

CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a station signal. Allow the receiver to warm up. Connect a clip lead across the Horizontal Stabilizing coil (L20).

Set the Horizontal Frequency control (R7) until the picture appears to float back and forth across the screen.

Remove the clip lead from across L20 and adjust the Horizontal Frequency slug (B1) until the picture synchronizes horizontally.

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL MODEL H3412L

1. Remove 4 push-on type knobs from front of cabinet.
2. Remove 8 metal screws holding rear cover. Remove the rear cover.
3. Remove tuner connections, yoke plug, speaker leads, AC interlock from clock, picture tube socket connecting plug, video lead, and HV lead. (CAUTION: HV lead must be unplugged from 1G3 socket by opening 1G3 access door.)
4. Remove 2 metal screws holding rear control mounting bracket.
5. Remove 2 metal screws holding rear cabinet brace.
6. Remove 2 nuts holding front control bracket.
7. Remove 2 metal screws holding rear cover interlock.
8. Remove 4 chassis bolts from bottom of cabinet.
9. Remove chassis.

10. Remove 3 metal screws on bottom of cabinet holding the tuner. Remove tuner.

PICTURE TUBE HOUSING DISASSEMBLY

1. Remove 2 metal screws holding trim at bottom of picture tube.
2. Remove spring holding trim strip around picture tube.
3. Remove 2 screws holding metal shell strap. Remove strap and front glass.
4. Remove 2 brass plugs, one on either side of shell. Remove 2 metal screws now exposed.
5. Remove 2 screws at bottom of picture tube holding rear shell. Remove rear shell.
6. Remove yoke and picture tube socket.
7. Loosen picture tube mounting strap bolts.
8. Remove picture tube.

SET 466 FOLDER 1

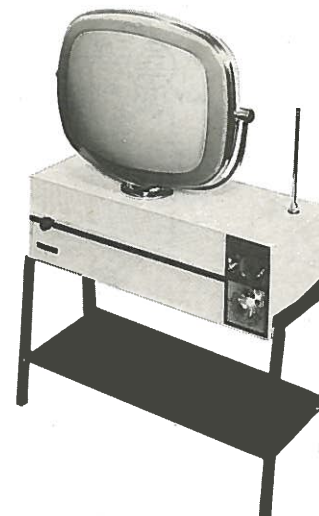
PHOTOFACT* Folder



with CIRCUITRACE



PHILCO CHASSIS 10L41, U, 10L42, U, 10L43, U



MODEL H3412L (Ch. 10L43)

TRADE NAME	Philco	MODELS	CHASSIS
		H4254S, SL, H4674, L, W, H4676S, SL, H4678, W, H4680, L, W, H4682S, SL, SW, H4690, P, H4692W, H4696S, SW	10L41
		H4676 SLR, SR, H4680LR, R, WR, H4690PR, R, H4692WR, H4698PR, R	10L42
		H3408C, H3410, L, V, H3412GL, L, H4432, L, H4730, W	10L43
		UH4254S, SL, UH4674, L, W, UH4676S, SL, UH4678, W, UH4680, L, W, UH4682S, SL, SW, UH4690, P, UH4692W, UH4696S, SW	10L41U
		UH4690PR, R, UH4698PR, R	10L42U
		UH3408C, UH3410, L, V, UH3412GL, L, UH4432, L, UH4730, W	10L43U
MANUFACTURER	Philco Corp., Tioga & "C" Streets, Philadelphia, Pa.		
TYPE SET	Television Receiver		
TUBES	VHF-Sixteen, UHF-Seventeen		
POWER SUPPLY	105-120 Volts AC, 60 Cycle		
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)		

SERVICING IN THE FIELD

SAFETY GLASS REMOVAL

Remove 2 screws at bottom of picture tube holding trim. Remove spring holding trim strip around picture tube. Remove 2 screws holding metal shell strap. Remove strap and front glass.

FUSE

A fuse wire is used for filament protection. (For location, see M4 in photo "Chassis Top View".)

FUSE DEVICE

A 5.6Ω fusible resistor is used for low voltage power supply protection. (For location, see "Tube Placement Chart".)

TUNER OSCILLATOR ADJUSTMENTS

To touch-up the VHF Oscillator, remove Channel Selector and Fine Tuning knobs.

AGC

The AGC may be varied by means of a Range Switch. (For

location, see "Tube Placement Chart".)

FOCUS

The focus may be varied by connecting the lead from pin 4 of the picture tube to various voltage points. (For location, see photo "Chassis-Top View".)

HORIZONTAL OSCILLATOR FIELD ADJUSTMENTS

Coarse adjustment of the Horizontal Hold is accomplished by the proper setting of the Horizontal Frequency control. (For location, see "Tube Placement Chart".)

WIDTH

The width may be varied by adjusting a metallic sleeve, located between the yoke and the picture tube neck, in or out of the yoke.

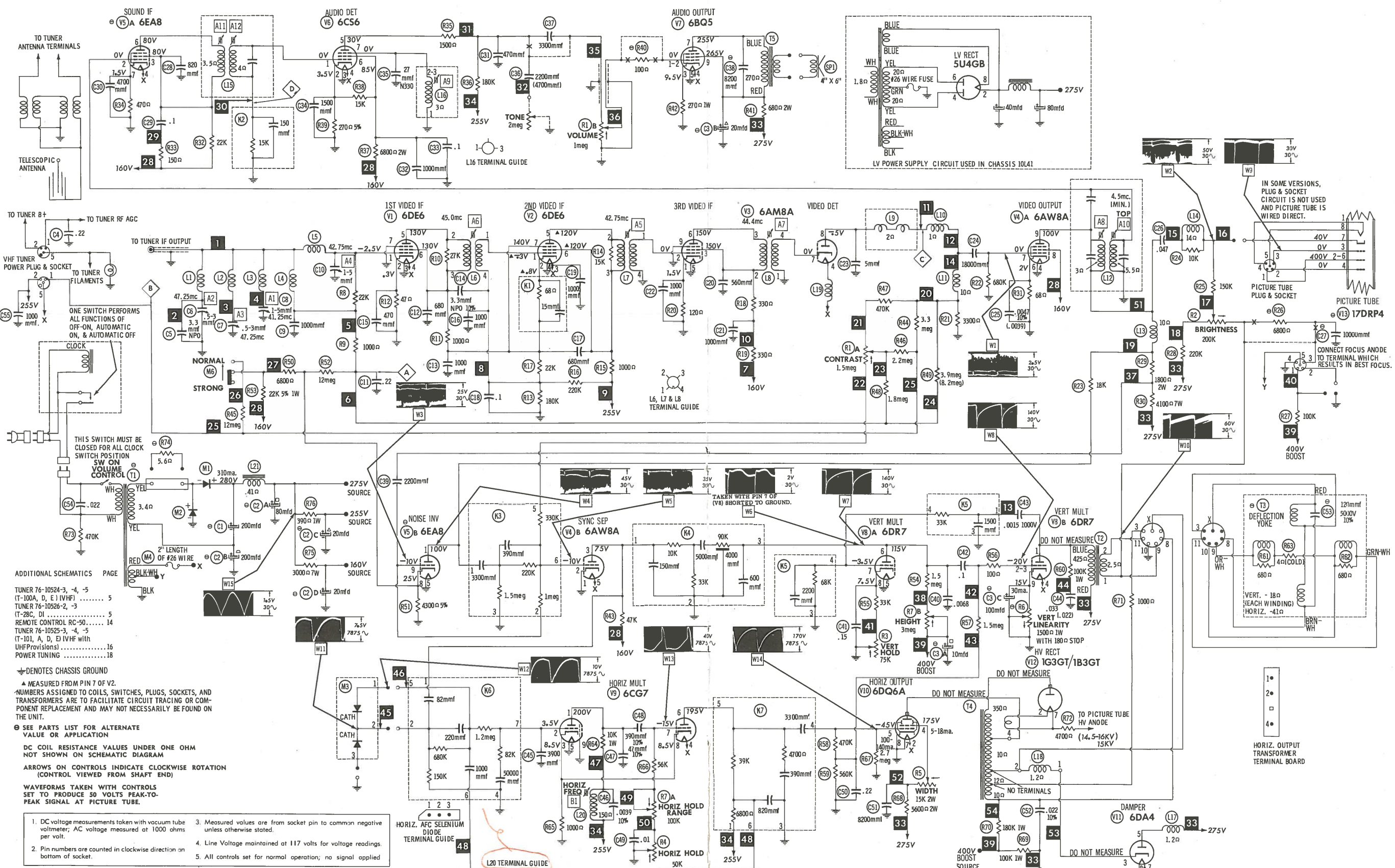
CENTERING

Centering is accomplished by 2 magnetic rings, located behind the yoke, on the neck of the picture tube.

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

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- ADDITIONAL SCHEMATICS PAGE
- TUNER 76-10524-3, -4, -5 (T-100A, D, E) (VHF) 5
 - TUNER 76-10526-2, -3 (T-28C, D) 5
 - REMOTE CONTROL RC-50 14
 - TUNER 76-10525-3, -4, -5 (T-101, A, D, E) (VHF with UHF Provisions) 16
 - POWER TUNING 18

⚡ DENOTES CHASSIS GROUND

▲ MEASURED FROM PIN 7 OF V2.

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.
2. Pin numbers are counted in 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. All controls set for normal operation; no signal applied

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with CIRCUITRACE

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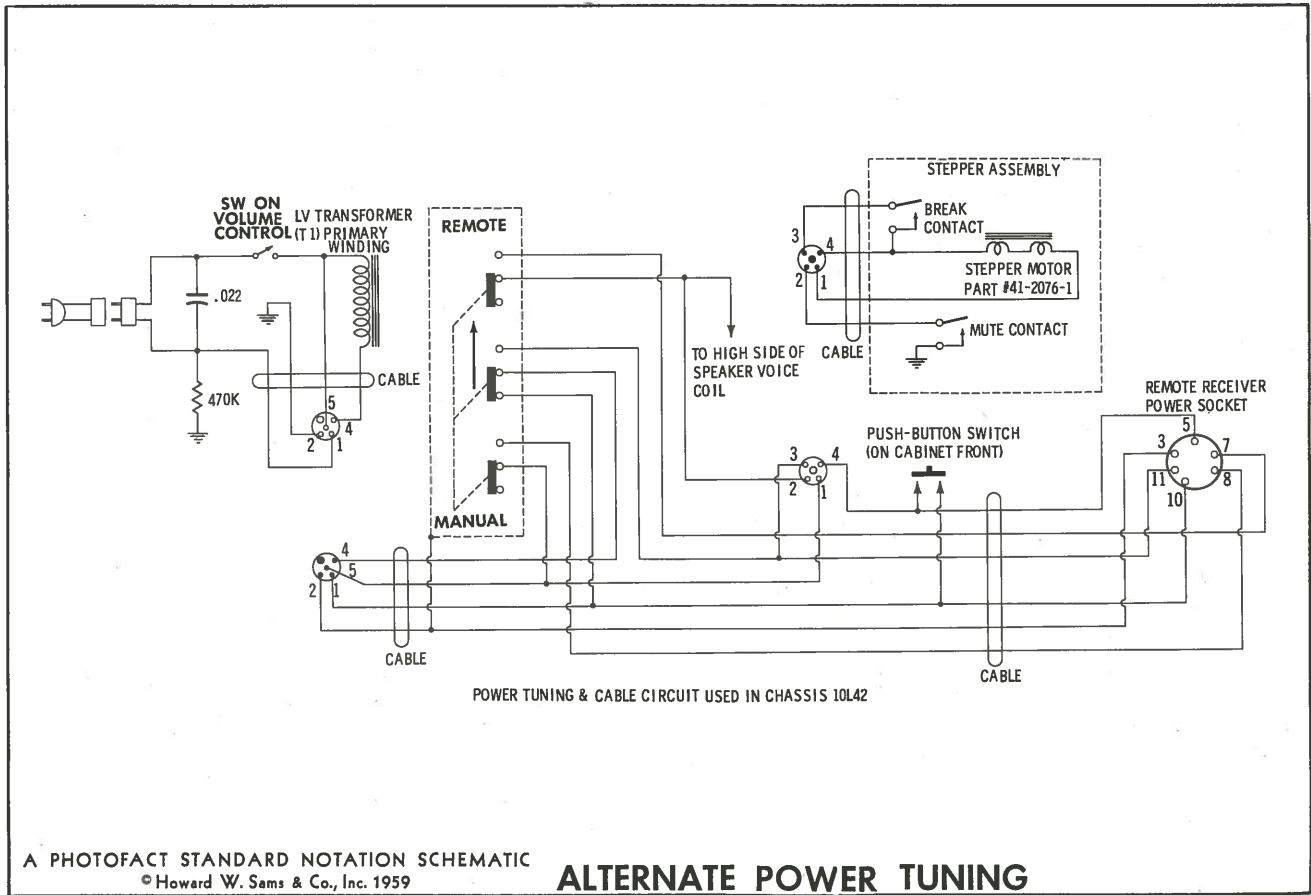
PHILCO CHASSIS 10L41, U, 10L42, U, 10L43, U

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6DE6	1.5meg	47Ω	0Ω	.1Ω	▲1000Ω	▲1000Ω	0Ω		
V2	6DE6	180K	▲68Ω	.1Ω	0Ω	†1400Ω	†1400Ω	200K		
V3	6AM8A	120Ω	.2Ω	†3600Ω	.1Ω	0Ω	†3600Ω	.2Ω	3300Ω	0Ω
V4	6AW8A	0Ω	1.1meg	†30K	0Ω	.1Ω	68Ω	680K	†3000Ω	†5900Ω
V5	6EA8	†24K	5.5Ω	†25K	.1Ω	0Ω	†25K	470Ω	4300Ω	2.1meg
V6	6CS6	15K	270Ω	0Ω	.1Ω	†180K	†10K	3Ω		
V7	6BQ5	100Ω	100Ω	270Ω	.1Ω	0Ω	NC	†950Ω	NC	†680Ω
V8	6DR7	†425Ω	2.1meg	2.1meg	.1Ω	0Ω	●†3.5meg	68K	●50K	●450Ω
V9	6CG7	†10K	1.9meg	1000Ω	.1Ω	0Ω	†45K	●100K	1000Ω	0Ω
V10	6DQ6A	NC	.1Ω	TP	†11K	700K	TP	0Ω	0Ω	TOP CAP †13Ω
V11	6DA4	NC	NC	†350K	NC	†1.2Ω	NC	.1Ω	0Ω	
V12	1G3GT 1B3GT	PINS 1 THRU 8 HAVE INFINITE RESISTANCE TOP CAP †360Ω								
V13	17DRP4	0Ω	NC	450K	0Ω	NC	†280K	200K	.1Ω	
V201	6BC8	†1800Ω	270K	INF	.1Ω	0Ω	INF	1.4meg	0Ω	0Ω
V202	6X8	0Ω	10K	†68K	0Ω	.1Ω	0Ω	220K	†62K	†47K

† THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
▲ MEASURED FROM PIN 7 OF V2.
† MEASURED FROM 275V SOURCE.
† MEASURED FROM PIN 3 OF V11.

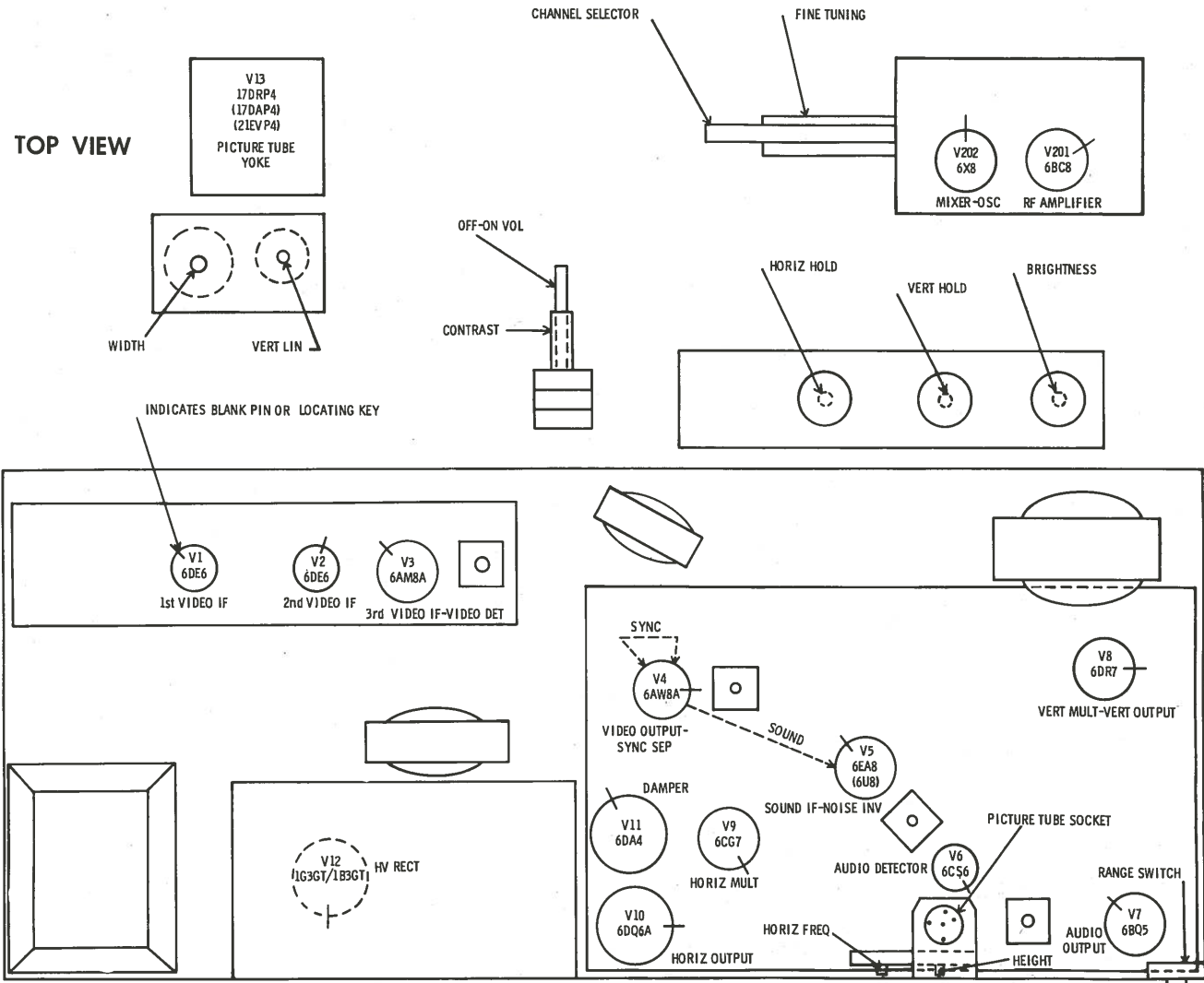
NC NO CONNECTION.
TP TIE POINT.



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ALTERNATE POWER TUNING

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 Fusible Resistor, Rect. (B+)

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

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster V1, V2, V3
No pic, no sound, has snow V201, V202, V1
No pic, has sound, has raster V4, V13
Has pic, no sound V5, V6, V7

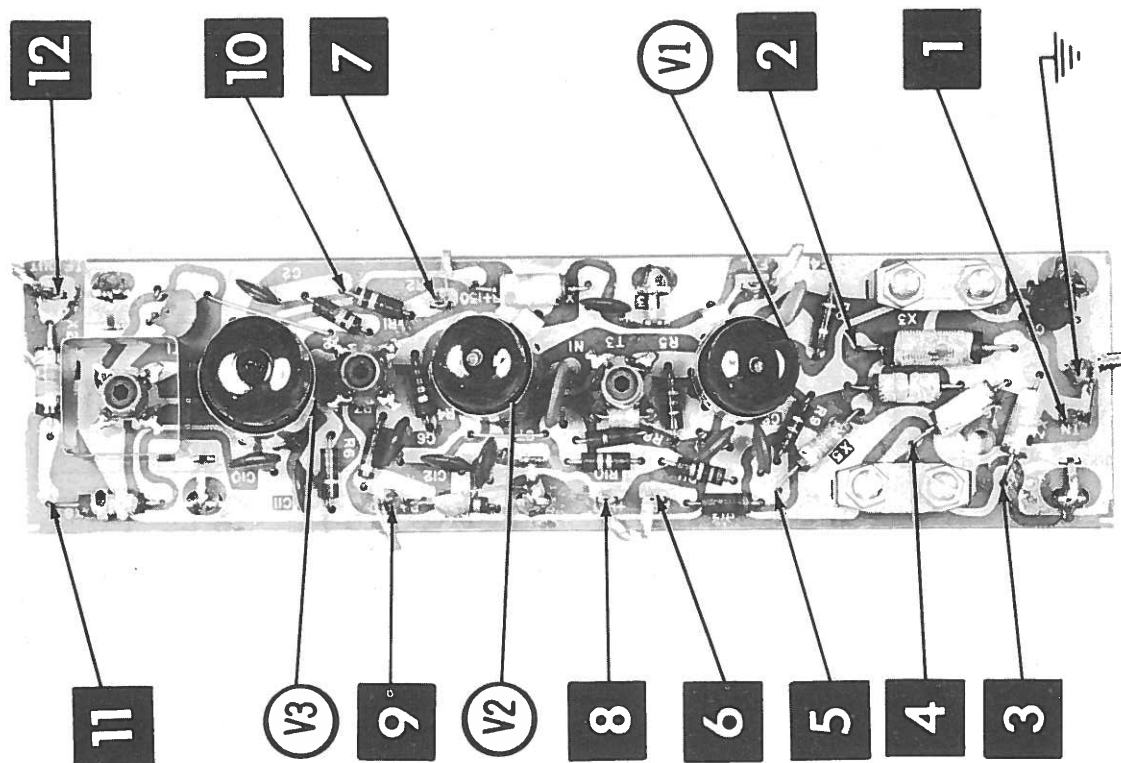
SYNC FAILURE
No vert. sync V4
No horiz. sync V4, Diode (Horiz. AFC)
No vert. or horiz. sync V4

SET 466 FOLDER 1

PHILCO CHASSIS 10L41,
U, 10L42, U, 10L43, U

FOLDER 1

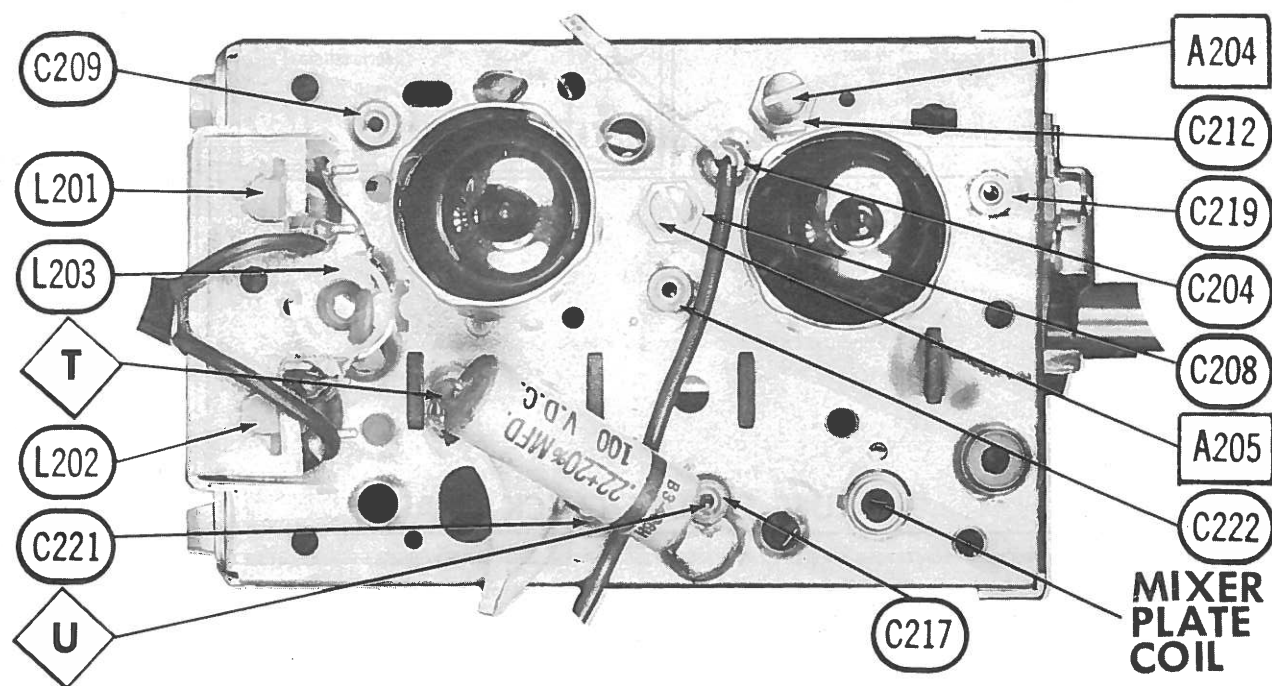
CircuiTrace Numbers 1 thru 12



VIDEO IF PRINTED BOARD

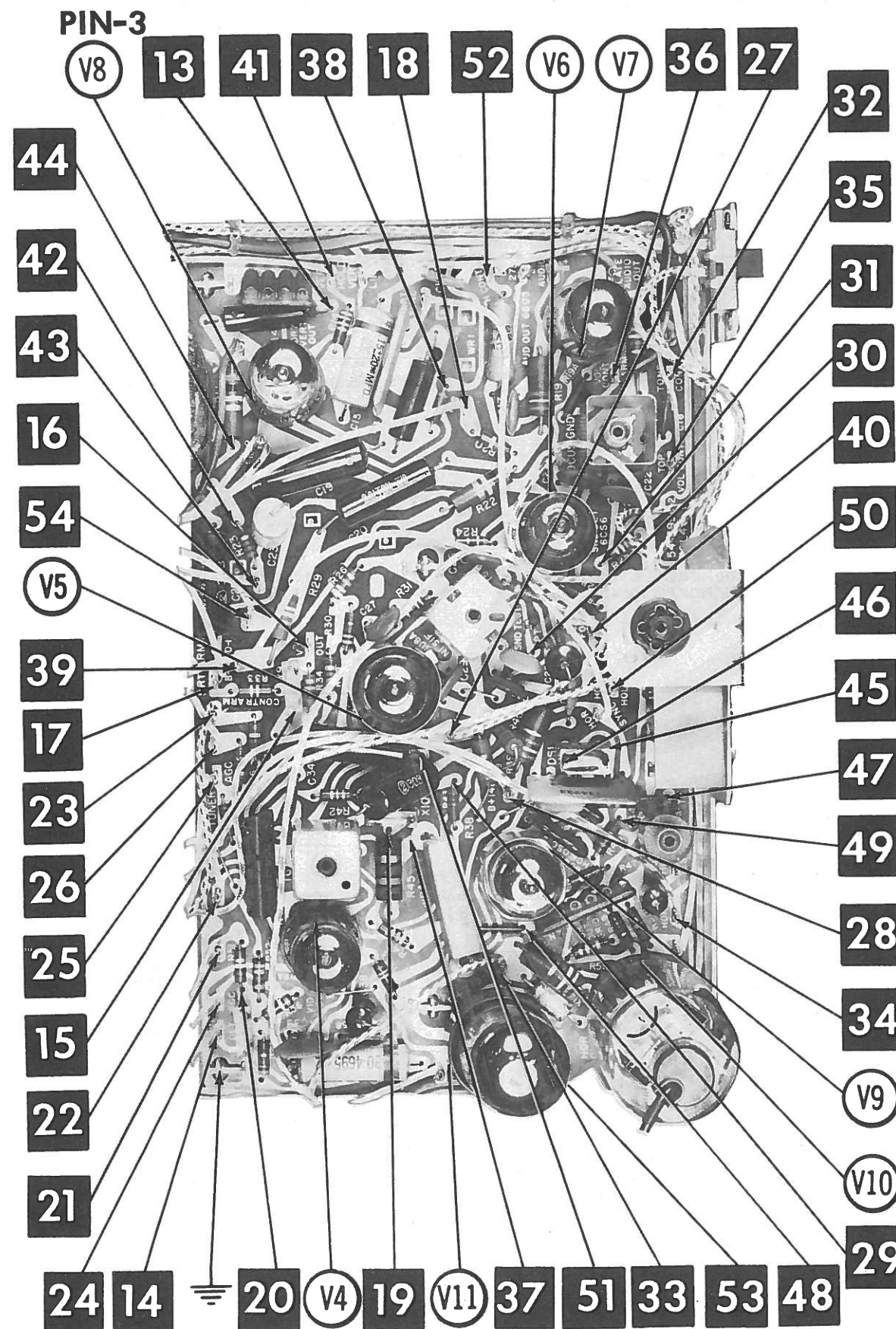
ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

A Howard W. Sams CIRCUITRACE[®] Photo



TUNER 76-10524-3 (T-100A) - TOP VIEW

CircuiTrace Numbers 13 thru 54



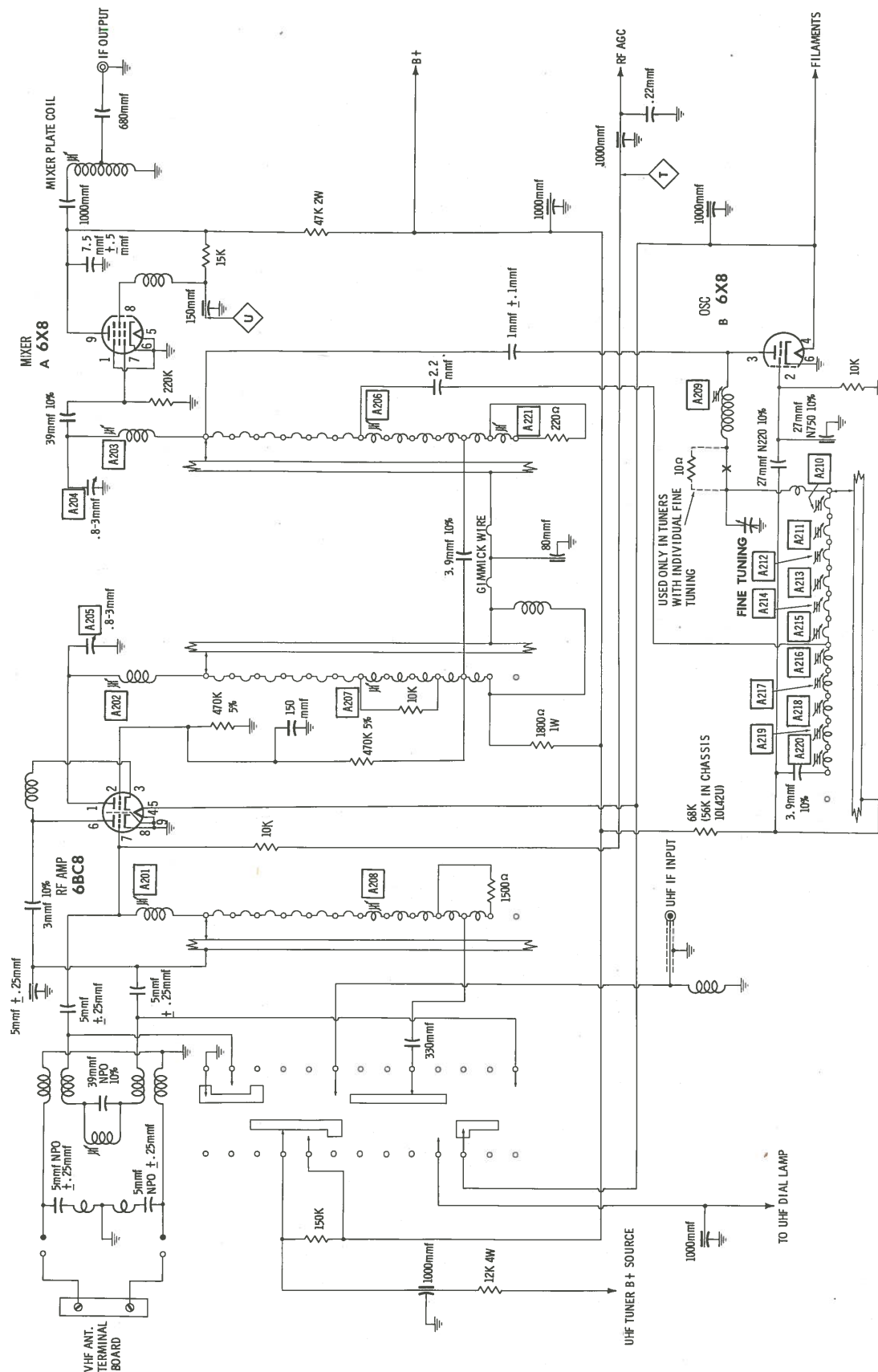
A Howard W. Sams CIRCUITRACE[®] Photo

MAIN PRINTED BOARD

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

PHILCO CHASSIS 10L41, U,
10L42, U, 10L43, U

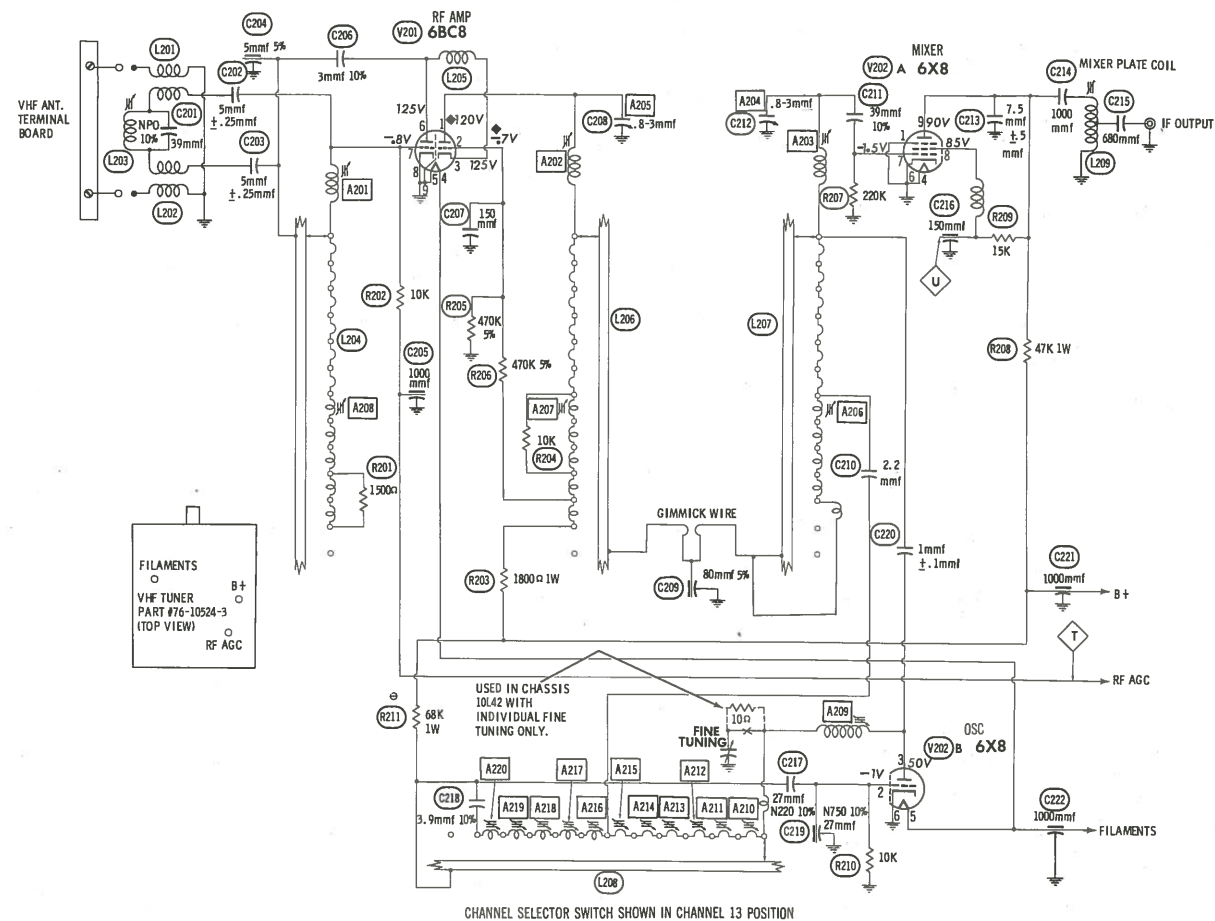
FOLDER 1



CHANNEL SELECTOR SWITCH SHOWN IN CHANNEL 13 POSITION

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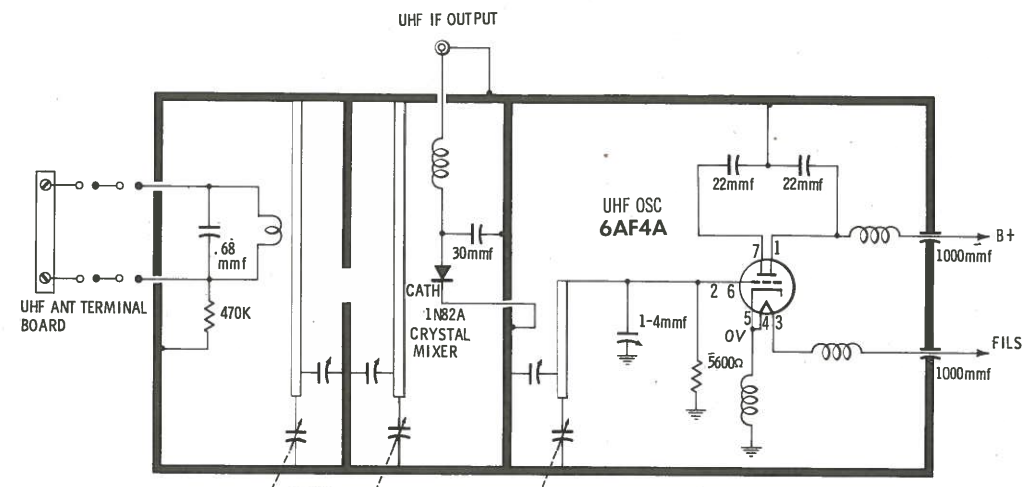
VHF TUNER with UHF Provisions 76-10525-3, -4, -5 (T-101A, D, E)



◇ measured from cath. (pin 3) of V201

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VHF TUNER 76-10524-3, -4, -5 (T-100A, D, E)



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UHF TUNER 76-10526-2, -3 (T-28C, D)

TUNER ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS FOR TUNER T100, T101

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.
Suggested alignment tools: A201, A202, A203, A206, A207, A208, A221...General Cement #5009, 8195, 8274, 8275, 8728, 8987
Walsco #2531
A204, A205 General Cement #5000, 5003, 5009, 8290
Walsco #2520, 2523, 2525, 2537
A209 thru A220 General Cement #8729, 8988, 8989, 9294
Walsco #2532, 2538
Mixer Plate Coil General Cement #8606, 8606L, 8282, 9295
Walsco #2526, 2543, 2544, 2545

VHF RF AND MIXER ALIGNMENT

Set Range switch to "Normal".
Connect the negative lead of a 1.5 volt bias supply to point \diamond . Positive to chassis.
Detune the Mixer Plate coil by connecting a 10 to 20mmf capacitor across it.
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.
Use 10MC sweep unless otherwise noted.
Coils not containing adjustable cores are adjusted by expanding or compressing coil turns.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Two 120 Ω Carbon Resistors	Across VHF antenna terminals with 120 Ω in each lead.	213MC	210MC	13	Vert. Amp. thru 10K to point \diamond . Low side to chassis.	A201	Adjust for maximum amplitude.
2. "	"	"	211.25MC	"	"	A202, A203	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown. Adjust A202 to set marker level, A203 for proper tilt.
3. "	"	177MC	174.0MC 180.0MC	7	"	A204, A205	Adjust for tilt as shown in Fig. 202. Recheck step 2 and retouch, if necessary. Repeat step 3.
4. "	"	85MC	82.0MC 85.0MC 88.0MC	6	"	A206, A207, A208	Turn A206 counterclockwise until a single peak appears. Adjust A207 until peak falls at 85MC. Adjust A208 for maximum gain and symmetry of single peak. Retouch A206 and A207 for symmetrical response centered about 85MC.

VHF OSCILLATOR ALIGNMENT

Set the Fine Tuning to the center of its range.
This procedure uses the traps of the Video IF strip. Make certain Video IF Alignment is correct.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
5. Two 120 Ω Carbon Resistors	Across VHF antenna terminals with 120 Ω in each lead.	209.75MC (400 \pm 30% AM Mod)	13	Across Video Detector load	A209	Adjust for MINIMUM scope indication.
		203.75MC	12		A210	
		197.75MC	11		A211	
		191.75MC	10		A212	
		185.75MC	9		A213	
		179.75MC	8		A214	
		173.75MC	7		A215	
		81.75MC	6		A216	
		75.75MC	5		A217	
		65.75MC	4		A218	
		59.75MC	3		A219	
		53.75MC	2		A220	

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.

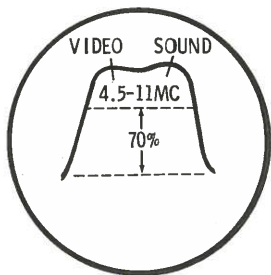


FIG.201

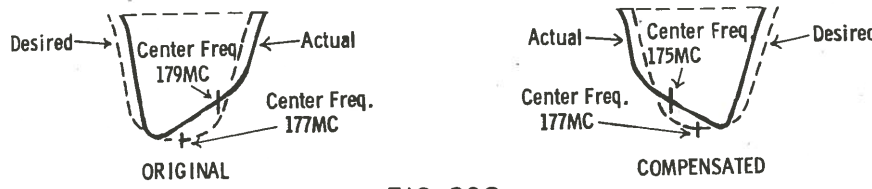
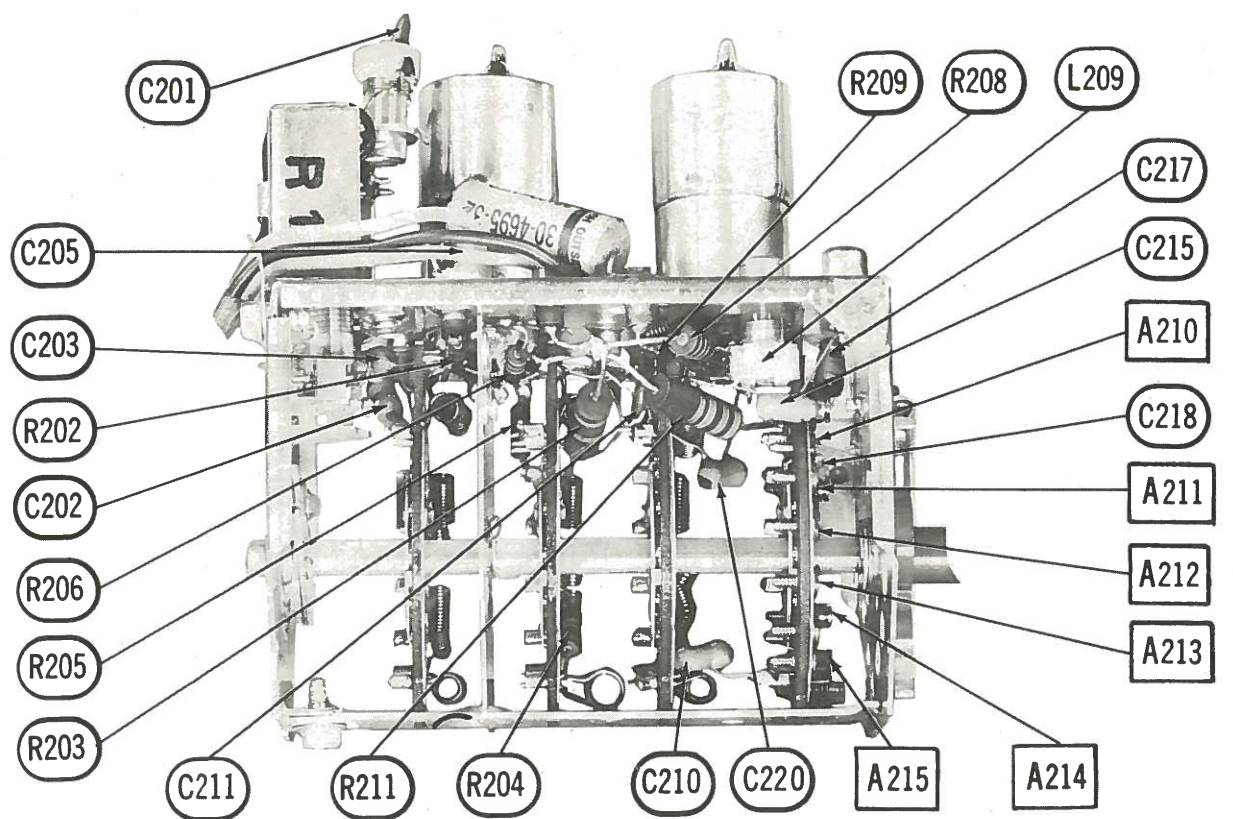
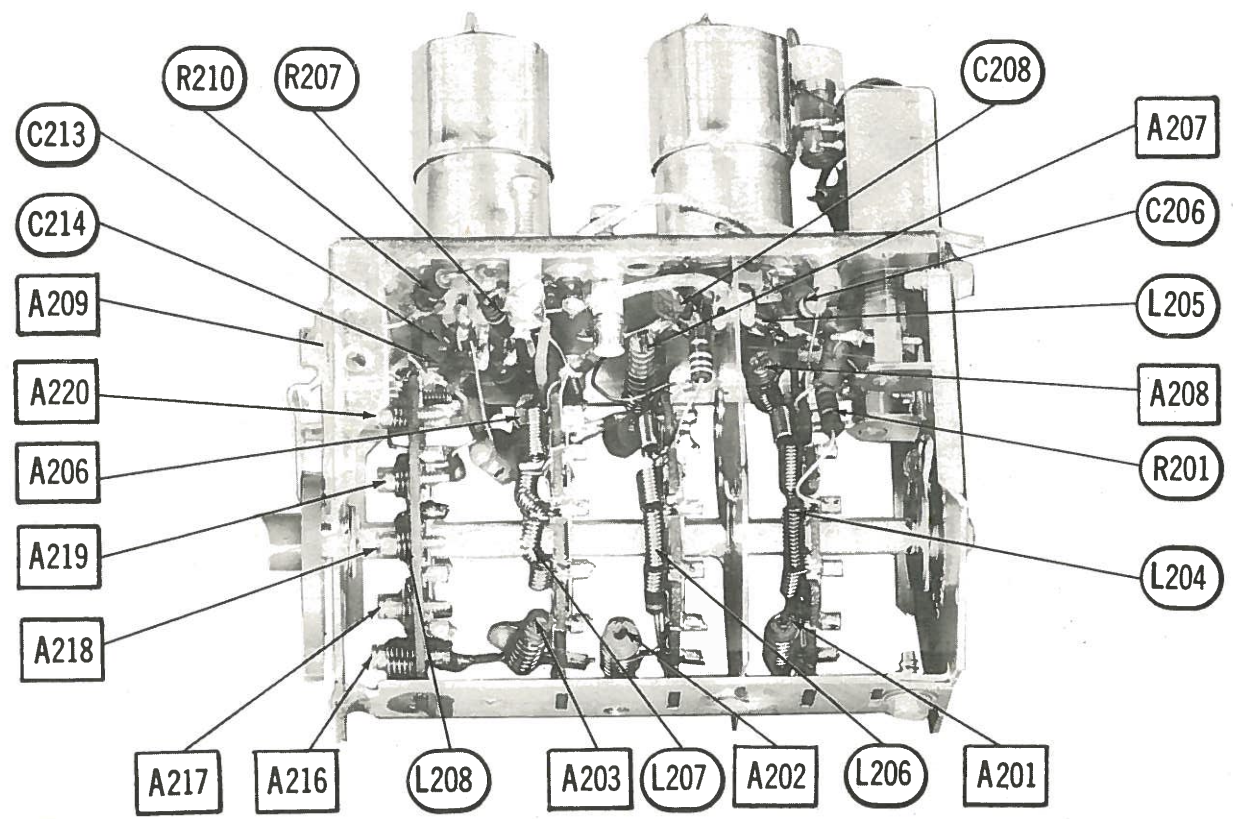


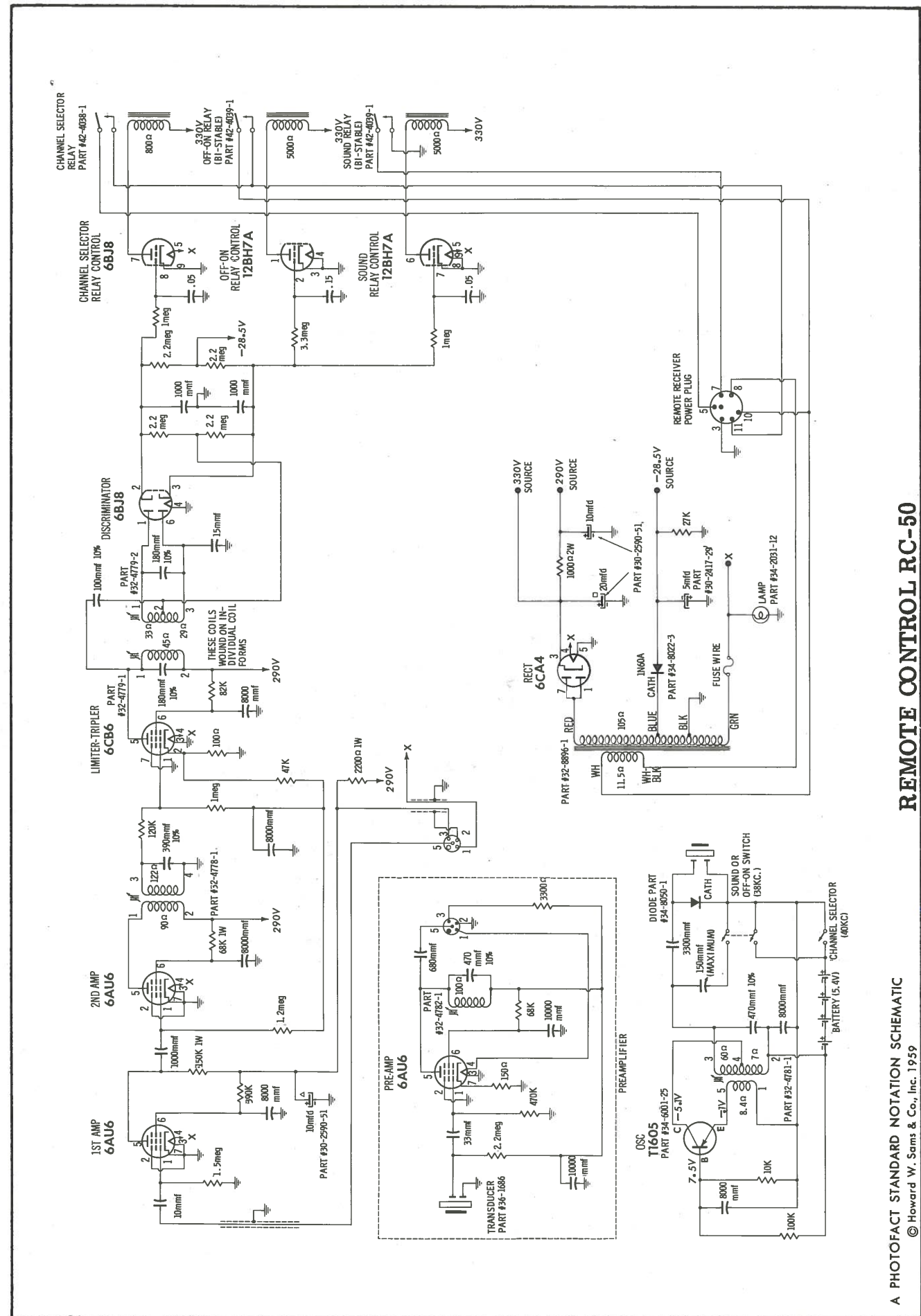
FIG.202



TUNER 76-10524-3 - LEFT SIDE



TUNER 76-10524-3 - RIGHT SIDE



REMOTE CONTROL RC-50

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TUNER PARTS LIST AND DESCRIPTIONS

76-10524-3(T-100A)

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amplifier	6BC8	V202	Mixer-Osc.	6X8

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	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	39 NPO 10%		NPO-DI 39	TCZ-39	C10Q39C	CCTO-390	CNO-439	10TCC-Q39
C202	5 ±.25mmf		NPO-SI 5	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C203	5 ±.25mmf		NPO-SI 5	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C204	5 10%	#30-1268-1						
C205	1000		EF-001	MFT-1000		CCF-102	CT280A	
C206	3 10%		NPO-SI 3	TCZ-3R3	C10V3C	CCTO-3R3	CNO-533	10TCC-V33
C207	150		DI-150	DD-151	L10T15	CCD-151	GP315	10TS-T15
C208	.8-3			829-3		CV-1	CT565	
C209	80 5%	#30-1268-13						
C210	2.2		NPO-SI 2.2	TCZ-2R2	C10V22C	CCTO-2R2	CNO-522	10TCC-V22
C211	39 10%		NPO-DI 39	TCZ-39	C10Q39C	CCTO-390	CNO-439	10TCC-Q39
C212	.8-3			829-3		CV-1	CT565	
C213	7.5 ±.5mmf				C10V8C	CCD-102	GP580	5HK-D10
C214	1000		BPD-001	DD-102	BYA10D1	CCD-681	GP210	10TS-T68
C215	680		SI 680	DD-681	BYA10T68		GP368	
C216	150	#30-1268-6						
C217	27 N220 10%	#30-1271-3						
C218	3.9 10%							
C219	27 N750 10%	#30-1268-4						
C220	1 ±.1mmf		NPO-SI 1	TCZ-1		CCTN-270	CNO-510	10TCC-V10
C221	1000		EF-001	MFT-1000		CCF-102	CT280A	
C222	1000		EF-001	MFT-1000		CCF-102	CT280A	

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

RESISTORS

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

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R201	1500Ω		R205	470K 5%		R209	15K	
R202	10K		R206	470K 5%		R210	10K	
R203	1800Ω 1W		R207	220K		R211	68K 1W	Note 1
R204	10K		R208	47K 1W				

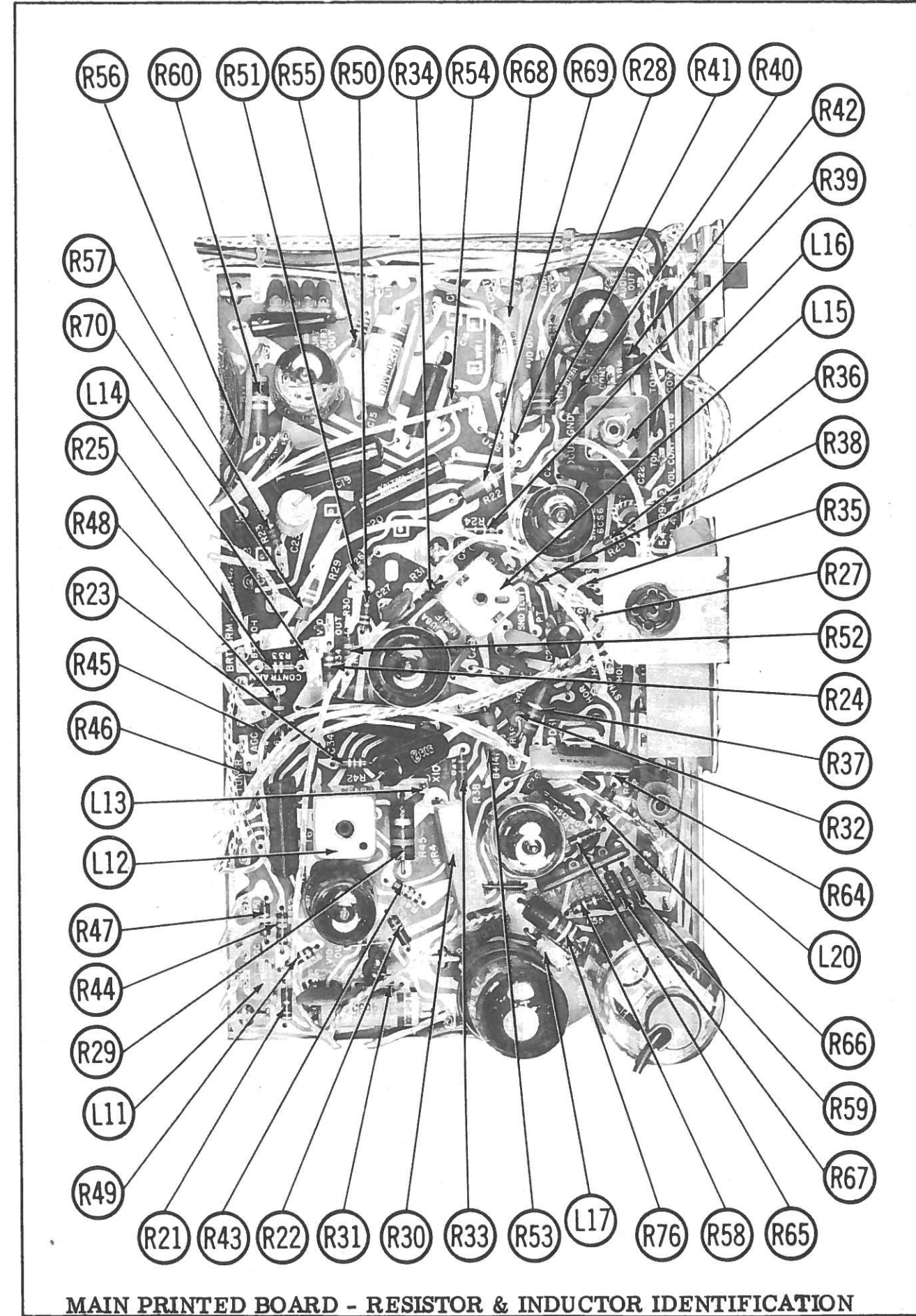
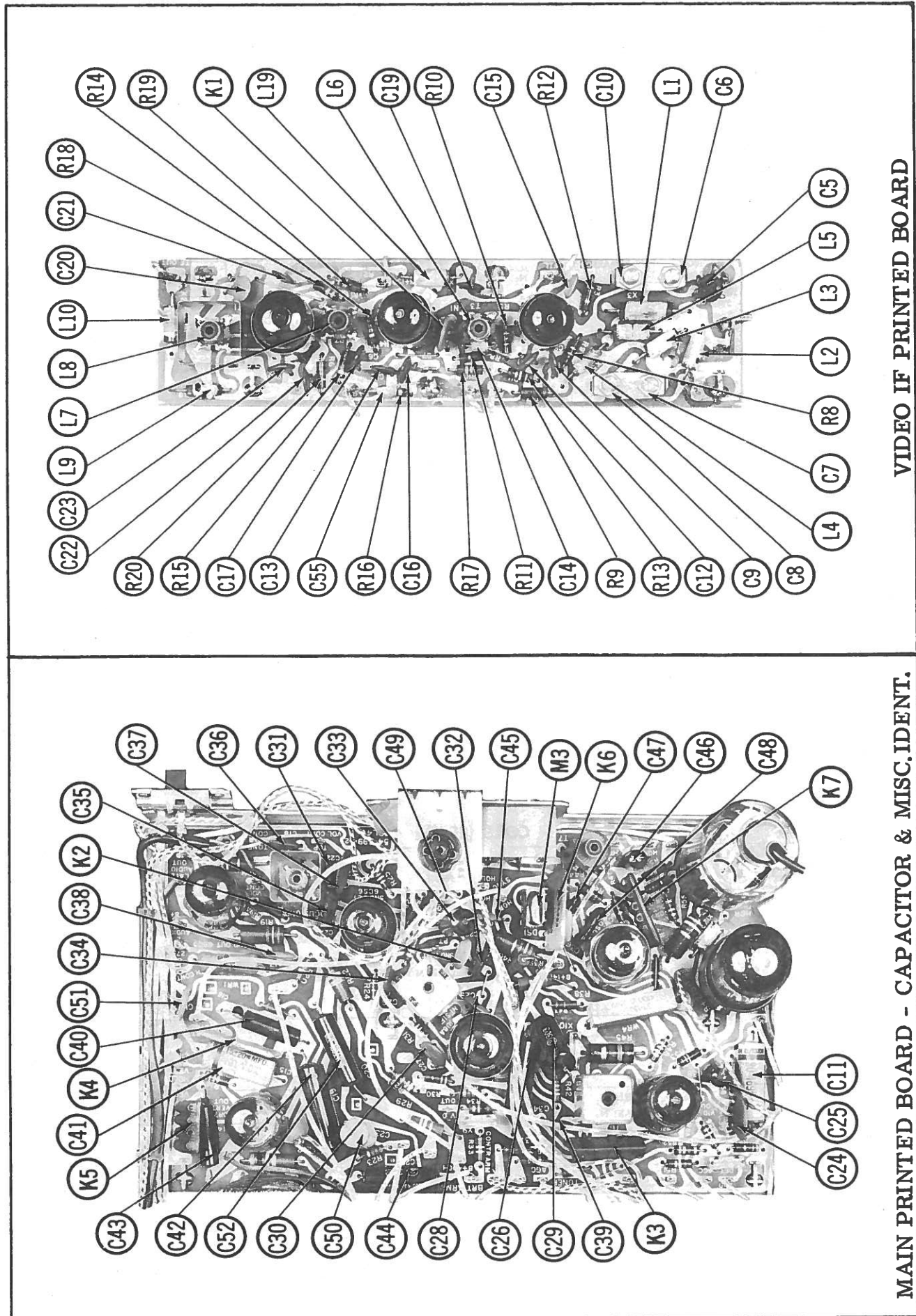
Note 1. Alternate 56K resistor is used in T-100A tuner, Ch. 10L42.

COILS (RF-IF)

ITEM No.	USE	PHILCO PART No.	NOTES	ITEM No.	USE	PHILCO PART No.	NOTES
L201	Ant. Coil	32-4725-4		L207	Mixer Grid Coils	76-10556	Channel 2-13, Includes Wafer Assy.
L202	Ant. Coil	32-4725-4		L208	Osc. Coils	76-10108	Channel 2-13, Includes Wafer Assy.
L203	IF Trap	32-4719-2		L209	Mixer Plate Coil	32-4652-48	
L204	Ant. Coils	76-11498	Channel 2-13, Includes Wafer Assy.				
L205	RF Choke	32-4652-52					
L206	RF Coils	76-11712	Channel 2-13, Includes Wafer Assy.				

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
	Switch Shaft Wrench Extension Shaft	76-11451-11 28-13074-1	Assembly Part of Pre-Set Fine Tuning Assembly
	Pre-Set Plate & Screw Assembly	76-11735-1	Part of Pre-Set Fine Tuning Assembly



ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

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.
Suggested Alignment Tools: A1 thru A4 GENERAL CEMENT #5000, 5003, 5014, 5015, 5016, 8276, 8290
WALSCO #2512, 2515, 2522, 2523, 2525, 2537
A1 thru A11 GENERAL CEMENT #8606, 8606L, 8282, 8295
WALSCO #2526, 2543, 2544, 2545

VIDEO IF ALIGNMENT

Connect the negative lead of a 6 volt bias supply to point \diamond . Positive to chassis.
Connect the negative lead of a 3 volt bias supply to point \diamond . Positive to chassis.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough generator output to provide a usable indication on VTVM.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Direct	Place a thin insulated metal strip between the Mixer-Osc. tube (V202), and tube shield. Connect the high side of sweep generator to the metal strip. Low side to chassis.	Not used	45.8MC (400v AM Mod)	Any non-interfering channel	Vert. Amp. thru 10K to point \diamond . Low side to chassis. (Across Video Det. load)	Mixer Plate Coil	Adjust for maximum on scope.
2. "	"	"	41.25MC	"	"	A1	Adjust for MINIMUM on scope.
3. "	"	"	47.25MC	"	"	A2, A3	"
4. "	"	"	42.75MC	"	"	A4, A5	Adjust for maximum on scope.
5. "	"	"	45.0MC	"	"	A6	"
6. "	"	"	44.4MC	"	"	A7	"
7. Two 120 Ω Carbon Resistors	Across antenna terminals with 120 Ω in each lead.	"	65.75MC	4	"	Fine Tuning	Adjust for MINIMUM on scope. Leave Fine Tuning at this setting.
8. "	"	69MC (10MC Swp)	42.75MC 45.75MC	"	"		Use only enough sweep generator output to provide a usable pattern on scope. Check for response similar to Fig. 1. If necessary retouch Mixer Plate Coil and A4 thru A7 for desired response. Position 45.75MC marker with Mixer Plate Coil and A6. Position 42.75MC marker with A4 and A5. Flatten curve with A7.

4.5MC TRAP ALIGNMENT

Use a 4.5MC tuned detector similar to Fig. 2. Before aligning trap, connect the detector to an accurate source of 4.5MC signal and adjust the coil slug for maximum DC voltage output. Set Contrast fully clockwise.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
9. .001mfd	High side to point \diamond . Low side to chassis.	4.5MC (400v 30% AM)	Any non-interfering channel	DC probe thru detector (Fig. 2) to pin 7 (cathode) of picture tube. Common to chassis.	A8	Adjust for MINIMUM deflection.

SOUND IF ALIGNMENT

Tune in a TV station, disconnect the antenna and adjust the Fine Tuning for best picture. DO NOT readjust Fine Tuning during balance of alignment.
Connect antenna and adjust A9 for maximum sound. Connect the DC probe of a VTVM thru 10K to point \diamond . Common to chassis.
Using a weak station signal (with antenna disconnected), adjust A10, A11 and A12 for maximum deflection.
If necessary, retouch SLIGHTLY A10, A11 and A12 to remove intercarrier buzz or noise interference. (DO NOT CHANGE more than 1/4".)

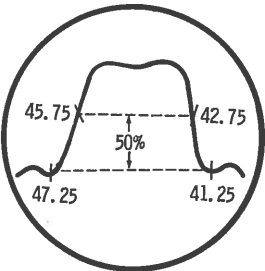


FIG. 1

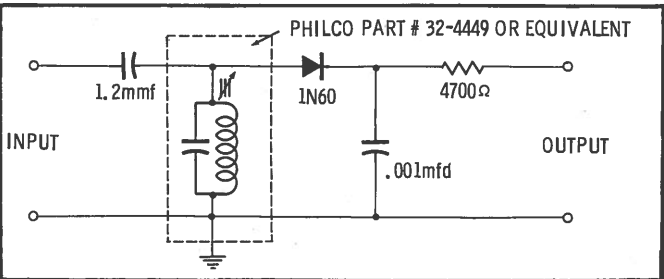
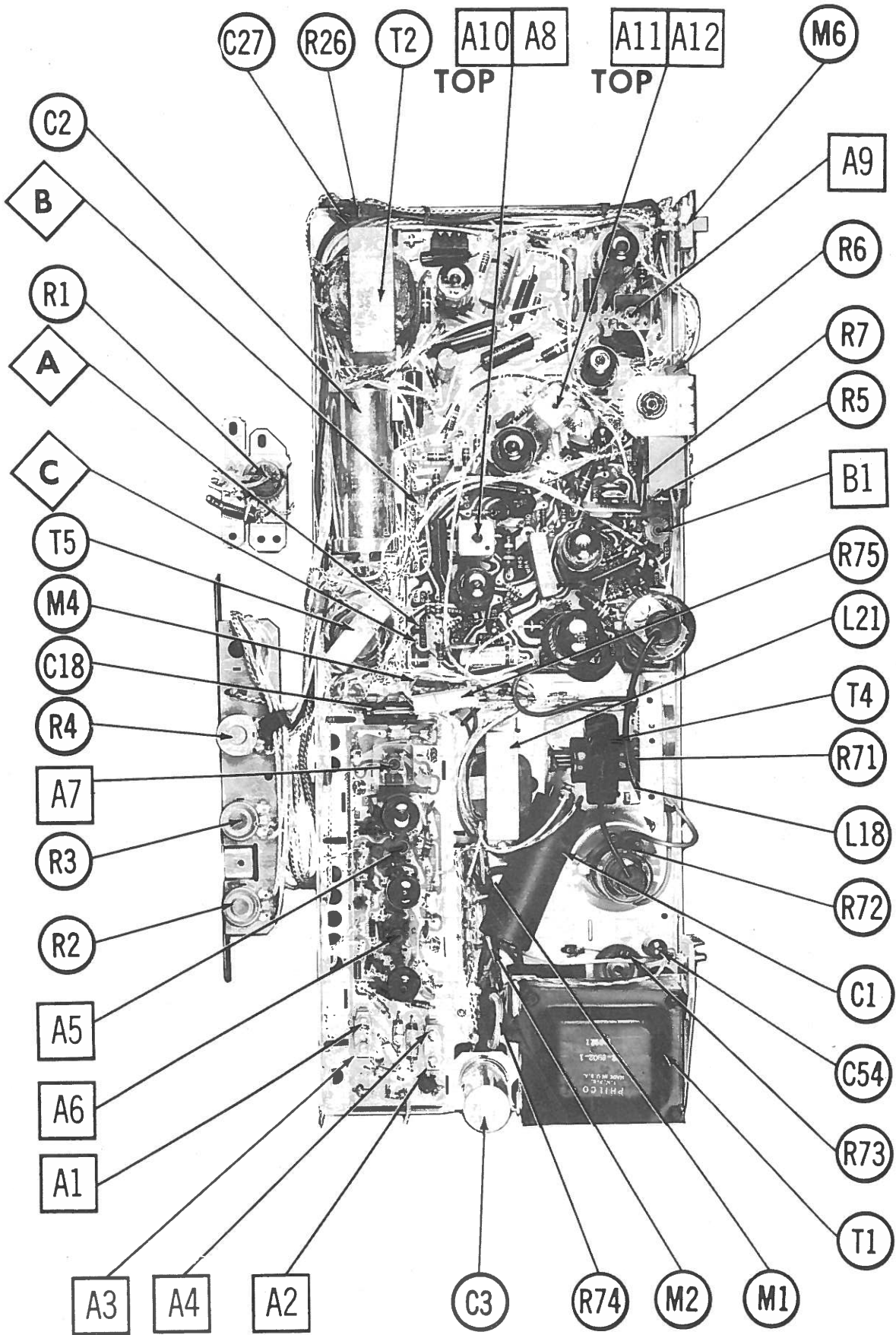


FIG. 2



CHASSIS TOP VIEW

PHILCO CHASSIS 10L41, U, 10L42, U, 10L43, U

FOLDER 1

CONTROLS

CBS			GENERAL ELECTRIC		RAYTHEON		SYLVANIA	
ITEM No.	USE	TYPE		ITEM No.	USE		TYPE	
V1	1st Video IF Amp.	6DE8		V7	Audio Output		6BQ6	
V2	2nd Video IF Amp.	6DE8		V8	Vert. Mult. - Vert. Output		6DR7	
V3	3rd Video IF Amp. - Video Det.	6 AM8A		V9	Horiz. Mult.		6CG7	
V4	Video Output-Sync Sep.	6AW8A		V10	Horiz. Output		6D46A	
V5	Sound IF Amp. - Noise Inv.	6EA8 (6U8) *		V11	Damper		6DA4	
	Audio Detector	6R6		V12	RV Rect.		1G3 GT / 1B3 CT	

* Alternate.

ITEM No.	REPLACEMENT DATA					NOTES
	PHILCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
V13	17DRP4 17DAP4 21EVP4				17DAP4/8F-17 (D)	① "Silver Screen 85"

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO Part No.	AEROVOX	CORNELL-DUBIER Part No.	MALLORY Part No.	PYRAMID Part No.	SPRAGUE Part No.	NOTES
C1	200	150	30-2568-78	AFH51-24-24	XAO282.1 #	FP118 #	TMS-26 #	TVLS-1431.1* #	Note 1
C2A	200	300	30-2590-52	AFH54-47-25	DO022		TMT-43	TVLS-4576 *	Note 2
B	200	150			BR20015	FP333.8	TD-200-159		
C	220	300				WSS42			
D	20	300							
C3A	100	450	30-2590-49	AFH3-157	CL150	FP399	TMD-49	TVL-3928	Note 3
B	220	350					TD-100-50		
C	100	50							

* Not normally in distributor's stock. Available thru distributor on order to manufacturer. § Use insulating tube.
 Note 1. Not used in Ch. 10L41, U.
 Note 2. Ch. 10L41, U use 80/20/20/40mfd @ 350V (Part #30-2590-48). Note 3. Alternate Part #30-2590-56.

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

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAS PART No.	CORRELL-DUBILIER PART No.	ELMENCOPART No.	MALLORY PART No.	SPRAGUE PART No.
C4	.22 100V		P288N-22		CUB2P22	1DP-3-224	GEM-2022	2TM-P22
C5	3.3 NPO		NPO-DI 3.3	DTZ-3R3	C10V33C	CCTO-3R3	CNO-5522	10TCC-V33
C6	.5-3			829-3		CV-1	CT565	
C7	.5-3			829-3		CV-1	CT565	
C8	1-5	#31-6535-2		829-6				
C9	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C10	1-5	#31-6535-2		829-6				
C11	.22 100V		P288N-22		CUB2P22	1DP-3-224	GEM-2022	2TM-P22
C12	680		BPD-00068	DD-681	BYA10T68	CCD-681	B-368	5GA-T68
C13	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C14	3.3 NPO 10%		NPO-SI 3.3	TCZ-3R3	C10V33C	CCTO-3R3	CNO-522	10TCC-V33
C15	470		BPD-00047	DD-471	BYA10T47	CCD-471	B-347	5GA-T47
C16	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C17	680		BPD-00068	DD-681	BYA10T68	CCD-681	B-368	5GA-T68
C18	.1 200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P1
C19	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C20	560		DI-560	DD-561	L10T56	CCD-561	B-356	5GA-T56
C21	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C22	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C23	5		DI-5	DD-050	L10T5	CCD-050	GP550	10TGS-V50
C24	18000		BPD-02	DD-203	BYB652	CCD-203	B-120	5HK-520
C25	.0047 400V 10%	(.0039mfd)*	W4C8D47-10%		P1M67	8DP-1-472	JI-247	6TM-D47
C26	.047 400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-S47
C27	10000		BPD-01	DD-103	BYA1081	CCD-103	B-110	5HK-S10
C28	8200		DAC-28	DD-822	HVE16D8	CCD-822	B-282	6TM-D8
C29	.1 200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P1
C30	4700		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C31	470		BPD-00047	DD-471	BYA10T47	CCD-471	B-347	5GA-T47
C32	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C33	.1 200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P1
C34	1500		BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C35	27 N330	#30-1263-46 (4700mm)*						
C36	2200		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C37	3300		BPD-0033	DD-332	BYA10D33	CCD-332	B-233	5HK-D33
C38	8200		DAC-28	DD-822	HVE16D8	CCD-822	B-282	6TM-D8
C39	2200		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C40	.0068 400V		P488N-0068	D8-682	CUB6D68	6DP-1-682	GEM-6268	6TM-D68
C41	.15 100V		P288N-15		CUB2P15	1DP-3-154	GEM-2015	2TM-P15
C42	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P1
C43	.0015 1000V		P1088N-0015	DD-152	CUB10D15	16DP-1-152	GEM-10215	10TM-D15
C44	.033 400V	(.022mfd)*	P488N-0033	DD-303	CUB4S33	4DP-2-333	GEM-4133	4TM-S33
C45	3900		BPD-004	DD-392	BYA10D4	CCD-392	GP239	5HK-D40
C46	.0039 600V 10%		W4C6D4-10%		PM6D4	6DP-1-392	GEM-1624	6TM-D4
C47	47 10%		1469-000047	TCZ-47	22RQ547	CM-20B-470K	MCB225	MS-447
C48	390 10%		1469-000039	D6-391	22R5T39	CM-20B-391K	MCB245	MS-339
C49	.01 400V		P468N-01	DD-103	CUB4S8	4DP-1-103	GEM-411	4TM-S1
C50	.22 100V		P288N-22		CUB2P22	2DP-3-224	GEM-201	2TM-P22
C51	8200		DAC-26	DD-822	HVE16D8	CCD-622	B-262	6TM-D8
C52	.022 400V 10%		W4C4822-10%	DD-203	PM4S22	4DP-2-223	GEM-1612	4TM-S22
C53	120 5000V 10%	#30-1246-26⑤						
C54	.022 600V		P688N-022	DD-203	CUB6S22	6DP-2-223	GEM-6122	6TM-S22
C55	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10

Philco Part Number. * Alternate value.

① Not used in some versions. ③ Ch. 10L41, U, 10L42, U use 135mmf 5% @ 5000V in this application (Part #30-1246-17).

② Run 1 thru 3 use 6800mmf in this application.

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA							
		PHI LCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Rogers PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T2 T3	Vert. Output Yoke-Horiz. (24MH) (110 ⁵)-Vert. (37MH) Alt. Yoke Alt. Yoke Rear Cover, Clamp, & Centering Assy. Rear Cover, Clamp, & Centering Assy.	32-8829-5 76-10508-14 76-10508-13 ② 76-10508-16 ③ 76-11644-1 ④ 76-10513-2 ⑤	26S75 ①					26S75 ①	A-108X
T4	Horiz. Output	32-8899-1							

① Use 8 to 1 turns ratio.	④ Used in Ch. employing 17DRP4 or 21EVP4 picture tube.
② Used in Ch. 10L41, U.	⑤ Used in Ch. employing 17DAP4 picture tube.
③ Used in Ch. 10L42, U.	

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
			PHILCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.								
T5	43000	3-40	32-8862-2	24851	A-2930	AU-801	A-3677	24851	8-3X	

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	PHILCO PART No.	QUAM PART No.	
SP1	4" x 6"	PM	3-4Q	36-1676-8	46A1	

ITEM No.	USE	DESCRIPTION	PHILCO PART No.	REPLACEMENT DATA
K1	2nd Video IF Cathode	15mmf, 68Ω	30-6039-1	Sprague PRC-12
K2	Audio Detector Grid	150mmf, 15K	30-6031-1	Sprague PRC-7
K3	Sync Sep. Grid	390mmf, 3300mmf, 220K, 330K, 1meg, 1.5meg	30-6532-3	
K4	Vert. Integrator	150mmf, 600mmf, 4000mmf, 5000mmf, 10K, 33K, 90K	30-6030-7	Sprague V-23
K5	Vert. Feedback	1500mmf, 2200mmf, 33K, 68K	30-6509-1	
K6	Horiz. AFC Network	82mmf, 220mmf, 1000mmf, 50000mmf, 82K, 150K, 680K, 1.2meg	30-6035-2	Sprague C-11
K7	Horiz. Mult. Network	390mmf, 820mmf, 3300mmf, 4700Ω, 6800Ω, 39K	30-6531-2	

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	CURRENT (Measured)	PHILOP PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	SARKES TARJIAN PART No.	SYLVANIA PART No.		
M1	.310A	34-8048-1 ① ②	HF-504 ②	SD-500 ②	40K ②	SR500 ②	① Ch.10L4I use 5U4GB ② Silicon type. ③ Dual Selenium Diode ④ Two Required	
M2	.310A	34-8048-1 ① ②	HF-504 ②	SD-500 ②	40K ②	SR500 ②		
M3		34-8037 ① ②	KI615 ③	SD-91 ③ ④				

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PHILCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M4	2" Length #26 Wire							

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M5	Tuner	76-10524-3	VHF (T-100D) Ch. 10L43
	Tuner	76-10525-4	VHF (T-100E) Ch. 10L41
	Tuner	76-10524-5	VHF (T-100A) Ch. 10L42
	Tuner	76-10525-3	VHF with UHF provisions (T-101D) Ch. 10L43U
	Tuner	76-10524-4	VHF with UHF provisions (T-101E) Ch. 10L41U
	Tuner	76-10525-5	VHF with UHF provisions (T-101A) Ch. 10L42U
	Tuner	76-10526-3	UHF (T-28D) Ch. 10L41U, 10L42U
	Tuner	76-10526-2	UHF (T-28C) Ch. 10L43U
M6	Switch	42-2075-1	Range (SPDT Slide Type)
	Switch	42-2117-1	Manual-Remote, Ch. 10L42
	Switch	76-11140-1	Touch Tuning, Pushbutton, Ch. 10L42
	Switch	42-2108	Stepper, Remote Tuning
	Magnet	76-10970	Beam Alignment , Used on some picture tubes
	Printed Board	54-6993	Video IF
	Printed Board	54-6994	Main, Run 1
	Printed Board	54-6994-2	Main, Run 2 (Red Dot)

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. 8485 (Flat) or 8484 (Round) - 4 Conductor 8485 (Round) - 5 Conductor 8488 (Round) - 8 Conductor

**PHILCO CHASSIS 10L41,
U, 10L42, U, 10L43, U**

FOLDER 1