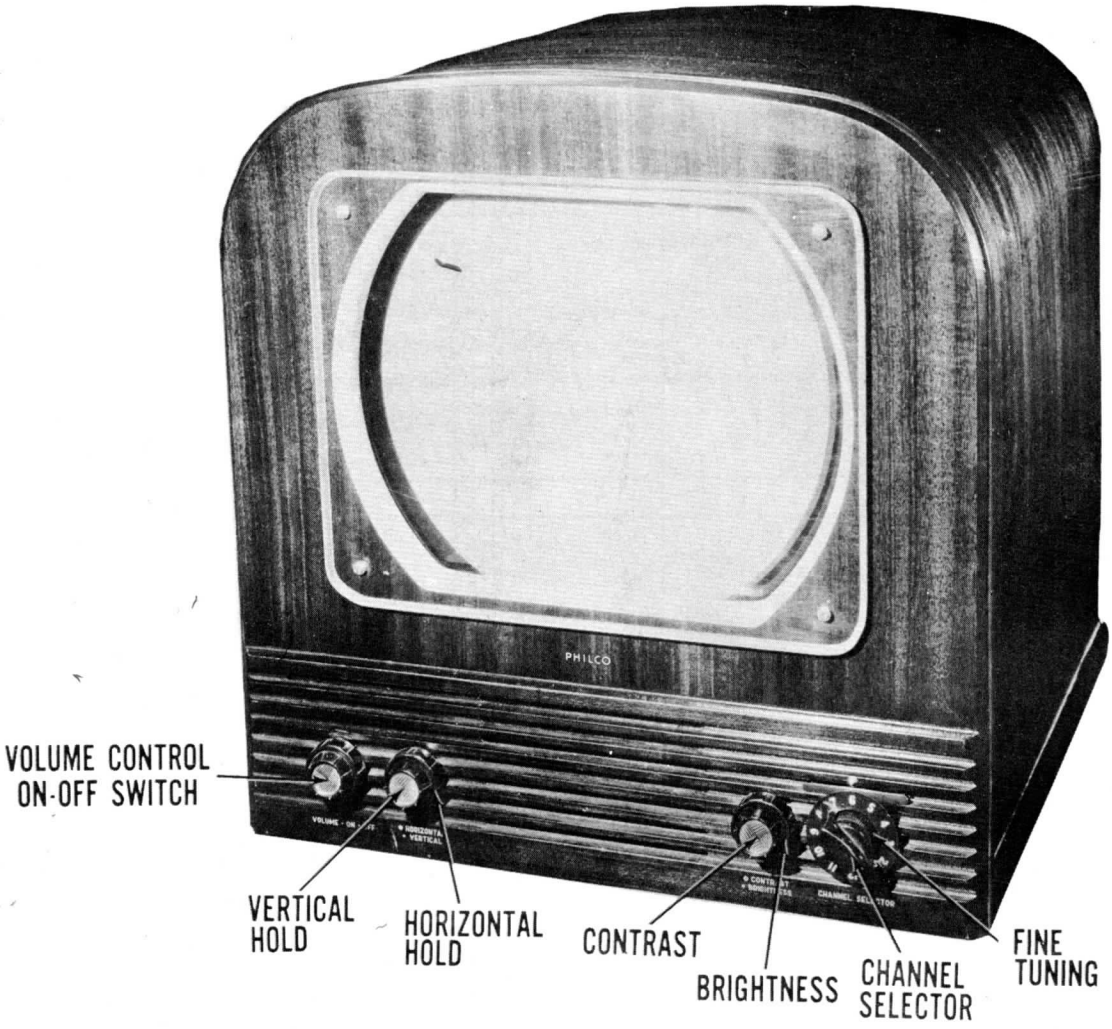
PHOTOFACT* Folder
*TRADE MARK

PHILCO MODELS 50-T1104 (Code 123), 50-T1400, 50-T1401, 50-T1402, 50-T1430 (Code 121)



PHILCO MODEL 50-T1400

TRADE NAME	Philco, Models 50-T1104 (Code 123), 50-T1400, 50-T1401, 50-T1402, 50-T1430 (All Code 121)
MANUFACTURER	Philco Corp., Tioga and "C" Sts., Philadelphia, Pa.
TYPE SET	Television Receiver
TUBES	Twenty Two
POWER SUPPLY	110-120 Volts AC-60 Cycle
RATING	2.1 Amp. at 117 Volts AC
TUNING RANGE	Channels 2 thru 13

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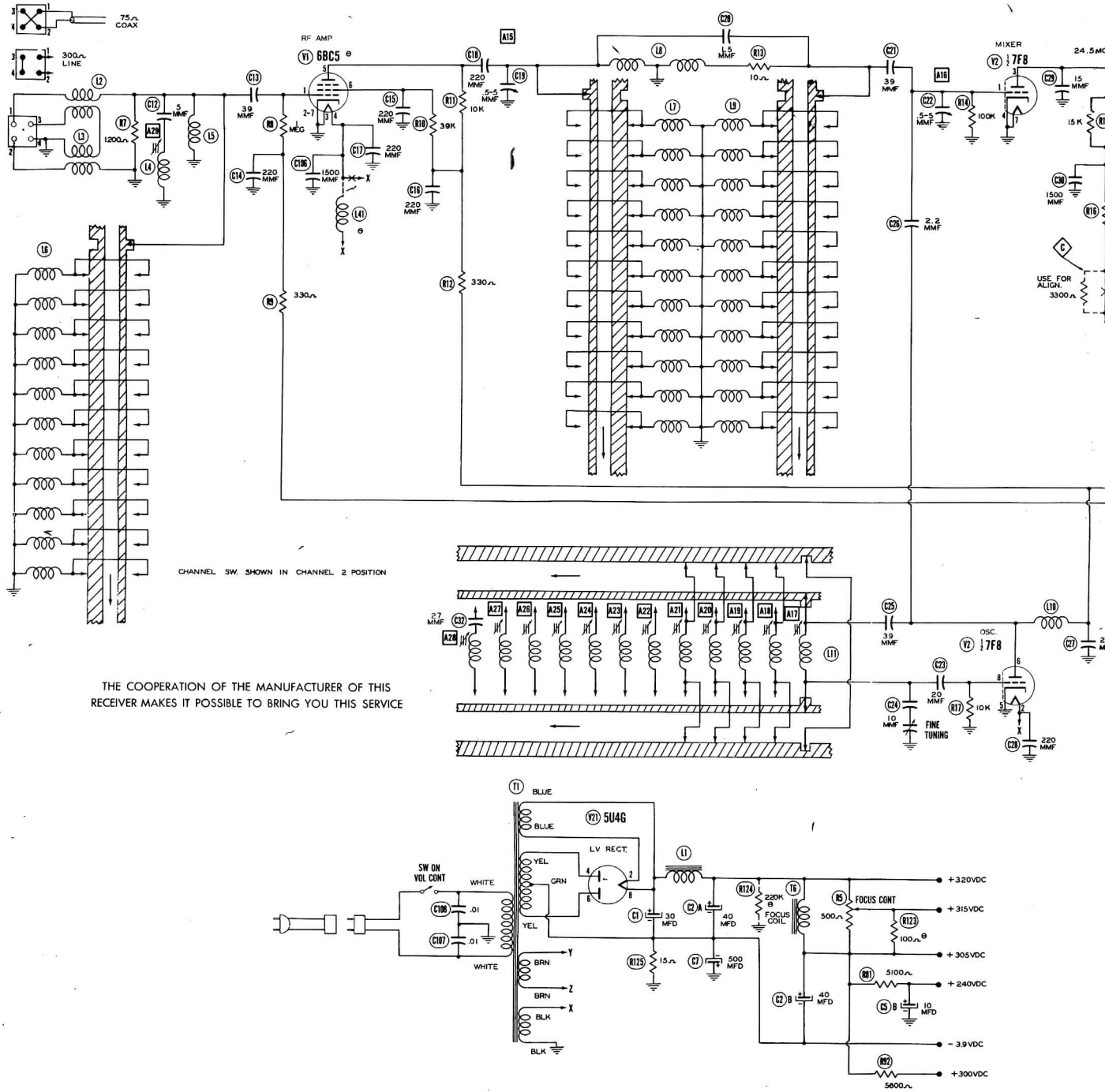
HOWARD W. SAMS & CO., INC. • Indianapolis 1, Indiana

DATE 11-50 SET 114 FOLDER 9

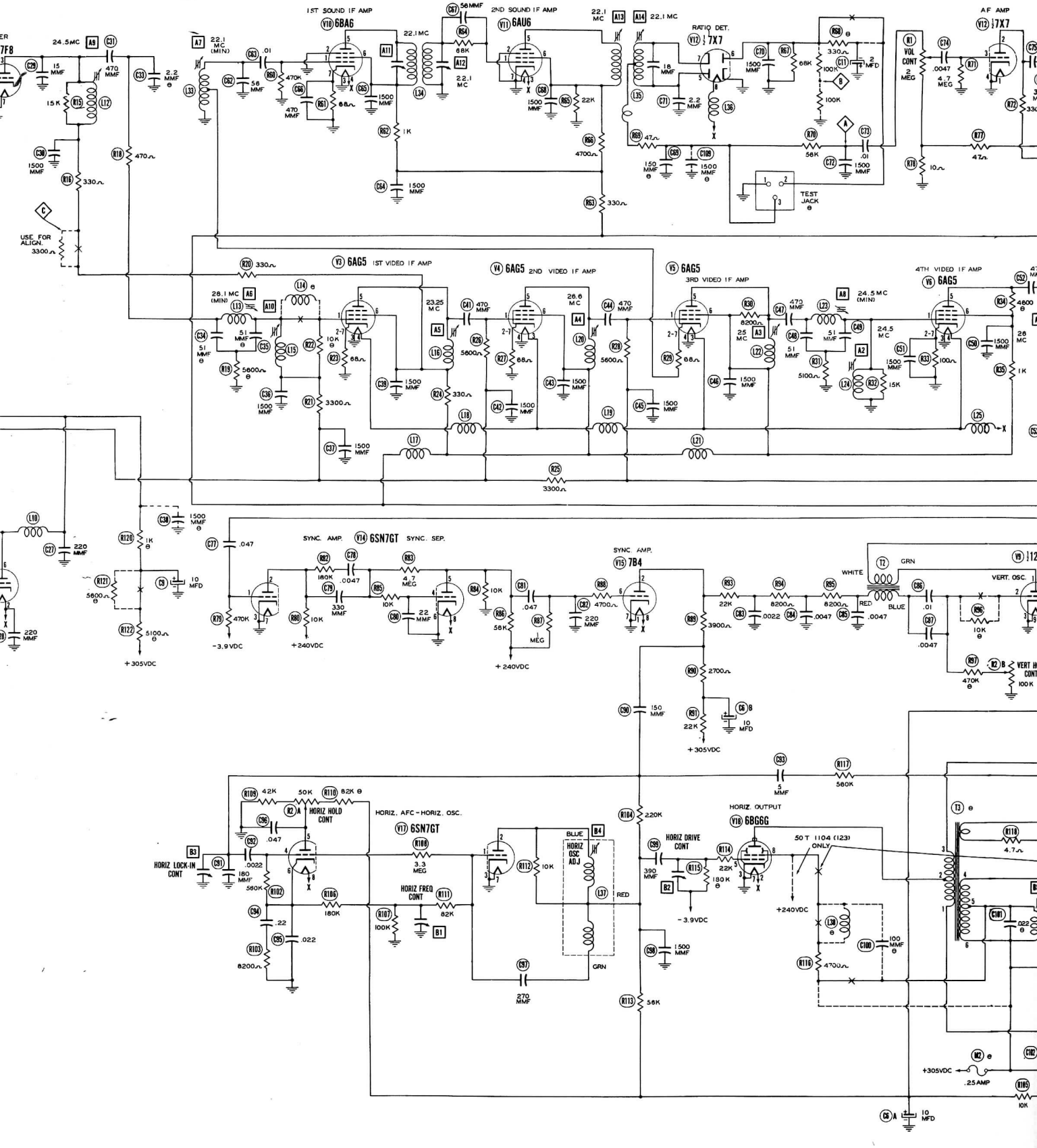
PHILCO MODELS 50-T1104 (Code 123), 50-T1400, 50-T1401, 50-T1402, 50-T1430 (Code 121)

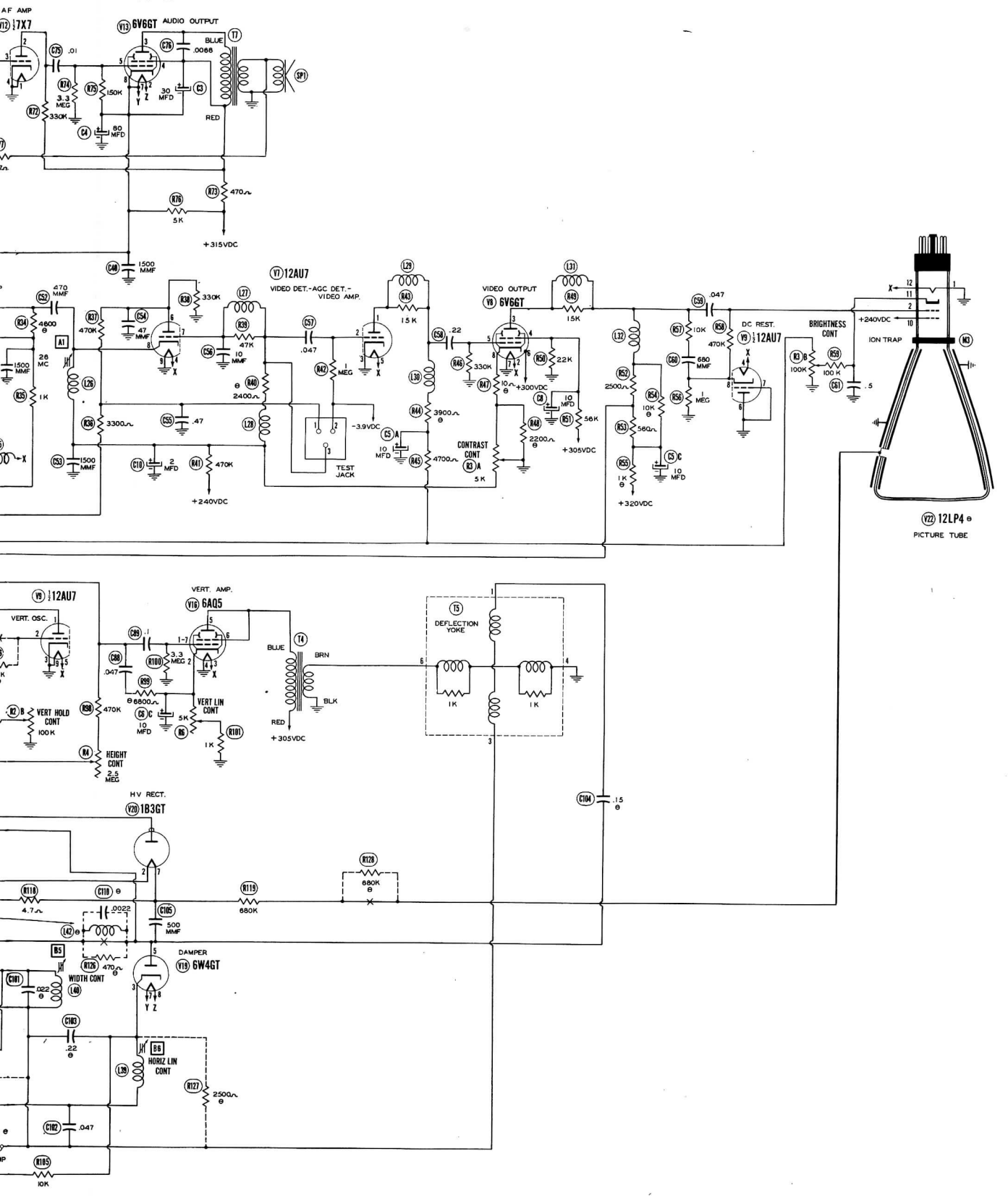


THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

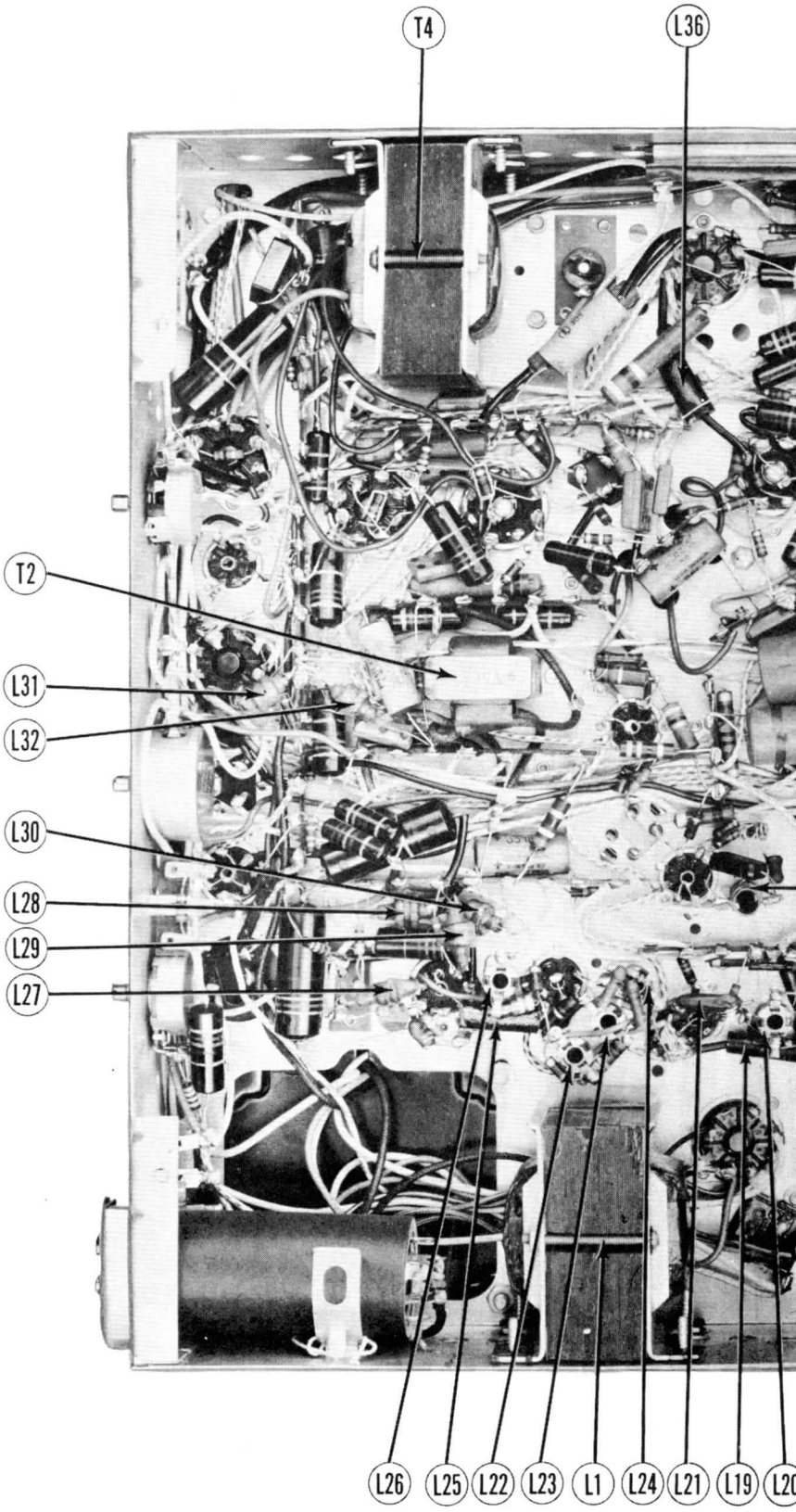
A PHOTOFACT STANDARD NOTATION SCHEMATIC

θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

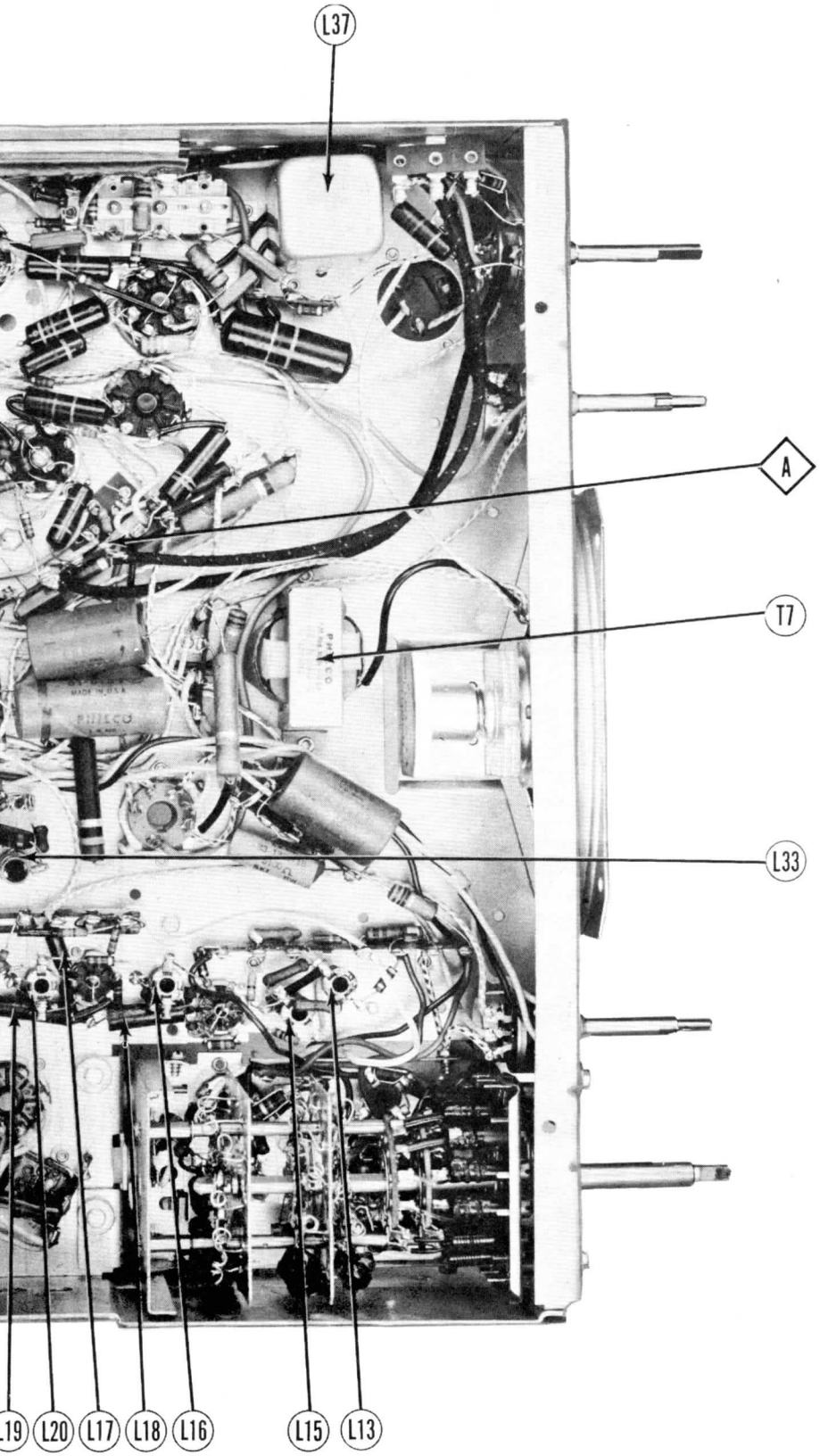

1ST SOUND IF AMP
V10 6BA6
2ND SOUND IF AMP
V11 6AU6
RATIO DET.
V12 7X7
AF AMP
V12 7X7
V3 6AG5 1ST VIDEO IF AMP
V4 6AG5 2ND VIDEO IF AMP
V5 6AG5
3RD VIDEO IF AMP
4TH VIDEO IF AMP
V6 6AG5
SYNC. AMP.
V14 6SN7GT
SYNC. SEP.
SYNC. AMP.
V15 7B4
HORIZ. AFC-HORIZ. OSC.
V17 6SN7GT
HORIZ. OUTPUT
V18 6BG6G
HORIZ HOLD CONT
HORIZ LOCK-IN CONT
HORIZ FREQ CONT
HORIZ DRIVE CONT
HORIZ OSC ADJ
VOL CONT 2 MEG
TEST JACK
USE FOR ALIGN. 3300Ω
-3.9VDC
+240VDC
+305VDC
50T 1104 (123) ONLY
WHITE
GRN
BLUE
RED
VERT. OSC.
VERT HOLD CONT 100K
.25 AMP


AF AMP
V12 ½7X7
V13 6V6GT AUDIO OUTPUT
BLUE
RED
SP1
+315VDC
V7 12AU7
VIDEO DET.-AGC DET.-
VIDEO AMP.
VIDEO OUTPUT
V8 6V6GT
DC REST.
V9 ½12AU7
BRIGHTNESS
CONT
ION TRAP
+240VDC
+300VDC
+305VDC
+320VDC
-3.9VDC
TEST
JACK
CONTRAST
CONT
V22 12LP4
PICTURE TUBE
VERT. OSC.
VERT. AMP.
V16 6AQ5
VERT HOLD
CONT
HEIGHT
CONT
VERT LIN
CONT
T4
T5
DEFLECTION
YOKE
HV RECT.
V20 1B3GT
DAMPER
V19 6W4GT
WIDTH CONT
HORIZ LIN
CONT

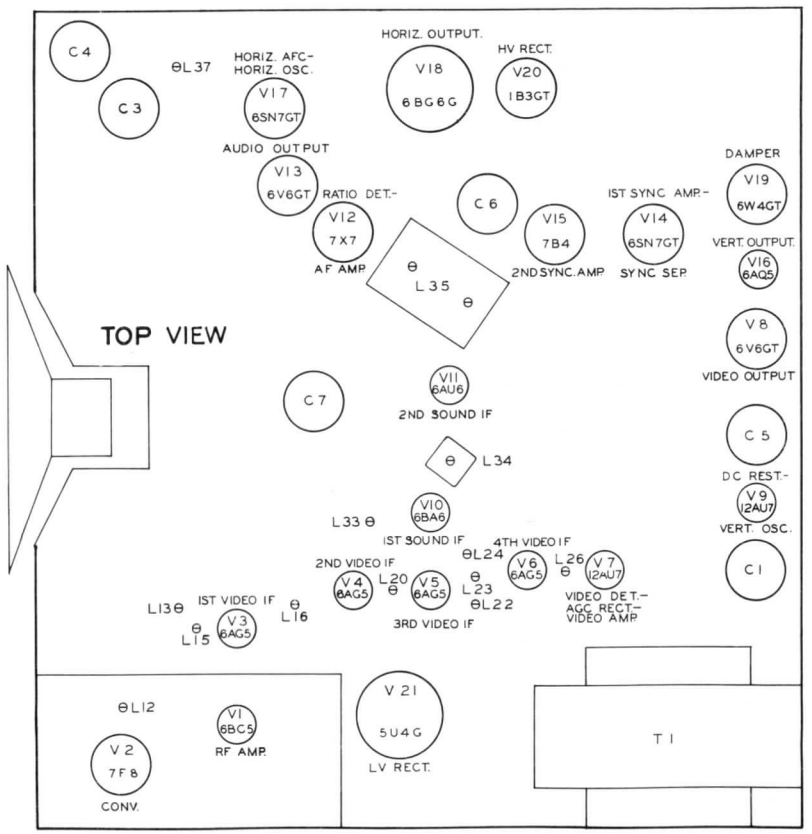
CHASSIS TOP VIEW

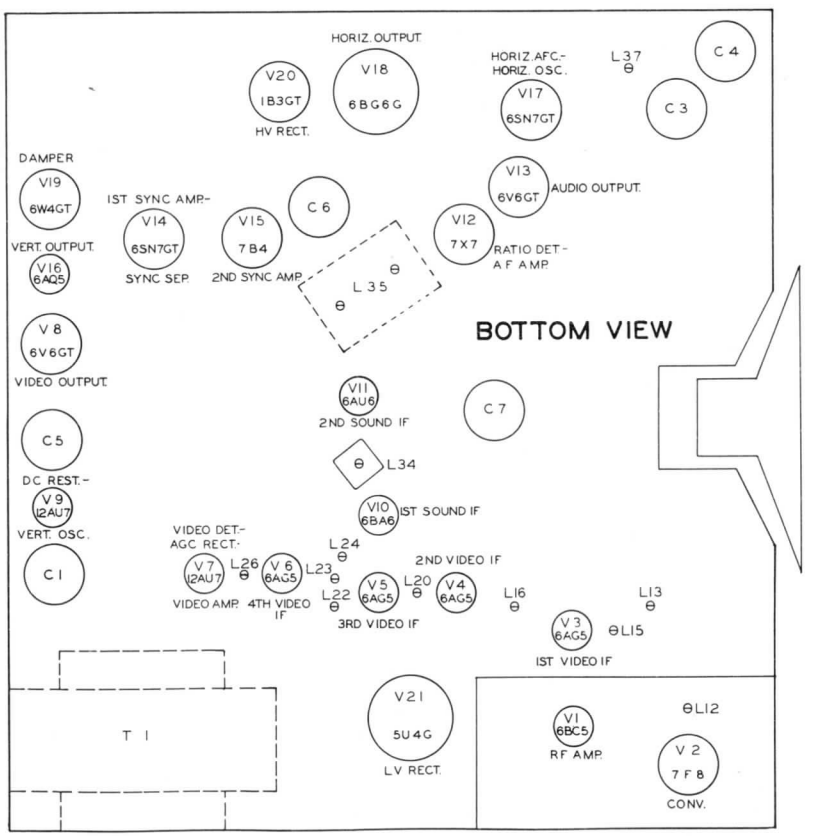


CHASSIS BOTTOM VIEW-TRANS., INDUC



DUCTOR AND ALIGNMENT IDENTIFICATION





TUBE PLACEMENT CHART

PHILCO MODELS 50-T1104 (Code 123), 50-T1400, 50-T1401, 50-T1402, 50-T1430 (Code 121)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

If receiver is to be aligned with picture tube removed the high voltage lead should be securely taped and dressed away from the chassis.

VIDEO IF ALIGNMENT

Disconnect the yellow lead at the junction of R12, C27 and L10 to prevent erroneous indications.
Turn the contrast control fully counter-clockwise.
Pre-set the following adjustments:
All and A12 fully clockwise
A10 fully counter-clockwise.
A8, A3 and A7 until the top of the adjusting screw is approximately 5/8 inch from top of coil mounting.
Connect the negative terminal of 1 1/2 volt battery to pin 2 of align test jack, connect the positive terminal to chassis.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	.001MFD	High side to pin 1 (Grid) of 6AG5 (V6). Low side to chassis.	26MC (Unmod.)	Any	DC Probe to pin 3 of align test jack. Common to chassis.	A1	Adjust for maximum deflection.
2.	.001MFD	High side to pin 1 (Grid) of 6AG5 (V5). Low side to chassis.	24.5MC	"	"	A2	"
3.	.001MFD	"	25MC	"	"	A3	"
4.	.001MFD	High side to pin 1 (Grid) of 6AG5 (V4). Low side to chassis.	26.6MC	"	"	A4	"
5.	.001MFD	High side to pin 1 (Grid) of 6AG5 (V3). Low side to chassis.	23.25MC	"	"	A5	"
6.	Direct	High side to ungrounded tube shield floating over converter tube (V2). Low side to chassis.	28.1MC	3	"	A6	Adjust for MINIMUM deflection.
7.	Direct	"	22.1MC	"	"	A7, A8	Adjust A7 for MINIMUM deflection. If no reading apparent turn A7 until reading increases. Then adjust A7 to point where reading just begins to increase. Adjust A8 for MINIMUM deflection.
8.	Direct	"	24.5MC	"	"	A9	Adjust for maximum deflection.

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
9.	Direct	High side to ungrounded tube shield floating over converter tube (V2). Low side to chassis.	25MC (10MC SWP)	23.25MC 23.7MC 25.8MC 26.6MC	3	Vert. Amp. to Pin 3 of align test jack. Low side to chassis.	A10	Adjust for response curve similar to figure 1. The 23.25MC and 26.6MC markers should be at 50% response. If necessary, SLIGHTLY retouch A1 thru A5, A9 and A10 for proper response.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Connect two matched 100KΩ (±1%) resistors from pin 2 of FM test jack to chassis. The junction of these two resistors is alignment Point (B) as shown on the schematic.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
10.	Direct	High side to ungrounded tube shield floating over converter tube (V2). Low side to chassis.	22.1MC (Unmod.)	Any	DC Probe to pin 2 of FM test jack. Common to chassis.	A11, A12, A13	Adjust for maximum deflection.
11.	Direct	"	"	"	DC Probe to Point (A). Common to Point (B).	A14	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 120 ∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10.	Direct	High side to ungrounded tube shield floating over converter tube (V2). Low side to chassis.	22.1MC (450KC SWP)	22.1MC	Any	Vert. Amp. to pin 2 of "FM" test jack. Low side to chassis.	A11, A12, A13	Disconnect stabilizer capacitor C11. Adjust for maximum amplitude and symmetry as per figure 2.
11.	Direct	"	"	"	"	Vert. Amp. to Point (A). Low side to chassis.	A14	Reconnect capacitor C11. Adjust A14 to place 22.1MC at center of crossover lines as per figure 3. SLIGHTLY retouch A13 for maximum amplitude and straightness of crossover lines.

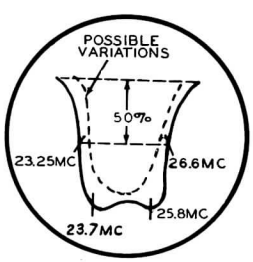


FIG. 1

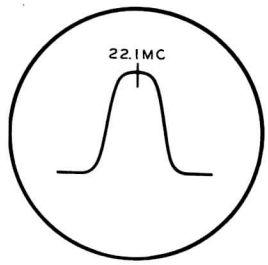


FIG. 2

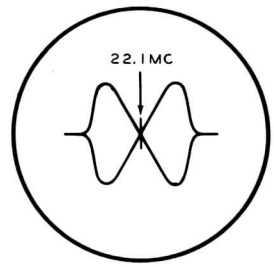


FIG. 3

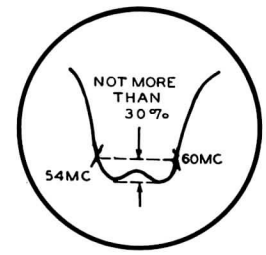


FIG. 4

ALIGNMENT INSTRUCTIONS (CONT.)

RF ALIGNMENT

Insert a piece of solder into hole adjacent to tuning core A9. Allow the solder to make contact with the lug under the hole and chassis.
Connect a 3300Ω resistor in series with 150 volt B+ lead to R16. The junction of these resistors will be alignment Point Ⓒ.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
12.	Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	57MC (10MC SWP)	54MC 60MC	2	Vert. Amp. to Point Ⓒ. Low side to chassis.	A15	Adjust for proper bandwidth of 6MC to 14MC as shown in figure 4 with markers as shown. The markers should not be less than 70% of maximum amplitude of response curve.
13.	"	"	213MC (10MC SWP)	Not used	13	"	A16	Adjust for maximum amplitude and symmetry as per figure 4.

OSCILLATOR ALIGNMENT

Reconnect the yellow lead to the junction of R12, C27 and L10.
The signal generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Set the fine tuning control to the mid-position of its range.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
14.	Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	59.75MC (Unmod.)	2	DC Probe to Point Ⓐ. Common to Point Ⓑ.	A17	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
15.	"	"	65.75MC	3	"	A18	"
			71.75MC	4		A19	
			81.75MC	5		A20	
			87.75MC	6		A21	
			179.75MC	7		A22	
			185.75MC	8		A23	
			191.75MC	9		A24	
			197.75MC	10		A25	
			203.75MC	11		A26	
			209.75MC	12		A27	
			215.75MC	13		A28	

FM TRAP ADJUSTMENT

The FM trap is adjusted at the factory to 100MC and normally should not be adjusted unless an FM station with a frequency other than 100MC causes interference.

Tune in the TV station which the FM interference occurs and adjust A29 for minimum interference.

If the FM station not on the air, connect an AM signal generator to the antenna terminals as in oscillator alignment, and set generator to frequency of FM station causing interference, and turn the channel selector to the channel on which interference occurs. Connect the vertical input lead of an oscilloscope to alignment Point C and chassis.

Adjust A29 for minimum indication on scope.

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

The horizontal hold control has sufficient range to compensate for normal variations and still provide horizontal synchronization. If replacement of tubes, or components, makes it necessary to make further adjustment, they should be made as follows:

1. Turn the horizontal frequency trimmer (B1) 1 1/2 turns counter-clockwise from fully clockwise position. Turn the horizontal drive trimmer (B2) two turns counter-clockwise from fully clockwise position. Turn the horizontal lock-in trimmer (B3) 1/2 turn counter-clockwise from fully clockwise position. Turn the horizontal hold control to the midposition of its range.
2. Turn the set on and tune in a TV station, preferably a test pattern, and adjust the horizontal oscillator coil slug (B4) until picture synchronizes horizontally.
3. Turn the horizontal hold control fully clockwise, and adjust B4 until 8 to 10 horizontal blanking bars are visible sloping downward to the right. If this cannot be accomplished, turn B1 another turn counter-clockwise and repeat this step.
4. Turn the hold control counter-clockwise until picture is in sync, and continue rotation of hold control until picture falls out of sync. The picture may not go out of sync, with the hold control at its fully counter-clockwise position. If this is true, momentarily remove the signal by switching to another channel and back again. The picture should be out of sync. Turn the hold control slowly clockwise and note the number of blanking bars present just before picture pulls into sync. There should be 3 1/2 to 4 1/2 bars present just before pull-in. If there are more than 4 1/2 bars, turn B3 1/4 turn clockwise and repeat steps 3 and 4. If there is less than 3 1/2 bars present, turn B3 another 1/4 turn counter-clockwise and repeat steps 3 and 4 until this condition exists.

HORIZONTAL WIDTH AND LINEARITY ADJUSTMENTS

Adjust the width slug (B5) until picture fills the mask horizontally.
Adjust the horizontal linearity slug (B6) until picture is symmetrical from left to right.

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	0V	6.3VAC	135VDC	125VDC	0V		
V 2	7F8	-1.6VDC	6.3VAC	130VDC	0V	0V	185VDC	0V	§-2.3VDC	
V 3	6AG5	-.5VDC	.4VDC	0V	6.3VAC	125VDC	125VDC	.4CDC		
V 4	6AG5	-.4VDC	.6VDC	6.3VAC	0V	130VDC	130VDC	.6VDC		
V 5	6AG5	-.4VDC	1.3VDC	6.3VAC	0V	130VDC	130VDC	1.3VDC		
V 6	6AG5	0V	1.3VDC	0V	6.3VAC	85VDC	135VDC	1.3VDC		
V 7	12AU7	105VDC	-.8VDC	0V	6.3VAC	6.3VAC	-2.8VDC	-1.4VDC	0V	0V
V 8	6V6GT	0V	6.3VAC	305VDC	85VDC	-1.7VDC	300VDC	0V	4.4VDC	
V 9	12AU7	275VDC 80VDC	-45VDC	0V	6.3VAC	6.3VAC	0V	0V	.6VDC	0V
V 10	6BA6	0V	0V	0V	6.3VAC	105VDC	105VDC	1.1VDC		
V 11	6AU6	-.4VDC	0V	6.3VAC	0V	90VDC	90VDC	0V		
V 12	7X7	0V	115VDC	-.6VDC	0V	-.4VDC	-20VDC	-.4VDC	6.3VAC	
V 13	6V6GT	0V	#6.3VAC	#150VDC	#165VDC	#-4.7VDC	0V	#0V	130VDC	
V 14	6SN7GT	-1.3VDC	165VDC	0V	-.3VDC	25VDC	0V	0V	6.3VAC	
V 15	7B4	0V	185VDC	180VDC	1.6VDC	0V	.4VDC	0V	6.3VAC	
V 16	6AQ5	0V	22VDC 36VDC	6.3VAC	0V	300VDC	300VDC	0V		
V 17	6SN7GT	-80VDC	200VDC	0V	-4VDC	45VDC	-25VDC	0V	6.3VAC	
V 18	6BG6G	0V	6.3VAC	0V	240VDC	-11VDC	200VDC	0V	245VDC	TOP CAP *
V 19	6W4GT	0V	0V	380VDC	300VDC	300VDC	340VDC	#0V	#6.3VAC	
V 20	1B3GT	* DO NOT MEASURE								
V 21	5U4G	0V	330VDC	0V	350VAC	0V	350VAC	130VDC	330VDC	
V 22	12LP4A	0V	.3VDC	PIN 10 240VDC	PIN 11 130VDC	PIN 12 6.3VAC				

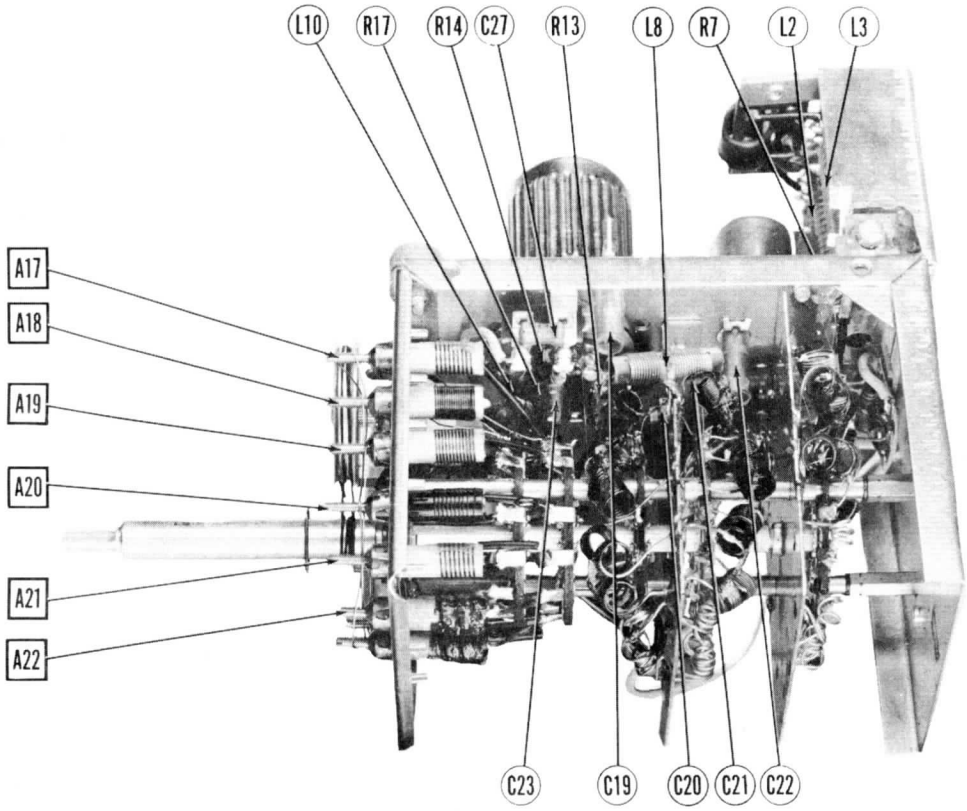
§ TAKEN WITH VACUUM TUBE VOLTMETER
# MEASURED FROM PIN 8 OF V13.
* DO NOT MEASURE

RESISTANCE READINGS

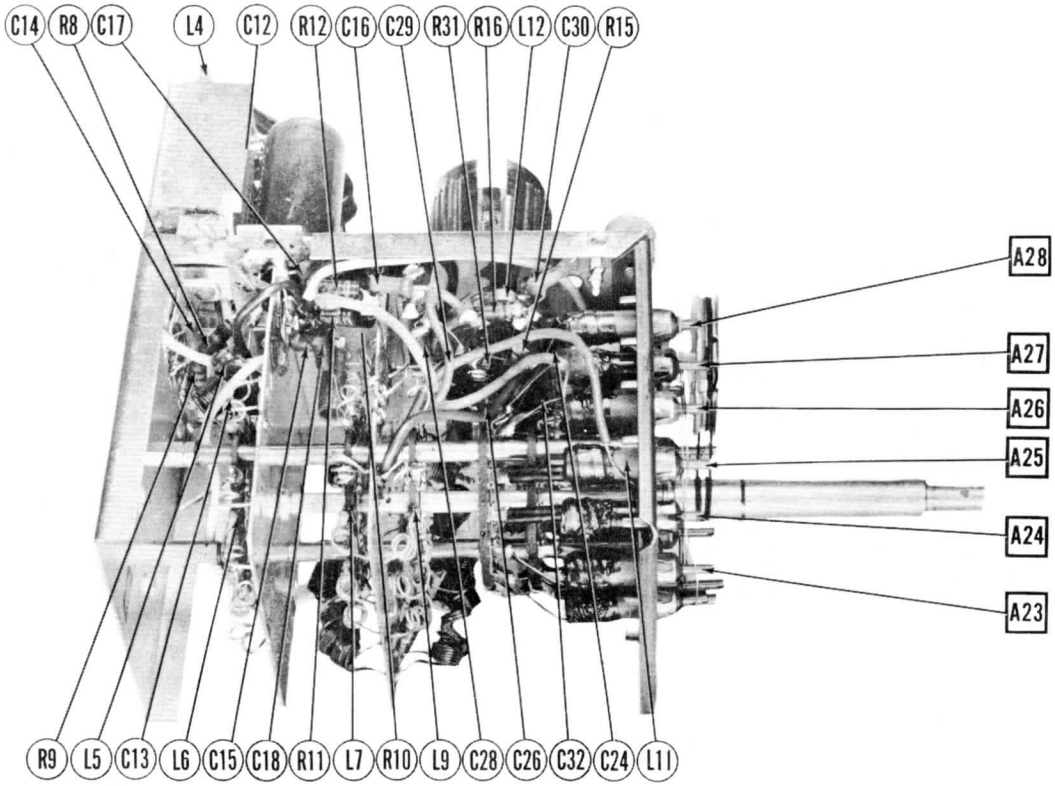
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BC5	1.9 Meg.	0Ω	0Ω	.1Ω	†17KΩ	†46KΩ	0Ω		
V 2	7F8	100KΩ	.1Ω	#990Ω	0Ω	0Ω	†6.5KΩ	0Ω	10KΩ	
V 3	6AG5	850KΩ	68Ω	0Ω	.2Ω	#330Ω	#330Ω	68Ω		
V 4	6AG5	850KΩ	68Ω	.2Ω	0Ω	#.5Ω	#.2Ω	68Ω		
V 5	6AG5	850KΩ	68Ω	.2Ω	0Ω	#.5Ω	#.4Ω	68Ω		
V 6	6AG5	.3Ω	100Ω	0Ω	.2Ω	#5.6KΩ	#1KΩ	100Ω		
V 7	12AU7	#8.6KΩ	1 Meg.	0Ω	.1Ω	.1Ω	330KΩ	2.4KΩ	.3Ω	0Ω
V 8	6V6GT	Inf.	.1Ω	†3.7KΩ	†20KΩ	330KΩ	†6KΩ	0Ω	2KΩ	
V 9	12AU7	▲480KΩ ▲3 Meg.	470KΩ	0Ω	.1Ω	.1Ω	0Ω	0Ω	1 Meg.	0Ω
V 10	6BA6	470KΩ	0Ω	0Ω	.1Ω	#1.3KΩ	#1.3KΩ	68Ω		
V 11	6AU6	68KΩ	0Ω	.1Ω	0Ω	#4.5KΩ	#4.5KΩ	0Ω		
V 12	7X7	0Ω	†330KΩ	4.7 Meg.	0Ω	Inf.	68KΩ	Inf.	.2Ω	
V 13	6V6GT	Inf.	#.1Ω	†975Ω	†550Ω	#150KΩ	Inf.	#10Ω	†5KΩ	
V 14	6SN7GT	470KΩ	†15KΩ	0Ω	4.7 Meg.	†20KΩ	0Ω	0Ω	.1Ω	
V 15	7B4	0Ω	†28KΩ	†45KΩ	1 Meg.	9Ω	1 Meg.	0Ω	.1Ω	
V 16	6AQ5	3.3 Meg.	6KΩ 1KΩ	.1Ω	0Ω	†900Ω	†900Ω	3.3 Meg.		
V 17	6SN7GT	180KΩ	▲65KΩ	0Ω	700KΩ	▲140KΩ	270KΩ	0Ω	.1Ω	
V 18	6BG6G	Inf.	.1Ω	0Ω	†5KΩ	200KΩ	▲55KΩ	0Ω	†4.8KΩ	TOP CAP ▲100Ω
V 19	6W4GT	Inf.	Inf.	140KΩ	†120Ω	†150Ω	▲10KΩ	#0Ω	#.1Ω	
V 20	1B3GT	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP ▲510Ω
V 21	5U4G	Inf.	20KΩ	Inf.	25Ω	Inf.	25Ω	†4.7KΩ	20KΩ	
V 22	12LP4	0Ω	1.5 Meg.	PIN 10 †5.2KΩ	PIN 11 120KΩ	PIN 12 .1Ω				

MEASURED FROM PIN 8 OF V13
† MEASURED FROM PIN 8 OF V21
▲ MEASURED FROM PIN 3 OF V19

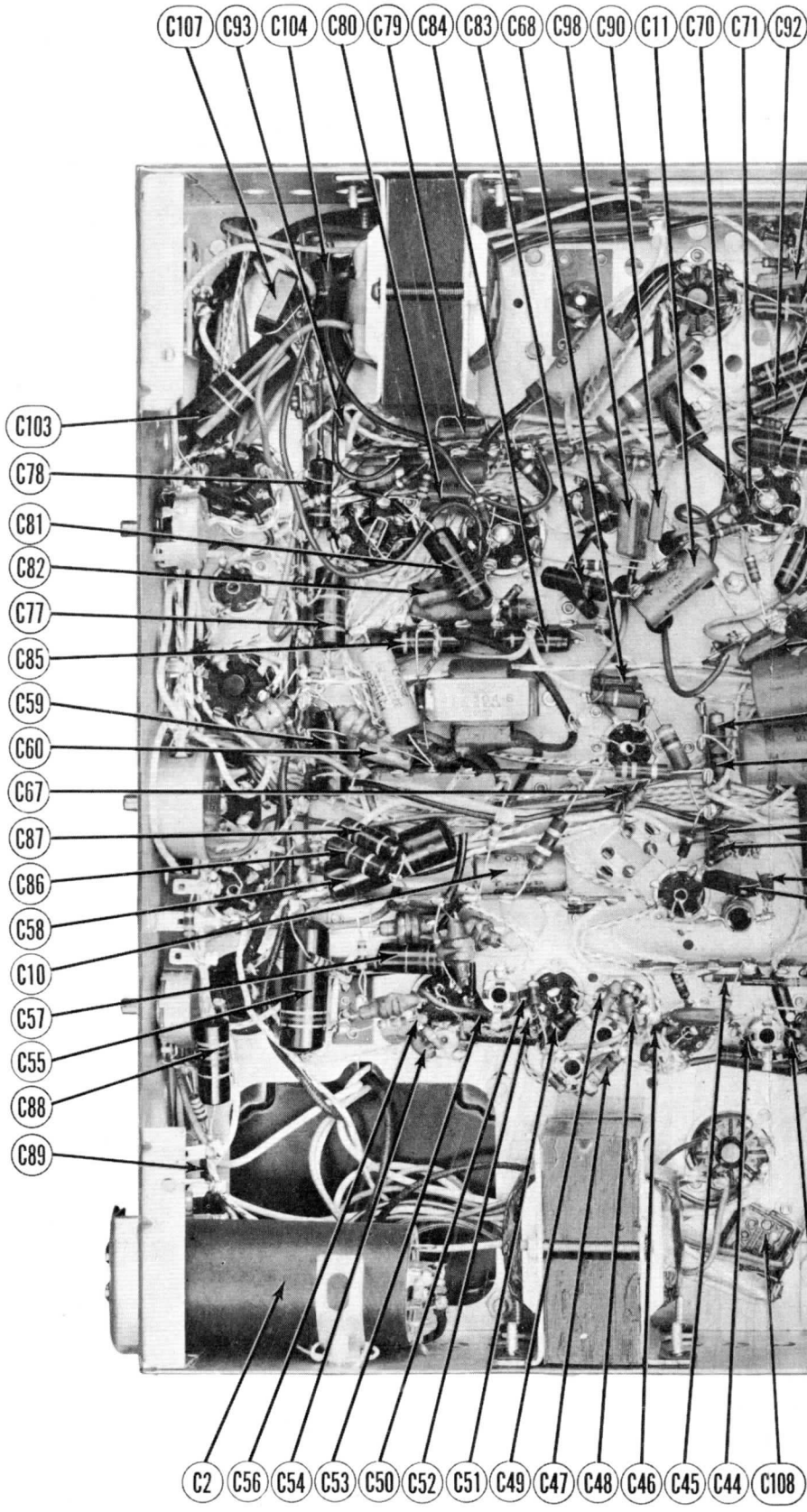
1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.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



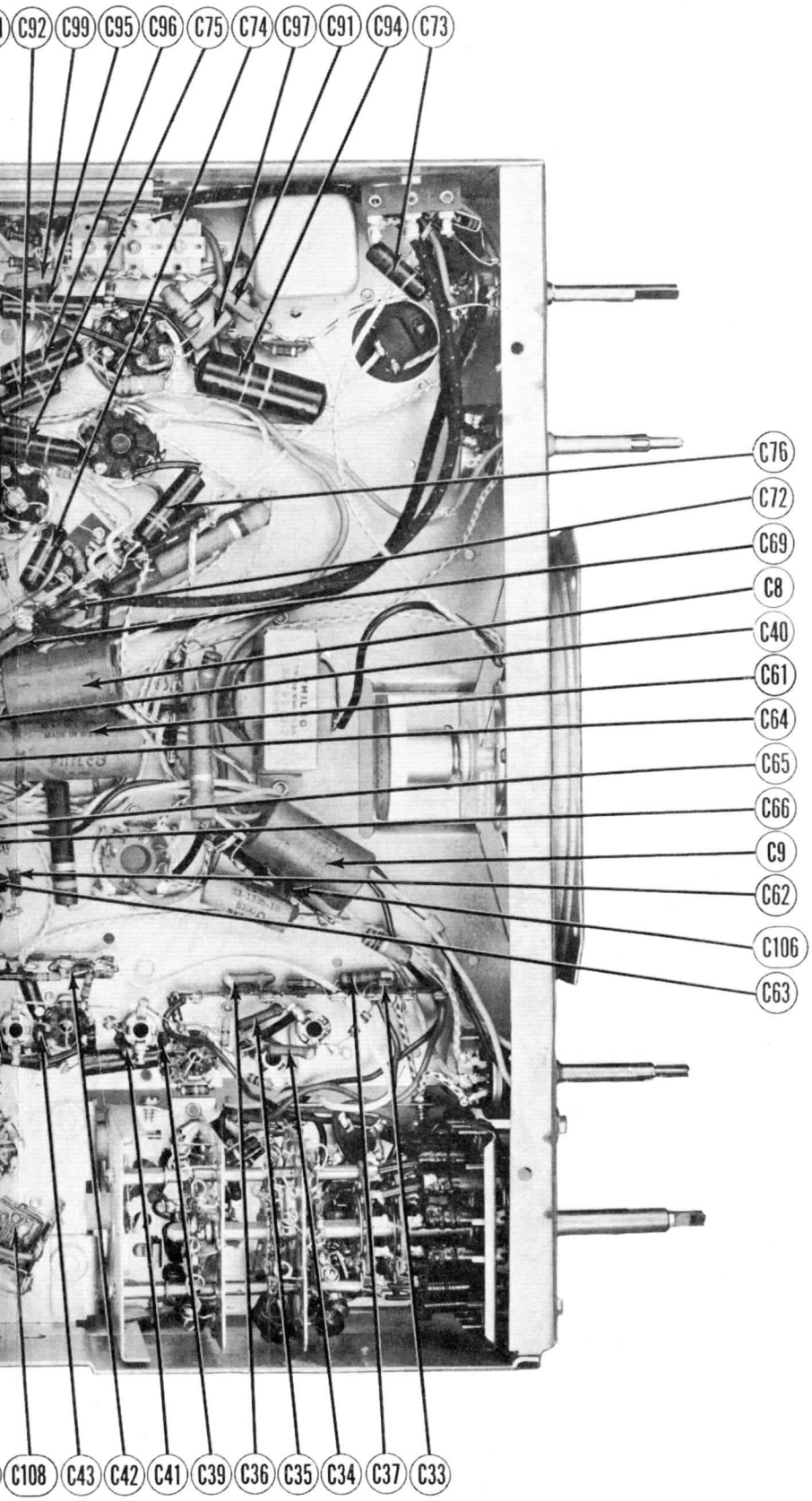
RF TUNER-RIGHT SIDE



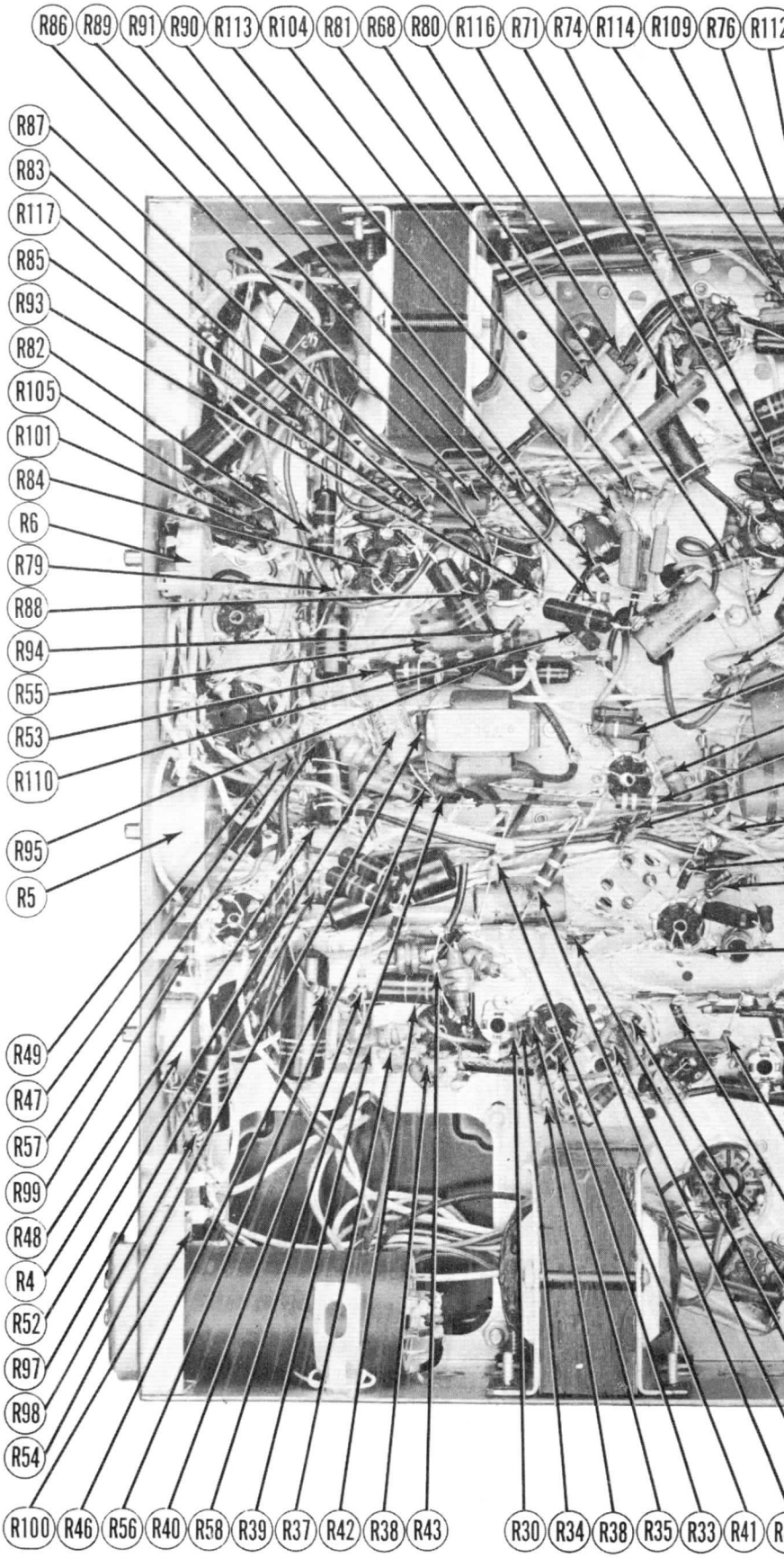
RF TUNER-LEFT SIDE



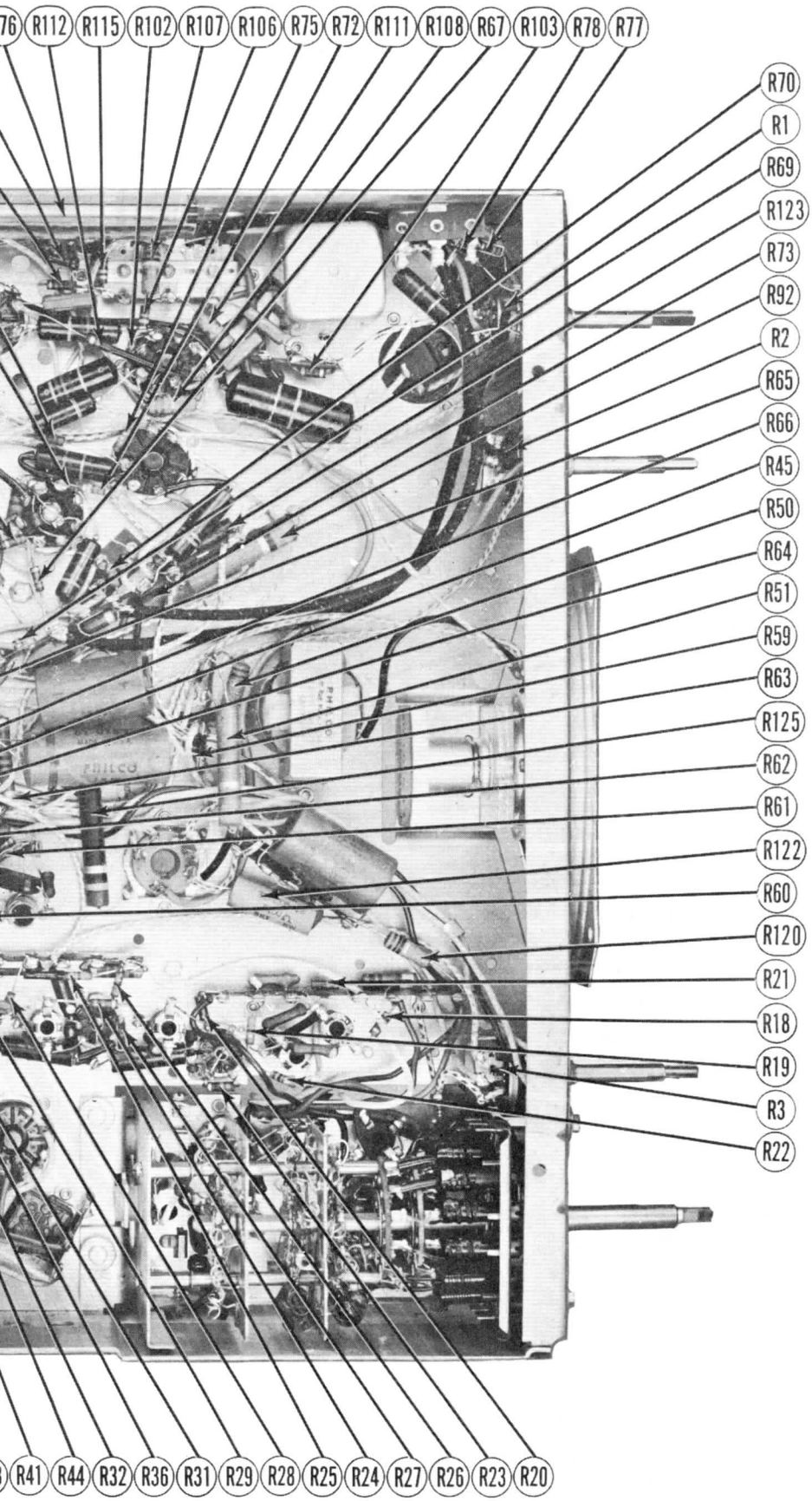
CHASSIS BOTTOM VIEW-CA



-CAPACITOR IDENTIFICATION



CHASSIS BOTTOM VIEW-RE



W-RESISTOR IDENTIFICATION

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		PHILCO PART No.	STANDARD REPLACEMENT		
V1A	RF Amp.	6BC5	6BC5	7BD	
B	RF Amp.	6AG5	6AG5	7BD	
V2	Converter	7F8	7F8	8G	
V3	1st Video IF	6AG5	6AG5	7BD	
V4	2nd Video IF	6AG5	6AG5	7BD	
V5	3rd Video IF	6AG5	6AG5	7BD	
V6	4th Video IF	6AG5	6AG5	7BD	
V7	Video Det.-AGC Det.-Video Amp.	12AU7	12AU7	9A	
V8	Video Det.	6V6GT	6V6GT	7AC	
V9	DC Rest.-Vert. Osc.	12AU7	12AU7	9A	
V10	1st Sound IF	6BA6	6BA6	7BK	
V11	2nd Sound IF	6AU6	6AU6	7BK	
V12	Ratio Det.-AF Amp.	7X7	7X7	8BZ	
V13	Audio Output	6V6GT	6V6GT	7AC	
V14	Sync. Amp.-Sync. Sep.	6SN7GT	6SN7GT	8BD	
V15	Sync. Amp.	7B4	7B4	5AC	
V16	Vert. Amp.	6AQ5	6AQ5	7BZ	
V17	Hor. AFC-Hor. Osc.	6SN7GT	6SN7GT	8BD	
V18	Hor. Output	6BG6G	6BG6G	5BT	
V19	Damper	6W4GT	6W4GT	4CG	
V20	HV Rect.	1B3GT	1B3GT	3C	
V21	LV Rect.	5U4G	5U4G	5T	
V22A	Picture Tube	12LP4	12LP4	12D	
B	Picture Tube	10BP4	10BP4	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
	CAP.	VOLT	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1	30	475	30-2568-19	AF6X		UPE3050		TVL-1810	Filter
C2A	40	450	30-2570-13	AF88J		UP4445		TVL-2764	▲ Filter
B	40	450							▲ Filter
C3	30	475	30-2568-19	AF6X		UPE3050		TVL-1810	Decoupling
C4	80	450	30-2570-39	AF16J		UP8045			Decoupling
C5A	10	475	30-2570-13	AF222X		UP11150		TVL-3835	■ 1st V. Amp. Dec.
B	10	475							▲ Decoupling
C	10	475							V. Output Dec.
C6A	10	475	30-2570-13	AF222X		UP11150		TVL-3835	■ Decoupling
B	10	475							▲ Sync. Amp. Dec.
C	10	475							Vert. Output Cath.
C7	500	25	30-1229-2	E3A172		UPT103			Filter
C8	10	450	30-2417-6	PRS450/10		BR1045A		TVA-1705	V. Output Screen
C9	10	450	30-2417-6	PRS450/10		BR1045A		TVA-1705	Decoupling
C10	2	50	30-2417-7	E26E6		BBR2-50T		TVA-1301	Bias Filter
C11	2	50	30-2417-7	E26E6		BBR2-50T		TVA-1301	Stabilizing Cap.
C12	5			SI5NPO	TCZ-4.7		NPOK-5		Fixed Trimmer
C13	39			SI39	D6-390		GP1K-39		RF Coupling
C14	220			SI220	D6-221		GP2K-220	19C13	AGC Filter
C15	220			SI220	D6-221		GP2K-220	19C13	RF Screen
C16	220			SI220	D6-221		GP2K-220	19C13	RF Decoupling
C17	220			SI220	D6-221		GP2K-220	19C13	RF Fil. Bypass
C18	220			SI220	D6-221		GP2K-220	19C13	RF Coupling
C19	.5-5						532-08-.5-5		Variable Trimmer
C20	1.5			SI1.5NPO	TCZ-1.5		NPOK-1.5		RF Coupling
C21	39			SI39	D6-390		GP1K-39		RF Coupling
C22	.5-5						532-08-.5-5		Variable Trimmer
C23	20			SI20	TCZ-20		GP1K-20		Osc. Grid Cap.
C24	10								Fixed Trimmer
C25	39			SI39	D6-390		GP1K-39		Osc. Feedback
C26	2.2				TCZ-2.2				Osc. Coupling
C27	220			SI220	D6-221		GP2K-220	19C13	RF Bypass
C28	220			SI220	D6-221		GP2K-220	19C13	Conv. Fil. Bypass
C29	15			SI15	D6-150		GP1K-15	19C22	Fixed Trimmer
C30	1500			SI1500	D6-152		GP2L-0015	29C8	Conv. Plate Dec.
C31	470			SI470	D6-471		GP2K-470	19C15	IF Coupling
C32	27			SI27	D6-270		GP1K-27		Fixed Padder
C33	2.2		30-1221-4		TCZ-2.2				RF Bypass *
C34	51		30-1224-62	SI51	D6-510		GP1K-51		Fixed Trimmer ♦
C35	51		30-1224-62	SI51	D6-510		GP1K-51		Fixed Trimmer ♦
C36	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	AGC Filter
C37	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	AGC Filter
C38	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	RF Bypass
C39	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	1st V. IF Dec.
C40	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	RF Bypass
C41	470		62-147001001	SI470	D6-471	5W5T5	GP2K-470	19C15	IF Coupling
C42	1500		62-215001011	SI1500	D6-152	1W5D15		29C8	AGC Filter
C43	1500		62-215001011	SI1500	D6-152	1W5D15		29C8	2nd V. IF Dec.
C44	470		62-417001001	SI470	D6-471	5W5T5		19C15	IF Coupling
C45	1500		62-215001011	SI1500	D6-152	1W5D15		29C8	AGC Filter
C46	1500		62-215001011	SI1500	D6-152	1W5D15		29C8	3rd V. IF Dec.
C47	470		62-147001001	SI470	D6-471	5W5T5		19C15	IF Coupling
C48	51		62-1224-2	SI51	D6-510		GP1K-51		Fixed Trimmer
C49	51		62-1224-2	SI51	D6-510		GP1K-51		Fixed Trimmer
C50	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	4th V. IF Dec.
C51	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	4th V. IF Cath.
C52	470		62-147001001	SI470	D6-471	5W5T5	GP2K-470	19C15	IF Coupling
C53	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	RF Bypass
C54	47		30-1224-2	SI47	D6-470	5W5Q5	GP1K-47	19C25	V. Det.-AGC Plate
C55	.47	200	61-0133	P288-47		GT2P5			AGC Filter
C56	10		62-010009001	SI10	D6-100	5W5Q1	GP1K-10	19C19	V. Diode Filter
C57	.047	400	61-0122	P488-047	DF-503	PTE4S5		4TM-S47	Video Coupling
C58	.22	400	45-3305-49	P488-22		GT4P25		4TM-P22	Video Coupling
C59	.047	400	61-0122	P488-047	DF-503	PTE4S5		4TM-S47	Video Coupling
C60	680	500	60-10685401	SI680	D6-681	1W5T7	GP2K-680	19C17	Video Coupling
C61	.5	400	61-0133	684-5		GT4P5		4TM-P5	Pic. Tube Cath.
C62	56		62-056409001	SI56	D6-560		GP1K-56		Fixed Trimmer

CAPACITORS (CONT.)

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C63	.01	100	61-0120	P488-01	D6-103	PTE4S1	811-01	4TM-S1	S. IF Coupling
C64	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	RF Bypass
C65	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	1st S. IF Dec.
C66	470		62-147001001	SI470	D6-471	5W5T5	GP2K-470	19C15	1st S. IF Cath.
C67	56		62-056409001	SI56	D6-560	5W5Q5	GP1K-56	19C28	S. IF Coupling
C68	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	2nd S. IF Dec.
C69	150	500	60-10155407	1468-00015	D6-151	5W5T15	GP2K-150	1FM-315	Diode Load Cap. †
C70	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	RF Bypass
C71	2.2		30-1221-4		TCZ-2.2				Balancing
C72	1500		62-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	De-emphasis
C73	.01	400	61-0120	P488-01	D6-103	PTE4S1	811-01	4TM-S1	Audio Coupling
C74	.0047	600	45-3505-56	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Audio Coupling
C75	.01	600	61-0120	P688-01	D6-103	PTE6S1	811-01	6TM-S1	Audio Coupling
C76	.0068	1000	45-3505-91	P1088-0068		PTE16D7		MB-D68	Output Plate Byp.
C77	.047	400	61-0122	P488-047	DF-503	PTE4S5		4TM-S47	Sync. Coupling
C78	.0047	600	45-3505-56	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Sync. Coupling
C79	330	500	62-133001001	1468-00035	D6-331	5W5T3	GP2K-330	1FM-335	Sync. Coupling
C80	22	500	62-022009001	1468-000025	D6-220	5W5Q25	GP1K-22	MS-425	Sync. Sep. Grid Byp.
C81	.047	400	45-3505-62	P488-047	DF-503	PTE4S5		4TM-S47	Sync. Coupling
C82	220	500	62-122001001	1468-00025	D6-221	5W5T25	GP2K-220	1FM-325	Sync. Amp. Grid
C83	.0022	600	61-0062	P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Integrator Net.
C84	.0047	600	45-3505-56	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Integrator Net.
C95	.0047	600	45-3505-56	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Integrator Net.
C86	.01	400	61-0120	P488-01	D6-103	PTE4S1	811-01	4TM-S1	Vert. Sync. Coupling
C87	.0047	600	45-3505-56	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Vert. Sync. Coupling
C88	.047	400	45-3505-62	P488-047		PTE4S5		4TM-S47	Vert. Discharge
C89	.1	400	45-3505-64	P488-1	DF-104	PTE4P1		4TM-P1	Vert. Sweep Coupling
C90	150	500	60-10155407	1468-00015	D6-151	5W5T15	GP2K-150	1FM-315	Hor. Sync. Coupling
C91	180	500	30-1220-30	1468-0002	D6-181	5W5T2	GP2K-180	1FM-32	Voltage Divider
C92	.0022	600	61-0062	P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Hor. Sync. Coupling
C93	5	500	60-90505007	1468-000005	TCZ-4.7	5W5V5	GP1K-5	MS-55	Hor. Feedback
C94	.22	400	61-0125	P488-22		GT4P25		4TM-P22	AFC Filter
C95	.022	400	61-0108	P488-022	DF-203	PTE4S2		4TM-S22	AFC Filter
C96	.047	400	61-1070	P488-047	DF-503	PTE4S5		4TM-S47	Hor. AFC Plate
C97	270	500	60-10275407	1468-00025	D6-271	5W5T25	GP2K-270	1FM-325	Hor. Osc. Grid
C98	1500	500	60-20155404	1464-0015		1R5D15	GP2L-0015	MS-215	Fixed Trimmer
C99	390	500	60-10395407	1468-0004	D6-391	5W5T4	GP2K-390	1FM-34	Hor. Sweep Coupling
C100	100		60-10105407						Hor. Feedback *
C101	.022	600	45-3505-60	P688-022	DF-203	PTE6S2		6TM-S22	Fixed Trimmer *
C102	.047	400	61-0122	P488-047		PTE4S5		4TM-S47	Damper Filter
C103	.22	400	45-3505-49	P488-22		GT4P25		4TM-P22	Damper Filter ¶
C104	.15	200	45-3505-48	P288-15		GT4P2		2TM-P15	Hor. Sweep Coup. See Note 1
C105	500	20000	30-1229-2	HV20B	TV1-502				HV Filter
C106	1500		60-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	Filament Bypass
C107	.01	600	61-0120	P688-01	D6-103	PTE6S1	811-01	6TM-S1	Line Filter
C108	.01	600	61-0120	P688-01	D6-103	PTE6S1	811-01	6TM-S1	Line Filter
C109	1500		60-215001011	SI1500	D6-152	1W5D15	GP2L-0015	29C8	Diode Load Cap. ‡
C110	.0022	600	45-3505-54	P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Fixed Trimmer §

* Not used in all models.
† Used only in models 50T-1400, 50T1401, 50T-1402, and 50T-1430 after run 4.
‡ Not used in models 50T-1400, 50T-1401, 50T-1402 and 50T-1430 after run 4.
§ Used only in model 50T-1104 code 123 after run 2.
♦ Model 50T1104 code 123 used 18MMF in this application before run 4.
¶ Model 50T1104 code 123 used .082MFD in this application Mfgr's Part No. 30-4651-3.
Note 1. Model 50T1104 code 123 uses .47MFD in this application Mfgr's Part No. 61-0133.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA PHILCO PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1A	2 Meg.	½	33-5564-4	Q13-139	AG-66-Z	B-76-S	Volume control
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Attach to R1A per instructions
C	Switch		Not Req.	76-1	SWB	Not Req.	Attach to R1A per instructions
R2A	50KΩ	½	33-5563-6	Concentrikit B11-123 *	RTV-133		Horiz. hold control-front
B	100KΩ	½		B11-128 *			Vert. hold control-rear
C	Shaft End			E-202 *			Attach per instr. in "Concentrikit".
R3A	5000Ω	2	33-5563-10		RTV-132	SBB-566	Contrast control-Wire Wound-front
B	100KΩ	½					Brightness control-rear
R4A	2.5 Meg.	½	33-5565-10	Q11-239	AM-84-S	AN-83	Height control
B	Shaft		Not Req.	Not Req.	FKS-1/4	AK-1	Attach to R4A per instructions
R5	500Ω	4	33-5546-28		RTV-126	SVP-985	Focus control-Wire Wound
R6A	5000Ω	½	33-5546-10	Q11-114	AM-19-S	AN-10	Vert. linearity control
B	Shaft		Not Req.	Not Req.	FKS-1/4	AK-1	Attach to R6A per instructions

* Additional parts to be used with "Concentrikit".

RESISTORS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA PHILCO PART No.	IRC PART No.	IDENTIFICATION CODES ALL RESISTORS ARE ± 10% UNLESS OTHERWISE STATED.
R7	1200Ω	½		BTS-1200	Antenna Loading
R8	1 Meg. 20%	½			RF Amp. Grid
R9	330Ω 20%	½		BTS-330	AGC Network
R10	39KΩ	½			RF Amp. Screen
R11	10KΩ	1			RF Amp. Plate
R12	330Ω 20%	½		BTS-330	RF Amp. Decoupling
R13	10Ω	½			Parasitic Suppressor
R14	100KΩ	½			Mixer Grid
R15	15KΩ	½			Mixer Plate Coil Shunt
R16	330Ω 20%	½		BTS-330	Mixer Plate Decoupling
R17	10KΩ	½			Osc. Grid
R18	470Ω	½	66-1478340		Parasitic Suppressor
R19	5600Ω 5%	½	66-2568340	BTS-5600-5%	Trap Network-See Note 1
R20	330Ω	½	66-1338340	BTS-330	Decoupling
R21	3300Ω 20%	½	66-2338340	BTS-3300	AGC Network
R22	10KΩ	½	66-3108340		1st Video IF Amp. Grid-See Note 2
R23	68Ω	½	66-0688340		1st Video IF Amp. Cathode
R24	330Ω	½	66-1338340	BTS-330	1st Video IF Amp. Decoupling
R25	3300Ω 20%	½	66-2338340	BTS-3300	AGC Network
R26	5600Ω	½	66-2568340	BTS-5600	2nd Video IF Amp. Grid

RESISTORS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA PHILCO PART No.	IRC PART No.
R27	68Ω	½	66-0688340	
R28	5600Ω	½	66-2568340	BTS-5600
R29	68Ω	½	66-0688340	
R30	8200Ω	½	66-2828340	
R31	5100Ω 5%	½	66-2508340	
R32	15KΩ	½	66-3158340	
R33	100Ω	½	66-1108340	BTS-100
R34	4600Ω	½	66-2468340	BTS-4700
R35	1000Ω	½	66-2108340	BTS-1000
R36	3300Ω 20%	½	66-2338340	BTS-3300
R37	470KΩ	½	66-4478340	BTS-470K
R38	330KΩ	½	66-4338340	BTS-330K
R39	47KΩ	½	66-3478340	BTS-47K
R40	2400Ω 5%	½	66-2248340	
R41	470KΩ	½	66-4478340	BTS-470K
R42	1 Meg. 20%	½	66-5108340	BTS-1 Meg.
R43	15KΩ	½	66-3158340	BTS-15K
R44	3900Ω	1	66-2398340	BTA-3900
R45	4700Ω	1	66-2478340	BTA-4700
R46	330KΩ	½	66-4338340	BTS-330K
R47	10Ω	½	66-0108340	BW-½-10
R48	2200Ω	½	66-2228340	BTS-2200
R49	15KΩ	½	66-3158340	BTS-15K
R50	22KΩ	1	66-3228340	BTA-22K
R51	56KΩ	2	66-3564340	BTB-56K
R52	2500Ω	5	66-2254340	1 3/4A-2500
R53	560Ω	1	66-1564340	BTA-560
R54	10KΩ	½	66-3108340	BTS-10K
R55	1000Ω	2	66-2108340	BTB-1000
R56	1 Meg. 20%	½	66-5108340	BTS-1 Meg.
R57	10KΩ	½	66-3108340	BTS-10K
R58	470KΩ 20%	½	66-4478340	BTS-470K
R59	100KΩ 20%	½	66-4108340	BTS-100K
R60	470KΩ 20%	½	66-4478340	BTS-470K
R61	68Ω	½	66-0688340	
R62	1000Ω	½	66-2108340	BTS-1000
R63	330Ω	½	66-1338340	BTS-330
R64	68KΩ 20%	½	66-3688340	
R65	22KΩ	1	66-3228340	
R66	4700Ω	1	66-2478340	BTA-4700
R67	68KΩ	½	66-3688340	BTS-68K
R68	330Ω	½	66-1338340	BTS-330
R69	47Ω	½	66-0478340	BW-½-47
R70	56KΩ	½	66-3568340	BTS-56K
R71	4.7 Meg. 20%	½	66-5478340	BTS-4.7 Meg
R72	330KΩ	½	66-4338340	BTS-330K
R73	470Ω	2	66-1478340	BTB-470
R74	3.3 Meg.	½	66-5338340	BTS-3.3 Meg
R75	150KΩ	½	66-4158340	BTS-150K
R76	5000Ω	10	33-3435-30	1 3/4A-5000
R77	47Ω	½	66-0478340	BW-½-47
R78	10Ω	½	66-0108340	BW-½-10
R79	470KΩ 20%	½	66-4478340	BTS-470K
R80	10KΩ	2	66-3104340	BTB-10K
R81	5100Ω	5	33-5546-28	1 3/4A-4700
R82	180KΩ	½	66-4188340	BTS-180K
R83	4.7 Meg.	½	66-5478340	BTS-4.7 Meg
R84	10KΩ	½	66-3108340	BTS-10K
R85	10KΩ	½	66-3108340	BTS-10K
R86	56KΩ	2	66-3564340	BTB-56K
R87	1 Meg.	½	66-5108340	BTS-1 Meg.
R88	4700Ω	½	66-2478340	BTS-4700
R89	3900Ω	½	66-2398340	BTS-3900
R90	2700Ω	½	66-2278340	BTS-2700
R91	22KΩ	1	66-3228340	BTA-22K
R92	5600Ω	2	66-2565340	BTB-5600
R93	22KΩ	½	66-3228340	BTS-22K
R94	8200Ω	½	66-2828340	BTS-8200
R95	8200Ω	½	66-2828340	BTS-8200
R96	10KΩ	½	66-3108340	BTS-10K
R97	470KΩ	½	66-4478340	BTS-470K
R98	470KΩ	½	66-4478340	BTS-470K
R99	6800Ω	½	66-2688340	BTS-6800
R100	3.3 Meg.	½	66-5338340	BTS-3.3 Meg
R101	1000Ω	½	66-2108340	BTS-1000
R102	560KΩ	½	66-4568340	BTS-560K
R103	8200Ω	½	66-2828340	BTS-8200
R104	220KΩ	½	66-4228340	BTS-220K
R105	10KΩ	½	66-3108340	BTS-10K
R106	180KΩ	½	66-4188340	BTS-180K
R107	100KΩ 5%	1	66-4108340	BTA-100K-5
R108	3.3 Meg. 5%	1	66-5338340	BTS-3.3 Meg 5%
R109	42KΩ	½	66-3428340	BTS-39K
R110	82KΩ	1	66-3828340	BTA-82K
R111	82KΩ 5%	1	66-3828340	BTA-82K-5%
R112	10KΩ	½	66-3108340	BTS-10K
R113	56KΩ 5%	1	66-3568340	BTA-56K-5%
R114	22KΩ	½	66-3228340	
R115	180KΩ	½	66-4188340	BTS-180K
R116	4700Ω	2	66-2475340	BTB-4700
R117	560KΩ 5%	½	66-4568340	BTS-560K-5%
R118	4.7Ω	½	66-9478340	
R119	680KΩ 20%	1	66-4685340	
R120	1000Ω	1	66-2104340	BTA-1000
R121	5600Ω	½	66-2568340	BTS-5600
R122	5100Ω	5	33-5546-28	1 3/4A-5000
R123	100Ω	½	66-1108340	BTS-100
R124	220KΩ	½	66-4225340	BTS-220K
R125	15Ω	2	66-0155340	BW-2-15
R126	470Ω	½	66-1478340	BTS-470
R127	2500Ω	½	66-2258340	BTS-2700
R128	680KΩ	½	66-4688340	

Note 1. Model 50-T1104 previous to run 4 uses a 5100Ω resis
Note 2. Some models use a 15KΩ resistor in this application
Note 3. Some models use a 5600Ω resistor in this applicatio
Note 4. Models 50-T1400, 1401, 1402, 1430 previous to run 5

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (CONT.)

SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
4TM-S1	S. IF Coupling
29C8	RF Bypass
29C8	1st S. IF Dec.
19C15	1st S. IF Cath.
19C28	S. IF Coupling
29C8	2nd S. IF Dec.
1FM-315	Diode Load Cap. †
29C8	RF Bypass
	Balancing
29C8	De-emphasis
4TM-S1	Audio Coupling
6TM-D47	Audio Coupling
6TM-S1	Audio Coupling
MB-D68	Output Plate Byp.
4TM-S47	Sync. Coupling
6TM-D47	Sync. Coupling
1FM-335	Sync. Coupling
MS-425	Sync. Sep. Grid Byp.
4TM-S47	Sync. Coupling
1FM-325	Sync. Amp. Grid
6TM-D22	Integrator Net.
6TM-D47	Integrator Net.
6TM-D47	Integrator Net.
4TM-S1	Vert. Sync. Coupling
6TM-D47	Vert. Sync. Coupling
4TM-S47	Vert. Discharge
4TM-P1	Vert. Sweep Coupling
1FM-315	Hor. Sync. Coupling
1FM-32	Voltage Divider
6TM-D22	Hor. Sync. Coupling
MS-55	Hor. Feedback
4TM-P22	AFC Filter
4TM-S22	AFC Filter
4TM-S47	Hor. AFC Plate
1FM-325	Hor. Osc. Grid
MS-215	Fixed Trimmer
1FM-34	Hor. Sweep Coupling
	Hor. Feedback *
6TM-S22	Fixed Trimmer *
4TM-S47	Damper Filter
4TM-P22	Damper Filter ¶
2TM-P15	Hor. Sweep Coup. See Note 1
	HV Filter
29C8	Filament Bypass
6TM-S1	Line Filter
6TM-S1	Line Filter
29C8	Diode Load Cap. ‡
6TM-D22	Fixed Trimmer §

3.

ALLATION NOTES

me control
h to R1A per instructions
h to R1A per instructions

z. hold control-front
hold control-rear
h per instr. in "Concentrikit".

rast control-Wire Wound-front
ntness control-rear
nt control
h to R4A per instructions
s control-Wire Wound
linearity control
h to R6A per instructions

CATION CODES
UNLESS OTHERWISE STATED.

Note 2

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ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA PHILCO PART No.	REPLACEMENT DATA IRC PART No.	IDENTIFICATION CODES
R27	68Ω	1/2	66-0688340		2nd Video IF Amp. Cathode
R28	5600Ω	1/2	66-2568340	BTS-5600	3rd Video IF Amp. Grid
R29	68Ω	1/2	66-0688340		3rd Video IF Amp. Cathode
R30	8200Ω	1/2	66-2828340		3rd Video IF Plate Coil Shunt
R31	5100Ω 5%	1/2	66-2508340		Trap Network
R32	15KΩ	1/2	66-3158340		4th Video IF Amp. Grid Coil Shunt
R33	100Ω	1/2	66-1108340	BTS-100	4th Video IF Amp. Cathode-Wire Wound
R34	4600Ω	1/2	66-2468340	BTS-4700	4th Video IF Amp. Plate-See Note 3
R35	1000Ω	1/2	66-2108340	BTS-1000	4th Video IF Amp. Decoupling
R36	3300Ω 20%	1/2	66-2338340	BTS-3300	AGC Network
R37	470KΩ	1/2	66-4478340	BTS-470K	AGC Network
R38	330KΩ	1/2	66-4338340	BTS-330K	AGC Diode Load
R39	47KΩ	1/2	66-3478340	BTS-47K	Video Peaking Coil Shunt
R40	2400Ω 5%	1/2	66-2248340		Video Det. Diode Load-See Note 4
R41	470KΩ	1/2	66-4478340	BTS-470K	Voltage Divider
R42	1 Meg. 20%	1/2	66-5108340	BTS-1 Meg.	Video Amp. Grid
R43	15KΩ	1/2	66-3158340	BTS-15K	Video Peaking Coil Shunt
R44	3900Ω	1	66-2398340	BTA-3900	Video Amp. Plate-See Note 5
R45	4700Ω	1	66-2478340	BTA-4700	Video Amp. Plate Decoupling
R46	330KΩ	1/2	66-4338340	BTS-330K	Video Output Grid
R47	10Ω	1/2	66-0108340	BW-1/2-10	Video Output Cathode
R48	2200Ω	1/2	66-2228340	BTS-2200	Voltage Divider-See Note 7
R49	15KΩ	1/2	66-3158340	BTS-15K	Video Peaking Coil Shunt
R50	22KΩ	1	66-3228340	BTA-22K	Voltage Divider
R51	56KΩ	2	66-3564340	BTB-56K	Video Output Screen
R52	2500Ω	5	66-2254340	1 3/4A-2500	Video Output Plate-Wire Wound
R53	560Ω	1	66-1564340	BTA-560	Video Output Plate
R54	10KΩ	1/2	66-3108340	BTS-10K	Video Output Plate-See Note 8
R55	1000Ω	2	66-2108340	BTB-1000	Video Output Plate Decoupling-See Note 9
R56	1 Meg. 20%	1/2	66-5108340	BTS-1 Meg.	DC Rest. Load
R57	10KΩ	1/2	66-3108340	BTS-10K	Isolation
R58	470KΩ 20%	1/2	66-4478340	BTS-470K	Picture Tube Grid
R59	100KΩ 20%	1/2	66-4108340	BTS-100K	Voltage Divider
R60	470KΩ 20%	1/2	66-4478340	BTS-470K	1st Sound IF Amp. Grid
R61	68Ω	1/2	66-0688340		1st Sound IF Amp. Cathode
R62	1000Ω	1/2	66-2108340	BTS-1000	1st Sound IF Amp. Decoupling
R63	330Ω	1/2	66-1338340	BTS-330	Decoupling
R64	68KΩ 20%	1/2	66-3688340		2nd Sound IF Amp. Grid
R65	22KΩ	1	66-3228340		Voltage Divider
R66	4700Ω	1	66-2478340	BTA-4700	2nd Sound IF Amp. Decoupling
R67	68KΩ	1/2	66-3688340	BTS-68K	Ratio Det. Diode Load
R68	330Ω	1/2	66-1338340	BTS-330	Balancing-See Note 8
R69	47Ω	1/2	66-0478340	BW-1/2-47	Balancing
R70	56KΩ	1/2	66-3568340	BTS-56K	De-emphasis
R71	4.7 Meg. 20%	1/2	66-5478340	BTS-4.7 Meg.	AF Amp. Grid
R72	330KΩ	1/2	66-4338340	BTS-330K	AF Amp. Plate
R73	470Ω	2	66-1478340	BTB-470	Decoupling
R74	3.3 Meg.	1/2	66-5338340	BTS-3.3 Meg.	Audio Output Grid
R75	150KΩ	1/2	66-4158340	BTS-150K	Bias Network
R76	5000Ω	10	33-3435-30	1 3/4A-5000	Decoupling-Wire Wound
R77	47Ω	1/2	66-0478340	BW-1/2-47	Feedback
R78	10Ω	1/2	66-0108340	BW-1/2-10	Feedback
R79	470KΩ 20%	1/2	66-4478340	BTS-470K	Sync. Amp. Grid
R80	10KΩ	2	66-3104340	BTB-10K	Sync. Amp. Plate
R81	5100Ω	5	33-5546-28	1 3/4A-4700	Sync. Amp. Plate Decoupling- Wire Wound
R82	180KΩ	1/2	66-4188340	BTS-180K	Phase Shifting
R83	4.7 Meg.	1/2	66-5478340	BTS-4.7 Meg.	Sync. Sep. Grid
R84	10KΩ	1/2	66-3108340	BTS-10K	Voltage Divider
R85	10KΩ	1/2	66-3108340	BTS-10K	Isolation
R86	56KΩ	2	66-3564340	BTB-56K	Sync. Sep. Plate
R87	1 Meg.	1/2	66-5108340	BTS-1 Meg.	Sync. Amp. Grid
R88	4700Ω	1/2	66-2478340	BTS-4700	Sync. Amp. Grid
R89	3900Ω	1/2	66-2398340	BTS-3900	Sync. Amp. Plate
R90	2700Ω	1/2	66-2278340	BTS-2700	Sync. Amp. Plate Decoupling
R91	22KΩ	1	66-3228340	BTA-22K	Filter
R92	5600Ω	2	66-2565340	BTB-5600	Filter
R93	22KΩ	1/2	66-3228340	BTS-22K	Integrator
R94	8200Ω	1/2	66-2828340	BTS-8200	Integrator
R95	8200Ω	1/2	66-2828340	BTS-8200	Integrator
R96	10KΩ	1/2	66-3108340	BTS-10K	Vert. Osc. Grid-See Note 10
R97	470KΩ	1/2	66-4478340	BTS-470K	Vert. Osc. Grid-See Note 11
R98	470KΩ	1/2	66-4478340	BTS-470K	Vert. Osc. Plate
R99	6800Ω	1/2	66-2688340	BTS-6800	Vert. Peaking-See Note 12
R100	3.3 Meg.	1/2	66-5338340	BTS-3.3 Meg.	Vert. Output Grid
R101	1000Ω	1/2	66-2108340	BTS-1000	Vert. Output Cathode
R102	560KΩ	1/2	66-4568340	BTS-560K	Horiz. AFC Grid
R103	8200Ω	1/2	66-2828340	BTS-8200	Horiz. AFC Filter Network
R104	220KΩ	1/2	66-4228340	BTS-220K	Horiz. AFC Filter Network
R105	10KΩ	1/2	66-3108340	BTS-10K	Filter
R106	180KΩ	1/2	66-4188340	BTS-180K	Horiz. AFC Cathode
R107	100KΩ 5%	1	66-4108340	BTA-100K-5%	Horiz. AFC Cathode
R108	3.3 Meg. 5%	1	66-5338340	BTS-3.3 Meg. 5%	Voltage Divider
R109	42KΩ	1/2	66-3428340	BTS-39K	Voltage Divider
R110	82KΩ	1	66-3828340	BTA-82K	Voltage Divider-See Note 13
R111	82KΩ 5%	1	66-3828340	BTA-82K-5%	Horiz. Osc. Grid
R112	10KΩ	1/2	66-3108340	BTS-10K	Horiz. Osc. Transformer Shunt
R113	56KΩ 5%	1	66-3568340	BTA-56K-5%	Horiz. Osc. Plate
R114	22KΩ	1/2	66-3228340		Parasitic Suppressor
R115	180KΩ	1/2	66-4188340	BTS-180K	Horiz. Output Grid-See Note 14
R116	4700Ω	2	66-2475340	BTB-4700	Horiz. Output Screen
R117	560KΩ 5%	1/2	66-4568340	BTS-560K-5%	Feedback
R118	4.7Ω	1/2	66-9478340		HV Rect. Filament-Wire Wound
R119	680KΩ 20%	1	66-4685340		HV Filter
R120	1000Ω	1	66-2104340	BTA-1000	Decoupling-See Note 3
R121	5600Ω	1/2	66-2568340	BTS-5600	Filter-See Note 10
R122	5100Ω	5	33-5546-28	1 3/4A-5000	Filter-Wire Wound-See Note 3
R123	100Ω	1/2	66-1108340	BTS-100	Focus Coil Shunt-See Note 15
R124	220KΩ	1/2	66-4225340	BTS-220K	Bleeder-See Note 10
R125	15Ω	2	66-0155340	BW-2-15	Bias Network- Wire Wound
R126	470Ω	1/2	66-1478340	BTS-470	Filter Choke Shunt-See Note 16
R127	2500Ω	1/2	66-2258340	BTS-2700	Horiz. Shaping-See Note 17
R128	680KΩ	1/2	66-4688340		HV Filter-See Note 10

Note 1. Model 50-T1104 previous to run 4 uses a 5100Ω resistor in this application.
Note 2. Some models use a 15KΩ resistor in this application.
Note 3. Some models use a 5600Ω resistor in this application.
Note 4. Models 50-T1400, 1401, 1402, 1430 previous to run 5 and model 50-T1104 uses a 3300Ω resistor in this application.
Note 5. Models 50-T1400, 1401, 1402,
Note 6. Models 50-T1400, 1401, 1402,
Note 7. Models 50-T1400, 1401, 1402,
Note 8. Not used in models 50-T1400,
Note 9. Models 50-T1400, 1401, 1402,
Note 10. Not used in all models.
Note 11. Some models use a 820KΩ res
Note 12. Some models use a 5600Ω or
Note 13. Some models use a 100KΩ res
Note 14. Models 50-T1400, 1401, 1402, this application.
Note 15. Models 50-T1400, 1401, 1402,
Note 16. Used only in model 50-T1104 a
Note 17. Used in model 50-T1104 only.

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	S
T1	117VAC ⓐ 2.1A	700VCT .250ADC	5VAC ⓐ 3A	6. ⓐ
				Sl
				6. ⓐ

③ Drill new mounting hole.

TR

ITEM No.	RATING DC RESISTANCE PRI.	RATING DC RESISTANCE SEC.	PHILCO PART N
T2	160Ω	325Ω	32-8304
T3	510Ω	11.5Ω	32-8421 ①
	Tap ⓐ 100Ω	Tap ⓐ 1.5Ω	32-8409 ②
T4	760Ω	9Ω	32-8405
T5A	13.5Ω		32-9622
B	68Ω		
T6	170Ω		76-2622-5

① Used in models 50-T1400, 50-T1401
② Used in model 50-T1104.

TR

ITEM No.	RATING IMPEDANCE PRI.	RATING IMPEDANCE SEC.	RATING DC RES. PRI.	RATING DC RES. SEC.	
T7	3800Ω	3.5Ω	425Ω	.7Ω	3

ITEM No.	RATINGS FIELD RES.	RATINGS V. C. IMP.	PI
SP1	PM	3.5Ω	36-1
	CONE DIA.	V. C. DIA.	
SP2	4" x 6"	9/16"	

ITEM No.	RATINGS TOTAL DIRECT CURRENT	RATINGS D. C. RESISTANCE	INDUC (0 CU 1000
L1	.250ADC	80Ω	5.7 He

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.
L2	Ant. Coil	.7Ω	.7Ω
L3	Ant. Coil	.7Ω	.7Ω
L4	FM Trap	0Ω	
L5	Ant. Loading	0Ω	
L6	RF Grid Coils	0Ω	
L7	RF Plate Coils	0Ω	
L8	RF Coil	0Ω	0Ω
L9	Mixer Grid Coils	0Ω	
L10	RF Choke	.2Ω	
L11	Osc. Coils	0Ω	
L12	Conv. Plate Coil	.1Ω	
L13A	Adj. Channel Video Trap	.1Ω	
B	Adj. Channel Video Trap		
L14	Grid Choke	.2Ω	
L15	1st Video IF	.3Ω	
L16	2nd Video IF	.3Ω	
L17	RF Choke	.1Ω	
L18	Fil. Choke	.1Ω	
L19	Fil. Choke	.1Ω	
L20	3rd Video IF	.3Ω	
L21	RF Choke	.1Ω	
L22	4th Video IF Plate Coil	.3Ω	
L23	Sound Trap	.1Ω	

RIPTIONS (Continued)

(CONT.)

IDENTIFICATION CODES
2nd Video IF Amp. Cathode
3rd Video IF Amp. Grid
3rd Video IF Amp. Cathode
3rd Video IF Plate Coil Shunt
Trap Network
4th Video IF Amp. Grid Coil Shunt
4th Video IF Amp. Cathode-Wire Wound
4th Video IF Amp. Plate-See Note 3
4th Video IF Amp. Decoupling
AGC Network
AGC Network
AGC Diode Load
Video Peaking Coil Shunt
Video Det. Diode Load-See Note 4
Voltage Divider
Video Amp. Grid
Video Peaking Coil Shunt
Video Amp. Plate-See Note 5
Video Amp. Plate Decoupling
Video Output Grid
Video Output Cathode
Voltage Divider-See Note 7
Video Peaking Coil Shunt
Voltage Divider
Video Output Screen
Video Output Plate-Wire Wound
Video Output Plate
Video Output Plate-See Note 8
Video Output Plate Decoupling-See Note 9
DC Rest. Load
Isolation
Picture Tube Grid
Voltage Divider
1st Sound IF Amp. Grid
1st Sound IF Amp. Cathode
1st Sound IF Amp. Decoupling
Decoupling
2nd Sound IF Amp. Grid
Voltage Divider
2nd Sound IF Amp. Decoupling
Ratio Det. Diode Load
Balancing-See Note 8
Balancing
De-emphasis
AF Amp. Grid
AF Amp. Plate
Decoupling
Audio Output Grid
Bias Network
Decoupling-Wire Wound
Feedback
Feedback
Sync. Amp. Grid
Sync. Amp. Plate
Sync. Amp. Plate Decoupling- Wire Wound
Phase Shifting
Sync. Sep. Grid
Voltage Divider
Isolation
Sync. Sep. Plate
Sync. Amp. Grid
Sync. Amp. Grid
Sync. Amp. Plate
Sync. Amp. Plate Decoupling
Filter
Filter
Integrator
Integrator
Integrator
Vert. Osc. Grid-See Note 10
Vert. Osc. Grid-See Note 11
Vert. Osc. Plate
Vert. Peaking-See Note 12
Vert. Output Grid
Vert. Output Cathode
Horiz. AFC Grid
Horiz. AFC Filter Network
Horiz. AFC Filter Network
Filter
Horiz. AFC Cathode
Horiz. AFC Cathode
Voltage Divider
Voltage Divider
Voltage Divider-See Note 13
Horiz. Osc. Grid
Horiz. Osc. Transformer Shunt
Horiz. Osc. Plate
Parasitic Suppressor
Horiz. Output Grid-See Note 14
Horiz. Output Screen
Feedback
HV Rect. Filament-Wire Wound
HV Filter
Decoupling-See Note 3
Filter-See Note 10
Filter-Wire Wound-See Note 3
Focus Coil Shunt-See Note 15
Bleeder-See Note 10
Bias Network- Wire Wound
Filter Choke Shunt-See Note 16
Horiz. Shaping-See Note 17
HV Filter-See Note 10

tor in this application.

n.

and model 50-T1104 uses a 3300Ω resistor in this application.

Note 5. Models 50-T1400, 1401, 1402, 1430 previous to run 5 and model 50-T1104 uses a 4700Ω resistor in this application.
Note 6. Models 50-T1400, 1401, 1402, 1430 previous to run 5 and model 50-T1104 uses a 100Ω resistor in this application.
Note 7. Models 50-T1400, 1401, 1402, 1430 previous to run 5 and model 50-T1104 uses a 5600Ω resistor in this application.
Note 8. Not used in models 50-T1400, 1401, 1402, 1430 previous to run 5 and model 50-T1104.
Note 9. Models 50-T1400, 1401, 1402, 1430 previous to run 5 and model 50-T1104 uses a 1500Ω resistor in this application.
Note 10. Not used in all models.
Note 11. Some models use a 820KΩ resistor in this application.
Note 12. Some models use a 5600Ω or 5100Ω resistor in this application.
Note 13. Some models use a 100KΩ resistor in this application.
Note 14. Models 50-T1400, 1401, 1402, 1430 previous to run 7 use a 270KΩ resistor and model 50-T1104 uses a 390KΩ resistor in this application.
Note 15. Models 50-T1400, 1401, 1402, 1430 previous to run 5 and model 50-T1104 use a 180Ω resistor in this application.
Note 16. Used only in model 50-T1104 after run 2.
Note 17. Used in model 50-T1104 only.

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	PHILCO PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC @ 2.1A	700VCT .250ADC	5VAC @ 3A	6.3VAC @ 1.7A SEC. 4 6.3VAC @ 7.1A	32-8411-1			TP-355 ③

③ Drill new mounting hole.

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING DC RESISTANCE PRI.	RATING DC RESISTANCE SEC.	REPLACEMENT DATA PHILCO PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	NOTES
T2	160Ω	325Ω	32-8304			TBO-1	Vert. Block Osc. Trans
T3	510Ω	11.5Ω	32-8421 ①		HVO-6	TFB-3	Hor. Output Trans.
	Tap @	Tap @	32-8409 ②				
	100Ω	1.5Ω					
T4	760Ω	9Ω	32-8405			TSO-5	Vert. Output Trans.
T5A	13.5Ω		32-9622	DY-7	MD-3		Hor. Deflection Coil
B	68Ω						Vert. Deflection Coil
T6	170Ω		76-2622-5		MF-1		Focus Coil

① Used in models 50-T1400, 50-T1401, 50-T1402, 50-T1430.
② Used in model 50-T1104.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING IMPEDANCE PRI.	RATING IMPEDANCE SEC.	RATING DC RES. PRI.	RATING DC RES. SEC.	REPLACEMENT DATA PHILCO PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	INSTALLATION NOTES
T7	3800Ω	3.5Ω	425Ω	.7Ω	32-8367-1	A-3823	A-3018	RO-6	

SPEAKER

ITEM No.	RATINGS FIELD RES.	RATINGS V. C. IMP.	REPLACEMENT DATA PHILCO PART No.	VIKING PART No.	QUAM PART No.	NOTES
SP1	PM	3.5Ω	36-1615-11	46J6	46A15	
	CONE DIA.	V. C. DIA.				
SP2	4" x 6"	9/16"				

FILTER CHOKE

ITEM No.	RATINGS TOTAL DIRECT CURRENT	RATINGS D. C. RESISTANCE	RATINGS INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA PHILCO PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	INSTALLATION NOTES
L1	.250ADC	80Ω	5.7 Henries	32-8387-1				

COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA PHILCO PART No.	MEISSNER PART No.	NOTES
L2	Ant. Coil	.7Ω	.7Ω	*		* Part of tuner, #76-5433
L3	Ant. Coil	.7Ω	.7Ω	*		
L4	FM Trap	0Ω		*		
L5	Ant. Loading	0Ω		*		
L6	RF Grid Coils	0Ω		*		
L7	RF Plate Coils	0Ω		*		
L8	RF Coil	0Ω	0Ω	*		
L9	Mixer Grid Coils	0Ω		*		
L10	RF Choke	.2Ω		*		
L11	Osc. Coils	0Ω		*		
L12	Conv. Plate Coil	.1Ω		*		
L13A	Adj. Channel Video Trap	.1Ω		32-4234-8		
B	Adj. Channel Video Trap			32-4234-4		
L14	Grid Choke	.2Ω		32-4112-15		Model 50-T1104
L15	1st Video IF	.3Ω		32-4233-4		
L16	2nd Video IF	.3Ω		32-4359		
L17	RF Choke	.1Ω		32-4112-11		
L18	Fil. Choke	.1Ω		32-4112-11		
L19	Fil. Choke	.1Ω		32-4112-11		
L20	3rd Video IF	.3Ω		32-4359		
L21	RF Choke	.1Ω		32-4112-11		
L22	4th Video IF Plate Coil	.3Ω		32-4234-1		
L23	Sound Trap	.1Ω		32-4234-7		

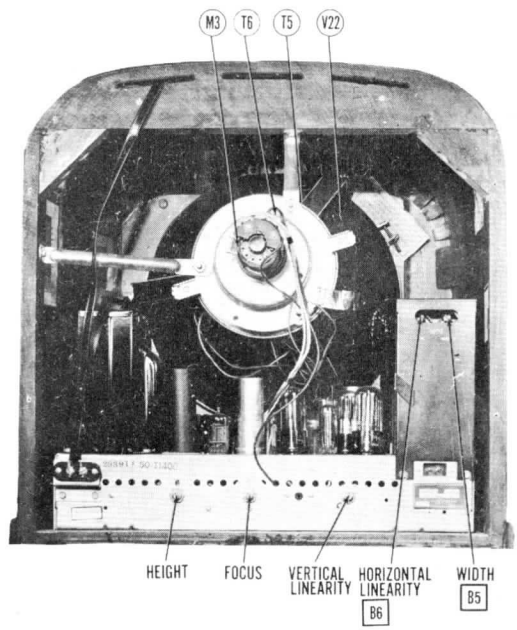
PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF) CONT.

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA PHILCO PART No.	REPLACEMENT DATA MEISSNER PART No.	NOTES
L24	4th Video IF Grid Coil	.3Ω		32-4233-2		
L25	Fil. Choke	.1Ω		32-4112-11		
L26	5th Video IF	.3Ω		32-4234-1		
L27A	Peaking	2.5Ω		32-4143-1		40 microhenries
B	Peaking			32-4143	19-1921	150 microhenries
L28	Peaking	5.8Ω		32-4143-7	19-1922	250 microhenries
L29	Peaking	5.8Ω		32-4143-7	19-1922	250 microhenries
L30	Peaking	5.8Ω		32-4143-7	19-1922	250 microhenries
L31	Peaking	5.1Ω		32-4143-5	19-1921	180 microhenries
L32	Peaking	5.1Ω		32-4143-5	19-1921	180 microhenries
L33	1st Sound IF	.1Ω		32-4302-3		
L34	2nd Sound IF	.8Ω	.8Ω	32-4236		
L35	Ratio Det. Trans.	.1Ω	.1Ω	32-4317-2		
L36	Fil. Choke	.1Ω		32-4112-11		
L37	Horiz. Osc. Coil	125Ω		32-4367		Tap at 35Ω
L38	RF Choke			32-4143-7		Not used in all models.
L39	Horiz. Lin.	.3Ω		32-4211-1		
L40A	Width Coil	25Ω		32-4419-2		
B	Width Coil			32-4419		
L41	Fil. Choke					Not used in all models.
L42	RF Choke			32-4264-1		Used in model 50-T1104

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M1A	RF Tuner	76-5433	
B	RF Tuner	76-4402-6	
C	RF Tuner	76-4402-9	
M2A	Fuse	45-2656-8	.25A 250V Type AGX Models 50-T1400, 50-T1401, 50-T1402, 50-T1430
B	Fuse	45-2656-10	3/8A Model 50-T1104
M3	Ion Trap	76-3913-4	
	Switch	76-4402-6	Band, Model 50-T1104
	Safety Glass	54-4754	Model 50-T1400
	Safety Glass	54-7595-8	Model 50-T1401
	Safety Glass	54-7983-1	Models 50-T1402, 50-T1104
	Safety Glass	54-7943-5	Model 50-T1430
	Knob	56-6596-1	Channel selector, Models 50-T1400, 50-T1401, 50-T1104
	Knob	56-6596-3	Channel selector, Models 50-T1402, 50-T1430
	Knob	54-4662-1	Fine tuning, Models 50-T1400, 50-T1401, 50-T1402, 50-T1104
	Knob	54-4662-2	Fine tuning, Model 50-T1430
	Knob	54-4707-2	Contrast, Models 50-T1400, 50-T1401
	Knob	54-4664-1	Contrast, Models 50-T1402, 50-T1104
	Knob	54-4707	Contrast, Model 50-T1430
	Knob	54-4703-2	Volume, Models 50-T1400, 50-T1401
	Knob	54-4661-1	Volume, Models 50-T1402, 50-T1104
	Knob	54-4703	Volume, Model 50-T1430
	Knob	54-4707-2	Horiz. hold, Models 50-T1400, 50-T1401
	Knob	54-4664-3	Horiz. hold, Models 50-T1402, 50-T1104
	Knob	54-4707	Horiz. hold, Model 50-T1430
	Knob	54-4699-3	Vert. hold, Models 50-T1400, 50-T1401
	Knob	54-4659-3	Vert. hold, Models 50-T1402, 50-T1104
	Knob	54-4699	Vert. hold, Model 50-T1430
	Knob	54-4659-1	Brightness, Models 50-T1104, 50-T1402
	Knob	54-4699-3	Brightness, Models 50-T1400, 50-T1401
	Knob	54-4699	Brightness, Model 50-T1430
	Knob	54-4750	Antenna tuning



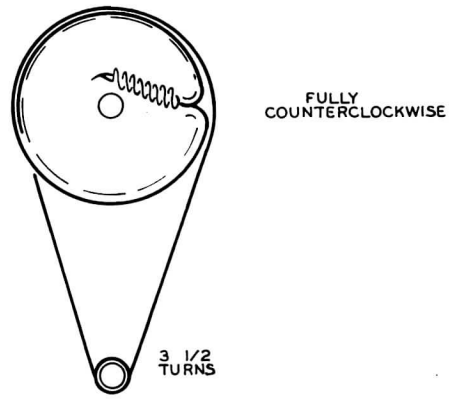
CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

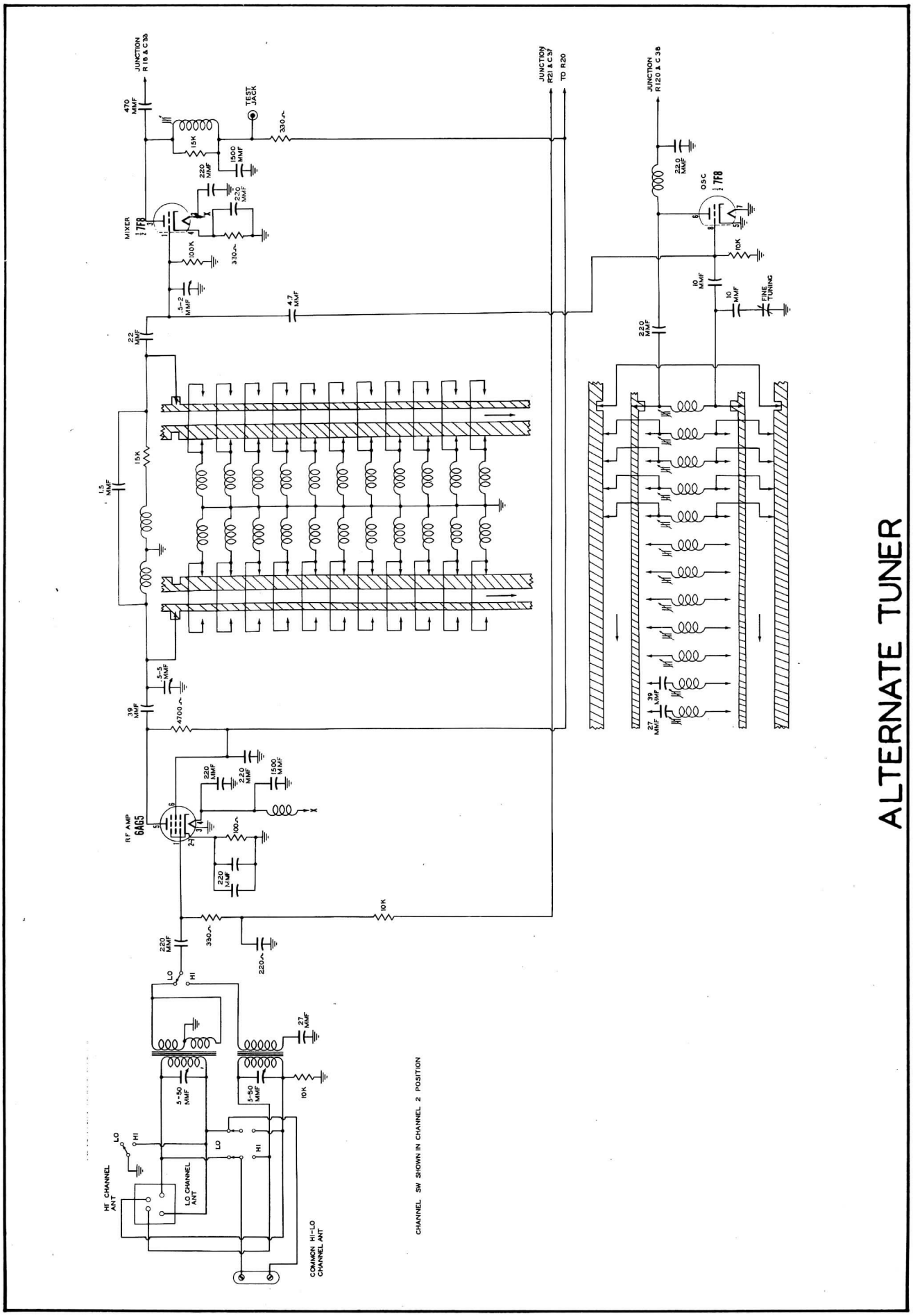
1. Remove seven push-on type control knobs.
2. Remove six wood screws holding rear cover in place.
3. Disconnect built-in antenna.
4. Disconnect yoke leads.
5. Release ground clamp.
6. Remove power cable from base of picture tube.
7. Remove high voltage lead from picture tube.
8. Remove four 1/4" hex head bolts from chassis.
9. Remove chassis.

NOTE: PICTURE TUBE REMOVAL.

1. Follow instructions as given above.
2. Remove two 7/16" hex nuts securing deflection yoke to cabinet at rear of set.
3. Remove three 7/16" nuts from braces securing picture tube to front of cabinet.
4. Remove picture tube.



FINE TUNING DIAL CORD STRINGING


ALTERNATE TUNER
JUNCTION R16 & C33
470 MMF
TEST JACK
330Ω
15K
1500 MMF
220 MMF
220 MMF
MIXER 1/2 7F8
100K
330Ω
5-2 MMF
4.7 MMF
22 MMF
JUNCTION R21 & C37
TO R20
JUNCTION R120 & C38
220 MMF
OSC 1/2 7F8
10K
10 MMF
10 MMF
FINE TUNING
220 MMF
1.5 MMF
15K
5-5 MMF
39 MMF
4700Ω
27 MMF
39 MMF
RF AMP 6AG5
220 MMF
220 MMF
1500 MMF
100Ω
220 MMF
10K
220 MMF
330Ω
220Ω
LO
HI
27 MMF
5-50 MMF
5-50 MMF
10K
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HI CHANNEL ANT
LO CHANNEL ANT
COMMON HI-LO CHANNEL ANT
CHANNEL SW SHOWN IN CHANNEL 2 POSITION