

CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Tune to a TV station and set all controls for normal operation. Connect a jumper from point Ⓢ to ground. Set the Horizontal Hold Control, R3A, to the center of its range. Connect a jumper across the Horizontal Stabilizer Coil, L21. Adjust Horizontal Hold (Centering) Control, R4C, until picture stands still or tends to float slowly across screen.

Interrupt signal momentarily to see if picture remains in sync.

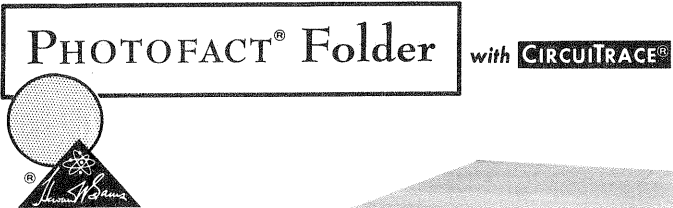
Adjust Width Control until picture is just wider than necessary to fill the screen.

DISASSEMBLY INSTRUCTIONS

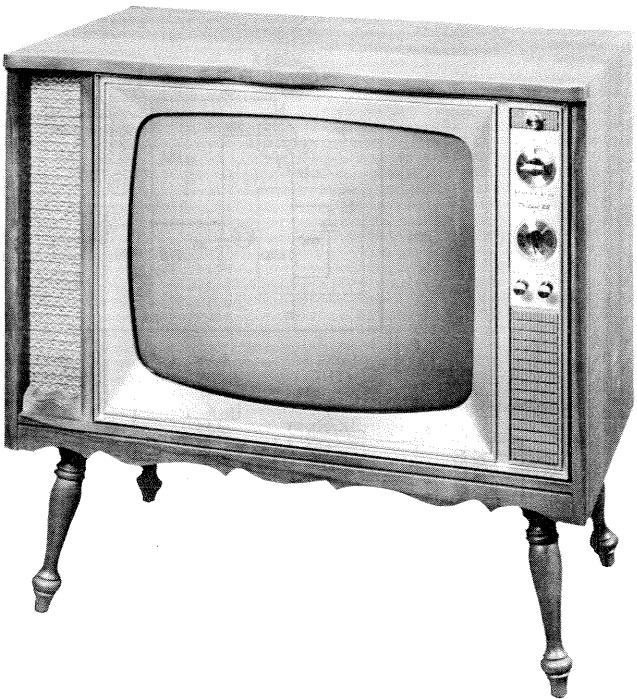
CHASSIS REMOVAL	PICTURE TUBE REMOVAL
1. Remove rear cover (9 screws) and 9 knobs from front.	1. Remove chassis and lay cabinet face down on a soft surface.
2. Disconnect speaker, anode lead, and picture tube socket.	2. Remove nuts from corner bracket bolts, and remove picture assembly.
3. Remove yoke and disconnect wire from control plate to picture tube mounting.	3. Loosen both clamp bolts and lift mounting band assembly from tube.
4. Remove screw from rear of tuner bracket and 5 screws from control and tuner mounting plate.	
5. Remove 6 screws from bottom of cabinet and remove chassis.	

SET 740 FOLDER 4

PHILCO  
CHASSIS 15N30



PHILCO  
CHASSIS 15N30



MODEL UN9520MA

CAUTION  
ONE SIDE OF AC LINE CONNECTED TO CHASSIS

TRADE NAME	PHILCO	MODELS	CHASSIS
		UN4720MB, UN4722MA/WA, UN4938MB, UN4940MA/WA, UN4942MA/WA, UN9306BK, UN9310MB/WA, UN9312MA/MB/WA, UN9516WA, UN9518MA/MB/WA, UN9522BL/CH/MA/WA, UN9524MB/WA, UN9526WA .....	15N30
SUPPLIER	For current address, see Master Index.		
TYPE SET	Television Receiver		
TUBES	VHF - Fourteen, UHF - One Transistor		
POWER SUPPLY	110-120 Volts, 60 Cycles	RATING	117 Watts, 1.5 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

<b>SAFETY GLASS</b> The safety glass is an integral part of the picture tube.	by the proper setting of the Horizontal Stabilizer Coil and Horizontal Hold (Centering). (See "Tube Placement Chart" for location.)
<b>FUSE OR FUSE DEVICE</b> A 1.45Ω fusible resistor is used for low voltage power supply protection. (See R78 "Chassis-Top View" for location.)	<b>WIDTH</b> The width may be varied by a Width Control. (See "Tube Placement Chart" for location.)
<b>VHF OSCILLATOR ADJUSTMENT</b> Set fine tuning at the center of its range and adjust osc. slug (one for each channel) for best sound and picture.	<b>FOCUS</b> The focus may be varied by connecting the lead from pin 4 of the picture tube to various voltage points. (For location, see "Chassis - Top View".)
<b>AGC</b> No provision is made to vary the AGC on this receiver.	<b>CENTERING</b> Centering is accomplished by 2 magnetic rings located on yoke rear cover.
<b>HORIZONTAL OSCILLATOR FIELD ADJUSTMENT</b> Coarse adjustment of the horizontal hold is accomplished	

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



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. NA072

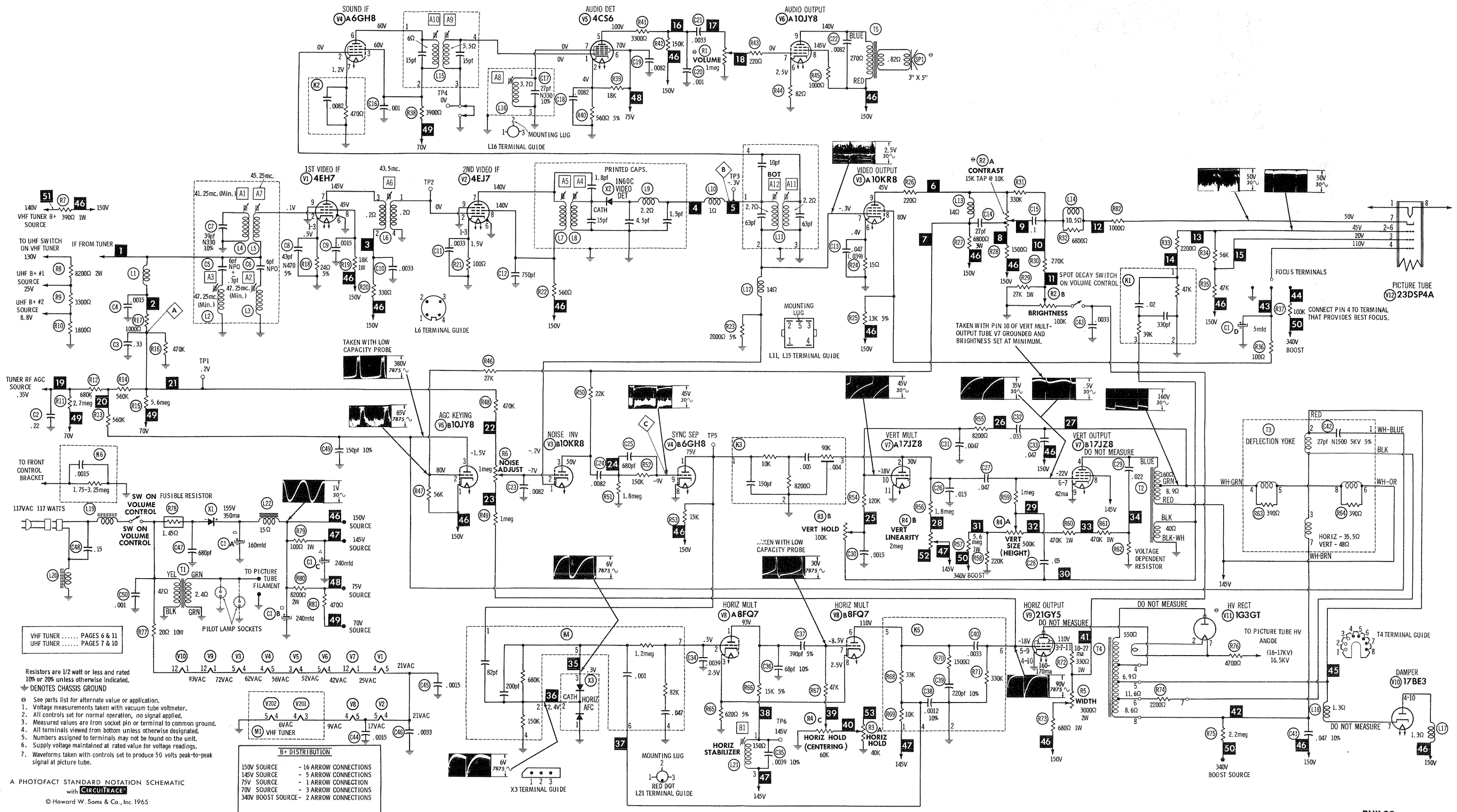
Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1965 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U. S. of America

DATE 2 -65

SET 740 FOLDER 4

PHILCO  
CHASSIS 15N30

SET 740 FOLDER 4



Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.  
 ⚡ DENOTES CHASSIS GROUND

See parts list for alternate value or application.  
 1. Voltage measurements taken with vacuum tube voltmeter.  
 2. All controls set for normal operation, no signal applied.  
 3. Measured values are from socket pin or terminal to common ground.  
 4. All terminals viewed from bottom unless otherwise designated.  
 5. Numbers assigned to terminals may not be found on the unit.  
 6. Supply voltage maintained at rated value for voltage readings.  
 7. Waveforms taken with controls set to produce 50 volts peak-to-peak signal at picture tube.

A PHOTOFACT STANDARD NOTATION SCHEMATIC  
 with CIRCUITRACE  
 © Howard W. Sams & Co., Inc. 1965

**B+ DISTRIBUTION**

150V SOURCE - 16 ARROW CONNECTIONS  
 145V SOURCE - 5 ARROW CONNECTIONS  
 75V SOURCE - 1 ARROW CONNECTION  
 70V SOURCE - 3 ARROW CONNECTIONS  
 340V BOOST SOURCE - 2 ARROW CONNECTIONS

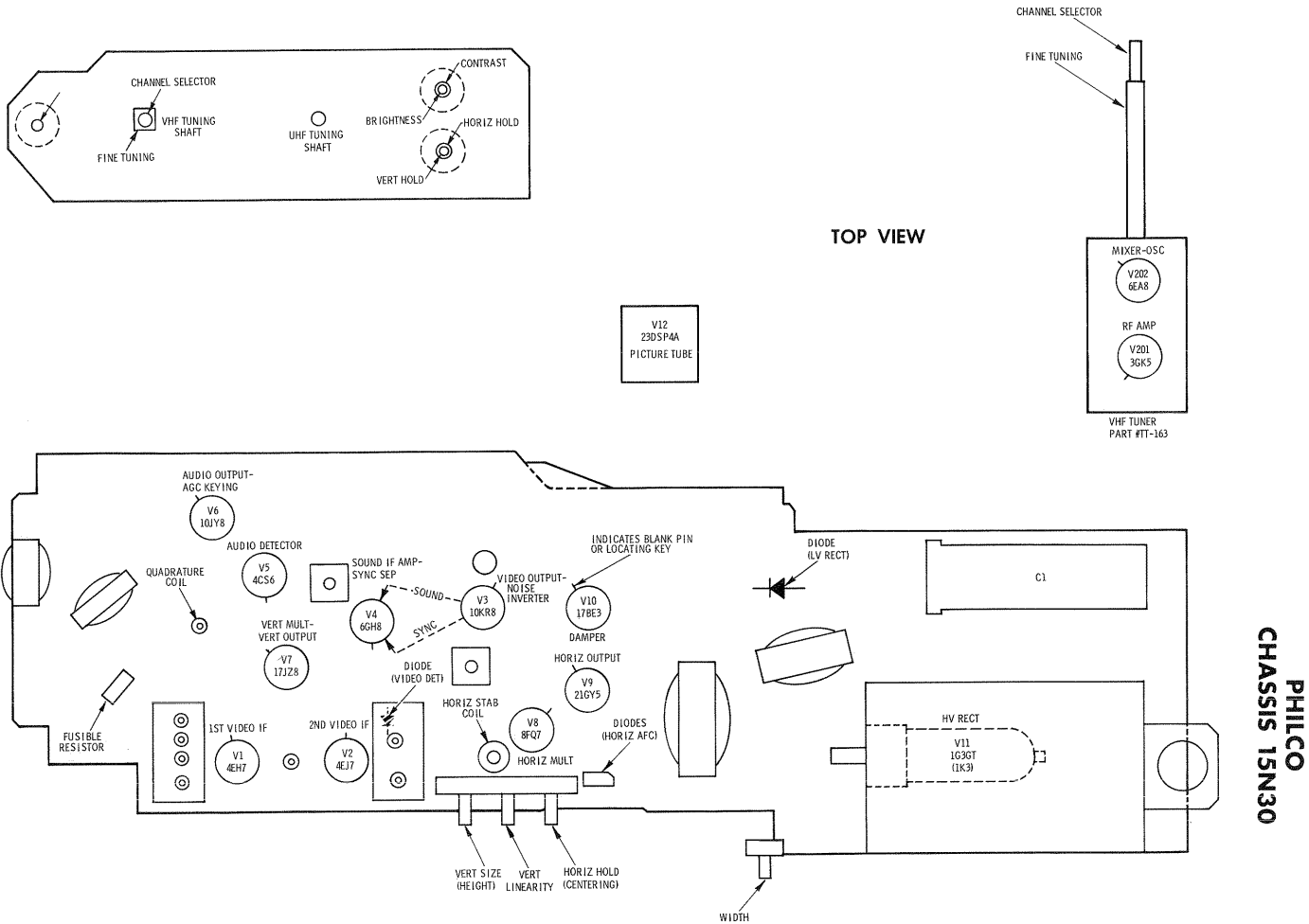
PHILCO  
CHASSIS 15N30

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V1	4EH7	24Ω	380K	24Ω	10Ω	8Ω	0Ω	† 345Ω	† 18K	0Ω			
V2	4EH7	100Ω	.2Ω	100Ω	8Ω	6Ω	0Ω	† 575Ω	† 575Ω	0Ω			
V3	10KR8	● 1200Ω	850K	27K	23Ω	26Ω	15Ω	● 1200Ω	† 13K	† 5400Ω			
V4	6GH8	† 10K	2.2Ω	† 12K	23Ω	21Ω	† 12K	470Ω	0Ω	1.9meg			
V5	4CS6	5.5Ω	560Ω	21Ω	20Ω	† 153K	† 8200Ω	3.7Ω					
V6	10JY8	† 15Ω	† 22K	1.4meg	16Ω	20Ω	82Ω	35K	† 1000Ω	† 285Ω			
V7	17JZ8	10Ω	† 2.6meg	NC	† 285Ω	NC	1.6meg	1.6meg	† 115Ω	0Ω	180K	0Ω	16Ω
V8	8EQ7	† 15K	2.2meg	620Ω	3Ω	6Ω	† 43K	120K	620Ω	0Ω			
V9	21GY5	26Ω	NC	† 2000Ω	0Ω	330K	TP	† 2000Ω	NC	330K	0Ω	† 2000Ω	32Ω
V10	17BE3	32Ω	NC	NC	† 15Ω	NC	NC	9.2meg	NC	NC	† 15Ω	NC	36Ω
V11	1G3GT						PINS 1 THRU 8 HAVE INFINITE RESISTANCE						TOP CAP # 558Ω
V12	23D5P4A	FIL	34K	12K	† 13K	NC	34K	160K	FIL				
V201	3GK5	0Ω	1.1meg	3Ω	2Ω	† 2600Ω	0Ω	0Ω					
V202	6EA8	† 12K	150K	† 19K	2Ω	0Ω	† 1400Ω	0Ω	0Ω	10K			
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12

# THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT. NC NO CONNECTION  
● READING DEPENDS ON POLARITY OF METER CONNECTIONS. TP TIE POINT  
† MEASURED FROM OUTPUT OF X1. ‡ MEASURED FROM PIN 7 OF V10.

TUBE PLACEMENT CHART



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.

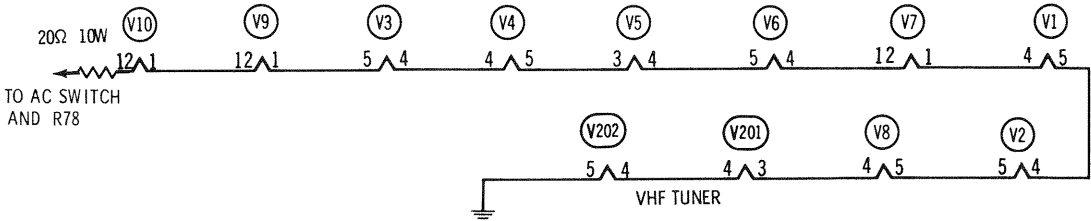
**POWER SUPPLY FAILURE**  
No raster, no sound R78 (Fusible Resistor), X1

**SWEEP FAILURE**  
No raster, has sound V8, V9, V10, V11, V12  
No vertical deflection V7  
Poor vert. linearity or foldover V7  
Poor horiz. linearity or foldover V8, V9, V10  
Narrow picture V8, V9, V10, X1  
Vert. off freq. V7  
Horiz. off freq. X3 (Horiz. AFC Diode), V8

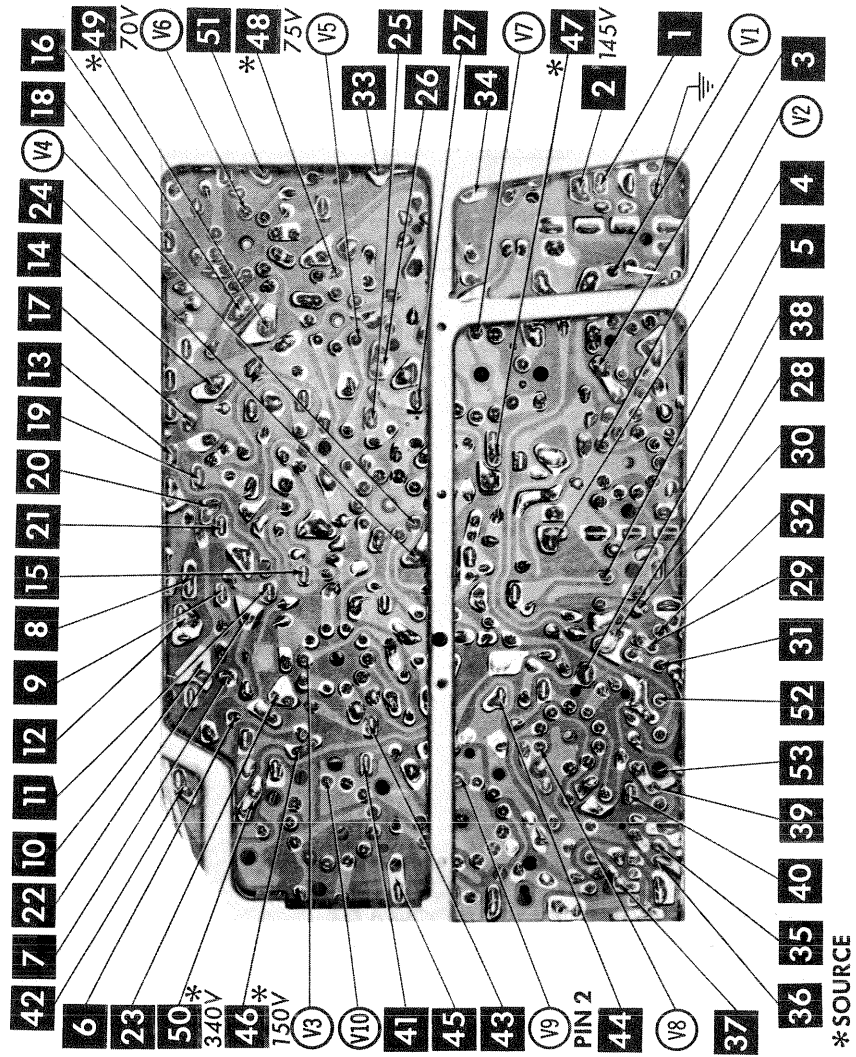
**LOSS OF PICTURE OR SOUND**  
No pic, no sound, has raster V1, V2, X2 (Video Det.), V3  
No pic, no sound, has snow V201, V202, V1  
No pic, has sound, has raster V3, V12  
Has pic, no sound V4, V5, V6  
Overloaded picture V6

**SYNC FAILURE**  
No vert. sync V4  
No horiz. sync V4  
No vert. or horiz. sync V4

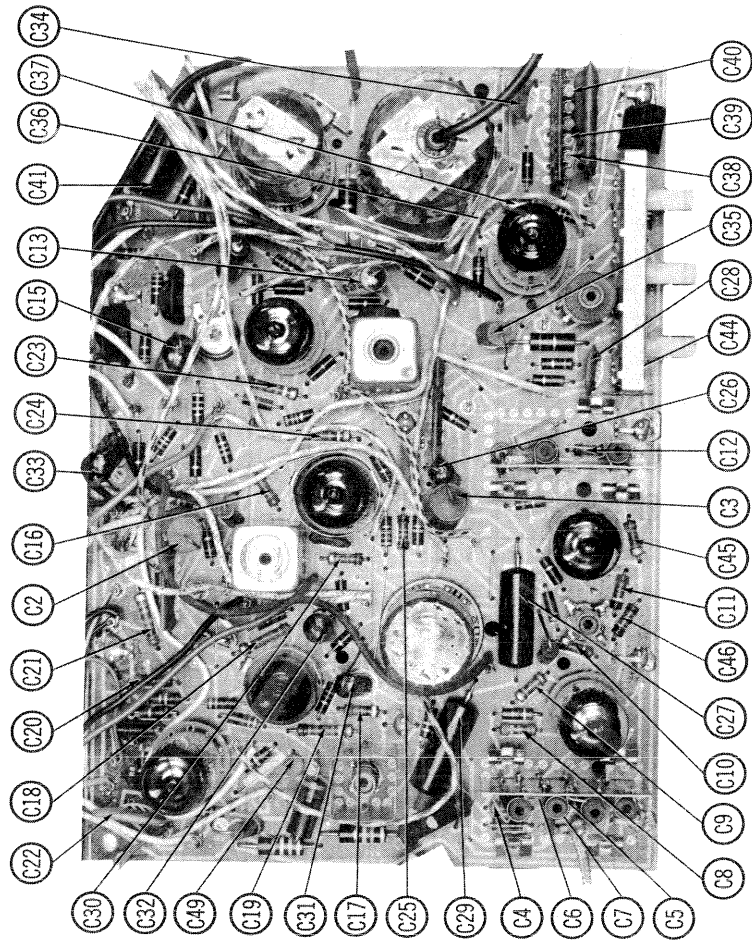
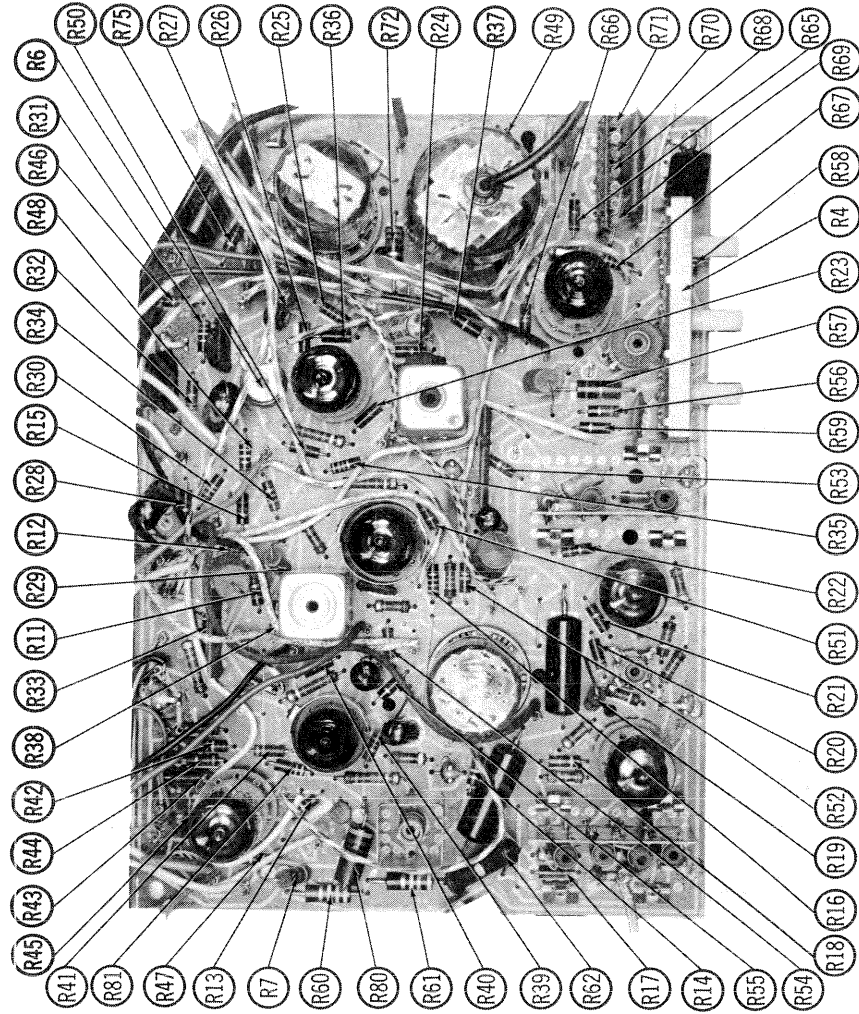
This receiver employs tubes used in a series filament network, an open filament in any tube will cause the set to be inoperative. (See circuit below.)



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

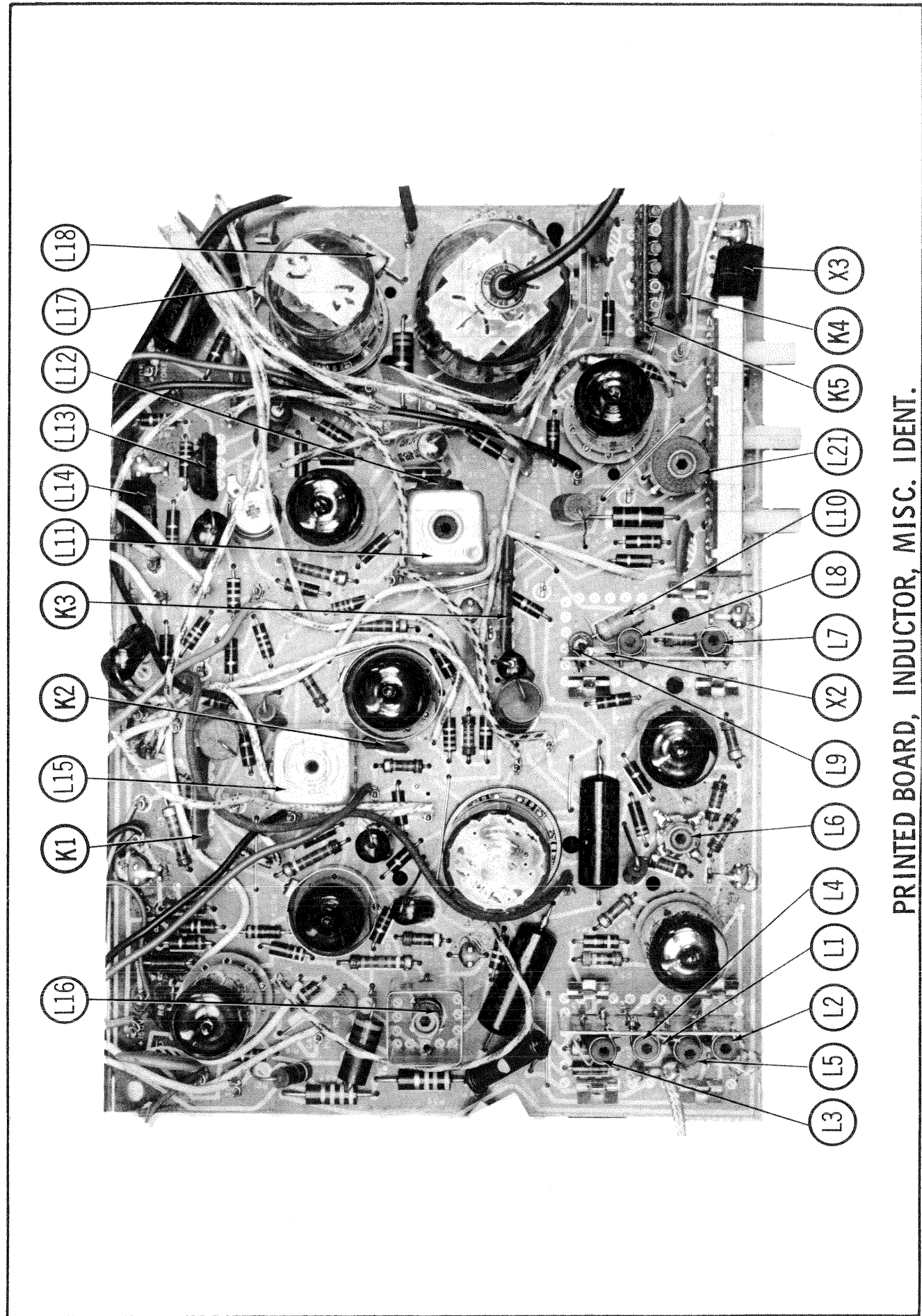


\* SOURCE



**PRINTED BOARD**  
PHILCO  
CHASSIS 15N30





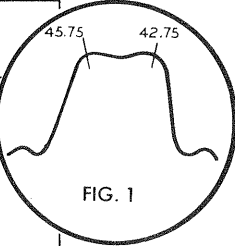
# ALIGNMENT INSTRUCTIONS

Use an isolation transformer and maintain voltage at 117 volts. Allow a 20-minute warm-up period for the receiver and test equipment.  
Suggested Alignment Tools: A1 thru A12, Mixer Plate Coil ... GENERAL CEMENT #8606, 8606L, 8869 ... WALSCO #2543, 2544, 2588

## VIDEO IF ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from those shown. Connect a variable bias supply to the IF AGC line (point  $\diamond$ ) and adjust to obtain a response curve which shows no indication of overload. Disable Oscillator section of Mixer-Osc. Set the Channel Selector to any non-interfering channel.

INDICATOR	GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	ADJUST	REMARKS
1. Connect DC probe of a VTVM thru a 47K resistor to point $\diamond$ . Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		41.25MC 47.25MC	A1 A2, A3	Adjust for MINIMUM.
2. Connect DC probe of a VTVM thru a 47K resistor to point $\diamond$ . Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		43.5MC 45.25MC 42.75MC	A6 A7 Mixer Plate Coil	Adjust for maximum.
3. Connect vertical input of a scope to point $\diamond$ . Low side to ground.	Connect high side to pin 2 (grid) of V2. Low side to ground.	44MC (10MC Sweep)	42.75MC 45.75MC	A4, A5	Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1.
4. Connect vertical input of a scope to point $\diamond$ . Low side to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.	44MC (10MC Sweep)	41.25MC 42.75MC 44.25MC 45.75MC 47.25MC	A6, A7, Mixer Plate Coil	Adjust for maximum gain and symmetry of response with markers as shown in Figure 2. In order to obtain a proper response, it may be necessary to slightly retouch A 4 and A 5.

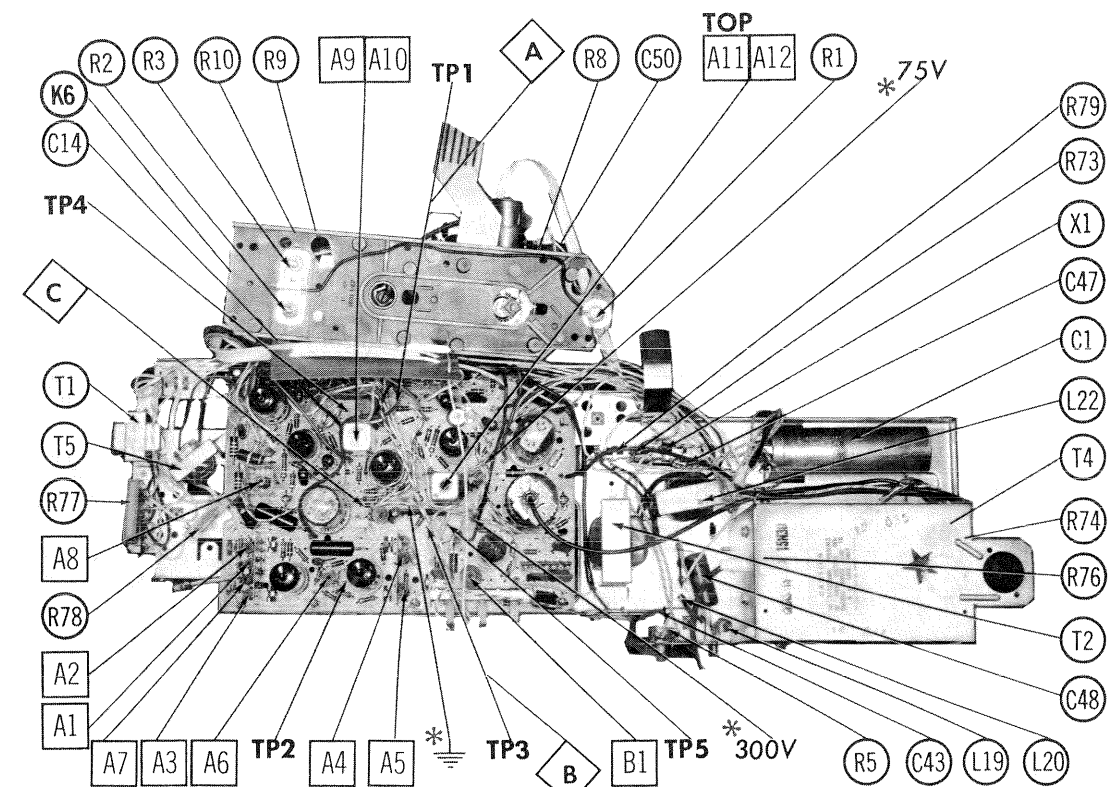
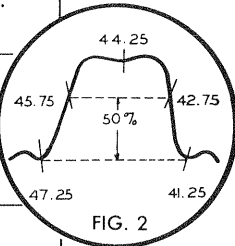


## 4.5 MC TRAP ALIGNMENT

Tune in a strong TV signal and set the Contrast at maximum. Adjust the Fine Tuning until a beat pattern is visible on the screen. Adjust A 12 for MINIMUM beat interference.

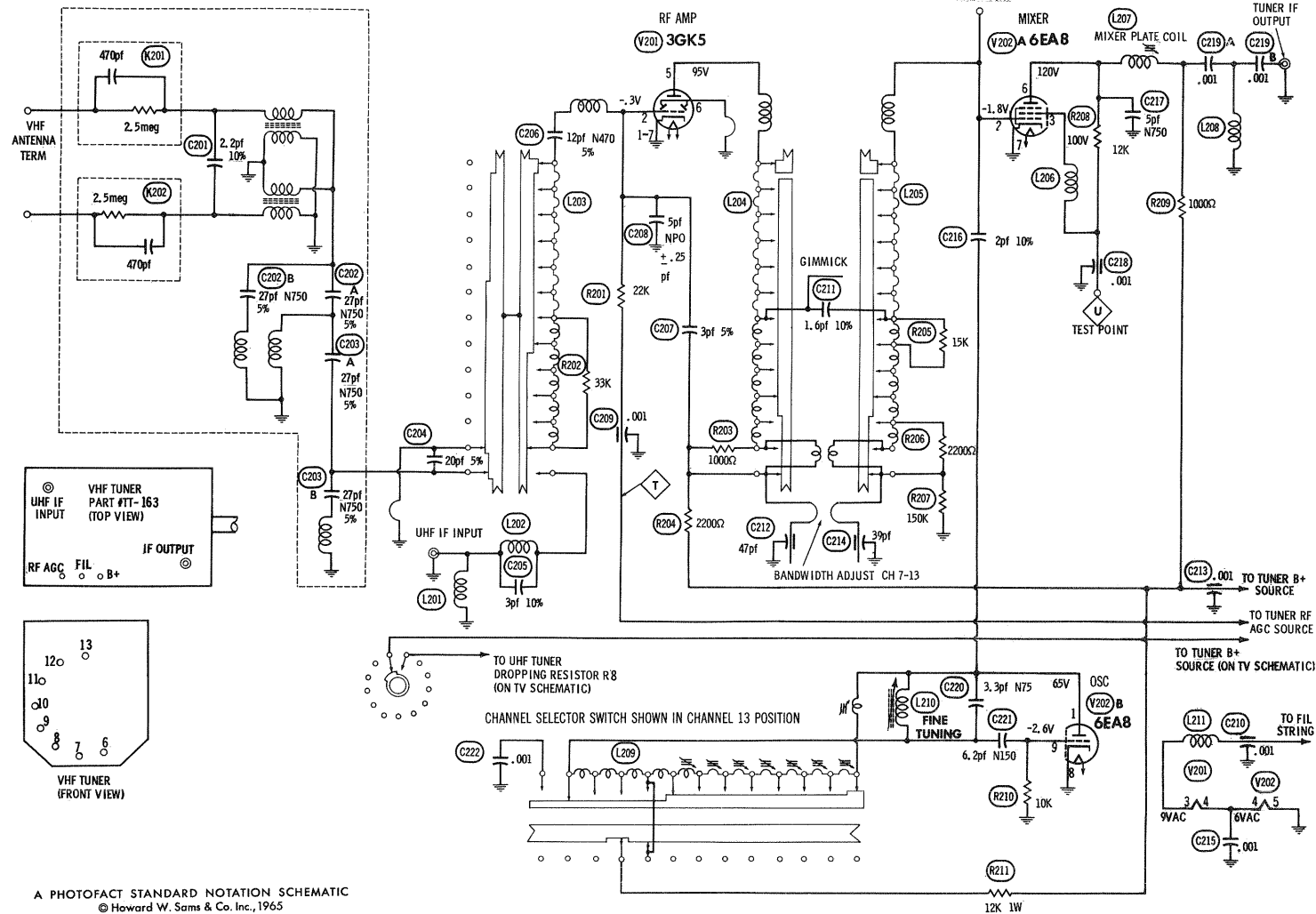
## SOUND IF ALIGNMENT

Tune in a station and adjust A 8 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce signal while aligning for undistorted output by adjusting A 9, A 10 and A 11.



\*FOCUS TAPS TP1 .2V IF AGC TP2 0V 2ND IF GRID TP3 -.3V DET OUTPUT  
TP4 0V SOUND IF TP5 75V SYNC

## CHASSIS—TOP VIEW



13 POSITION SWITCH-TYPE VHF TUNER TT-163

## VHF TUNER ALIGNMENT INSTRUCTIONS

### OSCILLATOR ADJUSTMENTS

Set the Fine Tuning to the center of its range. Starting with the highest available channel in area and working toward the lowest, adjust each oscillator adjustment, Channels 7 thru 13, for best picture and sound. Adjust Channel 6 oscillator adjustment for best picture and sound for Channels 2 thru 6.

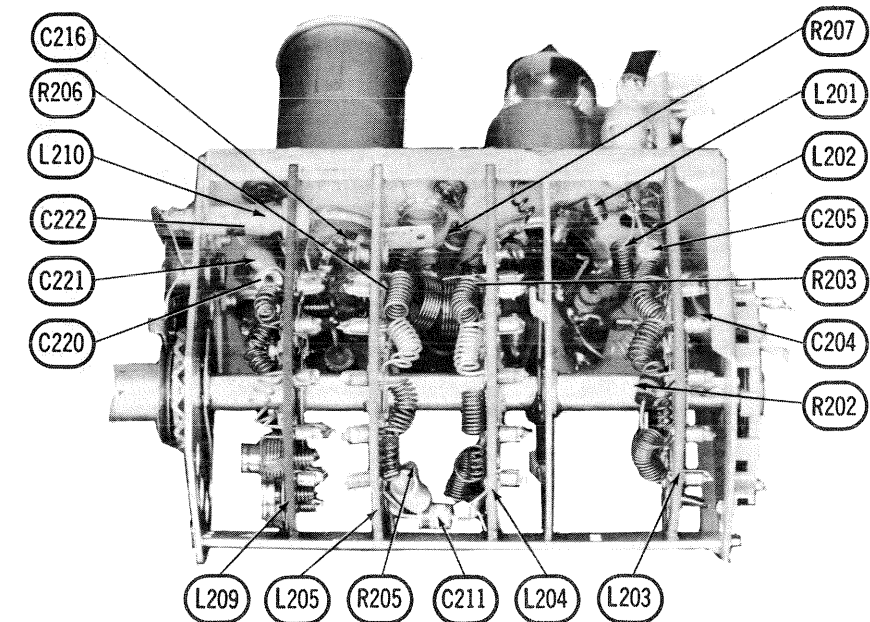
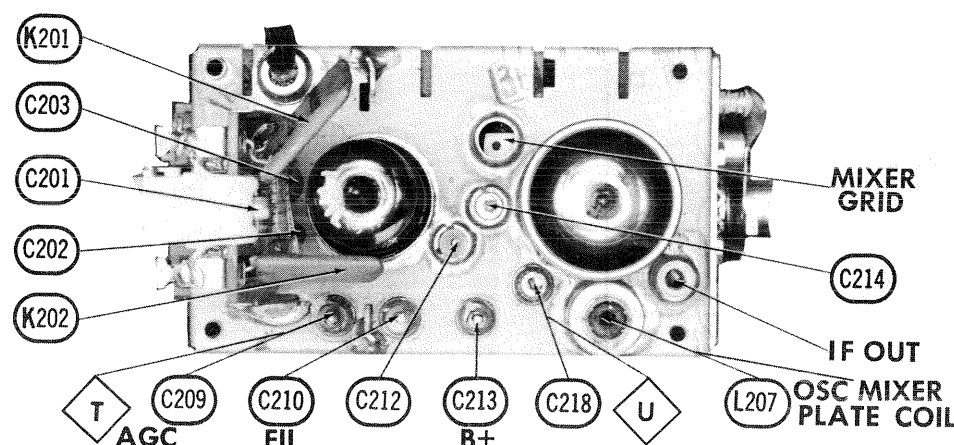
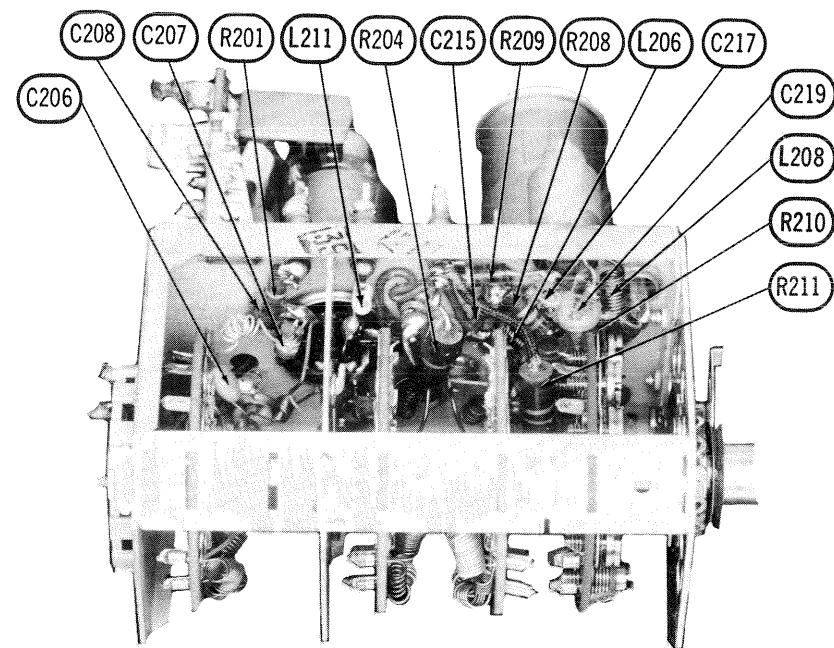
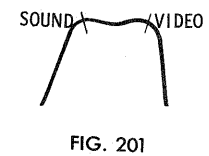
### RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use 10MC sweep unless otherwise noted. Connect a variable bias to the RF AGC line at point  $\nabla$ . Adjust bias to obtain response curve which shows no indication of overloading.

SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Across antenna terminals with 120 $\Omega$ in each lead.	213MC	211.25MC 215.75MC	13	Vert. Input to Point $\nabla$ , low side to ground.		Expand or compress appropriate coils for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
2. "	See Chart	See Chart	12 thru 2	Vert. Input to Point $\nabla$ , low side to ground.		Check all channels and make compromise adjustments by expanding or compressing appropriate coils if necessary.

### CHANNEL & FREQUENCY CHART

SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL
57MC	55.25MC 59.75MC	2	85MC	83.25MC 87.75MC	6	195MC	193.25MC 197.75MC	10
63MC	61.25MC 65.75MC	3	177MC	175.25MC 179.75MC	7	201MC	199.25MC 203.75MC	11
69MC	67.25MC 71.75MC	4	183MC	181.25MC 185.75MC	8	207MC	205.25MC 209.75MC	12
79MC	77.25MC 81.75MC	5	189MC	187.25MC 191.75MC	9	213MC	211.25MC 215.75MC	13



VHF TUNER PARTS LIST AND DESCRIPTION

TUBES

AMPEREX		GENERAL ELECTRIC		RCA		SYLVANIA	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE	
V201	RF Amp.	3GK5		V202	Mixer - Osc.	6EA8	

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	2.2	10%						
C202A	27 N750	5%		TCN-27			CN7427	10TCU-Q27
E	27 N750	5%		TCN-27			CN7427	10TCU-Q27
C203A	27 N750	5%		TCN-27			CN7427	10TCU-Q27
E	27 N750	5%		TCN-27			CN7427	10TCU-Q27
C204	3	5%		DTZ-20	C10Q2C		CNO420	10TCC-Q20
C205	3	10%						
C206	12 N470	5%				*		10TCT-Q12
C207	3	5%						
C208	5 NPO	±.25pf						10TCC-V50
C209	.001		EF-001	MFT-1000		CCF-102	CNO547	
C210	.001		EF-001	MFT-1000		CCF-102	CT280A	
C211	1.6	10%						
C212	47							
C213	.001		EF-001	MFT-1000		CCF-102	CT280A	
C214	39							
C215	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C216	2	10%						
C217	5 N750			DTN-5	C10V5U	CCTN-050	CN7550	10TCU-V50
C218	.001		EF-001	MFT-1000		CCF-102	CT280A	
C219A	.001				BYA10D1M	CCD-102	B2X210	5HK-2D10
B	.001		BPD2-2X001	DD3-102	BYA10D1M	CCD-102		
C220	3.3 N75							
C221	6.2 N150							
C222	.001		BPD-001	DD-102	BYA10D1	* CCD-102	B210	5HK-D10

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.  
# Philco Part Number

COILS (RF-IF)

ITEM No.	USE	PHILCO PART No.	NOTES	ITEM No.	USE	PHILCO PART No.	NOTES
L201	UHF Input	76-13602-34		L207	Mixer Plate	76-13602-37	
L202	Antenna	76-13602-36	Channel 1	L208	RF Choke		
L203	Ant. Wafer	76-13602-7	Chans. 2 thru 13	L209	Osc. Wafer	76-13602-10	
L204	RF Wafer	76-13602-9	" " " "	L210	Fine Tuning	76-13602-14	Chans. 2 thru 13
L205	Mixer Wafer	76-13602-8	" " " "	L211	Fil. Choke	76-13602-33	
L206	RF Choke	76-13602-27					

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	PHILCO PART NO.	REPLACEMENT DATA
K201	Antenna Isolation	2.5meg, 470mmf	30-6040-1	Centralab RC-471 Sprague AC1-1
K202	Antenna Isolation	2.5meg, 470mmf	30-6040-1	Centralab RC-471 Sprague AC1-1

UHF TUNER PARTS LIST AND DESCRIPTION

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X301	SE-1044	UHF Oscillator				NPN, Philco Part #76-13570-59

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X302		34-8027					1N82A

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C301	33 .001		DI-33	DD-330	LA10Q33-SL	CCD-330	GP433	10TS-Q33
C302	.001		EF-001	MFT-1000		CCF-102	CT280A	
C303	.5-3			829-3		CV-1	CT565	
C304	.001		EF-001	MFT-1000		CCF-102	CT280A	
C305	2.2 N220 1%	#76-13570-24				*		
C306		#76-13570-47						

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.  
# Philco Part Number

COILS (RF-IF)

ITEM No.	USE	PHILCO PART No.	NOTES	ITEM No.	USE	PHILCO PART No.	NOTES
L301	Antenna	76-12482-18		L303	IF Output	76-12762-47	
L302	Osc. Coupling	76-13570-63					

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

TUBES

AMPEREX		GENERAL ELECTRIC		RCA		SYLVANIA	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE	
V1	1st Video IF Amp.	4EH7		V7	Vert. Mult. - Vert. Output	17JZ8	
V2	2nd Video IF Amp.	4EJ7		V8	Horiz. Mult.	8FQ7	
V3	Video Output - Noise Inv.	10KR8		V9	Horiz. Output	21GY5	
V4	Sound IF Amp. - Sync Sep.	6GH8		V10	Damper	17BE3	
V5	Audio Detector	4CS6		V11	HV Rectifier	1G3GT (1K3) *	
V6	Audio Output - AGC Keying	10JY8					

\* Alternate

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	PHILCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V12	23DSP4A	23DSP4A ①			① Aluminized

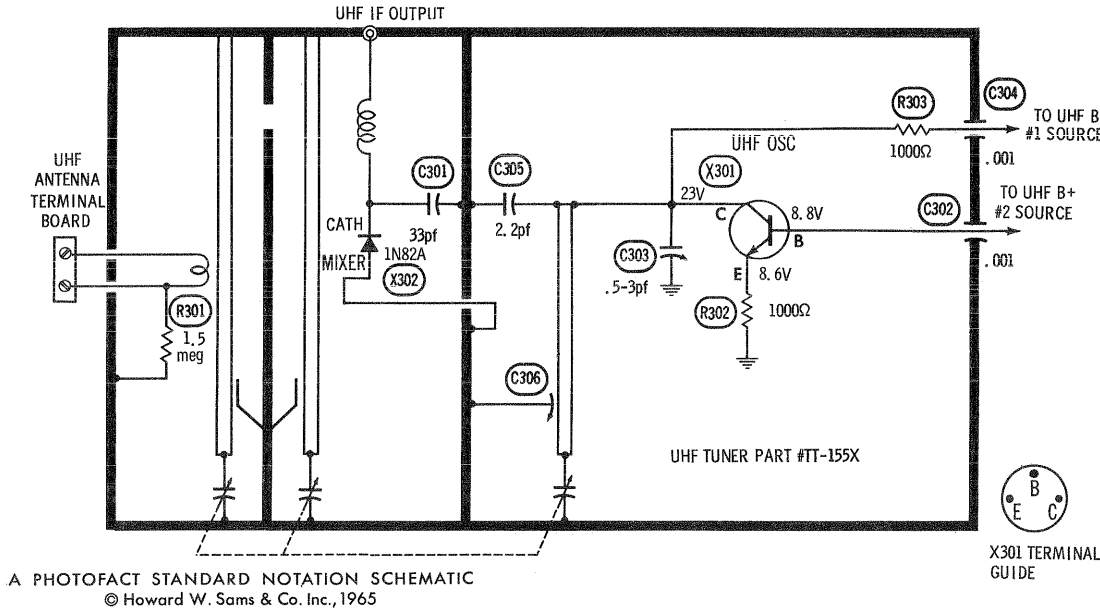
POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X1	.35A	34-8054-7	GE-504 or 1N1695	1N540 or 1N2070	1N1763 or 1N2862	40H or F-4	
X2		34-8022-6					1N60
X3		34-8037-1					6CG1

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	160	200	30-2601-33	AFHS4-01-66		XC3-20		FP412.13	TVL84479.4 *
B	240	200				QT1-27			
C	240	200							
D	5	200							

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.





PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C38	.0012 10%			CF-122	JB6D12	CCD-122	GP212	10TS-D12
C39	.220 10%			D6-221	LA10T22-S3	CCD-221	GP322	10TS-T22
C40	.0033		SI 3300	D6-332	LA10D33-C4	CCD-332	B233	5HK-D33
C41	.047 600V 10%	#30-1246-45	BE6847		PKM6847	6DP-3-473	PVC6147	6TM-S47
C42	27 5KV N1500 5%							
C43	.0033		BPD-0033	DD-332	BYA10D33	CCD-332	B233	5HK-D33
C44	.0015		SI 1500	D6-152	LA10D15-C4	CCD-152	B215	5HK-D15
C45	.0015		SI 1500	D6-152	LA10D15-C4	CCD-152	B215	5HK-D15
C46	.0033		SI 3300	D6-332	LA10D33-C4	CCD-332	B233	5HK-D33
C47	680		BPD-00068	DD-681	BYA10T68	CCD-681	B368	10TS-T68
C48	.15 600V		P688N-15		PM6P15	6DP-5-154	GEM6015	6TM-P15
C49	150 10%		DI-150	CCD-151	LA10T15-S3	CCD-151	GP315	10TS-T15
C50	.001		BPD-001	CI-102	BYA10D1	CCD-102	B210	5HK-D10

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.  
# Philco Part Number † Alternate Value

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			PHILCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume, Switch	1meg	33-5605-11 ①	F2-1meg, SFS212, KR-2 or (AB-70, AK-33, KR-2)	A47-1meg-Z RS-3/16, SWE-20	B13-137, SK9, 76-2 or (BU1, SL35, IS1250, US42) or (U53, DS37, US27) *	UA16A, SD3500, US42 or (RU16A, US42) or (U53, DS37, US27) *
R2A	Contrast	15K 10K Tap	33-5604-26 ②	F55-15K ④, R1-100K, FFS015, RFS107		■ QJ-1798	• UE4549
R3A	Brightness Horiz. Hold	100K	33-5604-27	F1-50K, R1-100K, FFS015, RFS107	P-50K-S, R-100K-S, CP-015, CSR-108	† QJ-1709	• UE4492
R4A	B Vert. Hold	40K	33-5595-9				
R5	Vert. Size (Height) B Vert. Linearity C Horiz. Hold (Centering) Width	500K 2meg 60K 3000Ω (2W)	33-5591-30	V-3000 or (WN-302)	U39-3000	110-3000 or (WPS3000) or (BU11, WF7, SS8) *	PFL3K or (VW3K) or (R3000L)
R6	Noise Adjust	1meg	33-5613-1				MTC16L4

① Some versions may use Part #33-5605-41. ③ Some versions may use Part #33-5604-38.  
② Some versions may use Part #33-5604-37. ④ Do not use 5K Tap.  
■ "CONCENTRIKIT" Equivalent: K-15 Kit with Base Elements and Shafts: B13-118X, P21-029 (Panel),  
"SNAPTROL" Equivalent: BU4, CF42T, CR8, SF5, SR41, DC1. B11-128, R26-112 (Rear).  
† "CONCENTRIKIT" Equivalent: K-15 Kit with Base Elements and Shafts: B11-123, P21-029 (Panel),  
"SNAPTROL" Equivalent: BU4, CF12, CR8, SF5, SR41, DC1. B11-128, R26-112 (Rear).  
♦ "STA-LOC" Equivalent: FA54L, RU15L, OS937A, IS1437. \* "SNAPTROL"  
• "STA-LOC" Equivalent: FA153T14, RU15L, OS937, IS1437

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R27 R62	6800Ω 3W V.D.R. †		3G-6800	#33-1363-46 #33-1373-6	R77 R78	20Ω 10W 1.45Ω Fusible	PW10-20	10W-SQ-20	#33-1363-120 #76-13605-2

† Voltage Dependent Resistor

# Philco Part Number

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		PHILCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (7 turns)	32-4652-96					
L2	47.25MC Trap	32-4652-78					
L3	47.25MC Trap	32-4652-78					
L4	41.25MC Trap	32-4652-80					
L5	1st Video IF	32-4652-79					
L6	2nd Video IF	32-4686-34					
L7	3rd Video IF	32-4652-78					
L8	Video Detector	32-4652-79					
L9	RF Choke (22uh)	32-4837-1	TV-192	72F225AP	RTC-8584	TA311	
L10	RF Choke (3uh)	32-4645-7	SW-630	74F336AP	RTC-8517	TB294	
L11	4.5MC Trap/ Sound Takeoff	32-4686-11					
L12	Peaking (330uh)	32-4762-20	TV-157 *	6270-PC *	RTC-9306 *	TA603 *	* Add 10pf capacitor externally.
L13	Peaking (330uh)	32-4762-20	BC-675	6132	RTC-8577	T349	
L14	Peaking (220uh)	32-4762-8	BC-673	6132	RTC-8577	T349	
L15	Sound Interstage	32-4745-8	TV-157	6270-PC	RTC-9306	T345	
L16	Quadrature	32-4876-1				TA603	
L17	RF Choke (9uh)	32-4112-62	BC-566	4611	RTC-8521	T860	
L18	RF Choke (9uh)	32-4112-62	BC-566	4611	RTC-8521	T860	
L19	Line Choke (100uh)	32-4857-1		5250			
L20	Line Choke (100uh)	32-4857-1		5250			

COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					
		PHILCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.
L21	Horiz. Stabilizer	32-4754-3	TV-250	6342			T183

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA						NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (Ø CURRENT 1000~)	PHILCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L22	.35ADC	15.9Ω	.35 Hy.	32-10010-4	C-4125	C-2343	26C79	C-34X	

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	PHILCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC ② .050A	6.3VAC ② .6A		32-10025-1					

\* TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		PHILCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2 T3	Vert. Output Yoke (Horiz. 26.8MH) 94 <sup>Ø</sup> (Vert. 37.5MH) Rear Cover and Centering Device Clamp	32-10012-2 76-13222-1	MDF-108 & M-238 ①②③	DY-36A ①②	Y-60 ①②	Y-45,NW-24, YC-112 ①	① Add 27pf ② 5KV cap. from yoke terminal #1 to pin #3 AGC Keying tube. ② Use original vertical damping network if necessary. ③ Remove 82pf cap. if necessary.
T4	Horiz. Output	76-12555-1 28-14029-1 32-10014-2 (32-10014-1)					

\* COMPONENT CONNECTION DATA

ORIGINAL → REPLACEMENT ↓	HV TRANSFORMER				VERTICAL OUTPUT				YOKE								YOKE PLUG							
	Original Connections				Original Connections				Original Connections								1 2 3 4 5 6 7 8							
MERIT																	1	2	3	4	5	6	7	8
STANCOR																	1	2	3	4	5	6	7	8
THORDARSON																	1	2	3	4	5	6	7	8
TRIAD																	1	2	3	4	5	6	7	8

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	PHILCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T5	3800Ω	3-4Ω	32-10013-3	A-2998	A-3328	22S32	S-16X ①	① Cut and tape Tap.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		PHILCO PART No.	QUAM PART No.	
SP1	3" x 5" PM 3-4Ω	36-1706-2 ①		① Used in Models UN9520MA/MB/WA. ② Used in Models UN4942MA/WA. ③ Used in Models UN4938MB, UN4940MA/WA. ④ Used in Models UN4720MB. ⑤ Used in Models UN4722MA/WA, UN9526WA. ⑥ Used in Models UN9306BK, UN9310MB/WA, UN9312MA/MB/WA, UN9516WA, UN9526WA. ⑦ Used in Models UN9518MA/MB/WA, UN9522BL/CH/MA/WA.
	4" PM	36-1673-34 ②		
	4" PM	36-1673-34 ②		
	5" PM	36-1669-27 ②⑦		
	6" x 9" PM	36-4712-1 ②①		
	3" x 5" PM 3-4Ω	36-1689-11 ①③⑤ 35A05		
	5" PM	36-1669-15 ⑤		
	6" PM	36-1695-2 ③		
	4" x 6" PM	36-1693-4 ④		

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	PHILCO PART NO.	REPLACEMENT DATA
K1 K2 K3	Retrace Supp. Sound IF Cathode Network Vertical Integrator	39K, 47K, 330pf, .02mfd 470Ω, .0082mfd 8200Ω, 10K, 90K, 150pf, .004mfd, .005mfd	30-8024-8 30-8031-22 30-6030-12	
K4	Horiz. AFC Network	82K, 150K, 680K, 1.2meg, 82pf, 200pf, .001mfd, .047mfd	30-6035-2	Aerovox PA-766 Centralab PC-409 Sprague C-11
K5	Horiz. Oscillator Network	1500Ω, 10K, 33K, 330K, 220pf, .0012mfd, .0033mfd	30-6551-3	
K6	Chassis Isolation	1.75-3.25meg, .0015mfd	30-6040-2	Aerovox PA-734 Centralab PC-377 Sprague PRC-19

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M1	VHF Tuner	76-13579-2 (TT-163)	
M2	UHF Tuner	76-13588-6 (TT-155X)	
M3	UHF Antenna	76-13797-1	
M4	UHF Antenna	40-2681-5	
	Printed Circuit Board	27-10657-5	Used in Models UN4942WA/MA. Used in Models UN9312WA/MB/MA.
	Printed Circuit Board	27-10661-6	Main Circuit Board
	Printed Circuit Board	27-10561-4	IF Trap IF Detector

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART NO.	MODELS									
		UN4720MA	UN4720MB	UN4722MA	UN4722MA	UN9306BK	UN9310MB	UN9310WA	UN9312MA	UN9312MB	UN9312WA
Mask and Instrument Panel	27-10979-4	X	X	X	X						
Mask and Instrument Panel	27-10979-1					X					X
Mask and Instrument Panel	27-10979-2						X	X	X	X	X
Knob-VHF/UHF Chan. Sel.	424-8707	X	X	X	X		X	X	X	X	X
Knob-VHF/UHF "	28-14781-4					X					X
Knob-VHF Fine Tuning	27-10984-3	X	X	X	X		X	X	X	X	X
Knob-VHF "	27-10984-1					X					X
Knob-UHF Fine Tuning	27-10984-4	X	X	X	X		X	X	X	X	X
Knob-UHF "	27-10984-2					X					X
Knob- Brightness, Vert. Hold	424-8357	X	X	X	X	X	X	X	X	X	X
Knob-Contrast, Horiz. Hold	27-10983-1	X	X	X	X	X	X	X	X	X	X

PHILCO  
CHASSIS 15N30

ITEM	PART No.	UN9518MB	UN9518WA	UN9520MA	UN9520MB	UN9520MA	UN9522BL	UN9522CH	UN9522MA	UN9522MA	UN9524MB	UN9524WA	UN9526WA
Mask and Instrument Panel	27-10979-4												
Mask and Instrument Panel	27-10979-1	X	X	X	X	X							
Mask and Instrument Panel	27-10979-2						X	X	X	X	X	X	X
Knob-VHF/UHF Ch. Sel.	424-8707						X	X	X	X	X	X	X
Knob-VHF/UHF Ch. Sel.	28-14781-4	X	X	X	X	X							
Knob-VHF Fine Tuning	27-10984-3						X	X	X	X	X	X	X
Knob-VHF Fine Tuning	27-10984-1	X	X	X	X	X							
Knob-UHF Fine Tuning	27-10984-4						X	X	X	X	X	X	X
Knob-UHF Fine Tuning	27-10984-2	X	X	X	X	X	X						
Off/On/Volume, Knob-Brightness, Vert. Hold	424-8357	X	X	X	X	X	X	X	X	X	X	X	X
Knob-Contrast, Horiz. Hold	27-10983-1	X	X	X	X	X	X	X	X	X	X	X	X