	.1Ω	0Ω	.1Ω	0Ω	33KΩ		
V 8	12AU7	120KΩ	5.6KΩ	5.6KΩ	.1Ω	.1Ω	16.8KΩ	200KΩ	220Ω	0Ω
V 9	12AU7	30KΩ	40KΩ	200KΩ	.1Ω	.1Ω	118KΩ	36KΩ	2.2KΩ	0Ω
V 10	6AL5	470KΩ	0Ω	0Ω	.1Ω	11000Ω	128KΩ	82Ω		
V 11	6AU6	100KΩ	0Ω	0Ω	.1Ω	18.2KΩ	135KΩ	0Ω		
V 12	6AL5	0Ω	100KΩ	5.1Ω	.1Ω	200KΩ	0Ω	100KΩ		
V 13	6AV6	10 Meg.	0Ω	0Ω	.1Ω	70KΩ	70KΩ	1330KΩ		
V 14	6AG5	470KΩ	66Ω	0Ω	.1Ω	140Ω	143Ω	470KΩ		
V 15	6AV6	1.2 Meg.	500Ω	0Ω	.1Ω	0Ω	0Ω	41.5 Meg.		
V 16	6AG5	2.2 Meg.	370Ω	0Ω	.1Ω	11.6KΩ	11.8KΩ	2.2 Meg.		
V 17	6SN7GT	1.6 Meg.	140KΩ	400KΩ	550KΩ	182KΩ	0Ω	0Ω		
V 18	6AU6GT	470KΩ	0Ω	220Ω	Inf.	120Ω	Inf.	1Ω	16.8KΩ	
V 19	6W4GT	Inf.	Inf.	400KΩ	Inf.	185Ω	Inf.	Inf.	Inf.	TOP CAP #4000
V 20	12L4	Inf.	Inf.	Inf.	PIN 11 100KΩ	PIN 12 Inf.	Inf.	Inf.	Inf.	
V 21	12L4	0Ω	1 Meg.	#220KΩ	100KΩ	.1Ω				

TURN "AGC" SWITCH CLOCKWISE.  
 TURN TV-PHONO SWITCH TO "TV" POSITION.  
 † MEASURED FROM OUTPUT OF M2.  
 ‡ MEASURED FROM PIN 3 OF V18.

- DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
- Pin numbers are counted in a clockwise direction on bottom of socket.
- Measured values are from socket pin to common negative unless otherwise stated.
- Line voltage maintained at 117 volts for voltage readings.
- Front panels controls set at minimum.
- Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.

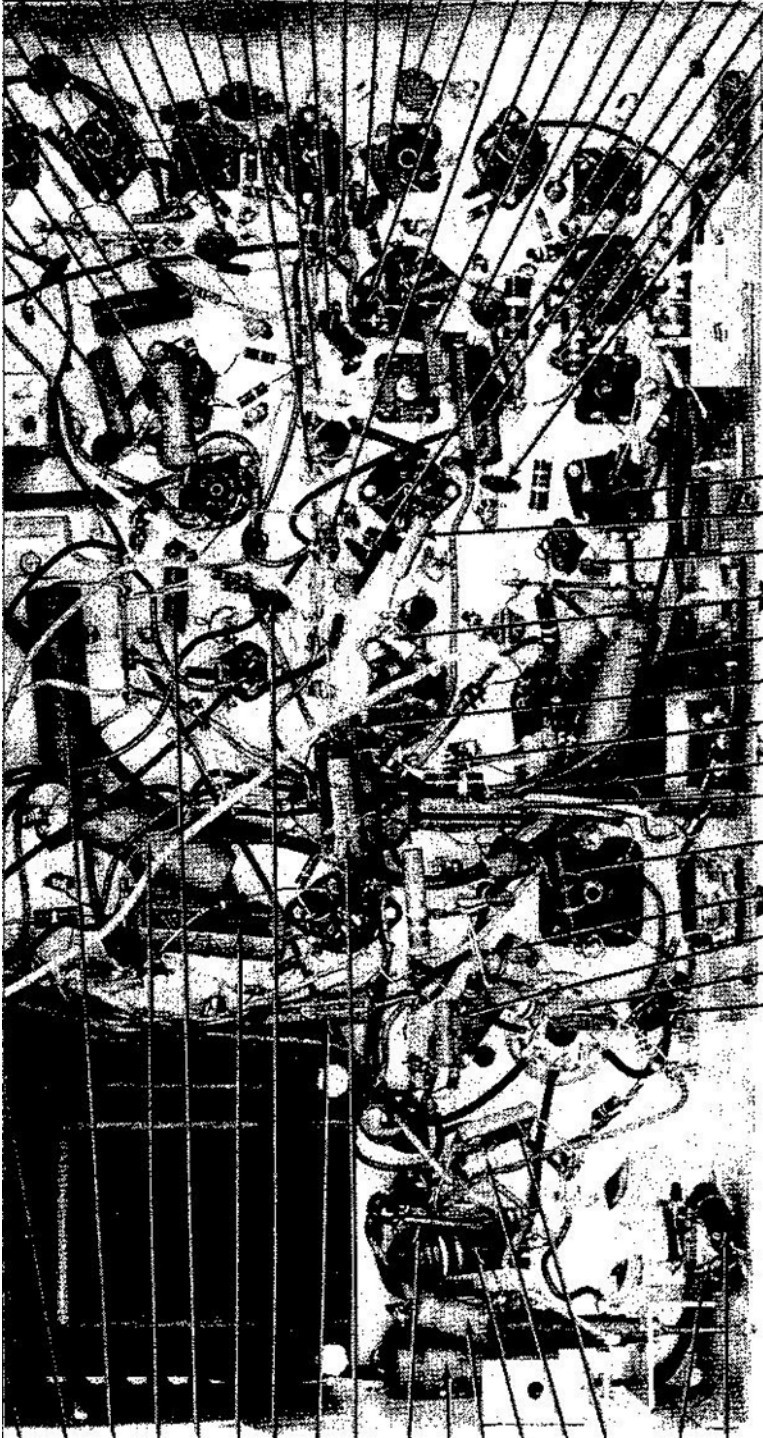


RF TUNER-RIGHT SIDE



RF TUNER-LEFT SIDE

C32 C33 C28 C36 C37 C52 C49 C44 C38 C29 C40 C39 C42 C51 C66 C46 C45 C64 C65 C48 C43 C68  
C67  
C50

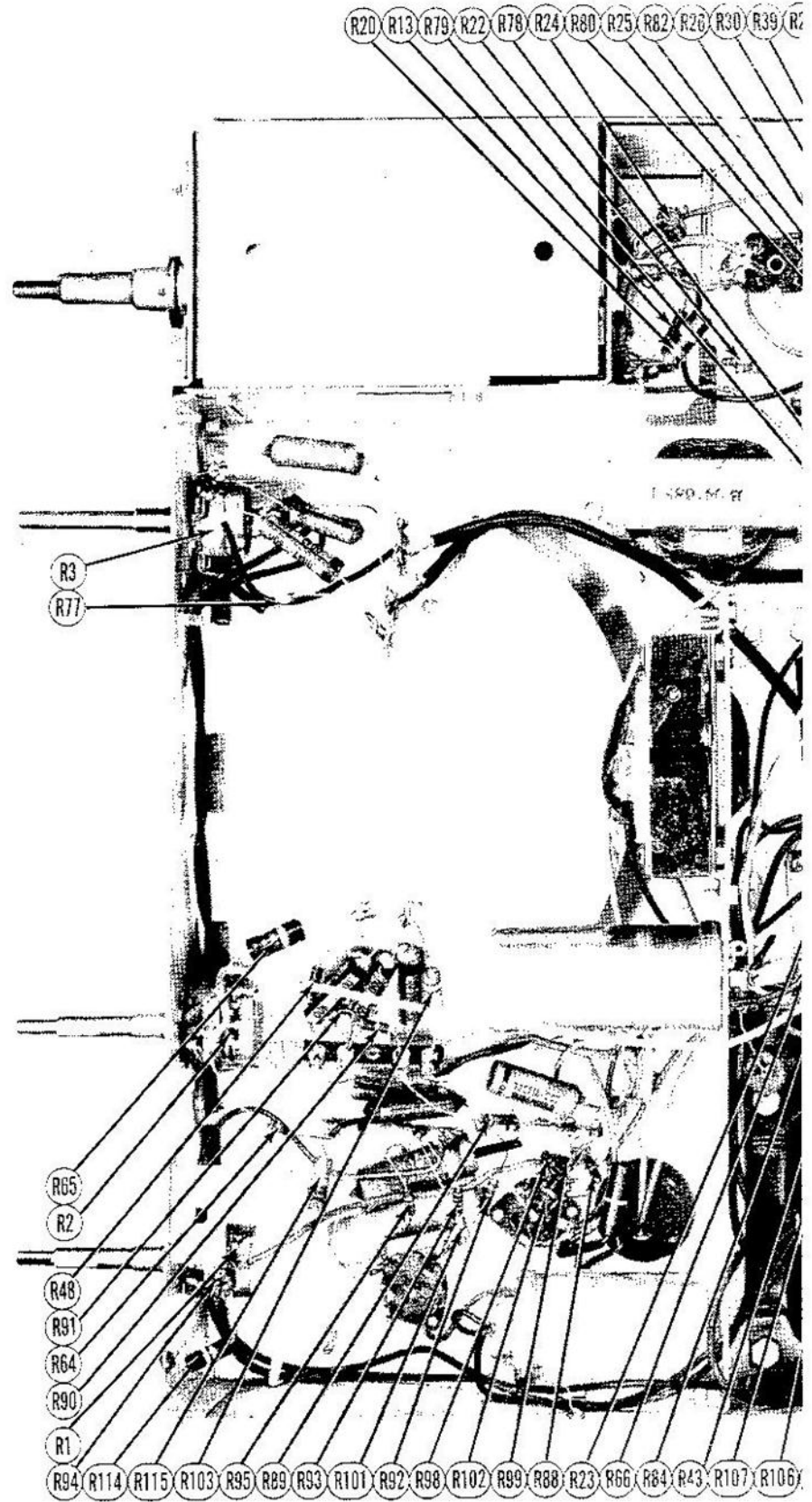


C70  
C53  
C69  
C54  
C58  
C62  
C57  
C59  
C60  
C95  
C91  
C89  
C90  
C95

C3 C63 C56 C88 C74 C77 C55 C94 C61 C102 C93 C92 C101 C97 C98 C105 C104

APACITOR IDENTIFICATION

RCA VICTOR MODELS 2151, 2160  
(Ch. KCS45, KCS545A)



CHASSIS BOTTOM VIEW-I

# PARTS LIST AND DESCRIPTIONS

## TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		RCA PART No.	STANDARD REPLACEMENT		
V1	RF Amp.	6CB6	6CB6	6CK	
V2	Converter	6J6	6J6	7BF	
V3	1st Video IF	6AL6	6AU6	7BK	
V4	2nd Video IF	6CB6	6CB6	6CK	
V5	3rd Video IF	6AU6	6AU6	7BK	
V6	4th Video IF	6CB6	6CB6	6CK	
V7	Video Det. -AGC Rect.	6AL5	6AL5	6BT	
V8	Video Amp.	12AU7	12AU7	9A	
V9	DC Rest. -Sync. Sep.	12AU7	12AU7	9A	
V10	1st Sound IF	6AU6	6AU6	7BK	
V11	Limiter	6AU6	6AU6	7BK	
V12	Sound Discr.	6AL5	6AL5	6BT	
V13	AGC Clamper -AF Amp.	6AV6	6AV6	7BT	
V14	Audio Output	6AQ5	6AQ5	7BZ	
V15	Vert. Osc.	6AV6	6AV6	7BT	
V16	Vert. Output	6AQ5	6AQ5	7BZ	
V17	Hor. AFC -Hor. Osc.	6SN7GT	6SN7GT	8BD	
V18	Hor. Output	6AU6GT	6AU6GT	6CK	
V19	Damper	6W4GT	6W4GT	4CG	
V20	HV Rect.	1B3GT	1B3GT	3C	
V21	Picture Tube	12LP4	12LP4	12D	

## CAPACITORS

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

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
		RCA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1	150	73220	E4A85		UPE15020		TVL-1540	Filter
C2	150	73220	E4A85		UPE15020		TVL-1540	Filter
C3A	10	73219	AFR2J202H4A		UPT419			Decoupling
B	100							Filter
C	10							Decoupling
D	20							Output Cathode
C4A	10	73218	AFH2H33B		UPT316			Vert. Output Dec.
B	5							Decoupling
C	150							Vert. Output Cath.
C5	2	73747	SRE50/2		BBR2-50		TVA-1301	AGC Filter
C6	130	73437	SI-03	D6-131		GP1K-100	19C11	RF Coupling
C7	39	73196		TCN-39		N750L-39		Fixed Trimmer
C8	270	73199	SI270	D6-271		GP2K-270	19C31	RF Coupling
C9	5000	73473	BPD-005	DD-502		311-305	29C1	AGC Filter
C13A	1500	73669	BPD-2 x 0015	DD-2-152		882-2 x 0015	29C6	RF Screen
B	1500							RF Filament
C11	12	73200	SI12	TCZ-12		GP1K-12		RF Cathode
C12	1500	73168						RF Bypass
C13	1500	73166						RF Bypass
C14	270	73199	SI270	D6-271		GP2K-270	19C31	RF Coupling
C15	270	73199	SI270	D6-271		GP2K-270	19C31	RF Coupling
C16	470	73196	SI470	D6-471		GP2K-470	19C15	RF Coupling
C17	1500	73163						Conv. Decoupling
C18	6.8	73197	SI6.8NPO	TCZ-6.8		NPOK-6.8		Fixed Trimmer
C19	39	73196		TCN-39		N750L-39		Fixed Trimmer
C20	.68	71504		TCZ-.68				Fixed Trimmer
C21	15	43465	SI15	TCZ-15		GP1K-15	19C5	Osc. Feedback
C22	4	73289						Osc. Feedback
C23	1500	73196						Filament Bypass
C24	1500	73748						Conv. Fil. Bypass
C25	56	71924		TCN-56		N750L-56		Fixed Trimmer
C26	82			TCZ-82		NPOM-82		Fixed Trimmer
C27	1500	73748	BPD-0015	DD-152	1W5D15	811-0015	19C20	RF Bypass
C28	1500	73748	BPD-0015	DD-152	1W5D15	811-0015	19C20	RF Bypass
C29	1500	73748	BPD-0015	DD-152	1W5D15	811-0015	19C20	RF Bypass
C30	1500	73748	BPD-0015	DD-152	1W5D15	811-0015	19C20	AGC Filter
C31A	1500	75089	BPD-2 x 0015	DD-2-152	1W5D15	882-2 x 0015	29C6	AGC Filter
B	1500							1st V. IF Fil.
C32	1500	73748	BPD-0015	DD-152	1W5D15	811-0015	19C20	1st V. IF Screen
C33	13000	73960	BPD-31	DD-103	PTE4S1	811-31	36C1	1st V. IF Plate Dec.
C34	1500	72746	BPD-0015	DD-152	1W5D15	811-0015	19C20	RF Bypass
C35	47			TCZ-47		NPOM-47	23C14	Fixed Trimmer
C36	270	73091	1468-00025	D6-271	5W5T25	GP2K-270	19C31	IF Coupling
C37A	1500	75089	BPD-2 x 0015	DD-2-152	1W5D15	882-2 x 0015	29C6	AGC Filter
B	1500							2nd V. IF Fil.
C38A	1500	75089	BPD-2 x 0015	DD-2-152	1W5D15	882-2 x 0015	29C6	2nd V. IF Screen
B	1500							2nd V. IF Dec.
C39A	1500	75089	BPD-2 x 0015	DD-2-152	1W5D15	882-2 x 0015	29C6	AGC Filter
B	1500							S. IF Grid Filter
C40	270	73091	1468-00025	D6-271	5W5T25	GP2K-270	19C31	IF Coupling
C41	47			TCZ-47		NPOM-47	23C14	Fixed Trimmer
C42	1500	73748	BPD-0015	DD-152	1W5D15	811-0015	19C20	3rd V. IF Screen
C43	.1	73551	P483-1	DF-104	PTE4P1		47M-P1	3rd V. IF Screen
C44	10000	73960	BPD-01	DD-103	PTE4S1	811-01	36C1	3rd V. IF Plate Dec.
C45	5000	73473	BPD-0015	DD-152	1W5D15	811-0015	19C20	3rd V. IF Fil.
C46	270	73091	1468-00025	D6-271	5W5T25	GP2K-270	19C31	IF Coupling
C47	1500	73746	BPD-0015	DD-152	1W5D15	811-0015	19C20	RF Bypass
C48	1500	73748	BPD-0015	DD-152	1W5D15	811-0015	19C20	4th V. IF Screen
C49	100	43469	SI100NPO	TCZ-100	5W5T1	NPOM-100	36C10	4th V. IF Cath.
C50	5000	73473	BPD-0015	DD-152	1W5D15	811-0015	19C20	4th V. IF Fil.
C51A	1500	75089	BPD-2 x 0015	DD-2-152	1W5D15	882-2 x 0015	29C6	4th V. IF Plate Dec.
B	1500							RF Bypass
C52	75		SI75NPO	TCZ-75		NPOM-75		Fixed Trimmer
C53	270	73091	1468-00025	D6-271	5W5T25	GP2K-270	19C31	IF Coupling
C54	100	39396	SI100	D6-101	5W5T1	GP1K-100	19C11	IF Coupling
C55	1500	73748	BPD-0015	DD-152	1W5D15	811-0015	19C20	AGC Filter
C56	.47	200	P288-47	GT2P5			27M-P47	AGC Filter
C57	10	53511	SI10NPO	TCZ-10	5W5Q1	NPOK-10	19C3	V. Diode Filter

RCA VICTOR MODELS 2151, 2160  
(Ch. KCS45, KCS45A)





# PTIONS (Continued)

ONT.)

IDENTIFICATION CODES	
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- 2nd Video IF Amp. Cathode
- 2nd Video IF Amp. Screen
- 2nd Video IF Amp. Plate
- 2nd Video IF Amp. Decoupling
- Sound IF Amp. Grid
- 3rd Video IF Amp. Cathode
- 3rd Video IF Amp. Screen
- 3rd Video IF Amp. Plate
- 3rd Video IF Amp. Plate Decoupling
- 4th Video IF Amp. Screen
- 4th Video IF Amp. Cathode
- AGC Network
- AGC Network
- 4th Video IF Amp. Plate
- 4th Video IF Amp. Plate Decoupling
- AGC Network
- Video Det. Diode Load
- Video Amp. Cathode
- Voltage Divider
- Video Amp. Cathode
- Video Amp. Grid
- Video Amp. Plate
- Video Amp. Decoupling
- Decoupling
- Decoupling
- Video Amp. Plate
- Video Peaking
- Picture Tube Grid
- DC Rest. Load
- Sync. Sep. Grid
- AGC Network
- AGC Network
- AGC Network
- Voltage Divider
- Voltage Divider
- Picture Tube Cathode
- Sound IF Amp. Cathode
- Sound IF Amp. Screen
- Sound IF Amp. Decoupling
- Voltage Divider
- Limiter Screen
- Limiter Decoupling
- Disc. Diode Load
- Disc. Diode Load
- Disc. Filament-Wire Wound
- De-emphasis
- Tone Compensation
- AF Amp. Grid
- AF Amp. Plate
- Audio Output Grid
- Audio Output Cathode
- Audio Output Cathode
- Sync. Sep. Grid
- Sync. Sep. Grid
- Voltage Divider
- Sync. Sep. Cathode
- Sync. Sep. Plate
- Voltage Divider
- Integrator
- Integrator
- Integrator
- Current Limiting
- Vert. Osc. Grid
- Vert. Osc. Grid
- Vert. Osc. Plate
- Voltage Divider
- Decoupling
- Vert. Peaking
- Vert. Output Grid
- Vert. Output Cathode
- Current Limiting
- Voltage Divider
- Voltage Divider
- Vert. Output Decoupling
- Acc. Anode Load
- Acc. Anode Load
- Voltage Divider
- Horiz. AFC Grid
- Horiz. AFC Grid
- Horiz. AFC Cathode
- Horiz. AFC Cathode
- Horiz. AFC Filter Network
- Horiz. AFC Filter Network
- Voltage Divider
- Voltage Divider
- Horiz. Osc. Grid
- Horiz. Osc. Transformer Shunt
- Horiz. Osc. Plate
- Voltage Divider
- Horiz. Output Grid
- Parasitic Suppressor
- Horiz. Output Cathode
- Horiz. Output Screen
- Horiz. Linearity Coil Shunt
- HV Filter
- Line Filter

## TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
					RCA	STANCOR	MERIT	CHICAGO
	PRI.	SEC. 1	SEC. 2	SEC. 3	PART No.	PART No.	PART No.	PART No.
T1	117VAC ① 1.5A	140VAC 240ADC	6.3VAC ② 1.2A	6.3VAC ③ 9A	75207			

## TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	DC RESISTANCE		RCA	STANCOR	MERIT	CHICAGO	
	PRI.	SEC.					
T2	400Ω	0Ω	75240				Hor. Output Trans.
T3	Tap ① 31Ω		75208				Vert. Output Trans.
T4A	540Ω	.8Ω	75204				Hor. Deflection Coil
B	42Ω						Vert. Deflection Coil
B	3.9Ω						

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		RCA	STANCOR	MERIT	CHICAGO	
	PRI.	SEC.	PRI.	SEC.					
T5A	7500Ω	.4Ω	400Ω	.6Ω	75520 ①	A-814 ①	A-3020	RO-13 ①	① Drill one new mounting hole. ② Used in model 2T60 only. ③ Used in model 2T51 only.
B	5800Ω	4.2Ω	500Ω	.4Ω	7419 ③	A-3877	A-2990	RO-8 ②	

## SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	RCA	JENSEN	GUAM		
	PM	4Ω				PART No.	
SPLA	EM	4Ω	75022 ②	ST-116 ③ MOD. PB-U	8A21 ④	② Used in model 2T60 only. ③ Used in model 2T51 only. ④ Remount output transformer.	
B	EM		75628 ③				
SP2A	CONE DIA. 7 1/4"	V. C. DIA. 8/4"	75024				
B	5 x 7						

## FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (D. C. CURRENT 1000 mA)	RCA	STANCOR	MERIT	CHICAGO	
L1	240ADC	45Ω	1.3 Henries	73154	C-2326	C-2991	TR-3300 ①	① Drill one new mounting hole.

## COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	RCA	MEISSNER	
L2	Ant. Coil	.6Ω	.6Ω	73381 *		* Part of antenna matching unit. Refer misc.
L3	Ant. Coil	.8Ω	.8Ω	73581 *		
L4	IF Trap	.7Ω		73242 *		Wound on 18MMF capacitor.
L5	IF Trap	.7Ω				Wound on 18MMF capacitor.
L6	Ant. Shunt	.4Ω		75241 *		
L7	FM Trap	0Ω		75449 *		
L8	Ant. Coils	0Ω		75160		Complete with stator, rotor, C6, C9, R7, R9, R10
L9	Fl. Choke	0Ω		73477		Includes trimmer capacitor
L10	RF Trimmer	0Ω		75183		Complete with stator, rotor, C15, R12
L11	RF Coils	0Ω		73179		
L12	Mixer Grid Coils	0Ω		75178		Complete with stator, rotor, R14, R15, R16
L13	Mixer Grid Trimmer Coil	0Ω		75182		Includes trimmer capacitor
L14	Osc. Coils	0Ω		75175		Complete with stator, rotor, C20, C21
L15	Fl. Choke	0Ω				
L16	Mixer Plate Loading Coil	0Ω		75185		
L17	RF Choke	.3Ω		75202		
L18	Conv. Trans.	.3Ω	.1Ω	75181		
L19	1st Video IF	.1Ω	.5Ω	74589		With trap
L20	Fl. Choke	0Ω		73477		
L21	2nd Video IF	.2Ω		74590		With trap
L22	3rd Video IF					
	-Sound Take Off	.3Ω	.1Ω	75209		
L23	Fl. Choke	0Ω		73477		
L24	4th Video IF	.1Ω	.1Ω	74592		With trap
L25	Sound Trap	.1Ω	0Ω	71778		
L26	5th Video IF	.5Ω		75210		
L27	Peaking	3Ω		75299		36 microhenries, orange-white dots, wound on 10 Meg
L28	Peaking	5.5Ω		75253	19-1921	120 microhenries, blue-red dots
L29	Peaking	2.7Ω		71793		36 microhenries-black dot
L30	Peaking	5.5Ω		75253	19-1921	120 microhenries, blue-red dots
L31	Peaking	13Ω		75252	19-1923	500 microhenries, green-white dots
L32	4.5MC Trap	2.7Ω		75251		Wound on 97MMF capacitors, green-yellow dots
L33	Sound IF	.3Ω		75211		
L34	Disc. Trans.	.1Ω	.1Ω	75212		
L35	Horiz. Osc. Trans.	80Ω	48Ω	75213		
L36	Horiz. Lta.	30Ω		71449		

RCA VICTOR MODELS 2T51, 2T60  
(Ch. KCS45, KCS45A)

## PARTS LIST AND DESCRIPTIONS (Continued)

### SELENIUM RECTIFIER

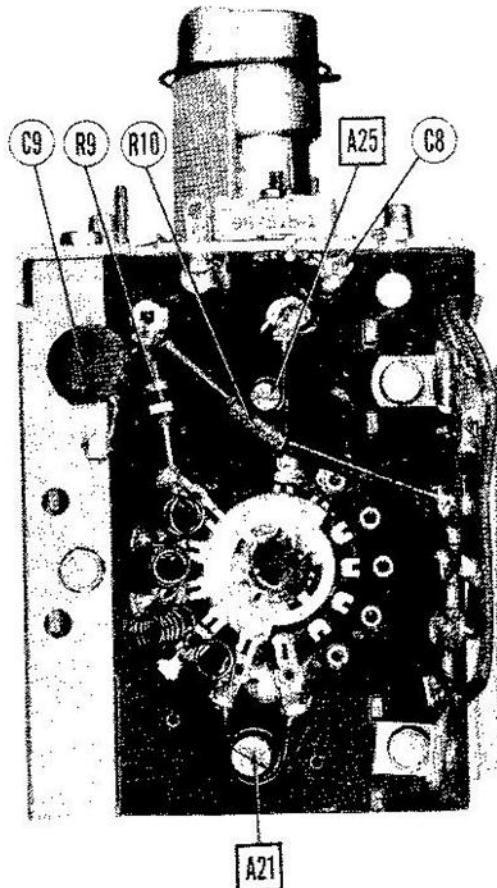
ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT	RCA PART No.	SYLVANIA PART No.	SELETRON PART No.	
M1	.240ADC	75221	NF-5	6Q2	
M2	.240ADC	75221	NF-5	6Q2	

### DIAL LIGHTS

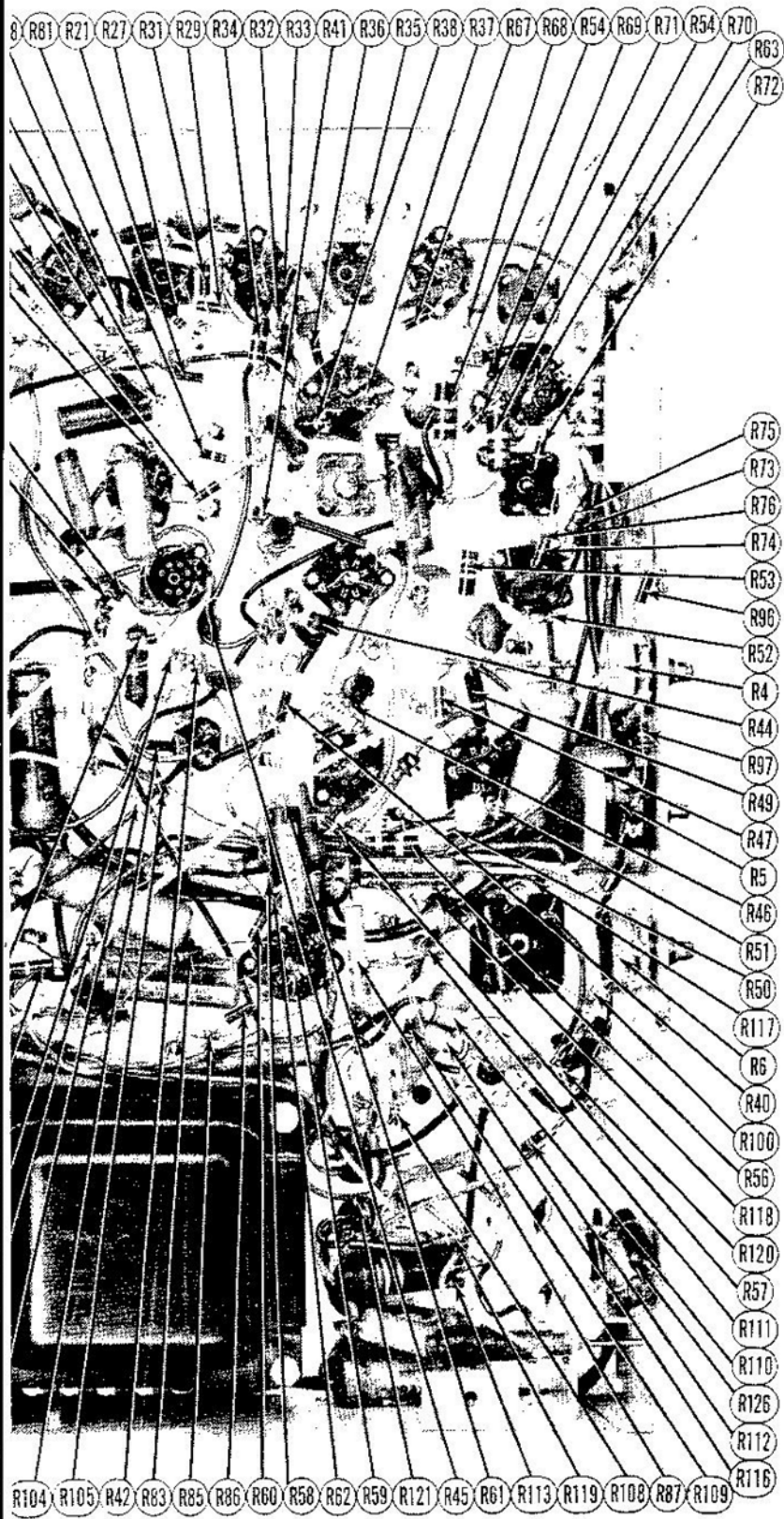
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA	NOTES
					RCA PART No.	
M3	Bayonet	5-8	.2	White	11765	Type #51, Model 2T60

### MISCELLANEOUS

ITEM No.	PART NAME	RCA PART No.	NOTES
M4	RF Tuner		
M5	Fuse	72600	.25A 250V
M6	Switch	75629	AGC
M7	Switch	33491	TV-Phono
M8	Ion Trap	74168	
M9	Picos Magnet	75235	Includes Plate and Stud
	Safety Glass	75478	Model 2T60
	Safety Glass	75468	Model 2T51
	Knob	74980	Channel selector, maroon
	Knob	75462	Channel selector, beige
	Knob	74959	Fine tuning, maroon
	Knob	75451	Fine tuning, beige
	Knob	74982	Brightness, Vert. hold, maroon
	Knob	75453	Brightness, Vert. hold, beige
	Knob	74983	Contrast, Horiz. hold, maroon
	Knob	75454	Contrast, Horiz. hold, beige
	Knob	74989	Volume, maroon
	Knob	75503	Volume, beige
	Escutcheon	75499	Channel marker, dark
	Escutcheon	75531	Channel marker, light
	Antenna Matching Unit	75241	Complete with connector, L2, L3, L4, L5, L6, L7, C8, C7

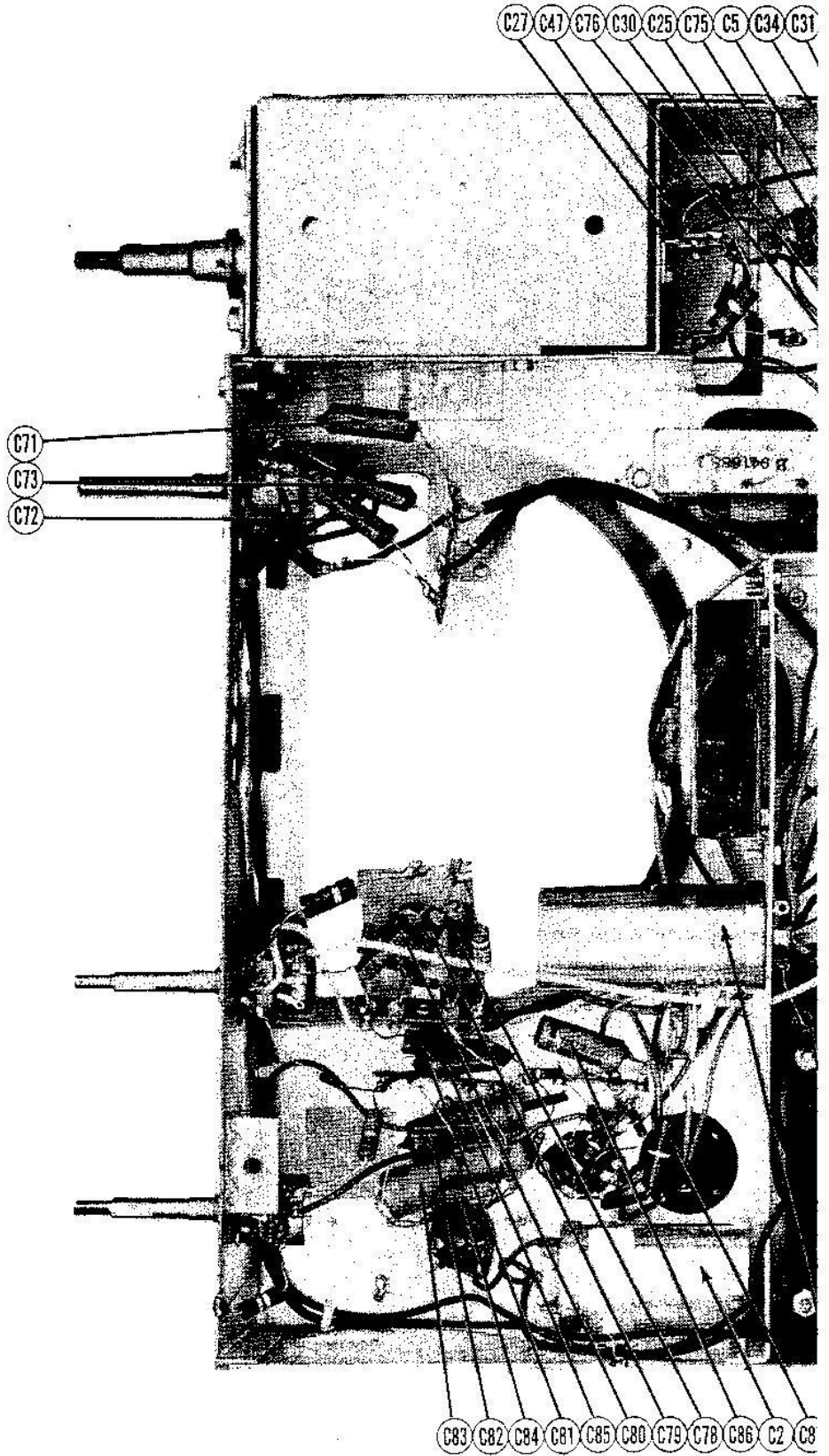


RF TUNER-REAR VIEW

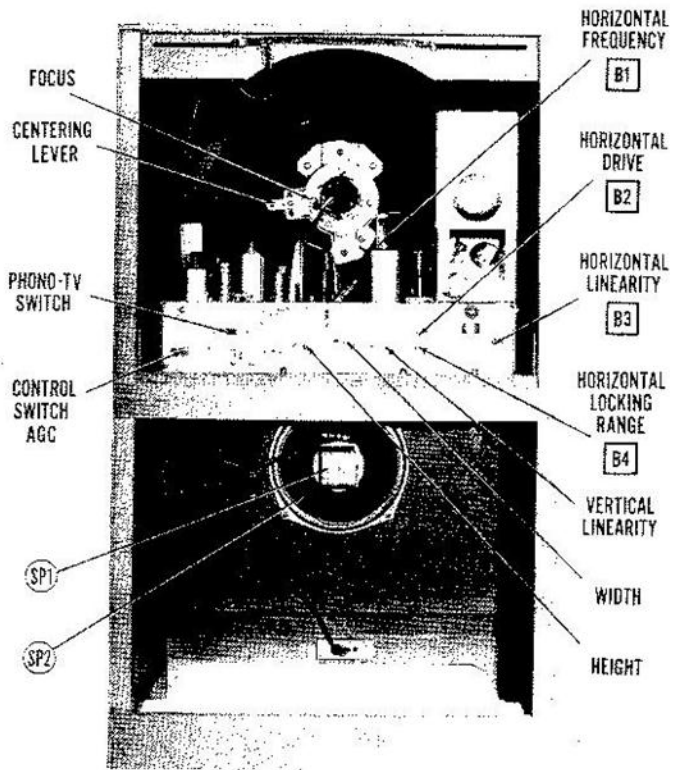


RCA VICTOR MODELS 2151, 2160  
 (Ch. KC545, KC5545A)

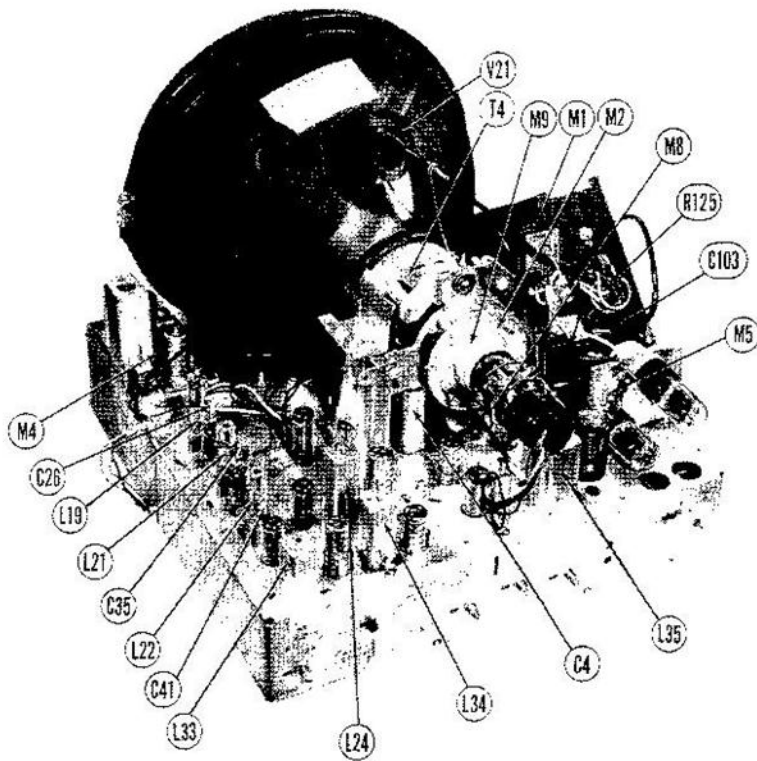
RESISTOR IDENTIFICATION



CHASSIS BOTTOM VIEW-C



CABINET-REAR VIEW



CHASSIS-TOP VIEW

## HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Connect a short between terminals C and D of L35.

Turn the set on and tune in a TV station preferably a test pattern.

Turn the horizontal hold control fully clockwise and adjust the horizontal frequency slug (B1) until the blanking signal appears as a single vertical line in the raster.

Turn the hold control 1/4 turn counter-clockwise to sync the picture.

Adjust the horizontal drive trimmer (B2) clockwise as far as possible without crowding the right side of the picture. Adjust the width control until the picture is of proper width. Adjust the horizontal linearity slug (B3) until the picture is symmetrical from left to right. A slight readjustment of B3 may be necessary for optimum results.

Turn the hold control fully counter-clockwise and momentarily remove the signal by switching to another channel and back again.

Turn the hold control slowly clockwise and note the least number of bars present just before the picture pulls into synchronization.

Adjust the horizontal locking trimmer (B4) until 7 to 9 bars are present just before pull-in.

## HORIZONTAL OSCILLATOR WAVEFORM ADJUSTMENT

Remove the short from terminals C and D of L35.

Turn the horizontal hold control fully clockwise, and adjust the waveform adjustment (B5) until the blanking signal appears in the picture as a single vertical line.

Turn the hold control counter-clockwise 1/4 turn to synchronize the picture.

Connect the low capacity probe of an oscilloscope to terminal C of L35 and chassis.

Adjust B5 until the broad and narrow peaks of the waveform are of equal height as shown in figure 7. If necessary during this adjustment turn the hold control to keep the picture in sync.

Turn the hold control to maximum counter-clockwise and momentarily remove the signal. Adjust B6 until 2 bars are present just before pull in as the hold control is turned clockwise.

Turn the horizontal hold control to maximum clockwise and adjust B1 until the blanking bar appears in the picture as a single vertical line. Turn the hold control 1/4 turn counter-clockwise to synchronize the picture.

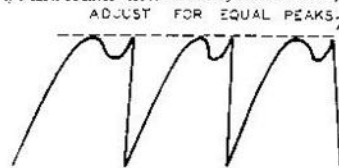


FIG. 7

## AGC SWITCH ADJUSTMENT

In a strong signal area the normal position of the AGC switch is in the counter-clockwise position. If an interference of the impulse type is encountered turn the switch to the center position. In very weak signal areas turn the switch fully clockwise.

## FM TRAP ADJUSTMENT

If interference is encountered from a strong FM station signal, it may be eliminated by adjusting the trap coil A38 for minimum interference in the picture.

## DISASSEMBLY INSTRUCTIONS

1. Remove seven push-on type control knobs.
2. Disconnect built-in antenna.
3. Remove four wood screws, and two 1/4" hex head metal screws from rear cover. Remove rear cover.
4. Remove four 3/8" hex head bolts from bottom of chassis.
5. Disconnect speaker.
6. Remove chassis.
7. Remove four 5/16" hex nuts from speaker. Remove speaker.