

FOLDER 1  
SET 439

PHOTOFACT\* Folder



with CIRCUITRACE\*

PHILCO MODELS G4242L, M, G4654L, M, W,  
UG4242L, M, UG4654L, M, W (Ch. 9L37, U)

PHILCO MODELS G4242L, M, G4654L, M, W,  
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MODEL UG4242L (Ch. 9L37U)

**CAUTION**

ONE SIDE OF AC LINE CONNECTED TO CHASSIS.

Care should be exercised when connecting test equipment or physically contacting chassis. Isolation devices employed by manufacturer should be checked and properly connected before returning receiver to owner.

TRADE NAME	Philco	MODELS	CHASSIS
		G4242L, M, G4654L, M, W .....	9L37
		UG4242L, M, UG4654L, M, W .....	9L37U
MANUFACTURER	Philco Corp., Tioga & "C" Streets, Philadelphia, Pa.		
TYPE SET	Television Receiver		
TUBES	VHF-Sixteen, UHF-Seventeen		
POWER SUPPLY	110-120 Volts AC, 60 Cycle	RATING 160 Watts, 1.56 Amp. @ 117 Volts AC	
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)		

**SERVICING IN THE FIELD**

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustment of the VHF Oscillator is possible by removing the Channel Selector and Fine Tuning knobs. Set the Fine Tuning at the center of its range. The adjustments (located in a circle around the shaft) should be made in sequence from the highest to the lowest channel in the area. Channel 13 adjustment is located at 9 o'clock, proceed in a counterclockwise direction adjusting for best picture and sound.

SAFETY GLASS CLEANING

Use only mild soap and water to clean safety glass.

AGC

The AGC may be varied by a Local-Distance switch. (For location, see tube placement chart.)

FOCUS

The focus may be varied in steps by the position of a plug in the Focus Adjustment board.

WIDTH

The width may be varied by Width control. (For location, see tube placement chart.)

HIDDEN ADJUSTMENTS

The Vertical Linearity Adjustment is located under Brightness knob, the Height under Vertical Hold and Horizontal Range under Horizontal Hold.

HORIZONTAL LINEARITY

The Horizontal Linearity can be adjusted by means of a magnet located to the left of the yoke.

HORIZONTAL OSCILLATOR ADJUSTMENTS

Set the Horizontal Hold at the center of its range and remove the knob. Adjust the Horizontal Range (inner shaft) until the picture synchronizes horizontally.

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate intercarrier buzz, adjust the Buzz control for MINIMUM buzz and maximum sound. (For location, see tube placement chart.)

FUSE DEVICE

A 5.6Ω fusible resistor (R78) is used for low voltage power supply protection. (For location, see tube placement chart.)

CENTERING

Centering is accomplished mechanically by adjustment of Vertical and Horizontal Centering Magnets.

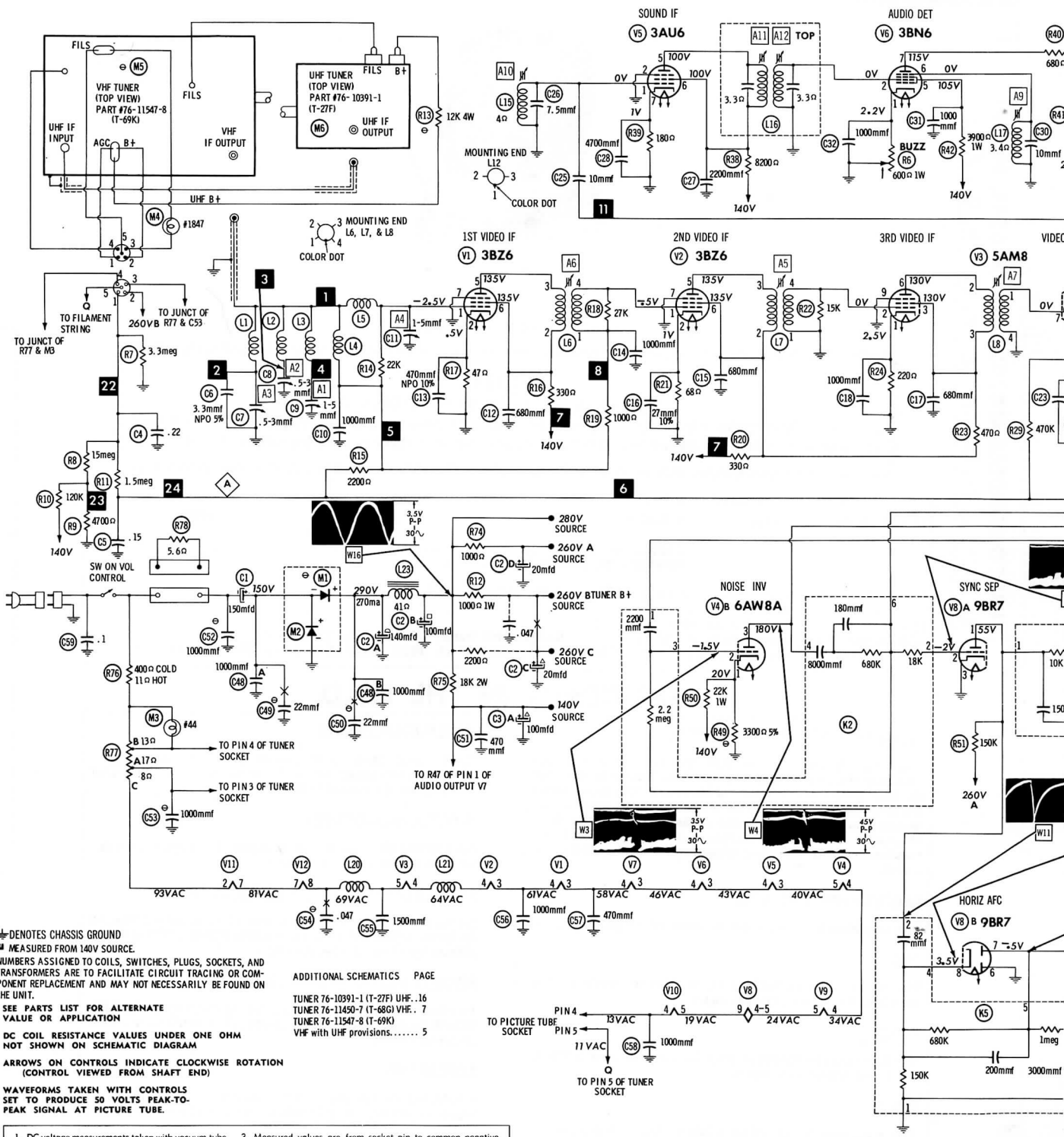
**HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana**

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PHILCO MODELS G4242L, M, G4654L, M, W,  
UG4242L, M, UG4654L, M, W (Ch. 9L37, U)

SET 439 FOLDER 1



⚡ DENOTES CHASSIS GROUND  
 ■ MEASURED FROM 140V SOURCE  
 NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.  
 ● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION  
 DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM  
 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)  
 WAVEFORMS TAKEN WITH CONTROLS SET TO PRODUCE 50 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE.

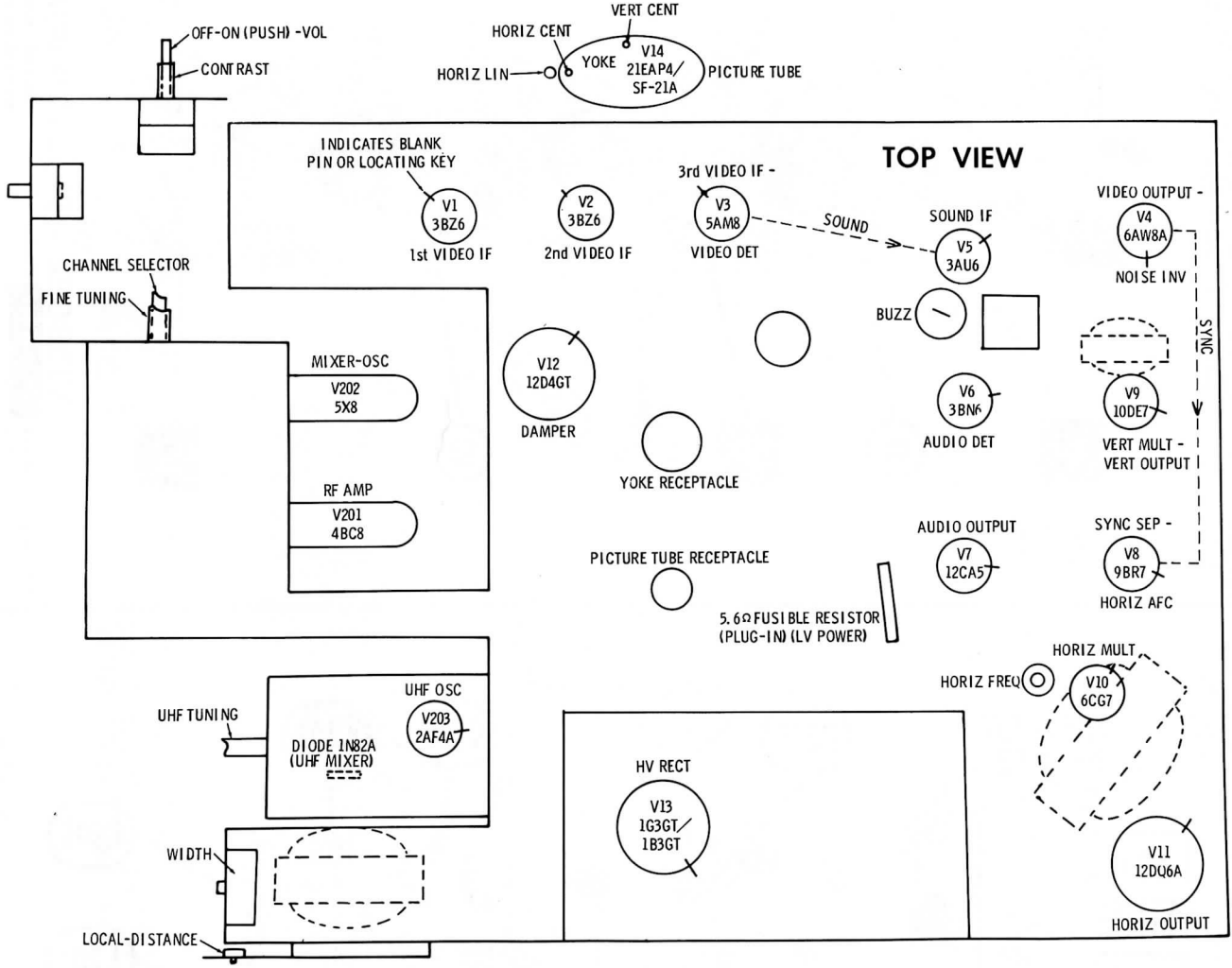
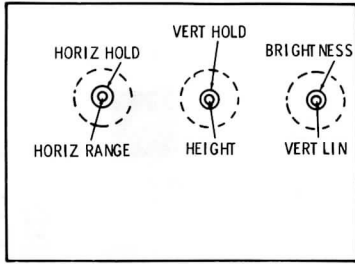
- |   |  |
|---|--|
| 1. DC voltage measurements taken with vacuum tube voltmeter; AC voltage measured at 1000 ohms per volt. | 3. Measured values are from socket pin to common negative unless otherwise stated. |
| 2. Pin numbers are counted in clockwise direction on bottom of socket.                                  | 4. Line Voltage maintained at 117 volts for voltage readings.                      |
|   | 5. All controls set for normal operation; no signal applied.                       |

A PHOTOFACIT STANDARD NOTATION SCHEMATIC  
 with **CIRCUITRACE**  
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ADDITIONAL SCHEMATICS PAGE  
 TUNER 76-10391-1 (T-27F) UHF .16  
 TUNER 76-11450-7 (T-68G) VHF. 7  
 TUNER 76-11547-8 (T-69K)  
 VHF with UHF provisions..... 5



# TUBE PLACEMENT CHART



PHILCO MODELS G4242L, M, G4654L, M, W, UG4242L, M, UG4654L, M, W (Ch. 9137, U)

# TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce indicated symptoms. Refer to tube placement chart for location and type of tube.

**POWER SUPPLY FAILURE**

No raster, no sound Fusible Resistor (5.6Ω), Rectifier (B+)

**SWEEP FAILURE**

No raster, has sound V8, V10, V11, V12, V13, V14  
 No vertical deflection V9  
 Poor vert. linearity or foldover V9  
 Poor horiz. linearity or foldover V10, V11, V12  
 Narrow picture V10, V11, V12, Rectifier (B+)  
 Vert. off freq. V9  
 Horiz. off freq. V10

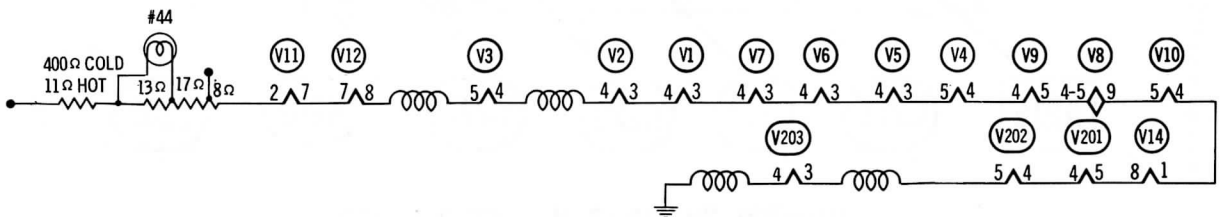
**LOSS OF PICTURE OR SOUND**

No pic, no sound, has raster V1, V2, V3  
 No pic, no sound, has snow V201, V202, V1, (V203 UHF only), Diode (UHF Mixer)  
 No pic, has sound, has raster V4, V14  
 Has pic, no sound V5, V6, V7

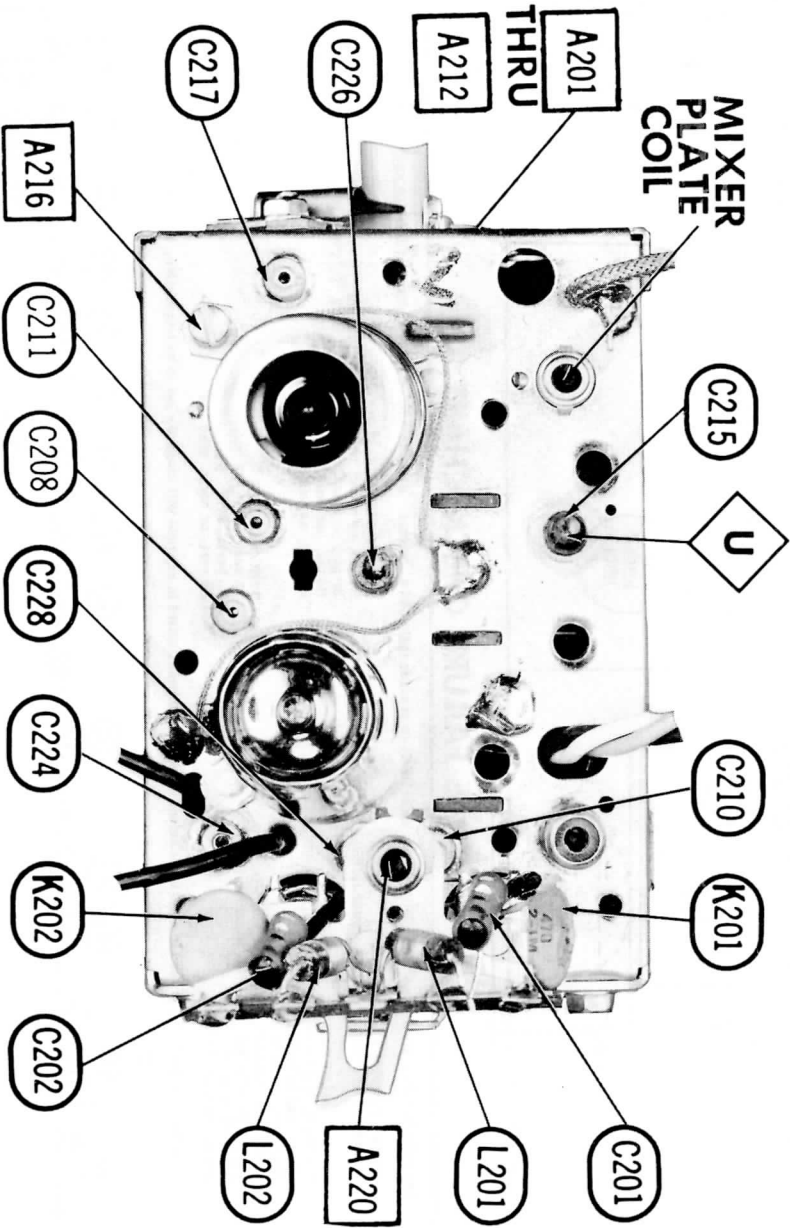
**SYNC FAILURE**

No vert. sync V8  
 No horiz. sync V8  
 No vert. or horiz. sync V8

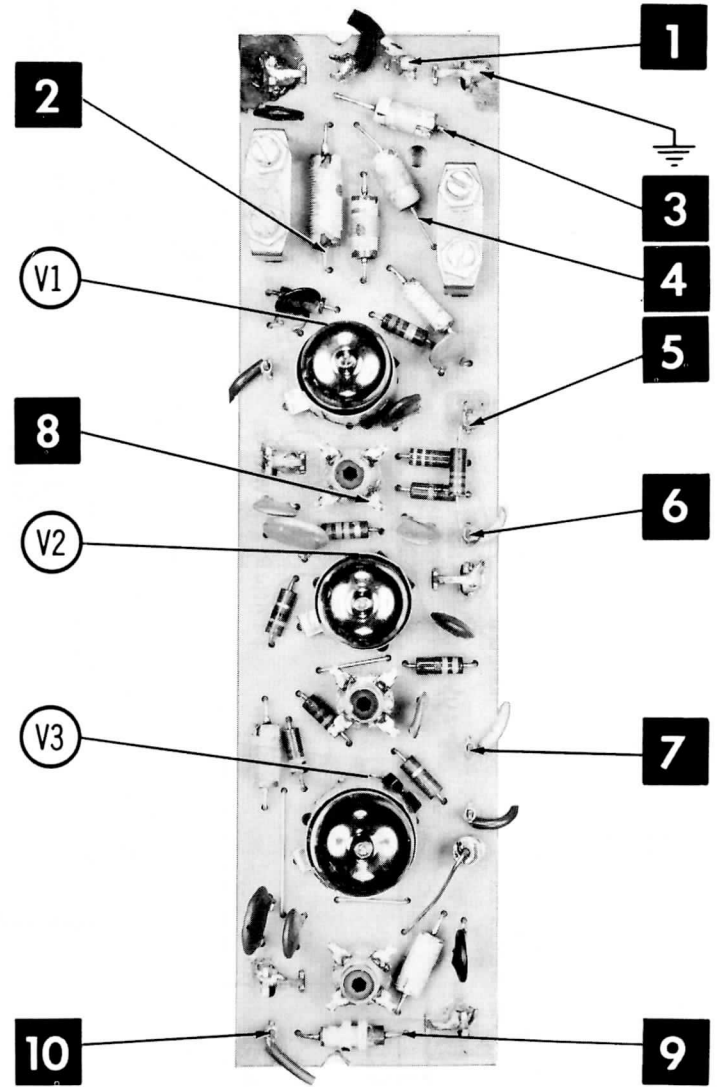
This receiver employs tubes used in a series filament network, an open filament in any tube will cause the set to be inoperative. (See circuit below.)



TUNER 76-11547-8 - TOP VIEW



CircuiTrace Numbers 1 thru 10



VIDEO IF - PRINTED BOARD

A Howard W. Sams **CIRCUITRACE** Photo

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



# TUNER PARTS LIST AND DESCRIPTIONS

76-11547-8, 76-10391-1

TUBES ( GENERAL ELECTRIC, SYLVANIA )

ITEM No.	USE	TYPE	NOTES
V201	RF Amp.	4BC8	
V202	Mixer-Osc.	5X8	

ITEM No.	USE	TYPE	NOTES
V203	UHF Osc.	2AF4A	

## FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C201	5		30-1224-78	SI 5		LT6V5	ZT-555	5GA-V5	
C202	5		30-1224-78	SI 5		LT6V5	ZT-555	5GA-V5	
C203	39		62-039409011	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C204	5		30-1224-78	SI 5		LT6V5	ZT-555	5GA-V5	
C205	5		30-1224-78	SI 5		LT6V5	ZT-555	5GA-V5	
C206	1000		30-1268-7	EF-001	MFT-1000			503C-DI	
C207	2.2		30-1221-6	NPO-SI 2.2	TCZ-2R2	CTA6V22C		5TCCB-V22	
C208	150		30-1268-6						
C209	3.9		30-1221-14						
C210	5		30-1268-5						
C211	65		30-1268-2						
C212	330		30-1265-2	BPD-00033	DD-331	L10T33	UC-5333	5GA-T33	
C213	.5-3		31-6520-25		829-3		CT565A		NPO
C214	7.5		30-1251-19						
C215	150		30-1268-6						
C216	1.0		30-1224-82						
C217	27		30-1268-4						
C218	27		30-1224-146	SI 27	D6-270	LT6Q27	UC-5427	5GA-Q27	
C219	3.9		30-1221-14						10%
C220	1000		30-1268-7	EF-001	MFT-1000			503C-DI	
C221	2.2		30-1224-143	NPO-SI 2.2	TCZ-2R2	CTA6V22C		5TCCB-V22	
C222	1000		30-1238-13	BPD-001	DD-102	BYA6D1	DC521	5HK-DI	
C223	680		30-1238-22	BPD-00068	DD-681	BYA10T68	UC-5368	5GA-T68	
C224	1000		30-1268-7	EF-001	MFT-1000			503C-DI	
C225	150		30-1265-3	BPD-00015	DD-151	L10T15	UC-5315	5GA-T15	
C226	1000		30-1268-7	EF-001	MFT-1000			503C-DI	
C227	330		30-1265-2	BPD-00033	DD-331	L10T33	UC-5333	5GA-T33	
C228	1000		30-1268-7	EF-001	MFT-1000			503C-DI	
C229	.68		30-1221-11		TCZ-R68				
C230	30		76-10170						
C231	15		30-1224-133						
C232	.5-3		31-6520-1		829-3		CT565A		N1500 ± .25mmf
C233	250		30-1261						
C234	1000		30-1258	EF-001	MFT-1000			503C-DI	
C235	1000		30-1258	EF-001	MFT-1000			503C-DI	

## RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R201	1500Ω		66-2158340	
R202	10K		66-3108340	
R203	470K 5%		66-4478240	
R204	470K 5%		66-4478240	
R205	1800Ω	1	66-2184340	
R206	100K		66-4108340	
R207	47K	2	66-3475340	
R208	15K		66-3158340	

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R209	10K		66-3108340	
R210	82K	1	66-3824340	
R211	220Ω		66-1228340	
R212	150K		66-4158340	
R213	470K		66-4478340	
R214	5600Ω		66-2568340	
R215	1500Ω		66-2158340	

## COILS (RF-IF)

ITEM No.	USE	PHILCO PART No.	NOTES
L201	RF Choke	32-4645-37	
L202	RF Choke	32-4645-37	
L203	IF Trap	32-4719-2	
L204	VHF Ant. Trans.	32-4725	
L205	VHF Ant. Trans.	32-4725	
L206	RF Choke	32-4726-10	
L207	Ant. Coils	76-10112	Channel 2-13, Includes wafer assy.
L208	Cathode Choke	32-4652-51	
L209	RF Coils	328-0116	Channel 2-13, Includes wafer assy.
L210	Mixer Grid Coils	76-10110	Channel 2-13, Includes wafer assy.

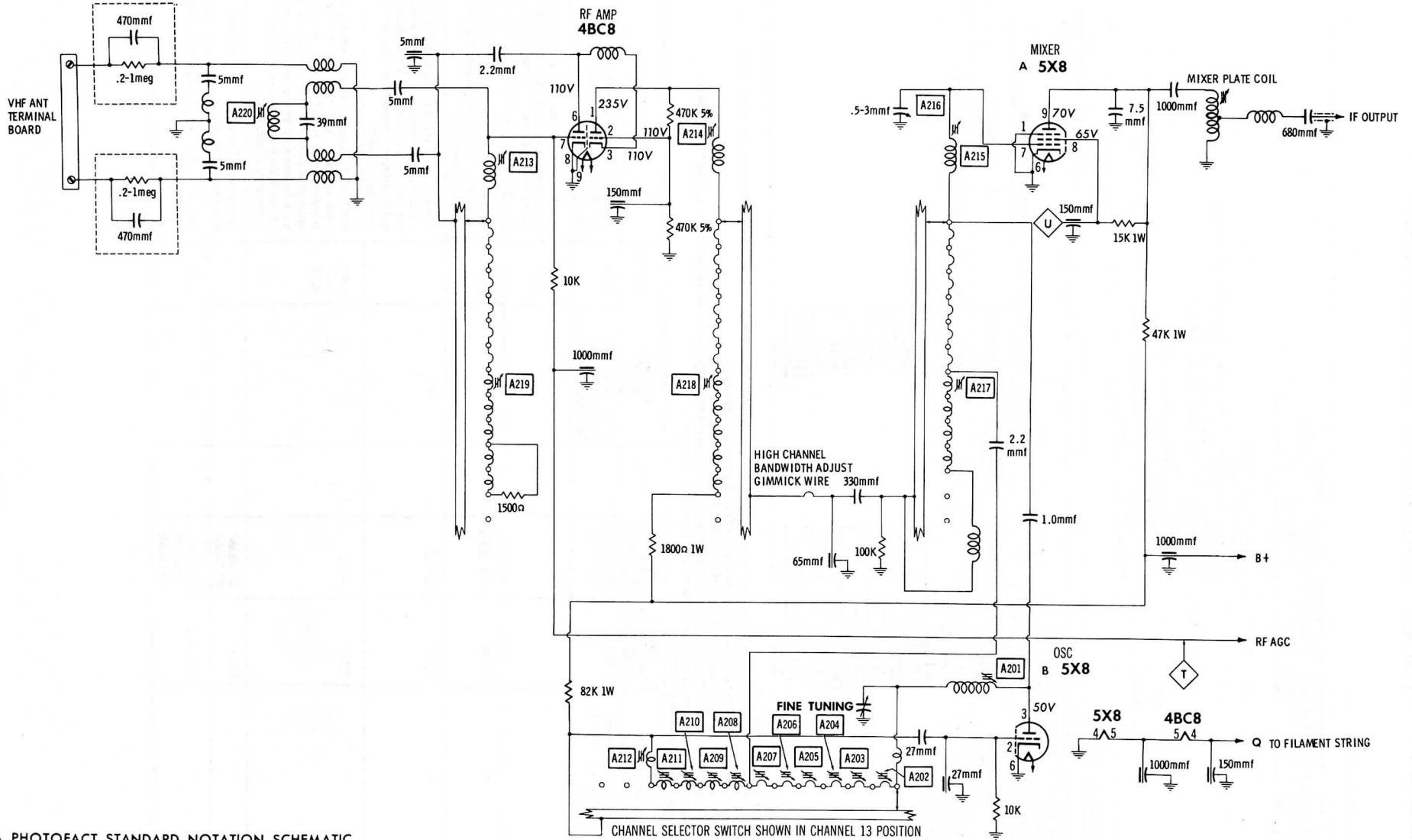
ITEM No.	USE	PHILCO PART No.	NOTES
L211	Osc. Coils	328-0113	Channel 2-13, Includes wafer assy.
L212A	Mixer Plate Coil	32-4629-9	
L213	RF Choke	76-10072	Includes C229, R213
L214	UHF Ant. Input Assy.		
L215	Cathode Choke	32-4642-4	
L216	Fil. Choke	32-4642-3	
L217	Fil. Choke	32-4652-44	
L218	RF Choke	76-10170	Includes crystal panel assy.

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	PHILCO PART No.	REPLACEMENT DATA
K201	Antenna Isolation Network	470mmf, .2-1meg	30-6028-1	Centralab Sprague RC-47I ACI-1
K202	Antenna Isolation Network	470mmf, .2-1meg	30-6028-1	Centralab Sprague RC-47I ACI-1

## CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		PHILCO PART No.	CBS PART No.	SYLVANIA PART No.	
M201	1N82A	34-8027	1N82A	1N82A	UHF Mixer (Clip-in)



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VHF TUNER 76-11450-7 (T-68G)

PHILCO MODELS G4242L, M, G4654L, M, W, UG4242L,  
 M, UG4654L, M, W (Ch. 9L37, U)



# TUNER ALIGNMENT INSTRUCTIONS

## PRE-ALIGNMENT INSTRUCTIONS

**USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT.**

The high voltage lead should be securely taped and kept away from the chassis.

Allow a 20 minute warm-up period for the receiver and test equipment.

Suggest alignment tools: A201 thru A212 ..... General Cement #5097 or 8727

Walsco  
A213 thru A215 ..... General Cement #9291  
Walsco #2520, 2522

A216 ..... General Cement #5000, 5003, 5004, 5008, 5009, 8276 or 9291  
Walsco #2515, 2520, 2522, 2525 or 2537

A217, A218, A221... General Cement #5000, 5003, 8276, 8290 or 8609  
Walsco #2525

A219 ..... General Cement #8606, 8606L or 9091  
Walsco #2542, 2543 or 2544

A220 ..... General Cement #8282, 8606, 8606L or 9295  
Walsco #2543, 2544, 2545

## VHF OSCILLATOR ALIGNMENT

The signal generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

Set the Fine Tuning to the center of its range.

Use only enough signal generator output to provide a usable indication on scope.

This procedure uses the traps of the Video IF strip. They must be in proper alignment before attempting to align the oscillator.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Two 120Ω Carbon Resistors	Across VHF antenna terminals with 120Ω in each lead.	209.75MC (400v 50% AM Mod)	13	Across Video Detector load.	A201	Adjust for MINIMUM 400v indication.
		203.75MC	12		A202	
		197.75MC	11		A203	
		191.75MC	10		A204	
		185.75MC	9		A205	
		179.75MC	8		A206	
		173.75MC	7		A207	
		81.75MC	6		A208	
		75.75MC	5		A209	
		65.75MC	4		A210	
		59.75MC	3		A211	
		53.75MC	2		A212	

## VHF RF AND MIXER ALIGNMENT

Connect the negative lead of a 1.5 volt bias supply to point  $\text{Ⓢ}$ . Positive to chassis.

Detune Mixer Plate Coil by connecting a 10 to 20mmf capacitor across it temporarily.

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

Use only enough sweep generator output to provide a usable pattern on scope.

Use 10MC sweep unless otherwise noted.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
2. Two 120Ω Carbon Resistors	Across VHF antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Amp. thru 10K to point $\text{Ⓢ}$ . Low side to chassis.	A213	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
3. "	"	"	"	"	"	A214, A215	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown. Adjust A214 to set marker positions, A215 for proper tilt.
4. "	"	177MC	175.25MC	7	"	A216	Adjust to obtain correct tilt on top of curve as in Fig. 202 to compensate for the tuning effect of channel 13.
5. "	"	213MC	213MC	13	"		Retouch A214 and A215 SLIGHTLY for symmetrical response centered about marker. Repeat steps 4 and 5 alternately until optimum response is obtained on channels 7 and 13.
6. "	"	85MC	85MC	6	"	A217, A218, A219	Turn A217 counterclockwise until a single peak appears. (DO NOT unscrew far enough to allow the core to fall out.) Adjust A218 until peak falls at 85MC. (It may be necessary to increase sweep generator output.) Adjust A219 for maximum amplitude and symmetry of single peak.
7. "	"	85MC	83.25MC 87.75MC	"	"		Retouch A217 and A218 for response similar to Fig. 203.
8. "	"	Not used	43.5MC (400v 30% AM Mod)	4	"	A220	Adjust for MINIMUM scope indication.

CONTINUED PAGE 13



TUBES ( GENERAL ELECTRIC, SYLVANIA )

ITEM No.	USE	TYPE	NOTES
V1	1st Video IF Amp.	3BZ6	
V2	2nd Video IF Amp.	3BZ6	
V3	3rd Video IF Amp. - Video Det.	5AM8	
V4	Video Output-Noise Inv.	6AW8A	
V5	Sound IF Amp.	3AU6	
V6	Audio Det.	3BN6	

ITEM No.	USE	TYPE	NOTES
V7	Audio Output	12CA5	
V8	Sync Sep. - Horiz. AFC	9BR7	
V9	Vert. Mult. - Vert. Output	10DE7	
V10	Horiz. Mult.	6CG7	
V11	Horiz. Output	12DQ6A	
V12	Damper	12D4GT	
V13	HV Rect.	1G3GT/1B3GT	

ITEM No.	USE	RATING		PHILCO PART No.	CENTRALAB PART No.	REPLACEMENT DATA
		RESISTANCE	WATTS			
R1A	1meg			33-5592-42		
R1B	2.5meg					
R1C	Switch					
R2A	250K			33-5592-32	F1-34	
R2B	1000Ω				R2-4 *	
R3A	30K			33-5592-28		
R3B	3.4meg					
R4A	30K			33-5592-33	F1-28	
R4B	250K				R2-34 *	
R5A	12K	2(WW)		33-5574-3	WN-153	
R5B	Shaft				Not Req.	
R6	600Ω	1(WW)		33-5591-6		

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	PHILCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V14	21EAP4/SF-21A			21EAP4/SF-21A ①	① "Silver Screen 85"

Note 1. Runs 1 thru 6 use 2meg Contrast, 2.5meg Vol Note 2. Runs 1 thru 4 use 30K Vert. Hold, 2.5meg Hc † "Concentrit" Equivalent: K-6 Kit with Base Element (Not available as a factory assembled unit) ‡ "STA-LOC" Equivalent: FA254L, OS687, RU13L, IS †† "Concentrit" Equivalent: K-6 Kit with Base Element (Not available as a factory assembled unit) ‡‡ "STA-LOC" Equivalent: FA34L, OS687, RU46L, IS ‡‡ "Concentrit" Equivalent: K-6 Kit with Base Element (Not available as a factory assembled unit) ‡‡ "STA-LOC" Equivalent: FA34L, OS687, RU254L, IS \* Cut and split inner shaft before assembling. † "STA-LOC" Equivalent: FA16R, RUP255L, OS1437.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1	150	200	30-2568-75 ①	AFHS1-23	XA0261	FPI17	TMS-24	TVL-1528	
C2A	140	350	30-2590-40	AFHS4-02-70				TVLS-4588 *	
C2B	100	300							
C2C	20	300							
C2D	20	300							
C3A	100	200	30-2590-37	AFH3-177-50				TVLS-3708. 2*	
C3B	200	25							
C3C	10	450							

\* Not normally in distributors stock. Available thru distributor on order to manufacturer. ① Some versions may use a 140mfd @ 150VDC with same part number.

FIXED CAPACITORS

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

ITEM No.	RATING			REPLACEMENT DATA						NOTES
	CAP.	VOLT.	TOL.	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	.22	200		30-4678-49	P288N-22		CUB2P22	GEM-2022	2TM-P22	
C5	.15	200		30-4650-48	P288N-15		CUB2P15	GEM-2015	2TM-P15	
C6	3.3		NPO 5%	30-1263-38	NPO-DI 3.3	DTZ-3R3	C10V33C	CNO-533	5TCCB-V33S 5%*	
C7	.5-3			31-6535-1		829-3				
C8	.5-3			31-6535-1		829-3				
C9	1-5			31-6535-2	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C10	1000			30-1262-11		829-6				
C11	1-5			31-6535-2	BPD-00068	DD-681	BYA10T68	B-368	5GA-T68	
C12	680		NPO 10%	30-1262-15		829-6				
C13	470			30-1262-38	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C14	1000			30-1262-11	BPD-00068	DD-681	BYA10T68	B-368	5GA-T68	
C15	680			30-1262-15	DI 27	DD-270	L10Q27	CNO-427	5GA-Q27S 10%*	
C16	27		10%	30-1263-6	BPD-00068	DD-681	BYA10T68	B-368	5GA-T68	
C17	680			30-1262-15	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C18	1000			30-1262-11	DI 5	DD-050	L10V5	ZT-555	5GA-V5	
C19	5			30-1263	P288N-033		CUB4S33	GEM-4133	4TM-S33	
C20	.033	200		30-4650-44	BPD-00068	DD-680	L10Q68	CNO-468	5GA-Q68	
C21	68			30-1263-4			PM6D33	GEM-16233	6TM-D33S 10%*	
C22	.0033	600	10%	30-4651-34			CUB6S1	GEM-611	6TM-S1	
C23	.01	600		30-4650-58	P688N-01	D6-103	CUB6S1	GEM-611	6TM-S1	
C24	.047	400		30-4650-45	P488N-047	DF-503	CUB4S47	GEM-4147	4TM-S47	
C25	1.0			30-1221-25	NPO-SI 1.0	TCZ-1	L10Q1	CNO-510	5TCCB-V1	
C26	7.5			30-1263-37						
C27	2700			30-1262-7	BPD-0022	DD-222	BYA10D22	B-222	5HK-D22	
C28	4200			30-1262-2	BPD-0047	DD-472	BYA10D47M	B-247	5HK-D47	
C29	1000			30-1262-13	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C30	10			30-1263-38	BPD-00001	DD-100	L10Q1	CNO-410	5GA-Q1	
C31	1000			30-1262-13	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C32	1000			30-1262-13	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C33	8200			30-1262-1	BPD-008		B-282			
C34	8200			30-1262-1	BPD-008		B-282			
C35	.22	100		30-4681-6	P288N-22		CUB2P22	GEM-2022	2TM-P22	
C36	.1	400		30-4650-47	P488N-1	DF-104	CUB4P1	GEM-401	4TM-P1	
C37	.1	200		30-4650-47	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C38	.0015	1000		30-4650-37	P1088N-0015	DD-152	CUB10D15	GEM-10215	10TM-D15	
C39	.033	400		30-4650-44	P488N-033		CUB4S33	GEM-4133	4TM-S33	
C40	.0047	400	10%				PM6D47	GEM-16247	5BF-D47	
C41	.068	200		30-4684-29	P288N-068		CUB4S68	GEM-4168	4TM-S68	
C42	.0039	200	10%	30-4651-25			PM6D39	GEM-16234	5BF-D39	
C43	.390		10%	30-1264-1	BPD-00039		5R5T39	MCB243	MS-339	
C44	10000			30-1238-2	BPD-01	DD-103	BYA10S1	B-110	5HK-S1	
C45	.033	400			P488N-033		CUB4S33	GEM-4133	4TM-S33	
C46	100	3000		30-1264-14	HVD-30-100	DD30-101	HVBS0T1	3DY-310	30GA-T1	
C47	82	5000			HVD-60-82	DD60-820			50GA-Q82S *	
C48A	1000			30-1239-3	BPD-2X001	DD2-102	BYD6DD1	B-210	5HK-2D1	
C48B	1000									
C49	22				BPD-000022	DD-220	L10Q22	CNO-422	5GA-Q22	
C50	22				BPD-000022	DD-220	L10Q22	CNO-422	5GA-Q22	
C51	470			30-1238-10	BPD-00047	DD-471	BYA10T47	B-347	5GA-T47	
C52	1000			30-1238-3	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C53	1000			30-1238-3	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C54	.047	400			P488N-047	DF-503	CUB4S47	GEM-4147	4TM-S47	
C55	1500			30-1262-9	BPD-0015	DD-152	BYA10D15	B-215	5HK-D15	
C56	1000			30-1262-11	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C57	470			30-1262-16	BPD-00047	DD-471	BYA10T47	B-347	5GA-T47	
C58	1000			30-1238-3	BPD-001	DD-102	BYA10DIM	B-210	5HK-D1	
C59	.1	600		30-4650-64	P688N-1	DF-104	CUB6P1	GEM-601	6TM-P1	

① Some versions may use .0056mfd @ 400V in this application (Part #30-4651-11).  
 ② Some versions may use .047mfd @ 400V in this application (Part #30-4650-45).  
 ③ Not used in some versions.  
 ④ Not used in Ch. 9L37.  
 \*Not normally in distributors stock. Available thru distributor on order to manufacturer.

All wattages 1/2 watt.

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R7	3.3meg		66-5338340	
R8	15meg		66-6168340	
R9	4700Ω		66-2478340	
R10	120K		66-4128340	
R11	1.5meg		66-5188340	
R12	1000Ω		66-2104340	
R13	12K	4	33-1363-11	Note 1
R14	22K		66-3228340	
R15	2200Ω		66-2228340	
R16	330Ω		66-1338340	
R17	47Ω		66-0478340	
R18	27K		66-3278340	
R19	1000Ω		66-2108340	
R20	330Ω		66-1338340	
R21	68Ω		66-0688340	
R22	15K		66-1516340	
R23	470Ω		66-1478340	
R24	220Ω		66-1228340	
R25	3900Ω		66-2398340	
R26	150K		66-4158340	
R27	1meg		66-5188340	
R28	1.8meg		66-5188340	
R29	470K		66-4478340	
R30	470K		66-4478340	
R31	680K		66-4688340	
R32	1500Ω	2	66-2155340	
R33	3900Ω	7	33-1363-24	
R34	68Ω		66-0688340	
R35	220K		66-4228340	
R36	330K		66-4338340	
R37	47K		66-3478340	
R38	8200Ω		66-2828340	Note 2
R39	180Ω		66-1888340	
R40	680Ω		66-1688340	
R41	330K		66-4338340	
R42	3900Ω	1	66-2394340	
R43	2200Ω		66-2228340	
R44	2200Ω		66-2228340	

Note 1. Not used in Ch. 9L37.  
 Note 2. Not used in chassis stamped RU Note 3. Printed boards with yellow dot Note 4. Printed boards with orange dot Note 5. Not used in some versions.

ITEM No.	USE	PHILCO PART No.	MEISSNER PART No.
L2	47.4MC Trap	32-4645-19	19-10
L3	41.25MC Trap	32-4635-34	
L4	RF Choke	32-4645-20	
L5	1st Video IF	32-4645-36	19-30
L6	2nd Video IF	32-4686-2	
L7	3rd Video IF	32-4686-2	
L8	4th Video IF	32-4686-3	
L9	Resonant Choke	32-4645-7	
L10	Resonant Choke	32-4674-1	
L11	Series Peaking Coil	32-4762-12	19-35
L12	4.5MC Trap	32-4644-15	
L13	Shunt Peaking Coil	32-4762-11	19-33
L14	RF Choke		
L1			

# PARTS LIST AND DESCRIPTIONS

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	PHILCO	CENTRALAB	CLAROSTAT	IRC	MALLORY	
			PART No.	PART No.	PART No.	PART No.	PART No.	
R1A	1meg		33-5592-42					Contrast, Note 1 Volume, Note 1 Push-Push Switch Brightness Vert. Linearity Vert. Hold, Note 2 Height, Note 2 Horiz. Hold Horiz. Range Width  Buzz
B	2.5meg						† UE3948-S	
C	Switch						† UE3949	
R2A	250K		33-5592-32	FI-34 R2-4 *			† QJ-999	
B	1000Ω						†† QJ-1095	
R3A	30K		33-5592-28				†† QJ-1094	
R4A	3.4meg						†† QJ-1094	
B	30K		33-5592-33	FI-28 R2-34 *			†† QJ-1094	
R5A	250K		33-5574-3	WN-153 Not Req.			W11-217 S85	
B	12K	2(WW)						
R6	600Ω	1(WW)	33-5591-6					

Note 1. Runs 1 thru 6 use 2meg Contrast, 2.5meg Volume (Part #33-5592-34).  
 Note 2. Runs 1 thru 4 use 30K Vert. Hold, 2.5meg Height (Part #33-5592-22).  
 † "Concentrikit" Equivalent: K-6 Kit with Base Elements & Shafts: B11-130, P1-024 (Panel)  
 B11-108, R15-005 (Rear)  
 † "STA-LOC" Equivalent: FA254L, OS687, RU13L, IS437.  
 †† "Concentrikit" Equivalent: K-6 Kit with Base Elements & Shafts: B11-121, P1-024 (Panel)  
 B11-141, R15-005 (Rear)  
 †† "STA-LOC" Equivalent: FA34L, OS687, RU48L, IS437.  
 ††† "Concentrikit" Equivalent: K-6 Kit with Base Elements & Shafts: B11-121, P1-024 (Panel)  
 B11-130, R15-005 (Rear)  
 † "STA-LOC" Equivalent: FA34L, OS687, RU254L, IS437.  
 \* Cut and split inner shaft before assembling.  
 † "STA-LOC" Equivalent: FA16R, RUP255L, OS1437.

ITEM No.	DC RES.		PHILCO PART No.
	PRI.	SEC.	
L22	140Ω		32-4754-3

ITEM No.	RATINGS		
	CURRENT (Measured)	DC RES.	INDUCTANCE (1000 Ω)
L23	.270A	4Ω	1.3 Hy.

ITEM No.	USE	PHILCO PART No.
T2	Rear Cover & Centering Device & Yoke Clamp	76-10513-32-8853-
T3	Horiz. Output	

① Use 8 to 1 turns ratio.  
 ② Drill new mounting hole(s).  
 ③ Remove jumper from yoke terminals same as original.

## RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		PHILCO PART No.	NOTES	ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R7	3.3meg		66-5338340		R45	820K		66-4828340	
R8	15meg		66-5108340		R46	1meg		66-5108340	
R9	4700Ω		66-2478340		R47	68Ω		66-0688340	
R10	120K		66-4128340		R48	22K		66-328340	
R11	1.5meg		66-5158340		R49	3300Ω 5%		66-2338240	Note 3
R12	1000Ω	1	66-2104340		R50	22K	1	66-3224340	
R13	12K	4	33-1363-11	Note 1	R51	150K		66-4158340	
R14	22K		66-3228340		R52	2.2meg	1	66-5224340	Note 4
R15	2200Ω		66-2228340		R53	15K		66-318340	
R16	330Ω		66-1338340		R54	820K		66-4828340	
R17	47Ω		66-0478340		R55	1.8meg		66-5188340	
R18	27K		66-3278340		R56	470K		66-4478340	
R19	1000Ω		66-2108340		R57	39K	1	66-3394340	
R20	330Ω		66-1338340		R58	270Ω	3	33-1363-19	
R21	68Ω		66-0688340		R59	1000Ω		66-2108340	
R22	15K		66-3158340		R60	1000Ω		66-2108340	
R23	470Ω		66-1478340		R61	68K		66-3688340	
R24	220Ω		66-1228340		R62	15K	1	66-3154340	
R25	3900Ω		66-2398340		R63	1000Ω		66-3108340	
R26	150K		66-4158340		R64	47K		66-3478340	
R27	1meg		66-5108340		R65	560K		66-4568340	
R28	1.8meg		66-5188340		R66	2700Ω	1	66-2274340	
R29	470K		66-4478340		R67	3900Ω	1	66-2394340	
R30	470K		66-4478340		R68	56K	2	66-4568340	
R31	680K		66-4688340		R69	2200Ω		66-2228340	
R32	1500Ω	2	66-2155340		R70	68K		66-3684340	
R33	3900Ω	7	33-1363-24		R71	100K	1	66-4104340	
R34	88Ω		66-0688340		R72	15Ω	1	66-0154340	
R35	220K		66-4228340		R73	5600Ω		66-2568340	Note 5
R36	330K		66-4338340		R74	1000Ω		66-2108340	
R37	47K		66-3478340	Note 2	R75	18K	2	66-3185340	
R38	8200Ω		66-2828340		R76	400Ω Cold 11Ω Hot		33-1343-11	
R39	180Ω		66-1188340		R77A	13Ω			
R40	680Ω		66-1688340		B	17Ω		33-1368-10	
R41	330K		66-4338340		C	8Ω			
R42	3900Ω	1	66-2394340		R78	5.6Ω		33-1366-3	
R43	2200Ω		66-2228340						
R44	2200Ω		66-2228340						

Note 1. Not used in Ch. 9L37.  
 Note 2. Not used in chassis stamped Run 1 or 2.  
 Note 3. Printed boards with yellow dot use 3600Ω 5% in this application (Part #66-2368240).  
 Note 4. Printed boards with orange dot use 2.7meg 1W in this application (Part #66-5274340).  
 Note 5. Not used in some versions.

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		PHILCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	47.4MC Trap	32-4645-32	19-1001	BC-562	4604		
L2	47.4MC Trap	32-4645-19	19-1002	BC-563	4606		
L3	4L 25MC Trap	32-4635-34					
L4	RF Choke	32-4645-20					
L5	1st Video IF	32-4645-36	19-3001	TV-189	4584 6175	VP-9	.23 Microhenry .88 Microhenry
L6	2nd Video IF	32-4686-2					
L7	3rd Video IF	32-4686-2					
L8	4th Video IF	32-4686-3					
L9	Resonant Choke	32-4645-7					3 Microhenries
L10	Resonant Choke	32-4674-1					22 Microhenries
L11	Series Peaking Coil	32-4762-12	19-3500	TV-203	6138	VP-8	470 Microhenries
L12	4.5MC Trap	32-4644-15					
L13	Shunt Peaking Coil	32-4762-11	19-3375	TV-201	6134		390 Microhenries 6.5 Microhenries ①
L14	RF Choke						
L15	1st Sound IF	32-4644-12					
L16	2nd Sound IF	32-4745-2					
L17	Quadrature Coil	32-4644-13					
L18	Resonant Choke	32-4112-50					
L19	Resonant Choke	32-4112-50					
L20	Fl. Choke	32-4645-35					11 Microhenries
L21	Fl. Choke	32-4645-35					11 Microhenries

① Not used in some versions.

ITEM No.	CURRENT (Measured)	PHILCO PART No.
M1	.270A	34-8047-2 ①
M2	.270A	34-8047-2 ①

ITEM No.	PART NAME	PHILCO PART No.
M4	Lamp	
M5	Tuner	76-11547-8
	Tuner	76-11450-7
M6	Tuner	76-10391-1
M7	Switch	42-2075-5
	Printed Board	54-8724-1
	Printed Board	54-8529-1

# DESCRIPTIONS

IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
QJ-999	UE3948-S	Contrast, Note 1 Volume, Note 1 Push-Push Switch Brightness Vert. Linearity Vert. Hold, Note 2 Height, Note 2 Horiz. Hold Horiz. Range Width Buzz
QJ-1095	UE3949	
QJ-1094	UE3950	
QJ-217	UE378L	

5592-34).  
5592-22).  
11-130, P1-024 (Panel)  
11-108, R15-005 (Rear)

11-121, P1-024 (Panel)  
11-141, R15-005 (Rear)

11-121, P1-024 (Panel)  
11-130, R15-005 (Rear)

otherwise listed.

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
45	820K		66-4828340	Note 3
46	1meg		66-5108340	
47	68K		66-0688340	Note 4
48	22K		66-3228340	
49	3300Ω 5%		66-2338340	Note 5
50	22K	1	66-3224340	
51	150K		66-4158340	Note 5
52	2.2meg	1	66-5224340	
53	15K		66-3158340	Note 5
54	820K		66-4828340	
55	1.8meg		66-5188340	Note 5
56	470K		66-4478340	
57	39K	1	66-3394340	Note 5
58	270Ω	3	33-1363-19	
59	1000Ω		66-2108340	Note 5
60	1000Ω		66-2108340	
61	68K		66-3688340	Note 5
62	15K	1	66-3154340	
63	1000Ω		66-3108340	Note 5
64	47K		66-3478340	
65	560K		66-4568340	Note 5
66	2700Ω	1	66-2274340	
67	3900Ω	1	66-2394340	Note 5
68	56K	2	66-4568340	
69	2200Ω		66-2228340	Note 5
70	68K	1	66-3684340	
71	100K		66-4104340	Note 5
72	15Ω	1	66-0154340	
73	5600Ω		66-2568340	Note 5
74	1000Ω		66-2108340	
75	18K	2	66-3185340	Note 5
76	400Ω Cold 1Ω Hot		33-1343-11	
77A	13Ω		33-1368-10	Note 5
B	17Ω			
C	8Ω			
78	5.6Ω		33-1366-3	Note 5

in this application (Part #66-2368240).  
/ in this application (Part # 66-5274340).

ITEM No.	Miller PART No.	Ram PART No.	NOTES
4604	4606		.23 Microhenry .88 Microhenry
4584	6175	VP-9	
6138		VP-8	3 Microhenries 22 Microhenries 470 Microhenries
6134			390 Microhenries 6.5 Microhenries ①
			11 Microhenries 11 Microhenries

## TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES.		REPLACEMENT DATA						NOTES
	PRI.	SEC.	PHILCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	Thordarson PART No.	
L22	140Ω		32-4754-3						Horiz. Freq.

## FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 Hz)	PHILCO PART No.	Holldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L23	.270A	4Ω	1.3 Hy.	32-8710-4					26C44	

## TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA							
		PHILCO PART No.	Holldorson PART No.	Merit PART No.	Ram PART No.	Rogers PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	Vert. Output Yoke (Horiz. 24MH) (110°) (Vert. 38.5MH) Rear Cover & Centering Device & Yoke Clamp Horiz. Output	32-8829-2	Z1900 ①	A-2823				A-8142 ②	A-108X
T2		76-10508-6						26S72 Y-53 ③	
T3		76-10513-6							
		32-8853-1							

- ① Use 8 to 1 turns ratio.
- ② Drill new mounting hole(s).
- ③ Remove jumper from yoke terminals #11 and #7, use original rear cover, centering device and yoke clamp. Connect same as original.

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	PHILCO PART No.	Holldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T4	5200Ω	3-4Ω	32-8742-2	Z1000	A-3026	AU-601	A-3877	24S51	S-6X	

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	PHILCO PART No.	QUAM PART No.	
SP1	4" x 6"	PM	3-4Ω	36-1676-4 ① 36-1671-3 ② 36-1651-24 ③	46A1	① Used in Models G4242L, M, UG4242L, M ② Used in earlier versions of Models G4242L, M, UG4242L, M ③ Used in Models G4654M, W, UG4654M, W

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	PHILCO PART No.	REPLACEMENT DATA
K1	Vert. Retrace	2000mmf, 5000mmf, 10K, 1meg	30-8024-1	Centralab Sprague PC-336 RS-2
K2	Sync Coupling	180mmf, 2200mmf, 8000mmf, 18K, 680K, 2.2meg	30-6519-2	
K3	Vert. Integrator	150mmf, 4000mmf, 5000mmf, 10K, 33K, 90K	30-8030-7 ①	
K4	Vert. Feedback	1500mmf, 2200mmf, 33K, 150K	30-6509-2	
K5	Horiz. AFC	82mmf, 200mmf, 3000mmf, 150K, 680K, 1meg	30-8034-1	Sprague C-6
K6	Horiz. Mult. Output	330mmf, 1000mmf, 1200mmf, 3300mmf, 4700Ω, 3900Ω, 47K	30-6512-6	
K7	Picture Tube Isolation	5000mmf, .2-1meg	30-6028-2	Centralab Sprague RC-471 AC1-4

① Chassis Runs 1 and 2 use alternate Part #30-6030-6 with values of 150mmf, 4000mmf, 5000mmf, 10K, 39K, and 90K.

## RECTIFIERS

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	CURRENT (Measured)	PHILCO PART No.	FEDERAL PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL PART No.	SARKES TARZIAN PART No.		
M1	.270A	34-8047-2 ①	HA504 ②		SD-500 ②	40K ②	① Germanium Type. Alternate Silicon Type Part #34-8048-1. ② Silicon Type.	
M2	.270A	34-8047-2 ①	HA504 ②		SD-500 ②	40K ②		

## MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M3	Lamp	34-2064	#44 #1847 (T-69K), VHF with UHF provisions, Ch. 9L37U (T-69G), VHF, Ch. 9L37U (T-2TF), UHF, Ch. 9L37U Local-Distance, SPDT (Side Type) Main Video IF
M4	Lamp		
M5	Tuner	76-11547-8	
	Tuner	76-11450-7	
	Tuner	76-10391-1	
M6	Switch	42-2075-5	
M7	Printed Board	54-8724-1	
	Printed Board	54-8529-1	

PHILCO MODELS G4242L, M, G4654L, M, W, UG4242L, M, UG4654L, M, W (Ch. 9L37, U)

FOLDER 1

# PARTS LIST AND DESCRIPTIONS (Continued)

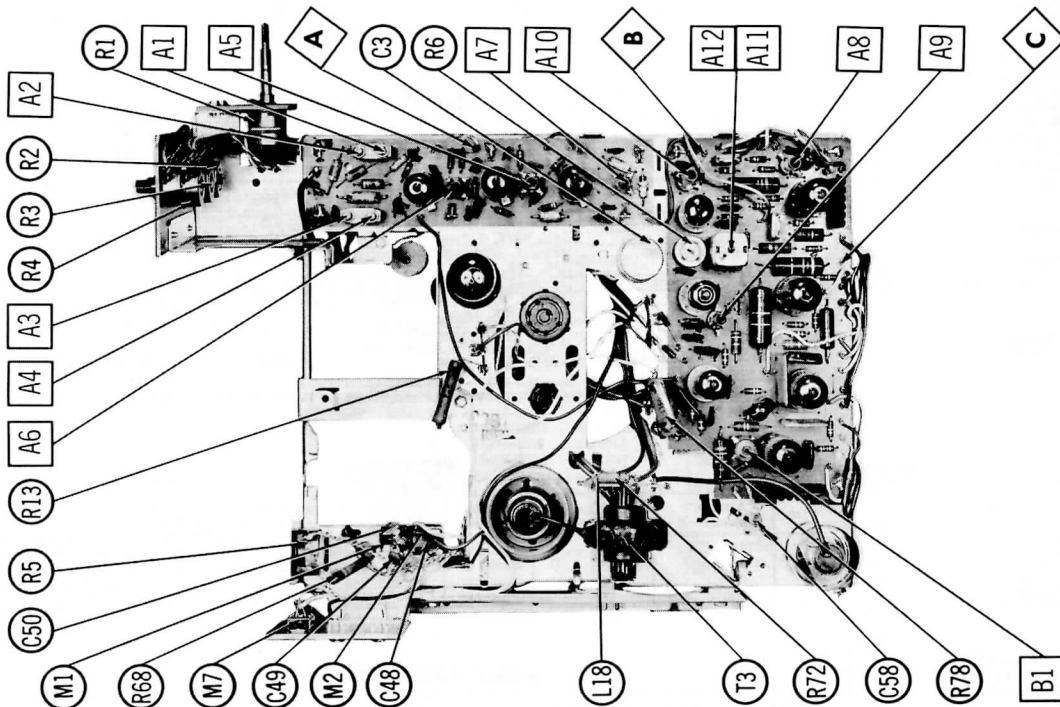
## CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Safety Glass	54-6691	Includes Mask
Knob	76-11142-8	Channel Selector, Models G4242L, M
Knob	76-11142-7	Channel Selector, Models UG4242L, M
Knob	76-11142-15	Channel Selector, Models G4654M, W
Knob	76-11142-16	Channel Selector, Models UG4654M, W
Knob	54-8307-1	Fine Tuning
Knob	76-10210-4	UHF Models UG4242M, UG4654M
Knob	76-10210-2	UHF Models UG4242L, UG4654W
Knob	54-6406-2	Volume-On-Off, Models G4242L, M, UG4242L, M
Knob	54-6406-3	Volume-On-Off, Models G4654M, W, UG4654M, W
Knob	54-6407-3	Contrast, Models G4242L, M, UG4242L, M
Knob	54-6407-4	Contrast, Models G4654M, W, UG4654M, W
Knob	54-6265-33	Brightness, Models G4242M, UG4242M
Knob	54-6265-36	Brightness, Models G4242L, UG4242L
Knob	54-6265-43	Brightness, Vert. Hold, Horiz. Hold, Models G4654M, W, UG4654M, W
Knob	54-6265-31	Vert. Hold, Models G4242M, UG4242M
Knob	54-6265-34	Vert. Hold, Models G4242L, UG4242L
Knob	54-6265-32	Horiz. Hold, Models G4242M, UG4242M
Knob	54-6265-35	Horiz. Hold, Models G4242L, UG4242L

## WIRING DATA

High Voltage Lead .....	Use BELDEN No. 8869
Shielded Hook-up Wire .....	Use BELDEN No. 8885 (Single Conductor) 8738 (Two Conductor)
General-use Unshielded Hook-up Wire .....	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type) .....	Use BELDEN No. 8874
300Ω Tuner Input Lead .....	Use BELDEN No. 8225
300Ω Antenna Lead-in .....	Use BELDEN No. 8230 or 8275
Antenna Rotor Cable .....	Use BELDEN No. 8464 (Flat) or 8494 (Round) - 4 Conductor 8485 (Round) - 5 Conductor 8488 (Round) - 8 Conductor



CHASSIS-TOP VIEW

# TUNER ALIGNMENT INSTRUCTIONS (cont)

## UHF IF ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms. Use only enough sweep generator output to provide a usable pattern on scope.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1500mmf Ceramic Capacitor	High side to point $\nabla$ . Low side to chassis.	Not used	43.5MC (400v 30% AM Mod)	UHF	Vert. Amp. thru 10K to point $\nabla$ . Low side to chassis.	A221	Adjust for flat symmetrical response.

## UHF TUNER ALIGNMENT

This portion of the receiver has been properly aligned at the factory and is very stable. Alignment of this portion should not be required in the field.

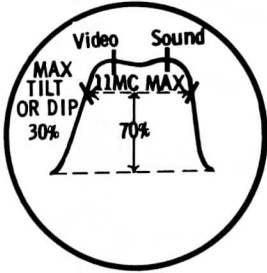


FIG. 201

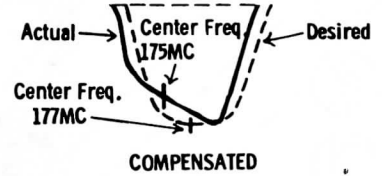
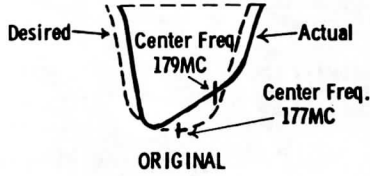


FIG. 202

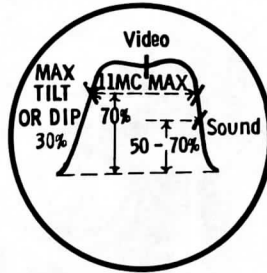
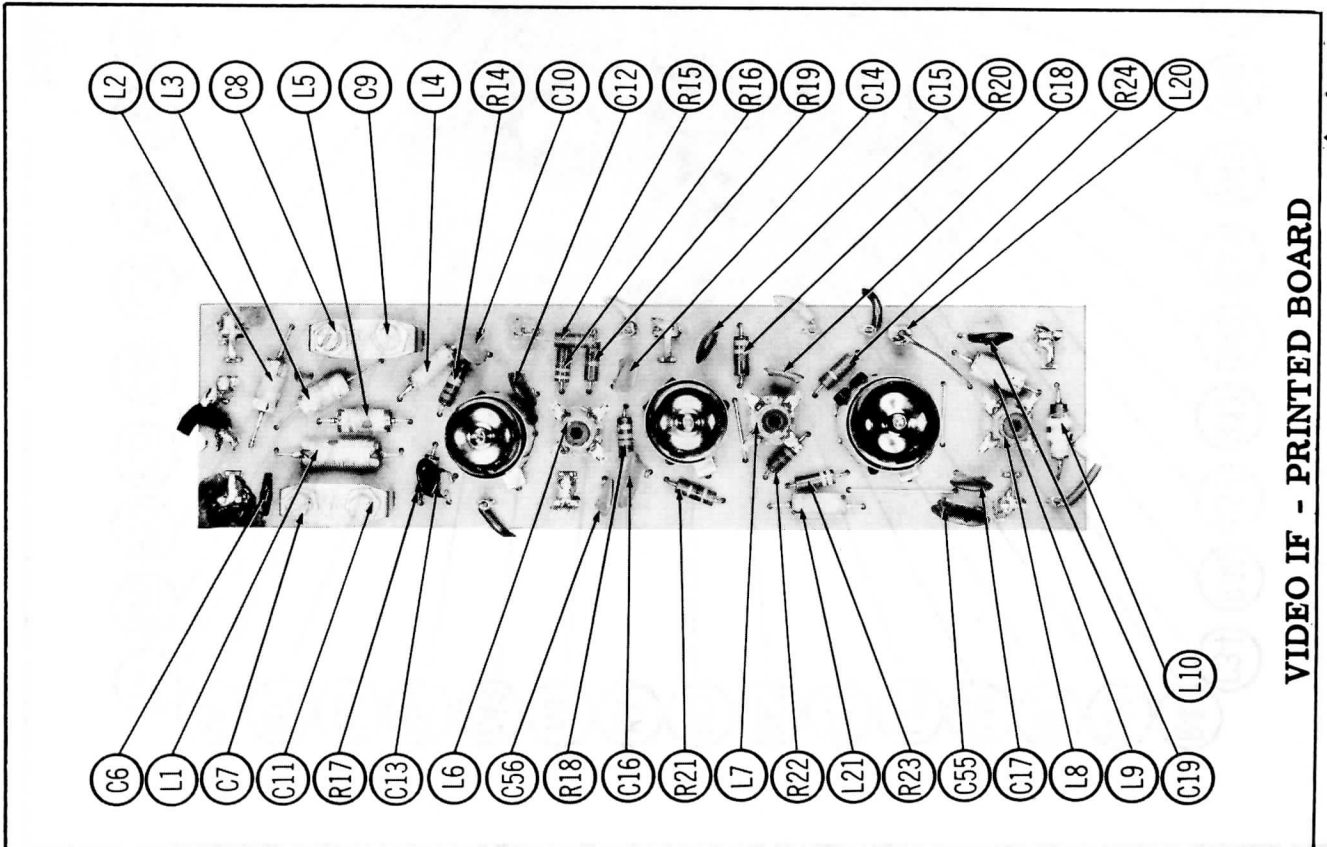


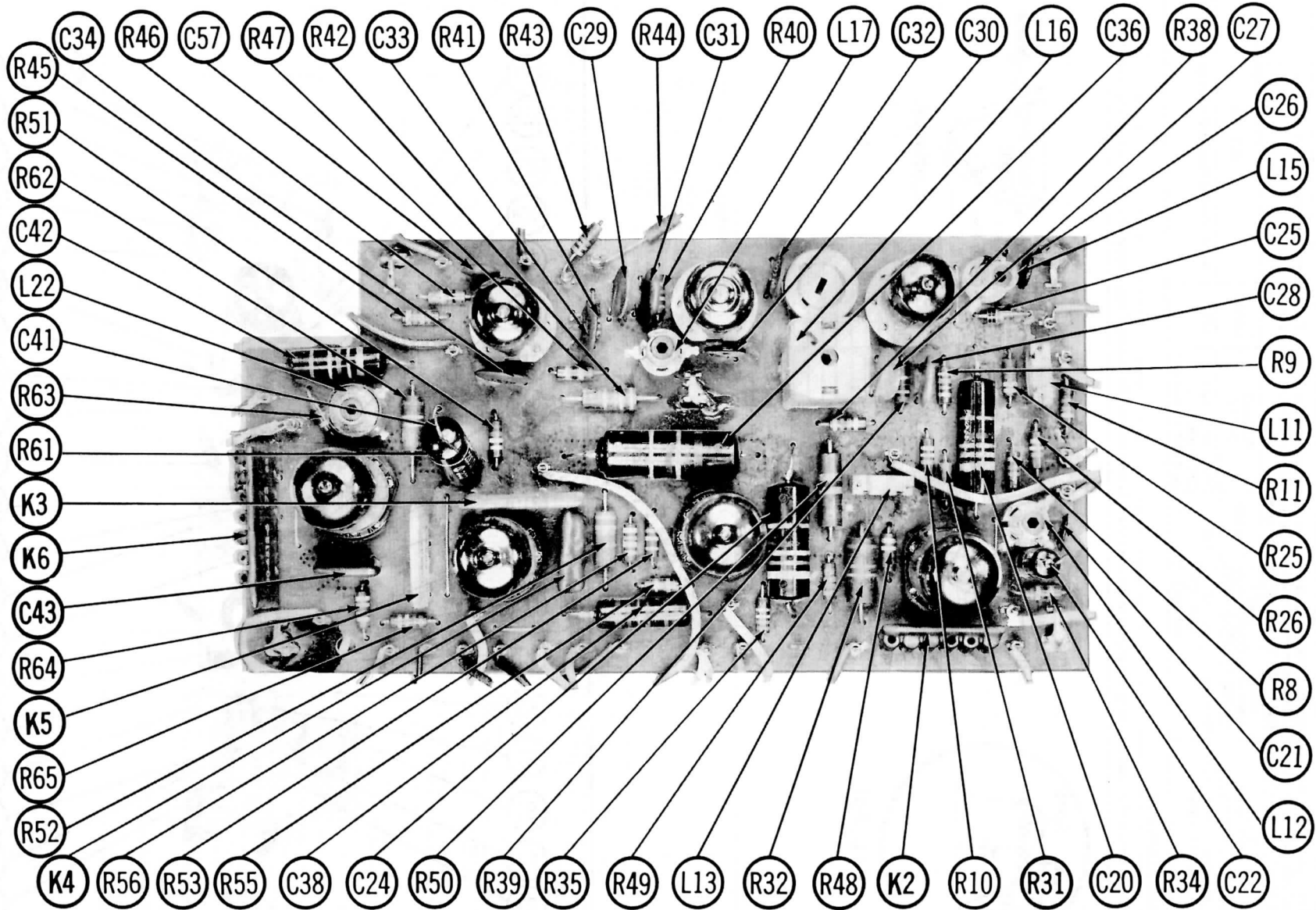
FIG. 203



VIDEO IF - PRINTED BOARD

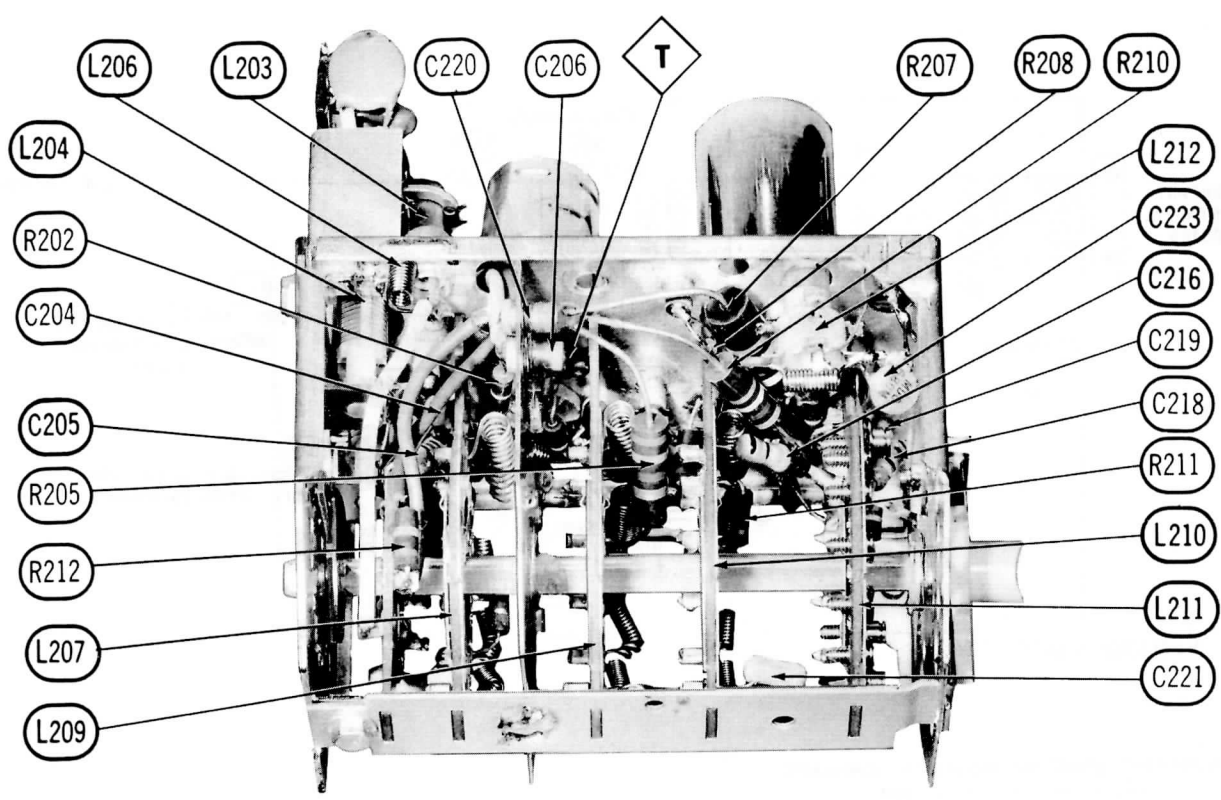
PHILCO MODELS G4242L, M, G4654L, M, W, UG4242L, M, UG4654L, M, W (Ch. 9137, U)

FOLDER 1

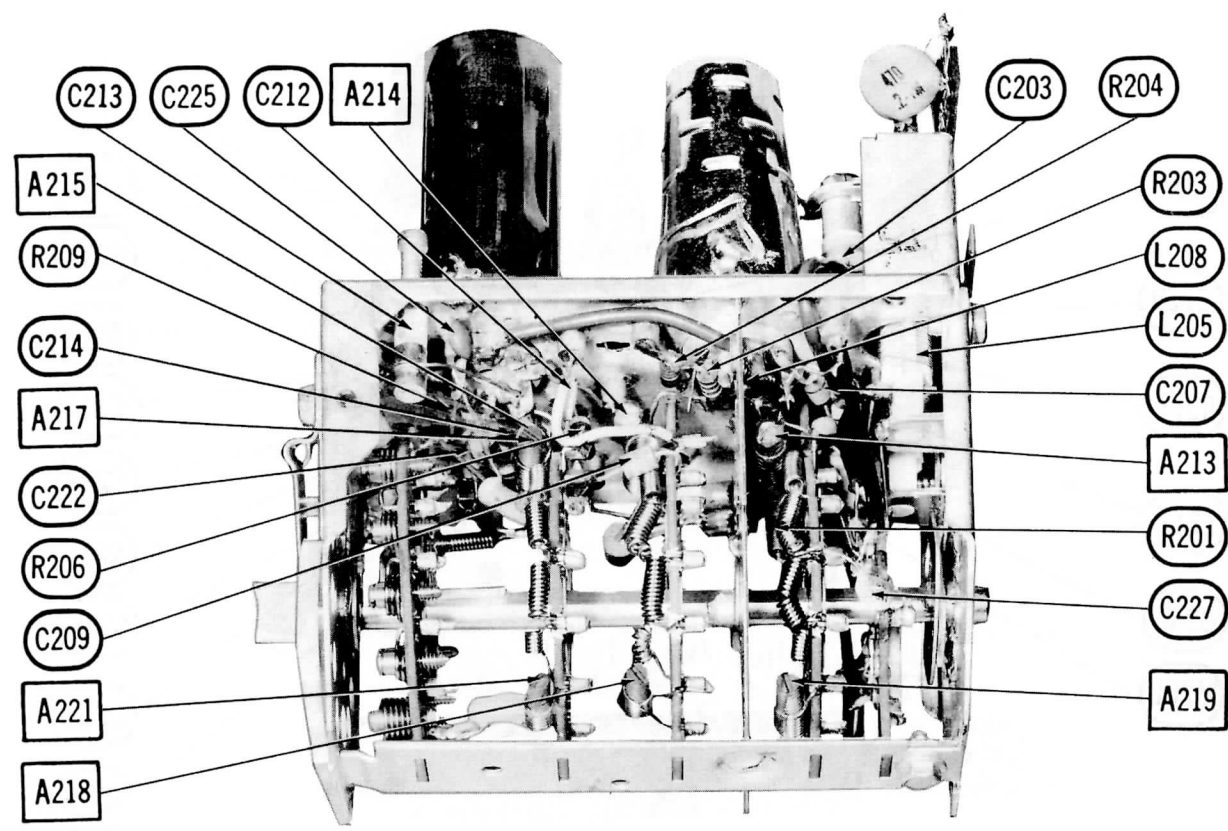


MAIN PRINTED BOARD





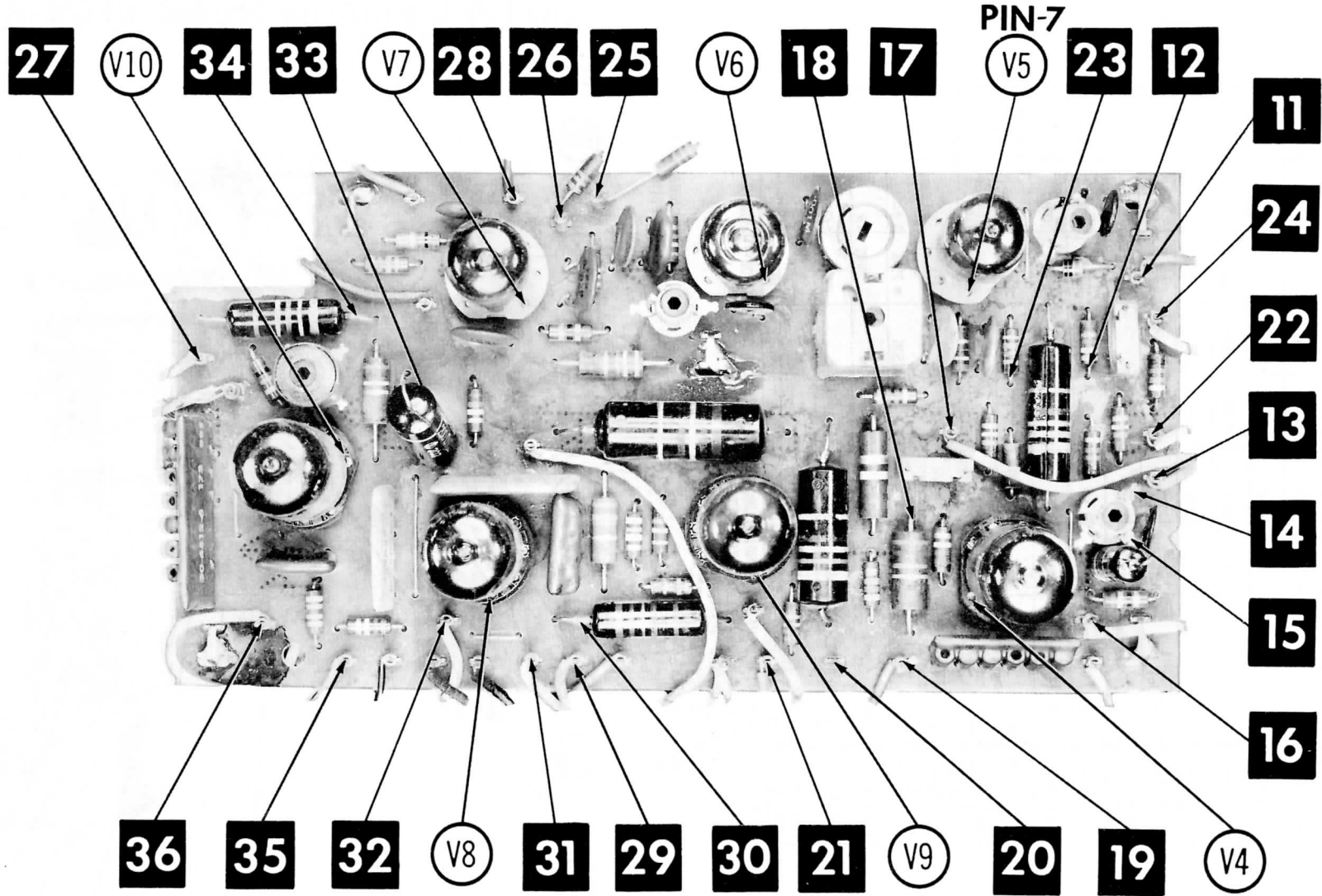
TUNER 76-11547-8 - LEFT SIDE



TUNER 76-11547-8 - RIGHT SIDE



CircuitTrace Numbers 11 thru 36



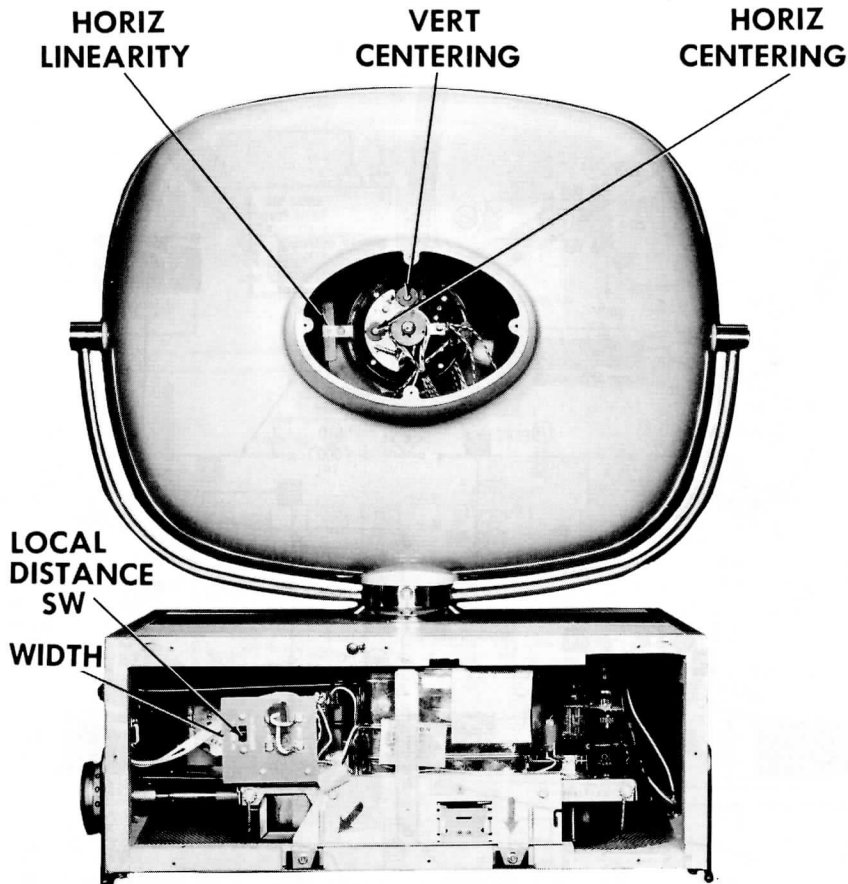
A Howard W. Sams **CIRCUITTRACE** Photo

MAIN PRINTED BOARD

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

PHILCO MODELS G4242L, M, G4654L, M, W, UG4242L,  
M, UG4654L, M, W (Ch. 9L37, U)





## CABINET-REAR VIEW

### HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

**Suggested Alignment Tools:**

GENERAL CEMENT #8606, 8606L, 8282, 9295  
WALSCO #2526, 2543, 2544, 2545

Turn the set on and tune in a station signal. Allow the receiver to warm up. Connect a clip lead across the Horizontal Frequency coil (L22).

Set the Horizontal Hold to the center of its range.

Adjust the Horizontal Range (R4B) until the picture appears to float back and forth across the screen.

Remove the clip lead from across L22 and adjust the Horizontal Frequency slug (B1) until the picture synchronizes horizontally.

Adjust the Width control (R5) for a picture slightly wider than necessary to fill the picture mask horizontally.

### DISASSEMBLY INSTRUCTIONS

**CHASSIS REMOVAL**

1. Remove 4 front and 4 side push-on type knobs.
2. Remove 8 wood screws holding rear cover. Remove the rear cover.
3. Extend antenna rod outward.
4. Remove 2 metal screws holding chassis at the rear.
5. Partially remove chassis. Remove yoke and picture tube plugs and cathode lead, speaker, and HV leads.
6. Remove chassis.

**PICTURE TUBE HOUSING DISASSEMBLY**

1. Yoke is accessible by removing 4 metal screws holding rear cover to housing.

2. Remove 2 small metal screws holding bottom metal trim strip.
3. Remove spring holding wrap around plastic trim strip at the bottom. Remove plastic trim strip.
4. Remove 2 metal screws holding plastic shell strap at the bottom. Remove strap.
5. Remove front mask.
6. Remove snap-in metal trim caps on side support arms.
7. Remove 2 metal screws holding support arms to rear shell. Remove support arms by turning to line up bottom slots.
8. Remove 2 small metal screws holding rear shell to bottom support bracket.
9. Remove rear shell.