

HALLICRAFTERS
MODELS 745, 750, 751, 760, 761

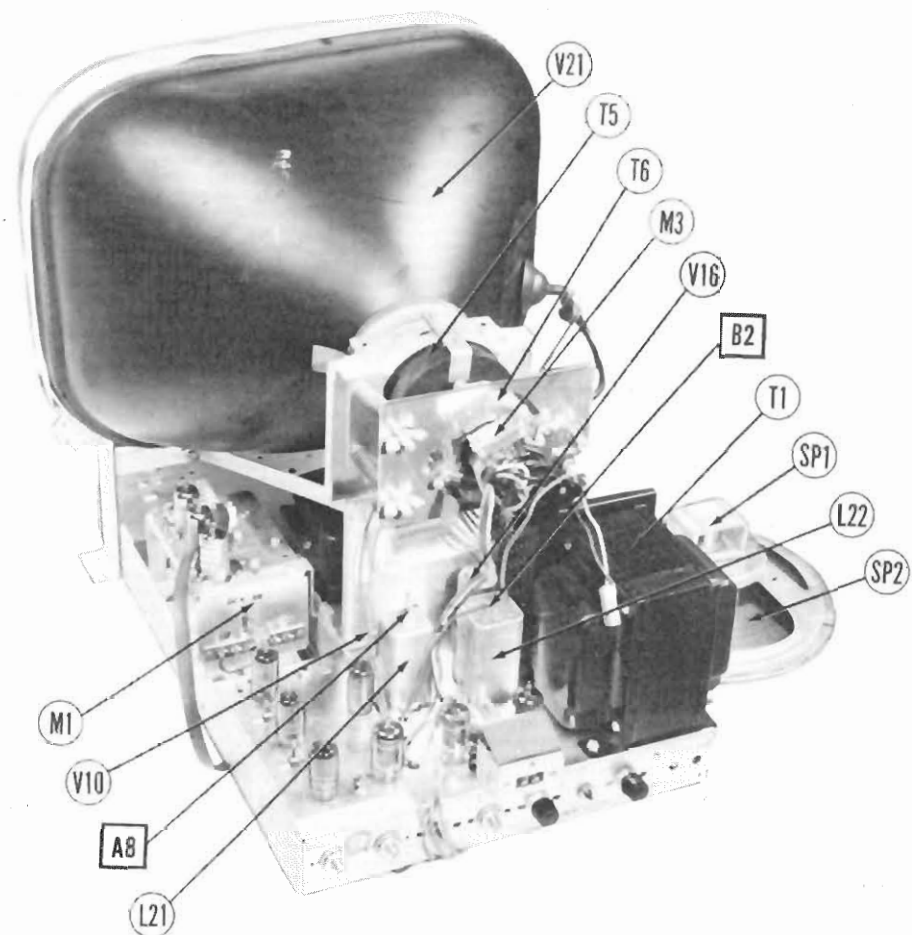
HALLICRAFTERS MODEL 760			
TRADE NAME	Hallicrafters, Models 745, 750, 751, 760, 761		
MANUFACTURER	The Hallicrafters Co., 5th and Kostner Ave., Chicago 24, Illinois		
TYPE SET	Television Receiver		
TUBES	Twenty-One		
POWER SUPPLY	105-125 Volts AC 60 Cycle	RATING 1.7 Amp. at 117 Volts AC	
TUNING RANGE—Channels 2 thru 13			
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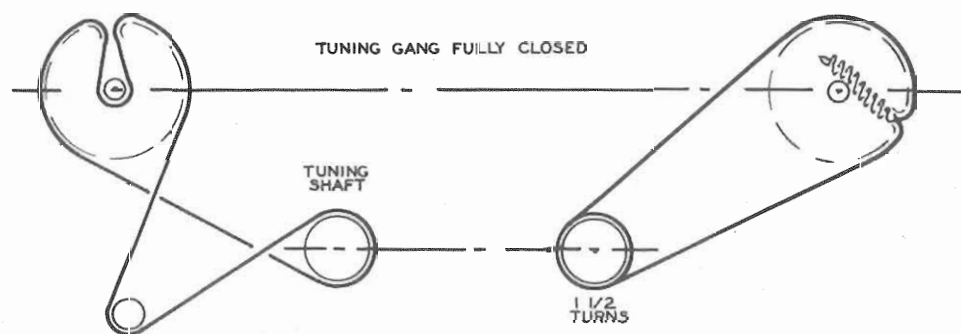
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CHASSIS-TOP VIEW DISASSEMBLY INSTRUCTIONS

1. Remove six push-on type control knobs from front of cabinet.
2. Remove nine phillips head wood screws holding rear cover. Remove cover.
3. Remove antenna terminal strip.
4. Remove five bolts holding chassis in cabinet. Remove chassis.
5. Remove four 3/8" hex nuts holding speaker in cabinet. Remove speaker.



FINE TUNING DIAL CORD STRINGING

TRADE NAME
MANUFACTURER
TYPE SET
TUBES

POWER SUPPLY
TUNING RANGE

Alignment Instructions

Disassembly Instructions

Horiz. Sweep

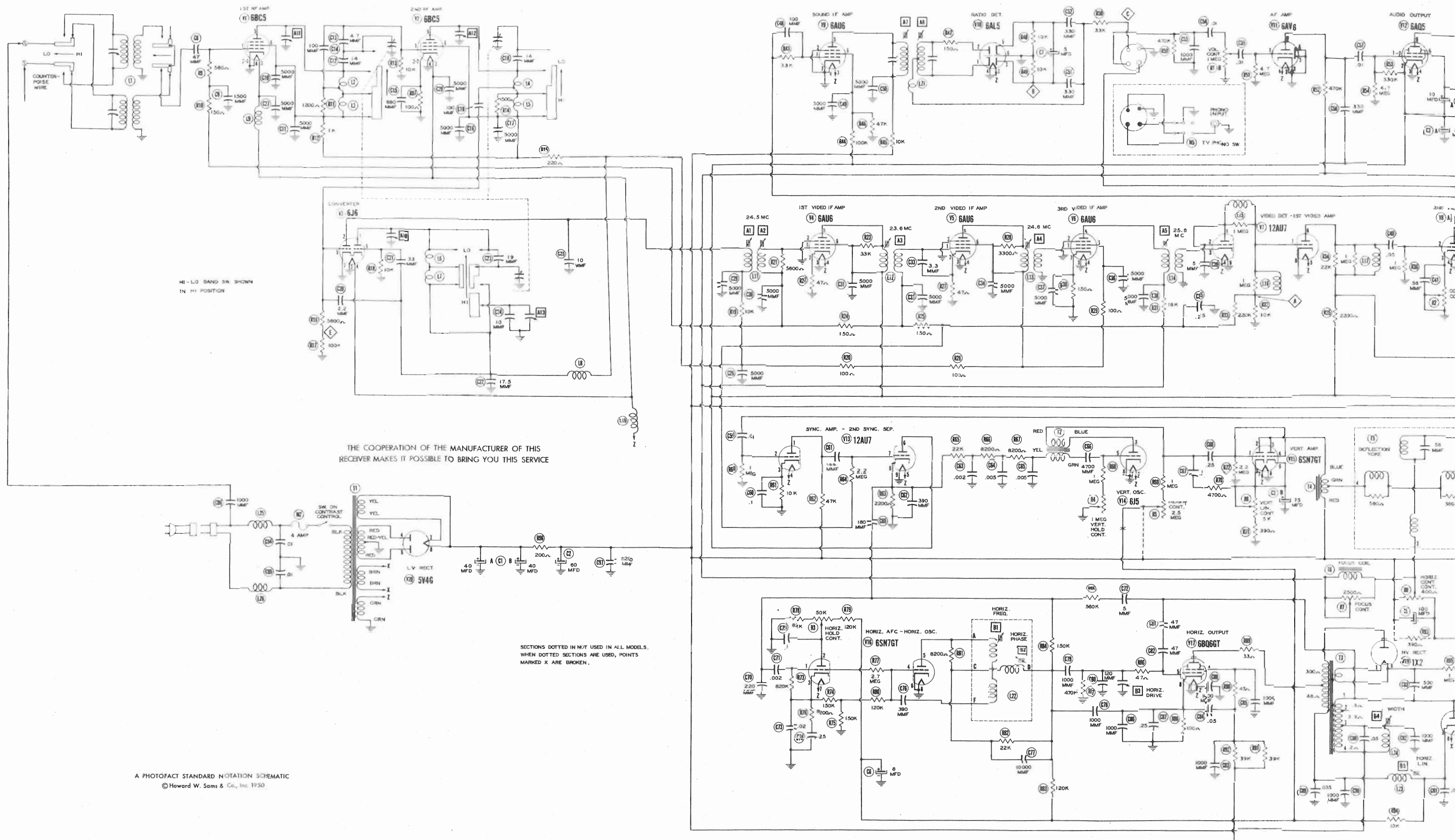
Parts List and Diagrams

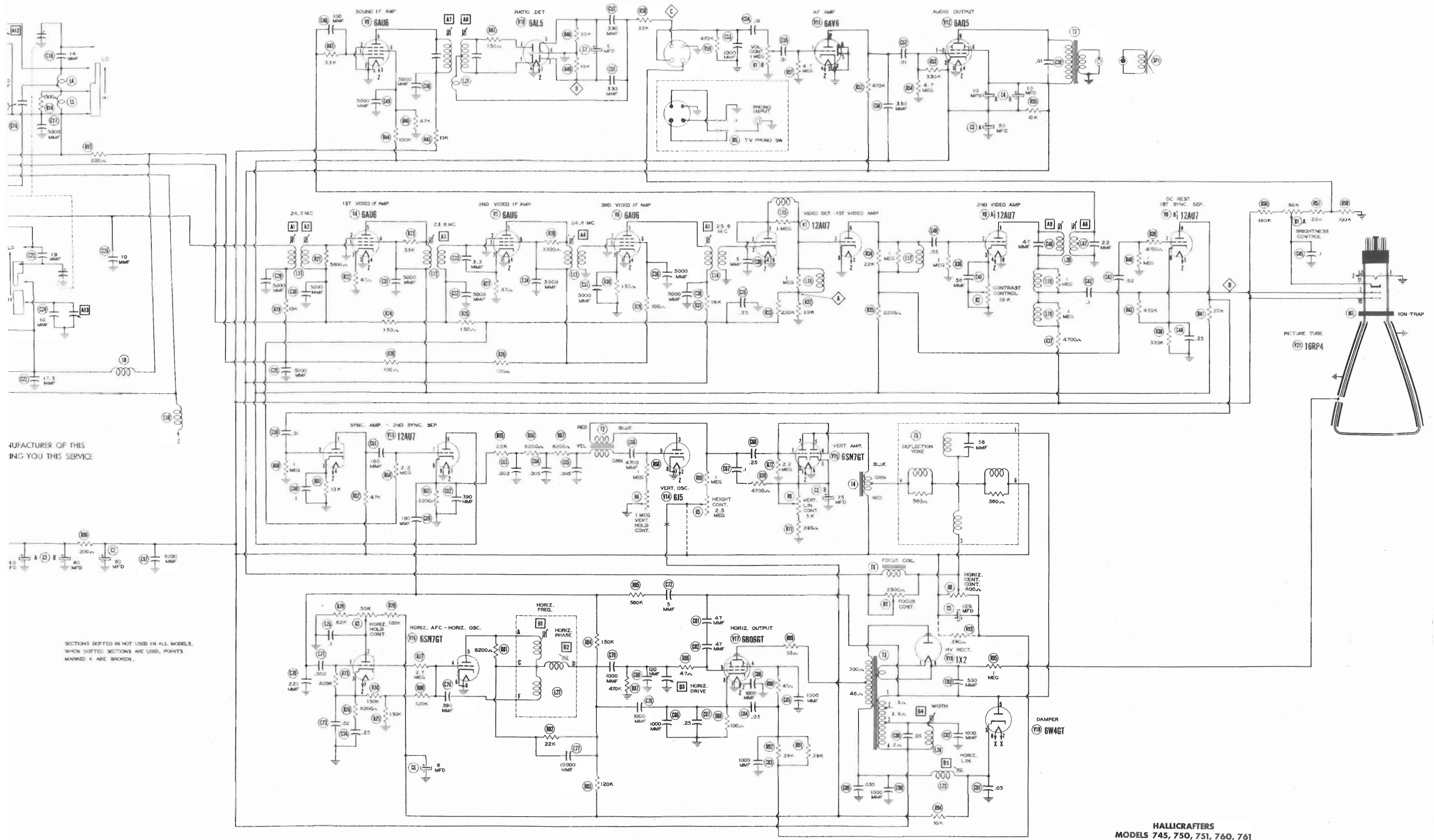
Photographs
Cabinet-Reference

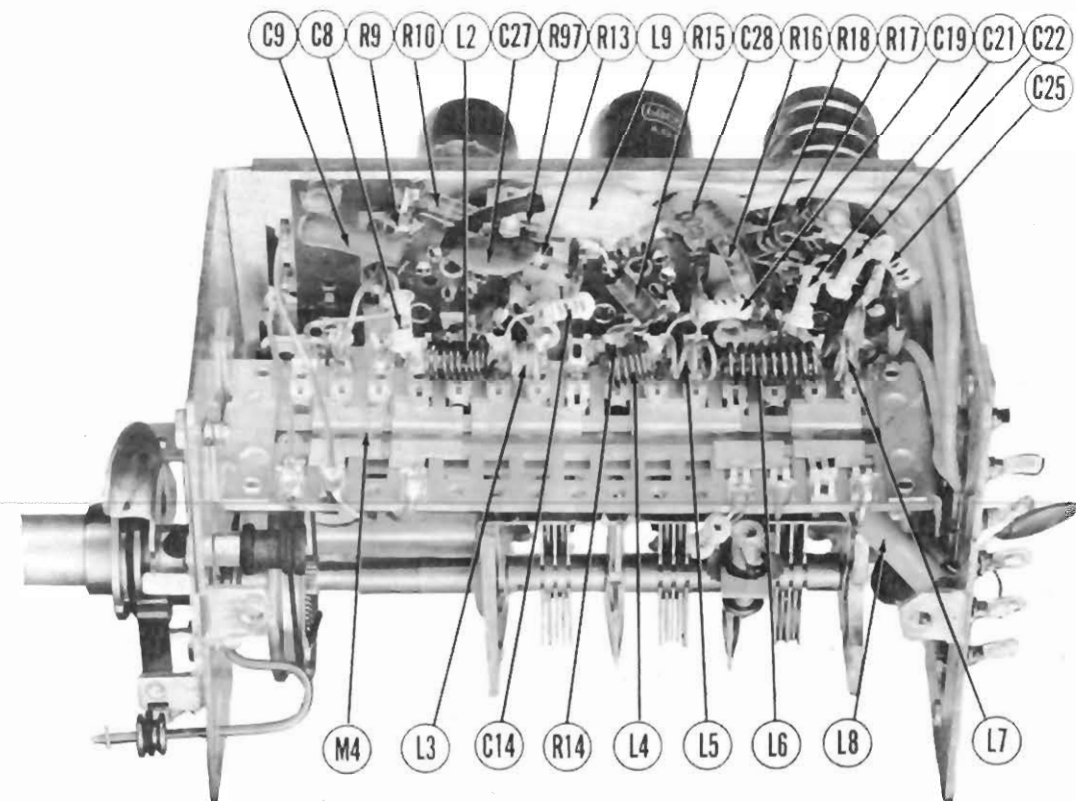
Capacitor List

Chassis-Top View

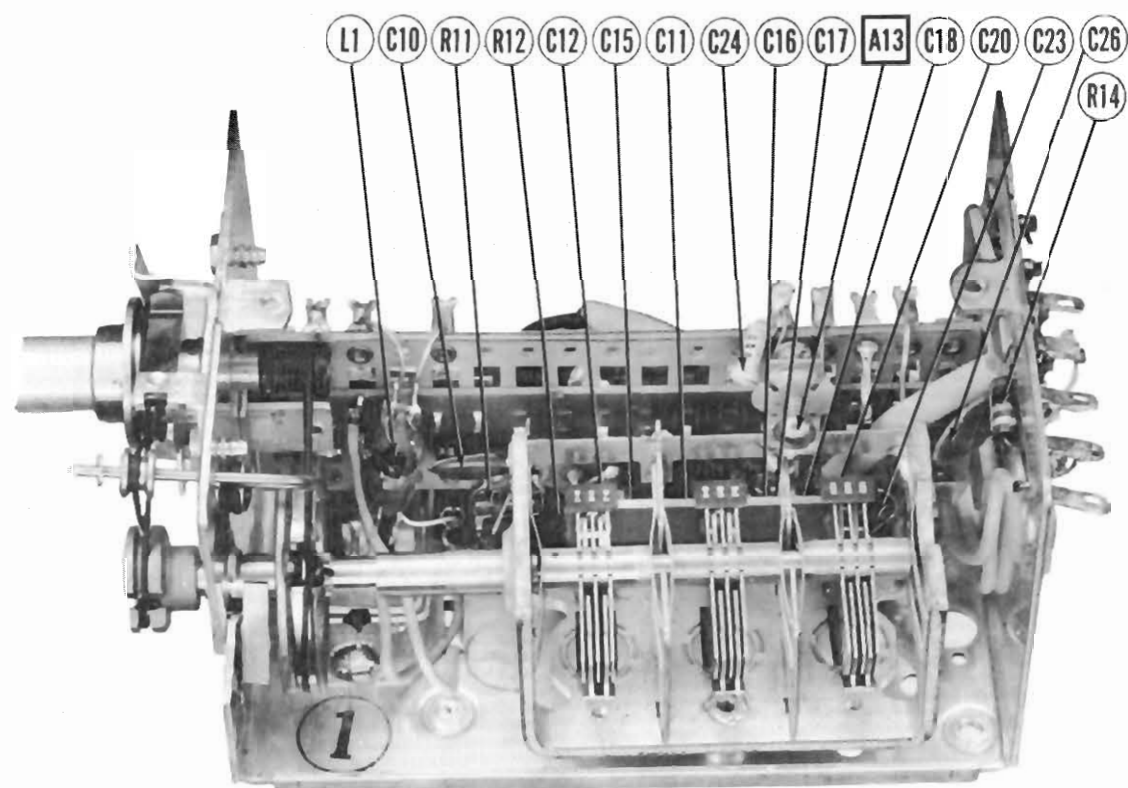
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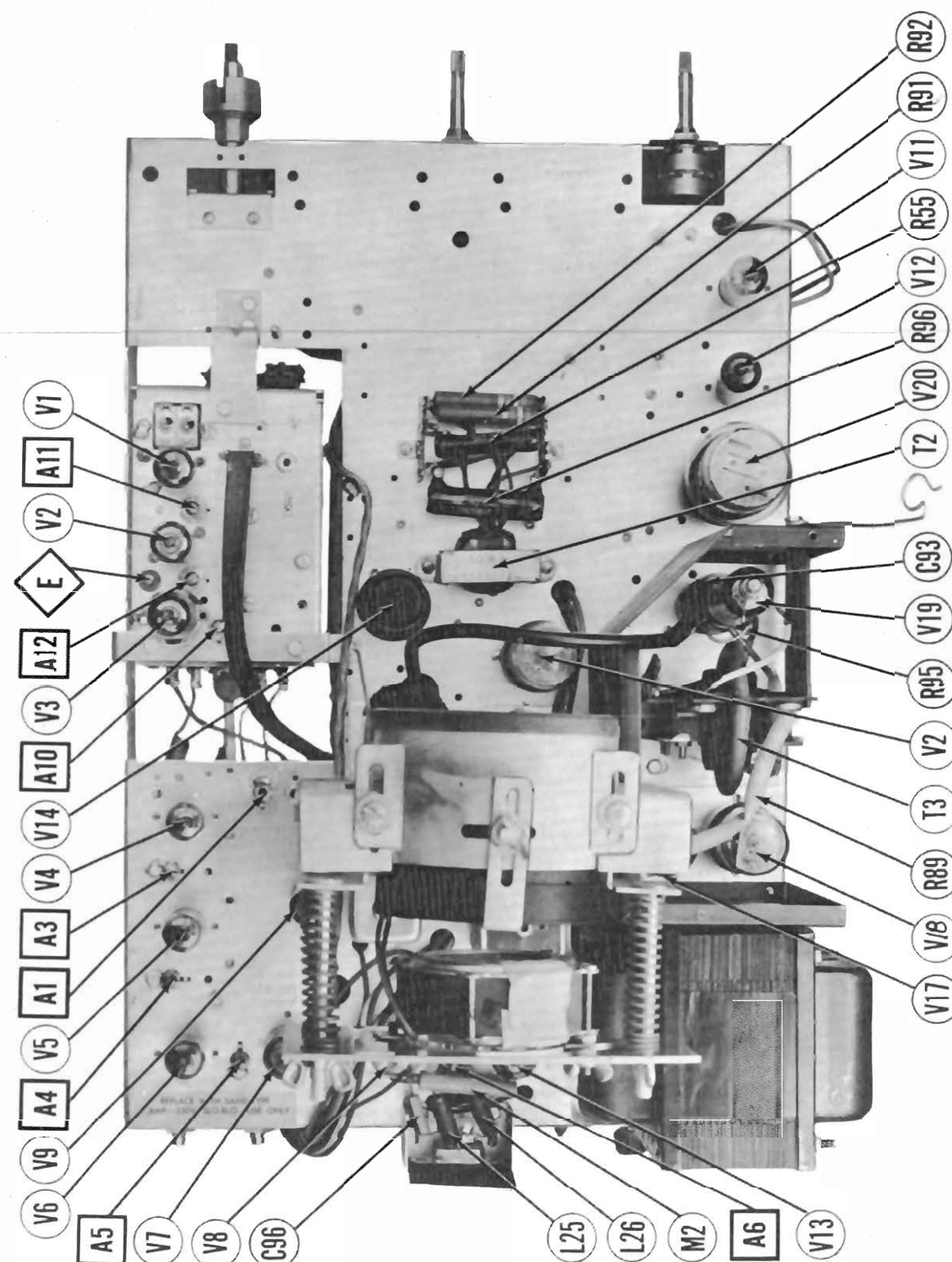




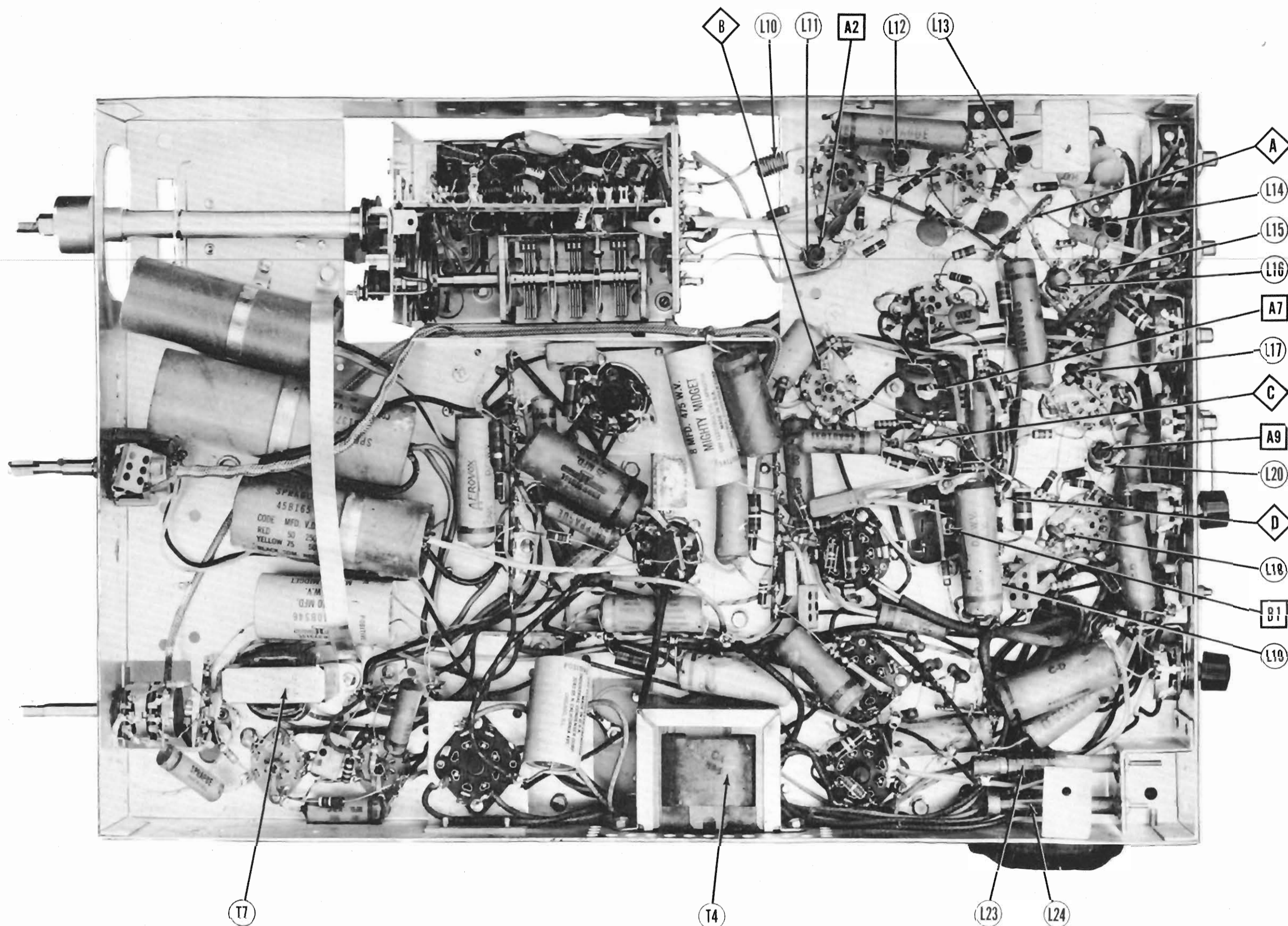
RF TUNER



RF TUNER



HALLICRAFTERS
MODELS 745, 750, 751, 760, 761
MAIN TOP VIEW CHASSIS



CHASSIS BOTTOM VIEW-TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION

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	6BC5	-6VDC	0V	6.3VAC	0V	100VDC	100VDC	0V		
V 2	6BC5	-4VDC	1VDC	6.3VAC	0V	120VDC	120VDC	1VDC		
V 3	6J6	105VDC	85VDC	0V	6.3VAC	-3VDC	1-5.4VDC	0V		
V 4	6AU6	-6VDC	0V	0V	6.3VAC	130VDC	130VDC	-3VDC		
V 5	6AU6	-6VDC	0V	0V	6.3VAC	130VDC	130VDC	-4VDC		
V 6	6AU6	0V	0V	0V	6.3VAC	220VDC	130VDC	1.2VDC		
V 7	12AU7	-5VDC	-5VDC	0V	6.3VAC	100VDC	100VDC	-5VDC	0V	0V
V 8	12AU7	300VDC	0V	20VDC	6.3VAC	130VDC	130VDC	0V	10VDC	0V
V 9	6AU6	-5VDC	0V	6.3VAC	0V	320VDC	28VDC	0V		
V 10	6AL5	0V	0V	6.3VAC	0V	.3VDC	0V	-3VDC		
V 11	6AV6	-5VDC	0V	0V	6.3VAC	0V	0V	95VDC		
V 12	6AQ5	-3.4VDC	0V	0V	6.3VAC	135VDC	135VDC	135VDC		
V 13	12AU7	260VDC	0V	18VDC	6.3VAC	135VDC	135VDC	-1VDC	5VDC	0V
V 14	6J5	0V	6.3VAC	80VDC	-1.4VDC	0V	0V	0V	0V	0V
V 15	6SN7GT	1VDC	300VDC	180VDC	1VDC	300VDC	10VDC	18VDC	0V	0V
V 16	6SN7GT	-2.3VDC	105VDC	-6VDC	-50VDC	140VDC	0V	6.3VAC	0V	0V
V 17	6BQ6GT	0V	6.3VAC	420VDC	125VDC	-15VDC	300VDC	0V	7.2VDC	TOP CAP *
V 18	6W4GT	400VDC	0V	450VDC	0V	300VDC	185VDC	1		
V 19	IX2	* DO NOT MEASURE.								
V 20	5V4G	0V	330VDC	300VDC	325VAC	0V	325VAC	0V	330VDC	
V 21	18RP4	0V	-4VDC	310VDC	150VDC	6.3VAC				

FOCUS CONTROL SET IN FULLY COUNTERCLOCKWISE POSITION.
* TAKEN WITH VACUUM TUBE VOLTMETER.

† DO NOT MEASURE.
‡ 6.3VAC MEASURED ACROSS FILAMENTS.
♦ MEASURED FROM JUNCTION OF C4B AND R53.

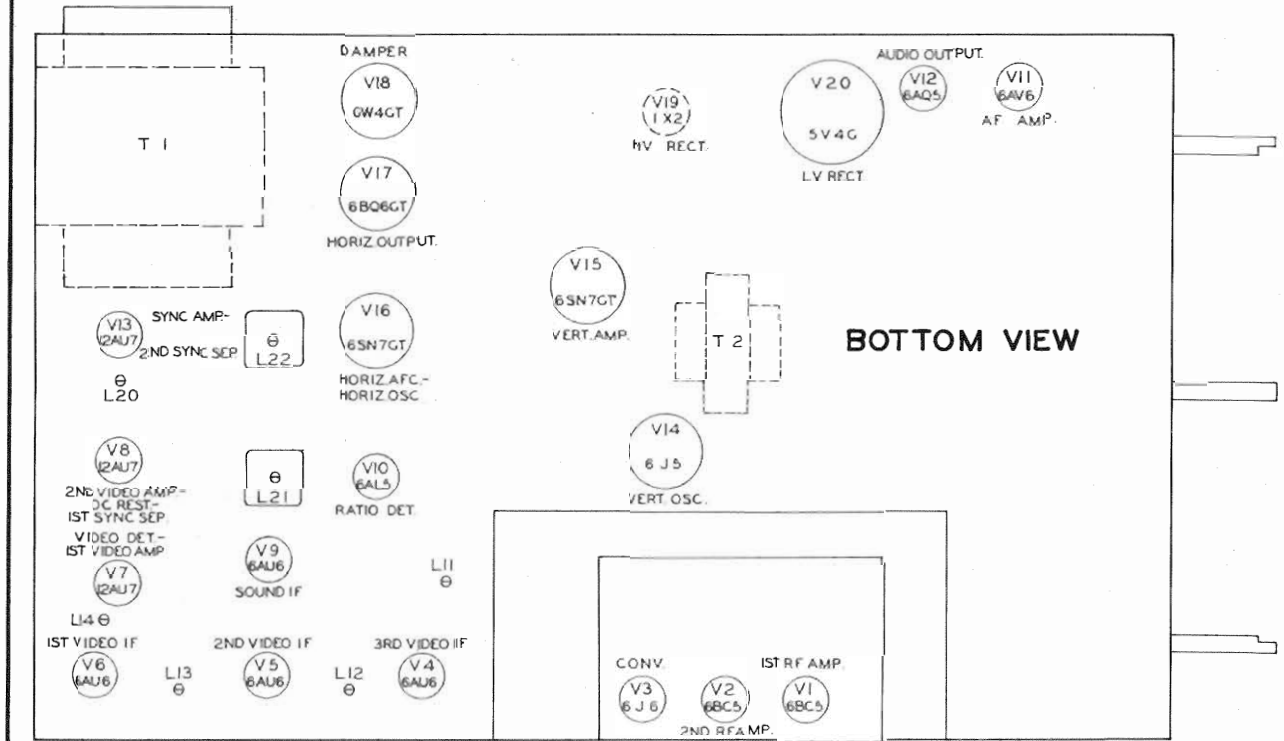
RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BC5	230KΩ	0Ω	.1Ω	0Ω	113KΩ	113KΩ	0Ω		
V 2	6BC5	10KΩ	100Ω	.1Ω	0Ω	113KΩ	113KΩ	100Ω		
V 3	6J6	112KΩ	122KΩ	0Ω	.1Ω	105KΩ	105KΩ	0Ω		
V 4	6AU6	230KΩ	0Ω	0Ω	.1Ω	112KΩ	112KΩ	47Ω		
V 5	6AU6	230KΩ	0Ω	0Ω	.1Ω	112KΩ	112KΩ	47Ω		
V 6	6AU6	.2Ω	0Ω	0Ω	.1Ω	120KΩ	112KΩ	150Ω		
V 7	12AU7	10KΩ	10KΩ	.2Ω	.1Ω	114KΩ	10KΩ	0Ω	0Ω	0Ω
V 8	12AU7	14.9KΩ	1 Meg.	10KΩ	.1Ω	139KΩ	1 Meg.	330KΩ	0Ω	0Ω
V 9	6AU6	33KΩ	0Ω	.1Ω	0Ω	110KΩ	195KΩ	0Ω		
V 10	6AL5	500KΩ	500KΩ	.1Ω	0Ω	10KΩ	0Ω	10KΩ		
V 11	6AV6	4.7 Meg.	0Ω	0Ω	.1Ω	0Ω	0Ω	1470KΩ		
V 12	6AQ5	330KΩ	40Ω	0Ω	.1Ω	156Ω	120Ω	330KΩ		
V 13	12AU7	147KΩ	1 Meg.	10KΩ	.1Ω	112KΩ	2.4 Meg.	2.2KΩ	0Ω	0Ω
V 14	6J5	0Ω	.1Ω	41 Meg.	20Ω	1 Meg.	0Ω	0Ω	0Ω	0Ω
V 15	6SN7GT	2.2 Meg.	11.2KΩ	500Ω	2.2 Meg.	11.2KΩ	390Ω	.1Ω	0Ω	0Ω
V 16	6SN7GT	850KΩ	130KΩ	260KΩ	250KΩ	150KΩ	0Ω	.1Ω	0Ω	TOP CAP #1000
V 17	6BQ6GT	Inf.	.1Ω	42Ω	120KΩ	470KΩ	120Ω	0Ω	100Ω	0Ω
V 18	6W4GT	10KΩ	0Ω	280KΩ	Inf.	120Ω	130KΩ	Inf.	Inf.	Inf.
V 19	IX2	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP #3750
V 20	5V4G	Inf.	50KΩ	50KΩ	30Ω	Inf.	30Ω	Inf.	50KΩ	
V 21	18RP4	0Ω	800KΩ	120Ω	122KΩ	.1Ω				

FOCUS CONTROL SET IN FULLY COUNTERCLOCKWISE POSITION.
* MEASURED FROM PIN 8 OF V20.

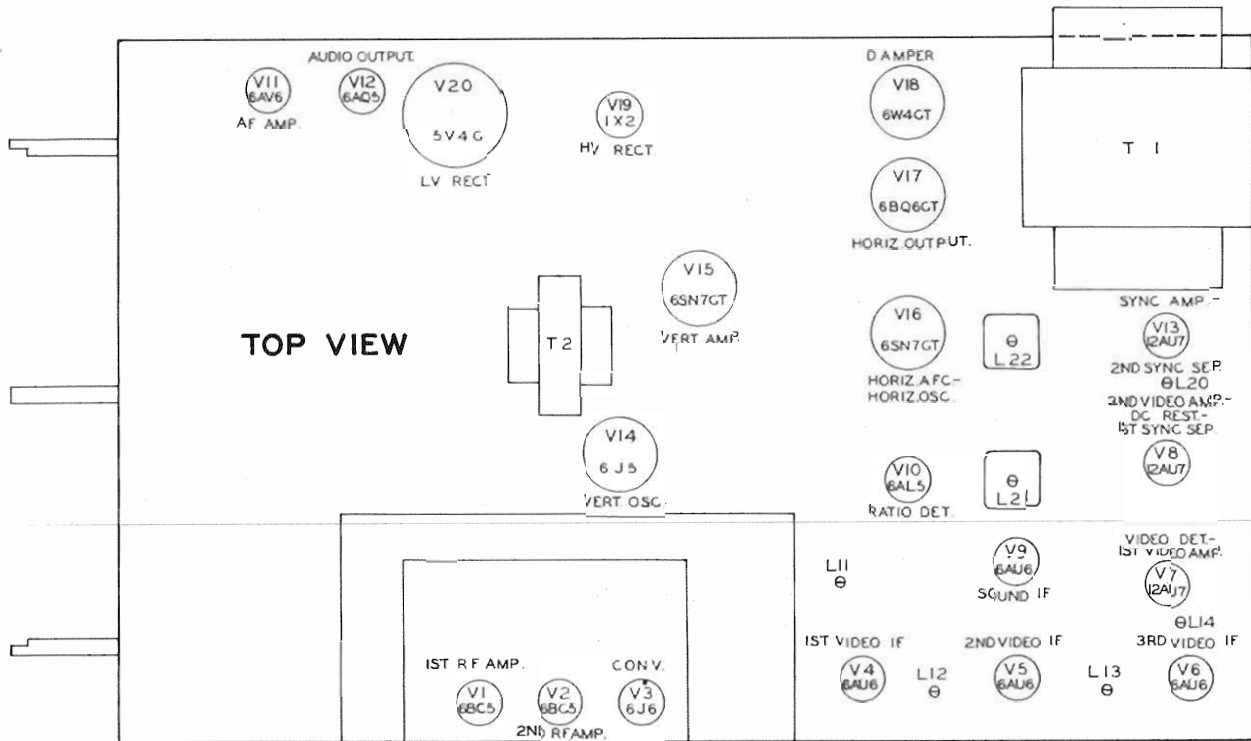
† MEASURED FROM PIN 3 OF V18.
‡ MEASURED FROM JUNCTION OF C4B AND R53.

1. DC Voltage measurements are at 20,000 ohms per volt. AC Voltage measured at 1,000 ohms.
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. Front panel controls set at minimum.
6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.



TUBE PLACEMENT CHART

HALLICRAFTERS
MODELS 745, 750, 751, 760, 761



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To prevent the high voltage shock hazard remove the horizontal output tube V17 from its socket.

VIDEO IF ALIGNMENT

Remove the converter tube from its socket and replace with a 6J6 with pin 1 removed to prevent erroneous indications. Alternate loading is required when aligning L1. This consists of a 1000Ω resistor shunting the primary when adjusting the secondary and shunting the secondary when adjusting the primary.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1. Direct	High side to ungrounded tube shield floating over dummy converter tube (V3). Low side to chassis.	24.5MC (Unmod.)	Any	DC Probe to Point A. Common to chassis.	A1, A2	With 1000Ω across secondary winding adjust A1 for maximum deflection. Remove 1000Ω and place across primary and adjust A2 for maximum deflection. Attenuate signal generator to maintain a maximum -2 volts reading. Remove 1000Ω resistor across primary.
2. Direct	"	23.6MC (Unmod.)	"	"	A3	Adjust for maximum deflection.
3. Direct	"	24.6MC (Unmod.)	"	"	A4	"
4. Direct	"	25.6MC	"	"	A5	"

OVERALL VIDEO IF RESPONSE CHECK

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
5. Direct	High side to ungrounded tube shield floating over dummy converter tube (V2). Low side to chassis.	24MC (10MC SWP)	21.75MC 26.25MC	Any	Vert. Amp. to Point B. Low side to chassis.		Check for response curve similar to figure 1. The 21.75MC marker should be at 5% response and the 26.25MC marker should be at 50% response. If necessary SLIGHTLY retouch A1 thru A5 for proper response.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
6. Direct	High side to point A. Low side to chassis.	4.5MC (Unmod.)	Any	DC Probe to Point B. Common to chassis.	A6, A7	Adjust for maximum deflection. Attenuate signal generator to maintain approximately -1 volt reading.
7. Direct	"	"	"	DC Probe to Point C. Common to chassis.	A8	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

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
6. Direct	High side to point A. Low side to chassis.	4.5MC (450KC Sweep)	4.5MC	Any	Vert. Amp. to Point B. Low side to chassis.	A6, A7	Disconnect stabilizer capacitor C7. Adjust for maximum amplitude and symmetry as per figure 2.
7. Direct	"	"	"	"	Vert. Amp. to Point C. Low side to chassis.	A8	Reconnect capacitor C7. Adjust A8 to place 4.5MC at center of crossover lines as per figure 3. SLIGHTLY retouch A7 for maximum amplitude and straightness of crossover lines.

4.5MC TRAP ADJUSTMENT

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8. Direct	High side to Point A. Low side to chassis.	Not used	4.5MC (400% Mod.)	Any	Vert. Amp. to Point D. Low side to chassis.	A9	Adjust for MINIMUM 400% indication on scope. After alignment is complete tune in a TV test pattern and adjust A9 for maximum vertical wedge definition.

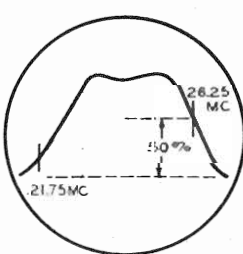


FIG. 1

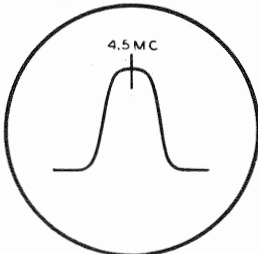


FIG. 2

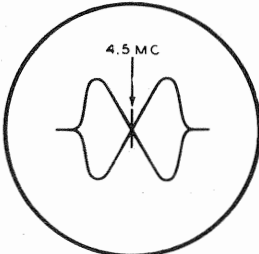


FIG. 3

RF TUNER ALIGNMENT

Connect the negative terminal of a 3 volt battery to junction of R24 and C30 and positive terminal to chassis. The two trimmer capacitors located near the front of the tuner are for the purpose of adjusting the antenna input circuit, these trimmers are pre-set and sealed at the factory, they should not be adjusted in the field. Remove the dummy converter tube and replace the original 6J6 in its socket. The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

HIGH BAND OSCILLATOR ALIGNMENT

Turn the range switch of the tuner to "high band (counter-clockwise)" position.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
9. Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	212.75MC 26.25MC	Turn tuning gang fully open	Vert. Amp. to Point E. Low side to chassis.	A10	Adjust so the 26.25MC and 212.75MC markers coincide at 100% response as shown in figure 4.
10. "	"	177MC (10MC SWP)	176.75MC 26.25MC	Turn tuning gang fully closed	"	L7	Expand or compress coil turns so the 26.25MC and 176.75MC markers coincide at 100% response as shown in figure 5. Repeat steps 9 and 10 until no further improvement can be made.

HIGH BAND RF ALIGNMENT

To set the tuning gang for step 11 inject a 26.25MC marker and a 211.25MC marker and turn tuning gang until both markers coincide on response curve. To set the tuning gang for step 12 inject a 26.25MC marker and a 175.25MC marker and turn tuning gang until both markers coincide on response curve.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
11. Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 215.75MC	as outlined above	Vert. Amp. to Point F. Low side to chassis.	A11, A12	Adjust A-11 for maximum amplitude at the 211.25MC point on response curve. Adjust A12 for maximum amplitude at the 215.75MC point on response curve as per figure 6.
12. "	"	177MC (10MC SWP)	175.25MC 179.75MC	"	"	L3, L5	Expand or compress coil turns of L3 for maximum amplitude at the 175.25MC point on response curve. Adjust L5 for maximum amplitude at the 179.75MC point on response curve as per figure 7.

LOW BAND OSCILLATOR ALIGNMENT

Turn the range switch of the tuner to "low band" (clockwise) position.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13. Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	85MC (10MC SWP)	84.75MC 84.75MC	Turn tuning gang fully open	Vert. Amp. to Point G. Low side to chassis.	L6	Expand or compress coil turns of L6 so the 84.75MC and 84.75MC markers coincide at 100% response as shown in figure 8.
14. "	"	57MC (10MC SWP)	56.25MC 54.25MC	Turn tuning gang fully closed	"	A13	Adjust so the 56.25MC and 54.25MC markers coincide at 100% response as shown in figure 9.

LOW BAND RF ALIGNMENT

To set the tuning gang for step 15 inject a 26.25MC marker and a 83.25MC marker and turn tuning gang until both markers coincide on response curve. To set the tuning gang for step 16 inject a 26.25MC marker and a 55.25MC marker and turn tuning gang with both markers coincide on response curve.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
15. Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	85MC (10MC SWP)	83.25MC 87.75MC	Set tuning gang as outlined above	Vert. Amp. to Point H. Low side to chassis.	L2, L4	Expand or compress coil turns of L2 for maximum amplitude at 83.75MC point on response curve. Adjust L4 for maximum amplitude at 87.75MC point on response curve as per figure 10.
16. "	"	57MC (10MC SWP)	55.25MC 59.75MC	"	"	L2, L4	Expand or compress coil turns of L2 for maximum amplitude at 55.25MC point on response curve. Adjust L4 for maximum amplitude at 59.75MC point on response curve as per figure 11. (Check step 15 to see if response has been seriously effected. If necessary a compromise adjustment of L2 and L4 will be required.)

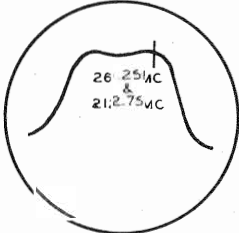


FIG. 4

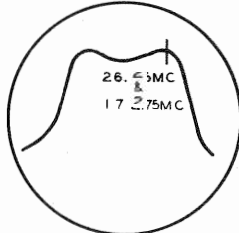


FIG. 5

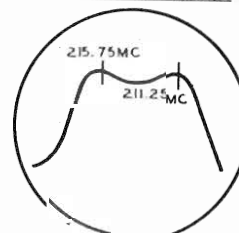


FIG. 6

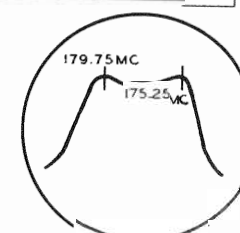


FIG. 7

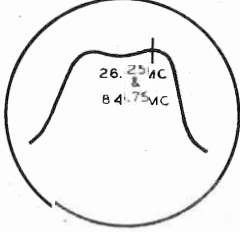


FIG. 8

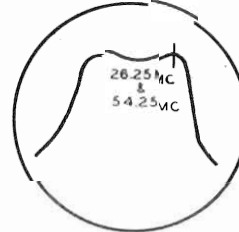


FIG. 9

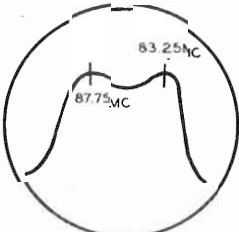


FIG. 10

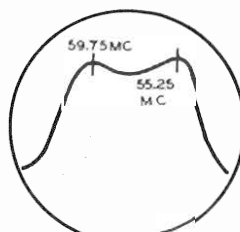
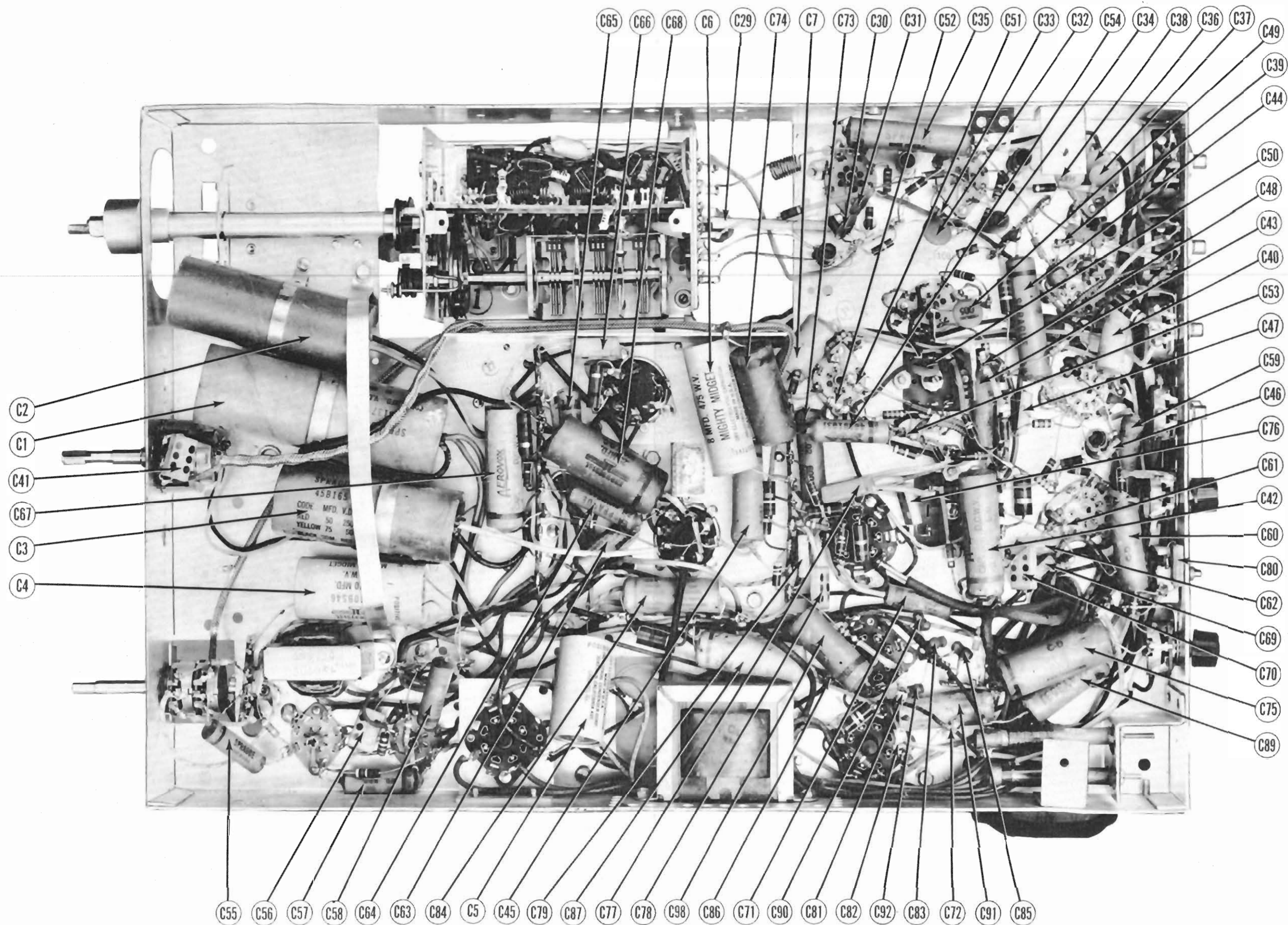


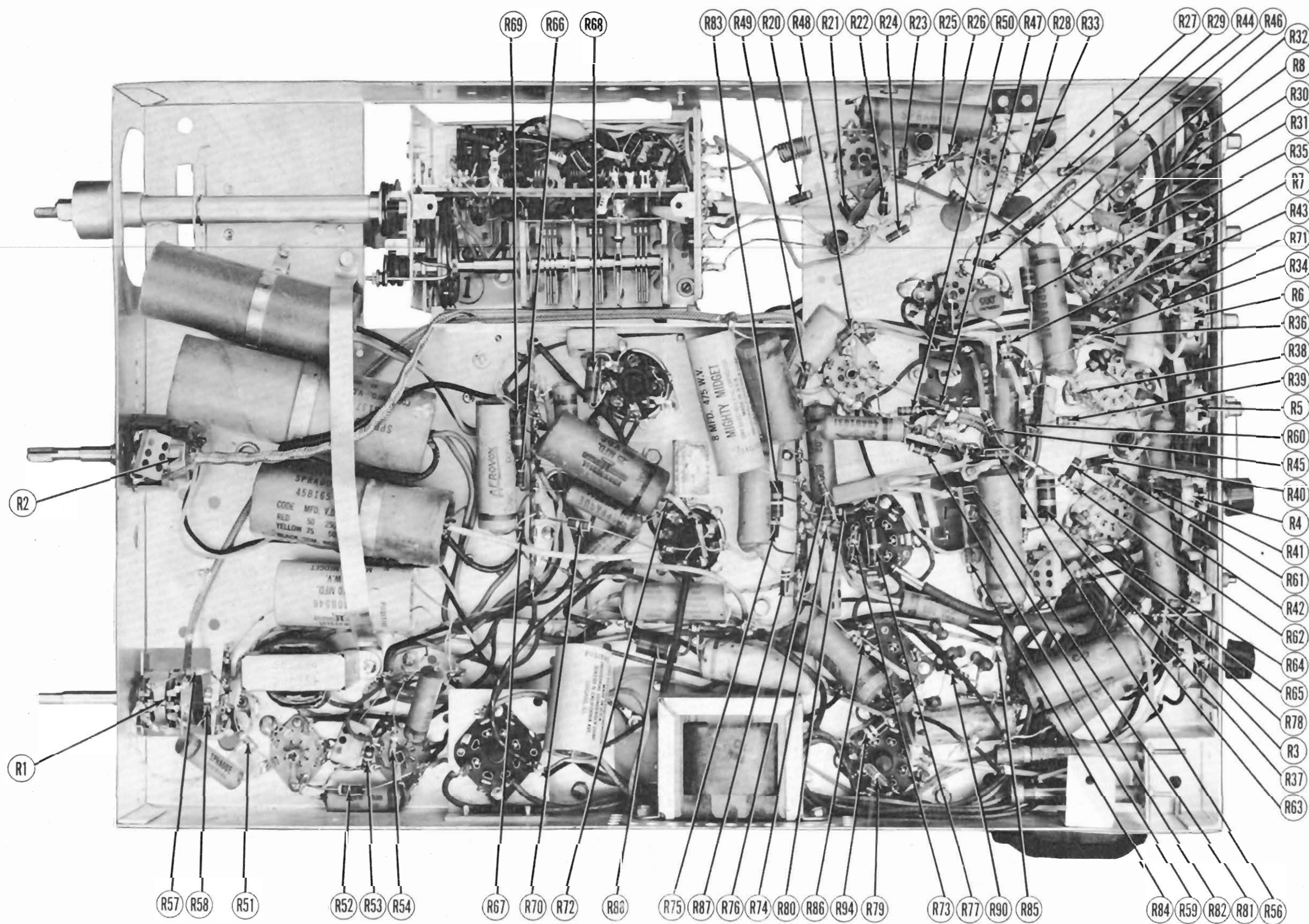
FIG. 11

MODELS 745, 750, 751, 760, 761
HALICRAFTERS



CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

HALLICRAFTERS
MODELS 745, 750, 751, 760, 761



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		Hallcrafters	STANCOR	MERIT	CHICAGO	
	PRI.	SEC.	PRI.	SEC.	PART No.	PART No.	PART No.	PART No.	
T7	6600Ω	4Ω	365Ω	.5Ω	55C134	A-3877	A-2930	RO-13	

SPEAKER

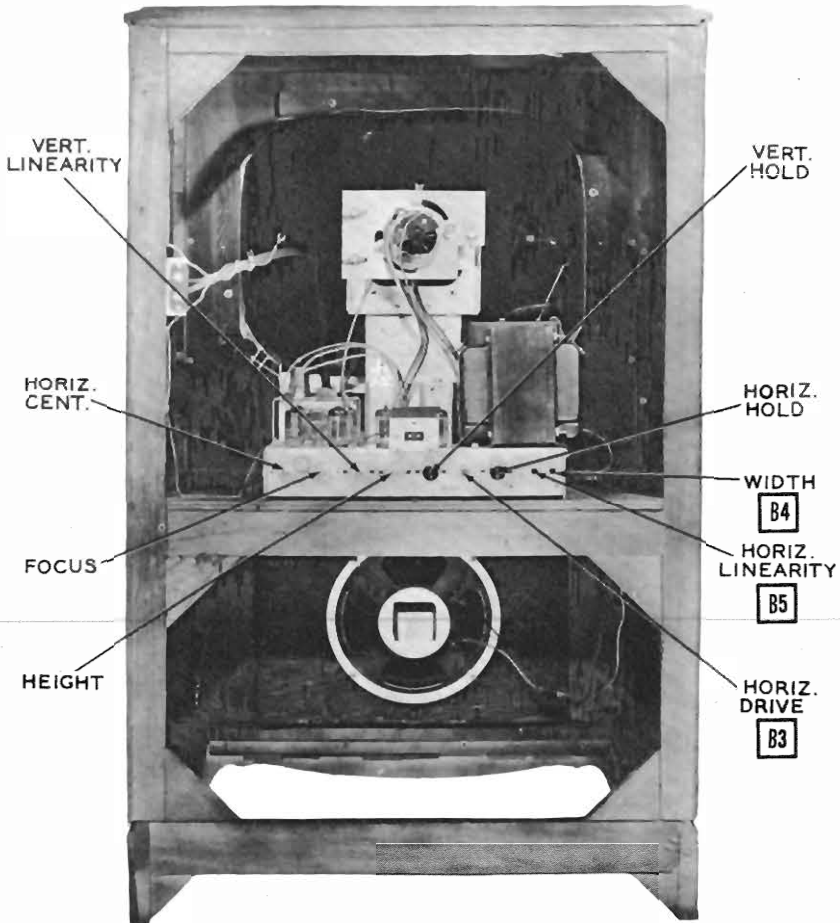
ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	HALLICRAFTER	JENSEN	QUAM	
			PART No.	PART No.	PART No.	
SP1A	PM	4Ω	85C102 ①	ST-115 MOD. P8-V	8A21	① Used in models 750, 751, 760, 761 ② Used in model 745
B			85C101 ②			
SP2A	CONE DIA.	V. C. DIA.				
B	7 3/4"	9/16"				

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	HALLICRAFTER	MEISSNER	
				PART No.	PART No.	
L1	Ant. Coil	0Ω	0Ω			Part of tuner #1C945
L2	1st RF	0Ω	0Ω			Low Band, part of tuner #1C945
L3	1st RF	0Ω	0Ω			High Band, part of tuner #1C945
L4	2nd RF	0Ω	0Ω			Low Band, part of tuner #1C945
L5	2nd RF	0Ω	0Ω			High Band, part of tuner #1C945
L6	Osc. Coil	0Ω	0Ω			Low Band, part of tuner #1C945
L7	Osc. Coil	0Ω	0Ω			High Band, part of tuner #1C945
L8	RF Choke	0Ω	0Ω			Part of tuner #1C945
L9	Flt. Choke	0Ω	0Ω			Part of tuner #1C945
L10	Flt. Choke	0Ω	0Ω			
L11	1st Video IF	.2Ω	.2Ω	53A191		
L12	2nd Video IF	.2Ω	.2Ω	50B458		
L13	3rd Video IF	.2Ω	.2Ω	50A431		
L14	4th Video IF	.2Ω	.2Ω	50A431		
L15	Peaking	9.5Ω		51A1154		Wound on 1 Meg. resistor
L16	Peaking	18Ω		51A1155		Wound on 1 Meg. resistor
L17	Peaking	9.5Ω		51A1154		Wound on 1 Meg. resistor
L18	Peaking	9.5Ω		51A1154		Wound on 1 Meg. resistor
L19	Peaking	18Ω		51A1155		Wound on 1 Meg. resistor
L20	Sound IF	1.6Ω	.8Ω	50A432		
L21	Ratio Det.					
L22	Trans.	5Ω	1Ω	50B406		
L23	Horiz. Osc.					
L24	Trans.	130Ω	38Ω	51B1153		
L25	Horiz. Lin.	26Ω		51B1205		
L26	Horiz. Size	.3Ω		51B1072-1		
L27	AC Line					
L28	Choke	.2Ω		53B009		
L29	AC Line					
L30	Choke	.2Ω		53B009		

MISCELLANEOUS

ITEM No.	PART NAME	HALLICRAFTER	NOTES
M1	RF Tuner	1C945	
M2	Fuse	39A345	4A 250V
M3	Ion Trap	21A101	
M4	Switch		High Band, Low Band, part of tuner #1C945
M5	Switch	60B381	Phono-TV mounted on cabinet back
	Trimmer	44A361	Horiz. drive
	Safety Glass	22D292	Models 760, 761, 751, 750
	Safety Glass	22D288	Model 745
	Knob	15B229	Channel selector, models 760, 750, 745
	Knob	15A236	Channel selector, models 751, 761
	Knob	15F234	Volume, models 760, 750, 745
	Knob	15A243	Volume, models 761, 751
	Knob	15C233	Brightness, models 760, 750, 745
	Knob	15A242	Brightness, models 761, 751
	Knob	15C232	Contrast, models 760, 750, 745
	Knob	15A241	Contrast, models 761, 751
	Knob	15C231	Range selector, models 760, 750, 745
	Knob	15A240	Range selector, models 761, 751



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

HORIZONTAL OSCILLATOR ADJUSTMENTS

Connect a short across terminals "C" and "D" of L22.

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

Turn the horizontal hold control to the mid-position of its range.

Adjust the horizontal frequency slug (B1) until picture synchronizes horizontally.

Remove the short and connect the vertical amplifier of an oscilloscope to terminal "D" of L22. Adjust the waveform adjustment slug (B2) until the broad and sharp peaks are of equal amplitude as shown in figure 12. If necessary, readjust the hold control so picture remains in sync.

HORIZONTALLY LINEARITY ADJUSTMENTS

Turn the horizontal drive trimmer (B3) clockwise as far as possible without causing fold-over in the raster.

Adjust the width slug (B4) until the picture fills the mask horizontally.

Adjust the horizontal linearity slug (B5) until the picture is symmetrical from left to right. Readjustments of B3 may be necessary while making this adjustment.

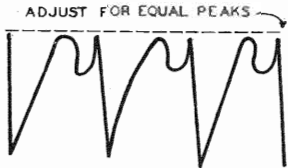


FIG.12

HALLICRAFTERS
MODELS 745, 750, 751, 760, 761

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT		
V1A	1st RF Amp.	6BC5	6BC5	7BD	Used in set
B	1st RF Amp.	6AG5	6AG5	7BD	Used as replacement
V2A	2nd RF Amp.	6BC5	6BC5	7BD	Used in set
B	2nd RF Amp.	6AG5	6AG5	7BD	Used as replacement
V3	Converter	6J6	6J6	7BF	
V4	1st Video IF	6AU6	6AU6	7BK	
V5	2nd Video IF	6AU6	6AU6	7BK	
V6	3rd Video IF	6AU6	6AU6	7BK	
V7	Video Det. -1st				
V8	Video Amp.	12AU7	12AU7	9A	
B	2nd Video Amp. - DC Rest.	12AU7	12AU7	9A	
V9	Sound IF Amp.	6AU6	6AU6	7BK	
V10	Ratio Det.	6AL5	6AL5	6BT	
V11	AF Amp.	6AV6	6AV6	7BT	
V12	Audio Output	6AQ5	6AQ5	7BZ	
V13	Sync. Amp. -2nd				
B	Sync. Sep.	12AU7	12AU7	9A	
V14	Vert. Osc.	6J5	6J5	6Q	
V15	Vert. Amp.	6SN7GT	6SN7GT	8BD	
V16	Hor. AFC-Hor. Osc.	6SN7GT	6SN7GT	8BD	
V17	Hor. Output	6BQ6GT	6BQ6GT	6AM	
V18	Damper	6W4GT	6W4GT	4CG	
V19	HV Rect.	1X2	1X2	7CB	
V20	LV Rect.	5V4G	5V4G	5L	
V21	Picture Tube	16RP4	16RP4	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	REPLACEMENT DATA		IDENTIFICATION CODES AND INSTALLATION NOTES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT	
C1A	40 450	45A159	PRS450/40-40	TVA-2740
B	40 450	45B166	PRS450/40-40	TVA-1613
C2	60 450	45B166	PRS450/20	
C3A	50 250	45B165	PRS450/40	TVA-1511
B	75 50		PRS50/100	TVA-1310
C4A	10 475	40B546	PRS500/10	TVA-2722
B	10 475		PRS500/10	
C5	100 10	45B170	PRS12/100	TVA-1130
C6	8 475	45A103	PRS500/10	TVA-1802
C7	5 30	45A109	PRS150/4	TVA-1303
C8	47	47X20CK500J	GP47M	GP1K-47
C9	1500	47X50CJ152J	GP1500M	GP2L-0015
C10	5000	47A168	BPD-5	811-005
C11	5000	47A168	BPD-5	29C1
C12	14	47X20CK140J	CN4JNPO	NP0K-14
C13	4.7	47A160-6	CN4.7DNPO	NP0K-4.7
C14	100	47B2010K5	GP100M	GP1K-100
C15	680		GP680M	GP2K-680
C16	5000	47A168	BPD-5	811-005
C17	5000	47A168	BPD-5	29C1
C18	14	47X20CK140J	CN4JNPO	NP0K-14
C19	100	47B2010K5	GP100M	GP1K-100
C20	2.2	47X20CK022J		
C21	33	47X20CK330J	GP33K	GP1K-33
C22	17.5	47X20CK180J	CN17.5JN470	N470K-17.5
C23	19	47X20CK190J	SH19NPO	NP0K-20
C24	10		CN10FN750	N750K-10
C25	10		CN10FN750	N750K-10
C26	5000	47A168	BPD-5	811-005
C27	5000	47A168	BPD-5	29C1
C28	5000	47A168	BPD-5	29C1
C29	5000	47A168	BPD-5	29C1
C30	5000	47A168	BPD-5	29C1
C31	5000	47A168	BPD-5	29C1
C32	5000	47A168	BPD-5	29C1
C33	3.3	47A160-5	CN3.3CNPO	NP0K-3.3
C34	5000	47A168	BPD-5	811-005
C35	.25	46AT254J	P488-25	GT2P25
C36	5000	47A168	BPD-5	811-005
C37	5000	47A168	BPD-5	811-005
C38	5000	47A168	BPD-5	811-005
C39	5	47X20UJ050M	GP5K	D2-4.7
C40	.05	46AU503J	P288-05	TM-15
C41	56	47X20A560M	1468-00005	D6-560
C42	.1	46AY104J	P688-1	TM-12
C43	.02	46AY203J	P688-02	TC-2
C44	.25	46AT254J	P488-25	GT2P25
C45	.1	46AU104J	P288-1	TM-1
C46	47		CN47JNPO	D2-47
C47	22	47X20A220K	GP100K	D6-101
C48	100	47B2010K5	BPD-5	D6-502
C49	5000	47A168	BPD-5	D6-502
C50	5000	47A168	BPD-5	D6-502
C51	330	47B2033K5	GP330M	D6-331
C52	330	47B2033K5	GP330M	D6-331
C53	1000	47B20102M5	GP1000M	D6-102
C54	.01	46AU103J	P488-01	D6-103
C55	.01	46AU103J	P488-01	D6-103
C56	330	47X20A331M	1468-00035	D6-331
C57	.01	46AY103J	P688-01	D6-103
C58	.01	46AY103J	P688-01	D6-103
C59	.01	46AU103J	P488-01	D6-103
C60	.1	46AU104J	P288-1	TM-1

CAPACITORS (CONT.)

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES AND INSTALLATION NOTES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT	
C61	100	47B2010K5	GP100M	D6-101
C62	390	47X20A391M	1468-0004	D6-391
C63	.002	46AZ202J	P688-002	D6-202
C64	.005	46AU502J	P688-005	D6-502
C65	.005	46AU502J	P688-005	D6-502
C66	4700	47X35A472M	1467-005	D6-472
C67	.1	46AY104J	P688-1	TM-1
C68	.25	46AX254J	P688-25	GT2P25
C69	180	47X20A181M	1468-0002	D6-181
C70	220	47X20A221M	1468-0002	D6-221
C71	.002	46AZ202J	P688-002	D6-202
C72	.5	47X20UJ050M	GP5K	D2-4.7
C73	.02	46AU203J	P688-02	TM-12
C74	.25	46AT254J	P488-25	GT2P25
C75	.1	46AY104J	P688-1	TM-1
C76	390	47X20A391M	1468-0004	D6-391
C77	10000	47X35A103K	1467-01	ID351
C78	1000	47X20A102M	1468-001	D6-102
C79	1000	47X20A102M	1468-001	D6-102
C80	120	46A361	1468-00015	D6-121
C81	47	47B20470K5	GP47K	D6-470
C82	47	47B20470K5	GP47K	D6-470
C83	1000	47B20A102M5	GP1000M	D6-102
C84	.05	46AY503J	P688-05	TM-15
C85	1000	47B20A102M5	GP1000M	D6-102
C86	1000	47B20A102M5	GP1000M	D6-102
C87	.25	46AT254J	P488-25	GT2P25
C88	1000	47B20A102M5	GP1000M	D6-102
C89	.035	46AY353J	P688-035	TM-35
C90	1000	47B20A102M5	GP1000M	D6-102
C91	.05	46AY503J	P688-05	TM-15
C92	1000	47B20A102M5	GP1000M	D6-102
C93	500	20000	47A216	TV2-502
C94	.01	600	46BR103L6	P688-01
C95	.01	600	46BR103L6	P688-01
C96	1000	500	47X20A102M	1468-001
C97	6200		P688-006	D6-562
C98	.05	600	P688-05	PTE655

* When either C51 or C52 are replaced, replace both with capacitors of equal value.

† Not used in all models.

‡ Use mounting strap.

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA		INSTALLATION NOTES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT	
R1A	50KΩ		Concentrikrit	Brightness control-front
B	1 Meg.	25B874	B11-123 *	Volume control-rear
C	Shaft End		E-202 *	Attach per instr. in "Concentrikrit".
R2A	10KΩ	25B790	WK-10K	Contrast control
B	Switch	Not Req.	51	Attach to R2A per instructions
R3A	50KΩ	25A858	Q11-123	Attach to R3A per instructions
B	Shaft	Not Req.	Not Req.	Horiz. hold control
R4A	1 Meg.	25A857	Q11-137	Attach to R4A per instructions
B	Shaft	Not Req.	Not Req.	Height control
R5A	2.5 Meg.	25B711	Q11-239	Attach to R5A per instructions
B	Shaft	Not Req.	Not Req.	Vert. linearity control
R6A	5000Ω	25B712	Q11-114	Attach to R6A per instructions
B	Shaft	Not Req.	Not Req.	Focus control-Wire Wound
R7	2500Ω	25B710	WK-2500	Horiz. centering control-See note 1
R8	4000	2	25B713	

* Additional parts to be used with "Concentrikrit".

Note 1: Some models use a 2500Ω, 2 watt control part #25B710.

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT	
R9	560Ω		23X20X561K	BTS-560
R10	150Ω 20%		23X20X151M	AGC Network
R11	1200Ω		23X20X122K	1st RF Coil Shunt
R12	1000Ω 20%		23X20X102M	1st RF Decoupling
R13	10KΩ		23X20X103K	2nd RF Grid
R14	1500Ω		23X20X152K	2nd RF Coil Shunt
R15	220Ω 20%		23X20X221M	Decoupling
R16	5600Ω		23X20X562K	Conv. Grid
R17	100KΩ 20%		23X20X104M	Conv. Grid
R18	10KΩ		23X20X103K	Conv. Grid
R19	10KΩ		23X20X103K	Conv. Plate Decoupling
R20	100Ω		23X20X101K	1st Video IF Transformer Shunt
R21	5600Ω		23X20X562K	1st Video IF Cathode
R22	47Ω		23X20X470K	2nd Video IF Transformer Shunt
R23	33KΩ		23X20X333K	AGC Network
R24	150Ω		23X20X151K	AGC Network
R25	150Ω		23X20X151K	Decoupling
R26	100Ω		23X20X101K	2nd Video IF Cathode
R27	47Ω		23X20X470K	3rd Video IF Transformer Shunt
R28	3300Ω		23X20X332K	Decoupling
R29	100Ω		23X20X101K	3rd Video IF Cathode
R30	150Ω		23X20X151K	3rd Video IF Cathode
R31	18KΩ		23X30X183K	3rd Video IF Plate Decoupling
R32	10KΩ		23X20X103K	Video Det. Diode Load
R33	220KΩ 20%		23X20X224M	AGC Network
R34	22KΩ		23X20X223K	Peaking Coil Shunt
R35	2200Ω		23X30X222K	1st Video Amp. Plate
R36	1 Meg. 20%		23X20X105M	2nd Video Amp. Grid

RESISTORS (CONT.)

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT	
R37	4700Ω		23X40X472K	2nd Video IF Plate
R38	330KΩ 20%		23X20X334M	1st Sync. Sep. Cathode
R39	4700Ω		23X20X472K	1st Sync. Sep. Grid
R40	1 Meg. 20%		23X20X105M	1st Sync. Sep. Grid
R41	27KΩ		23X20X273K	1st Sync. Sep. Plate
R42	470KΩ		23X20X474K	Picture Tube Grid
R43	33KΩ		23X20X335K	Sound IF Grid
R44	100KΩ		23X20X103K	Sound IF Screen
R45	10KΩ		23X20X103K	Sound IF Plate Decoupling
R46	47KΩ		23X20X473K	Voltage Divider
R47	150Ω		23X20X151K	Balancing
R48	10KΩ 5%		23X20X103J	Ratio Det. Diode Load
R49	10KΩ 5%		23X20X103J	Ratio Det. Diode Load
R50	33KΩ		23X20X333K	BTS-33K
R51	4.7 Meg. 5%		23X20X475J	AF Amp. Grid
R52	470KΩ 20%		23X20X474M	BTS-470K
R53	330KΩ 5%		23X20X334J	BTS-330K-5%
R54	4.7 Meg. 5%		23X20X475J	BTS-4.7 Meg. 5%
R55	10KΩ	10	24BG103E	AB-10K
R56	180KΩ		23X20X184K	BTS-180K
R57	22KΩ		23X20X223K	BTS-22K
R58	100KΩ		23X20X104K	BTS-100K
R59	470KΩ 20%		23X20X474M	BTS-470K
R60	1 Meg. 20%		23X20X105M	BTS-1 Meg.
R61	10KΩ		23X20X103K	BTS-10K
R62	47KΩ		23X20X473K	BTS-47K
R63	2200Ω		23X20X222K	BTS-2200
R64	2.2 Meg. 20%		23X20X225M	BTS-2.2 Meg.
R65	22KΩ		23X20X223K	BTS-22K
R66	8200Ω		23X20X822K	BTS-8200
R67	8200Ω		23X20X822K	BTS-8200
R68	1 Meg.		23X30X105K	BTA-1 Meg.
R69	1 Meg.		23X30X105K	BTA-1 Meg.
R70	4700Ω		23X20X472K	BTS-4700
R71	390Ω		23X30X391K	BTA-390
R72	2.2 Meg. 20%		23X20X225M	BTS-2.2 Meg.
R73	820KΩ		23X20X824K	BTS-820
R74	150KΩ		23X20X154K	BTS-150K
R75	150KΩ		23X30X154K	BTA-150K
R76	8200Ω		23X20X822K	BTS-8200
R77	2.7 Meg.		23X30X275K	BTA-2.7 Meg.
R78	82KΩ		23X20X823K	BTS-82K
R79	120KΩ		23X20X124K	BTS-120K
R80	120KΩ 5%		23X30X124J	BTA-120K-5%
R81	8200Ω		23X20X822K	BTS-8200
R82	22KΩ		23X20X223K	BTS-22K</