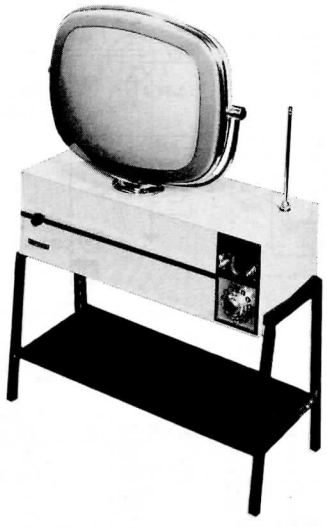
PHOTOFACT* Folder with CIRCUITRACE*

EIA MEMBER ELECTRONIC INDUSTRIES ASSOCIATION

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

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
		H4676SLR, 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 RATING 160 Watts, 1.7 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)

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

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

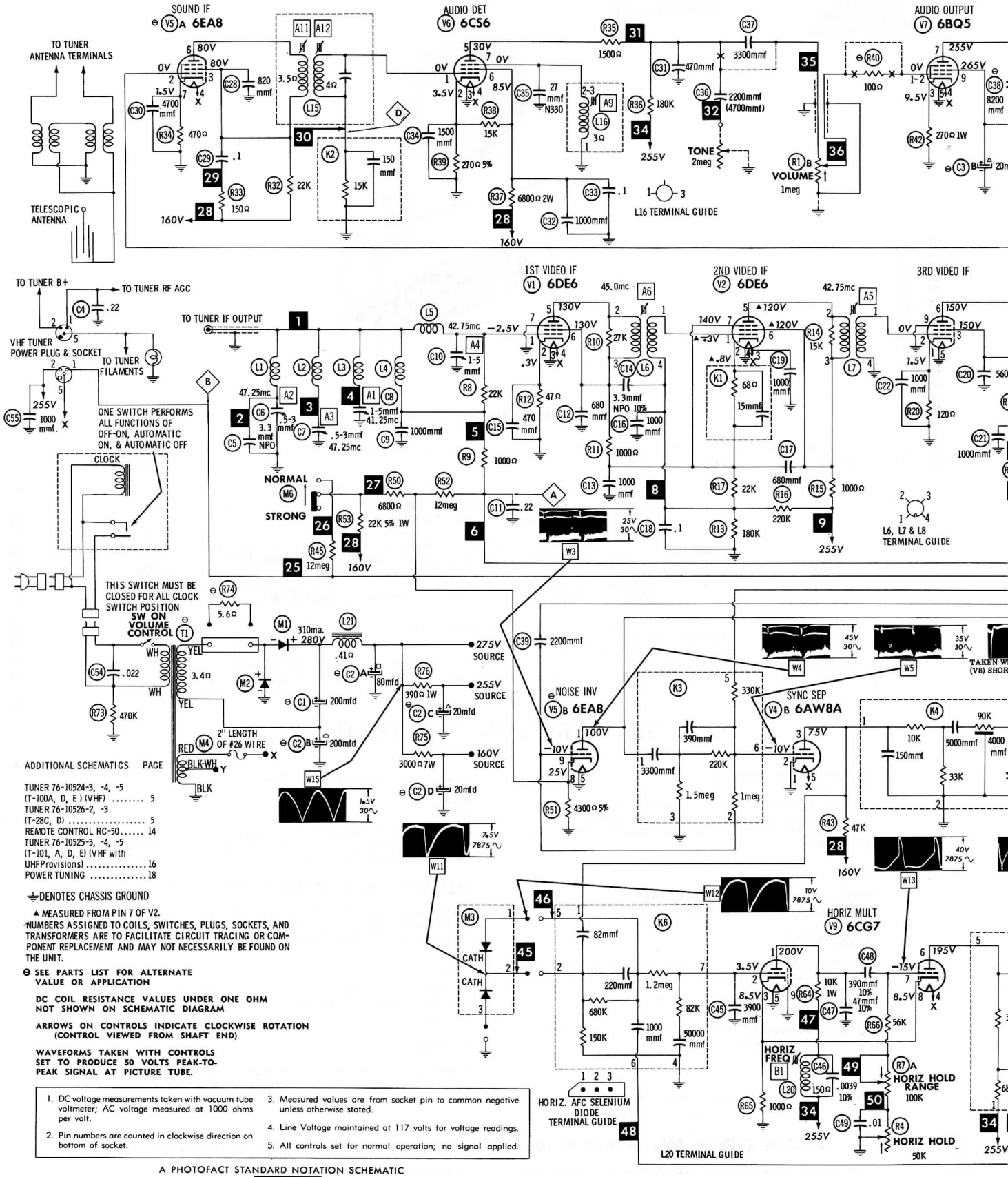
The width may be varied by adjusting a metallic sleeve, located between the yoke and the picture tube neck, in or out of the yoke.

CENTERING

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

SET 4 6 6 FOLDER 1

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



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

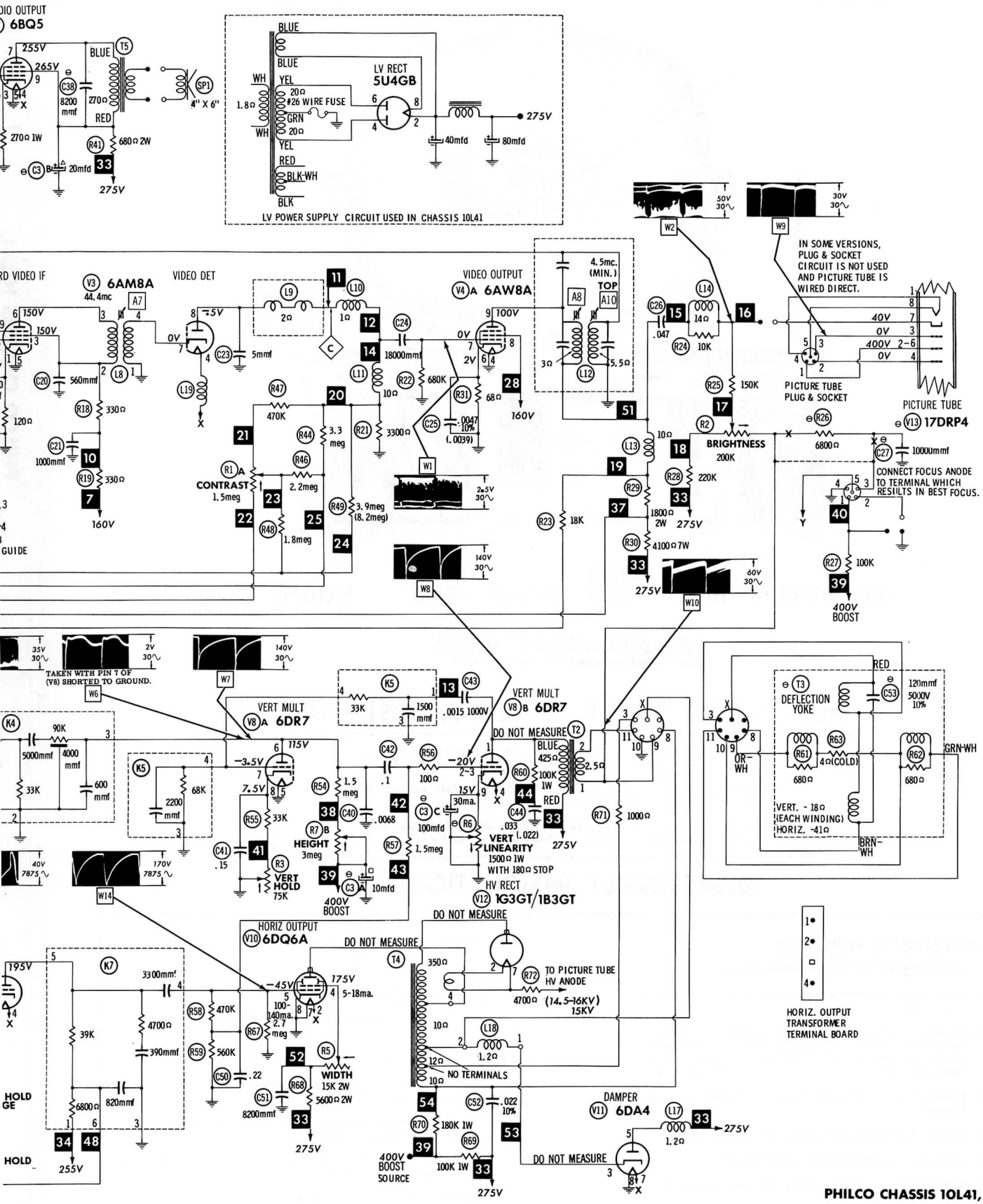
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

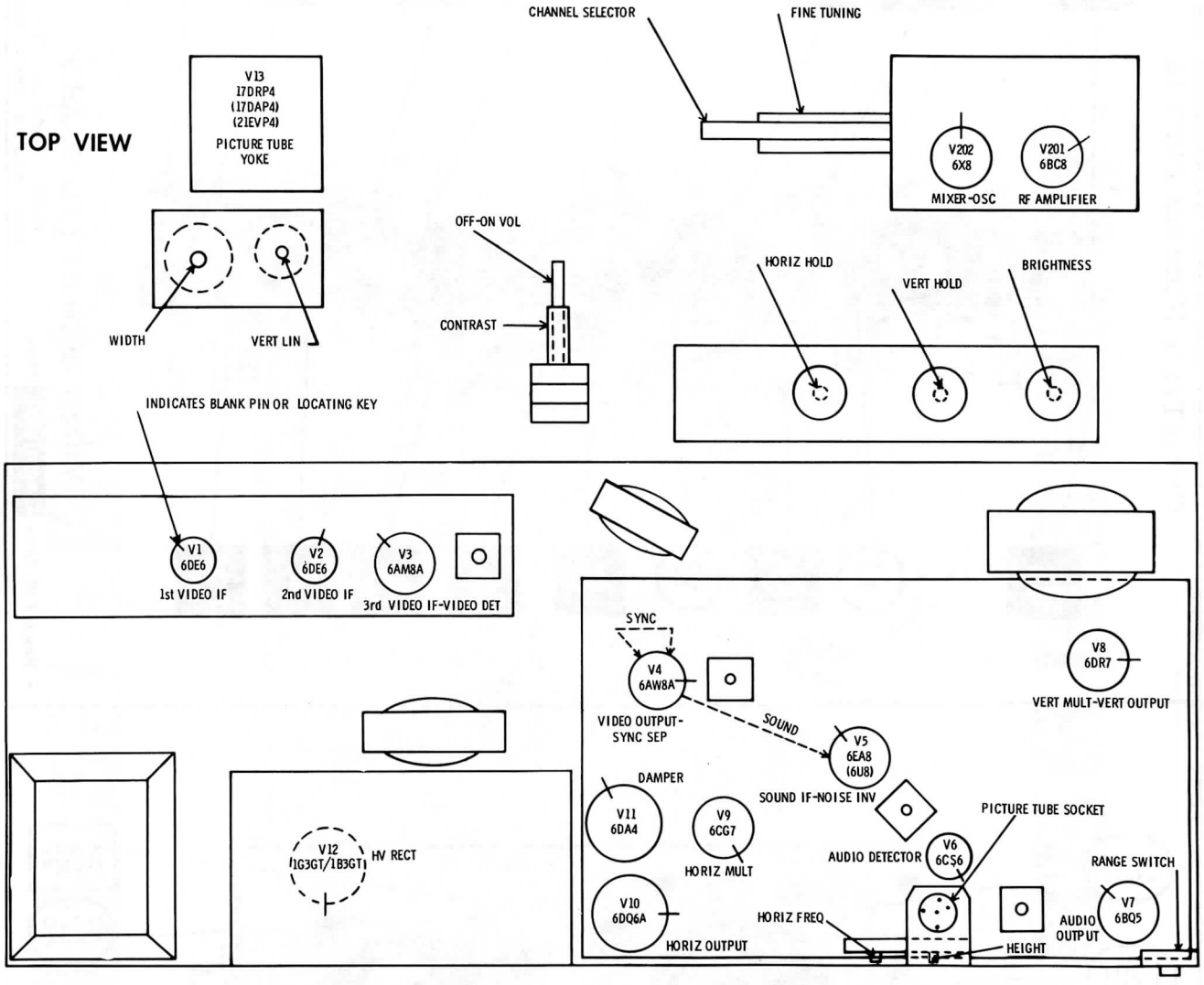
WAVEFORMS TAKEN WITH CONTROLS SET TO PRODUCE 50 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE.

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 PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE®


LV POWER SUPPLY CIRCUIT USED IN CHASSIS 10L41
LV RECT 5U4GB
275V
40mfd
80mfd
20Ω #26 WIRE FUSE
BLUE
YEL
GRN
RED
BLK-WH
BLK
WH
1.8Ω
20Ω
20Ω
4" X 6"
6BQ5
255V
265V
270Ω 1W
680Ω 2W
20mfd
8200 mmf
270Ω
IN SOME VERSIONS, PLUG & SOCKET CIRCUIT IS NOT USED AND PICTURE TUBE IS WIRED DIRECT.
PICTURE TUBE PLUG & SOCKET
PICTURE TUBE
17DRP4
BRIGHTNESS 200K
CONNECT FOCUS ANODE TO TERMINAL WHICH RESULTS IN BEST FOCUS.
400V BOOST
6AM8A
44.4mc
VIDEO DET
VIDEO OUTPUT
6AW8A
4.5mc. (MIN.)
TOP
CONTRAST 1.5meg
160V
GUIDE
TAKEN WITH PIN 7 OF (V8) SHORTED TO GROUND.
VERT MULT 6DR7
VERT MULT 6DR7
DO NOT MEASURE
VERT HOLD 75K
HEIGHT 3meg
VERT LINEARITY 1500Ω 1W WITH 180Ω STOP
400V BOOST
HV RECT 1G3GT/1B3GT
DEFLECTION YOKE
VERT. - 18Ω (EACH WINDING)
HORIZ. -41Ω
HORIZ. OUTPUT TRANSFORMER TERMINAL BOARD
HORIZ OUTPUT 6DQ6A
DO NOT MEASURE
TO PICTURE TUBE HV ANODE
4700Ω (14.5-16KV) 15KV
NO TERMINALS
WIDTH 15K 2W
5600Ω 2W
DAMPER 6DA4
400V BOOST SOURCE
100K 1W
180K 1W
DO NOT MEASURE
HOLD
HOLD
PHILCO CHASSIS 10L41, U, 10L42, U, 10L43, U

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

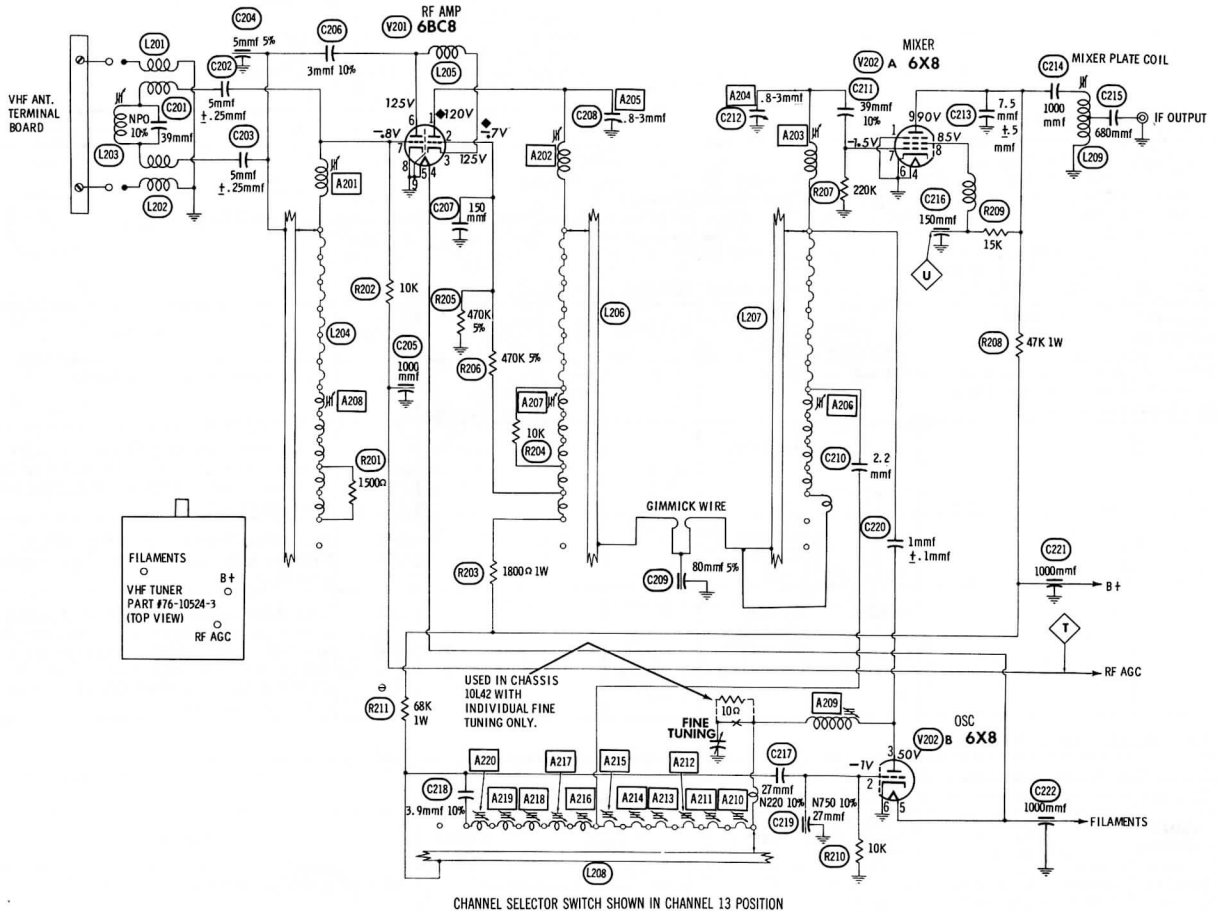
TUNER 76-10524-3 (T-100A) - TOP VIEW

CircuiTrace Numbers 1 thru 12

VIDEO IF PRINTED BOARD

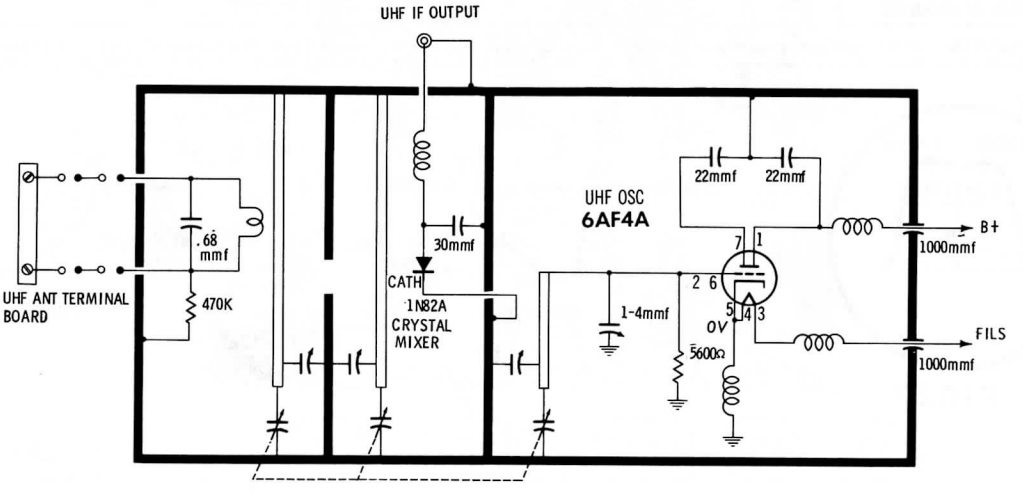
A Howard W. Sams CIRCUITRACE® Photo

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



A PHOTOFACT STANDARD NOTATION SCHEMATIC

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



A PHOTOFACT STANDARD NOTATION SCHEMATIC

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 (T). 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 120Ω Carbon Resistors	Across VHF antenna terminals with 120Ω in each lead.	213MC	210MC	13	Vert. Amp. thru 10K to point (U). 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 120Ω Carbon Resistors	Across VHF antenna terminals with 120Ω in each lead.	209.75MC (400∿ 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.

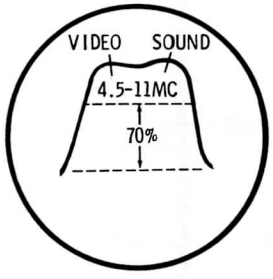
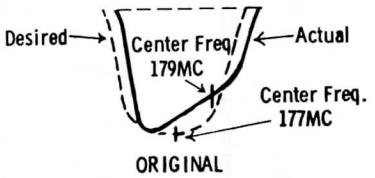


FIG.201



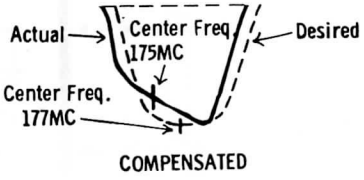


FIG.202

TUNER PARTS LIST AND DESCRIPTIONS

76-10524-3(T-100A)

TUBES

◆ CBS ◆ GENERAL ELECTRIC ◆ RAYTHEON ◆ SYLVANIA ◆					
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	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO 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		GP580	
C214	1000		BPD-001	DD-102	BYA10D1	CCD-102	GP210	5HK-D10
C215	680		SI 680	DD-681	BYA10T68	CCD-681	GP368	10TS-T68
C216	150	#30-1268-6						
C217	27 N220 10%	#30-1271-3				*		10TCR-Q27
C218	3.9 10%				C10V4C			10TCC-V39
C219	27 N750 10%	#30-1268-4				CCTN-270		
C220	1 ±.1mmf		NPO-SI 1	TCZ-1			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
R201	1500Ω	
R202	10K	
R203	1800Ω 1W	
R204	10K	

ITEM No.	RATING	REMARKS
R205	470K 5%	
R206	470K 5%	
R207	220K	
R208	47K 1W	

ITEM No.	RATING	REMARKS
R209	15K	
R210	10K	
R211	68K 1W	Note 1

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

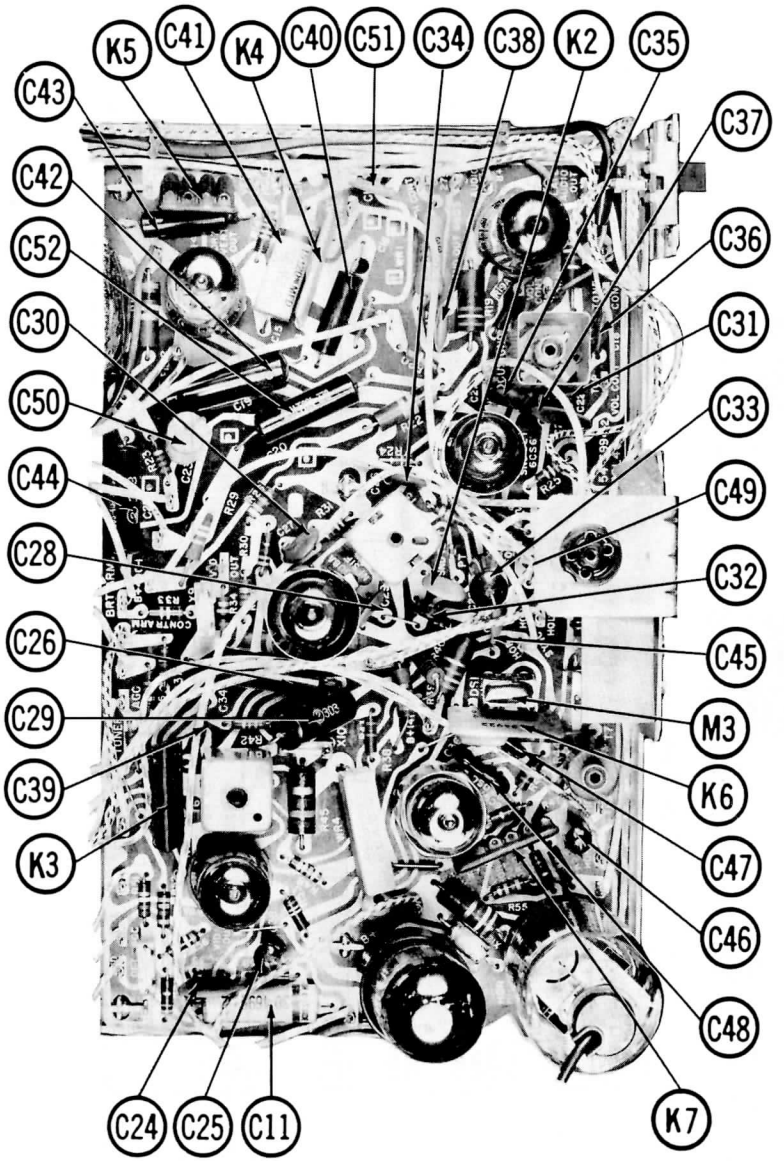
COILS (RF-IF)

ITEM No.	USE	PHILCO PART No.	NOTES
L201	Ant. Coil	32-4725-4	
L202	Ant. Coil	32-4725-4	
L203	IF Trap	32-4719-2	
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.

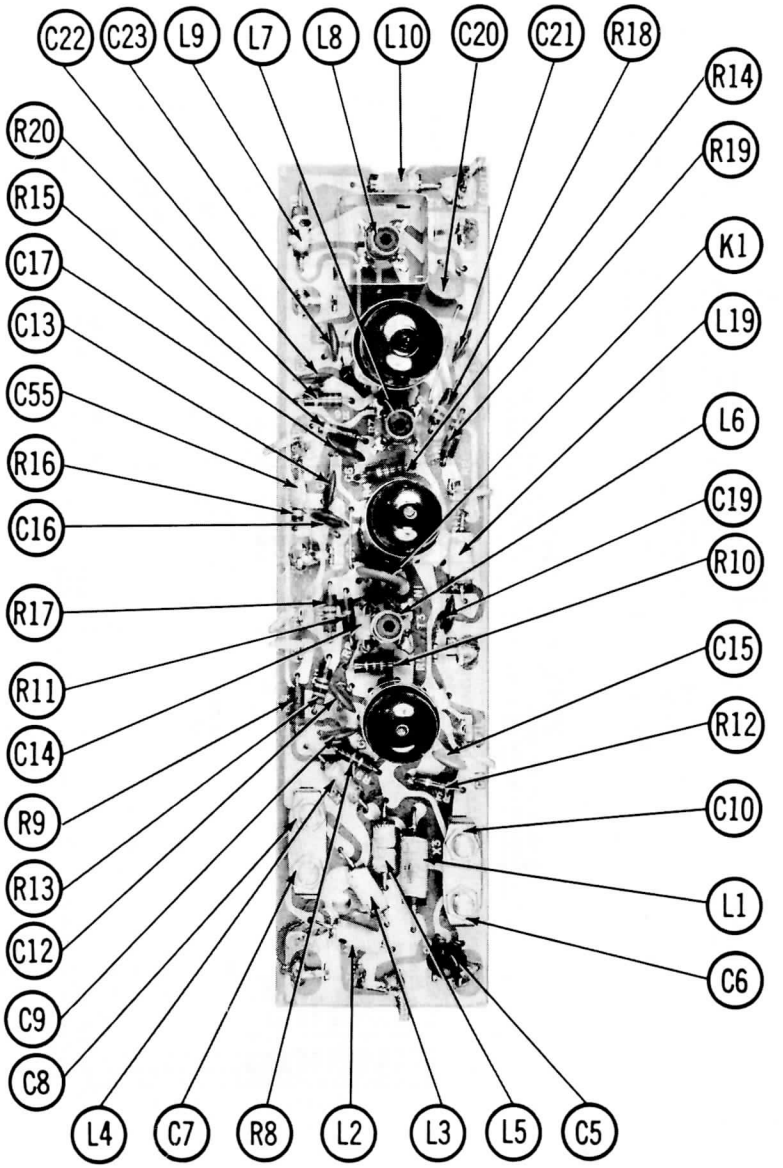
ITEM No.	USE	PHILCO PART No.	NOTES
L207	Mixer Grid Coils	76-10556	Channel 2-13, Includes Wafer Assy.
L208	Osc. Coils	76-10108	Channel 2-13, Includes Wafer Assy.
L209	Mixer Plate Coil	32-4652-48	

MISCELLANEOUS

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



MAIN PRINTED BOARD - CAPACITOR & MISC. IDENT.



VIDEO IF PRINTED BOARD

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, 9295
WALSCO #2526, 2543, 2544, 2545

VIDEO IF ALIGNMENT

Connect the negative lead of a 6 volt bias supply to point Ⓐ . Positive to chassis.
Connect the negative lead of a 3 volt bias supply to point Ⓑ . 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 (400∿ AM Mod)	Any non-interfering channel	Vert. Amp. thru 10K to point Ⓒ. 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 120Ω Carbon Resistors	Across antenna terminals with 120Ω 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 Ⓒ. Low side to chassis.	4.5MC (400∿ 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 Ⓓ. 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".)

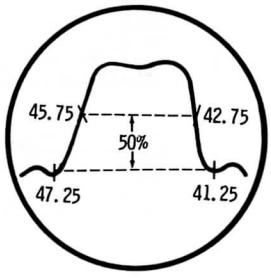


FIG. 1

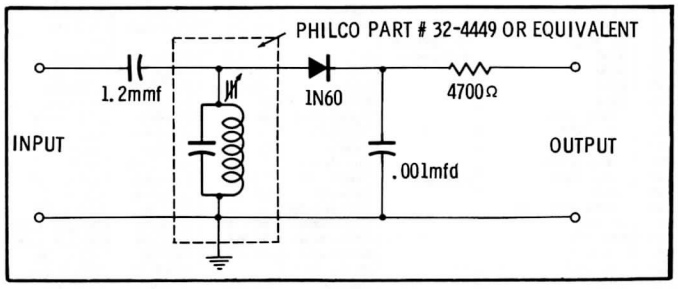


FIG. 2

PARTS LIST

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	1st Video IF Amp.	6DE6	V7	Audio Output	6BQ5
V2	2nd Video IF Amp.	6DE6	V8	Vert. Mult. - Vert. Output	6DR7
V3	3rd Video IF Amp. - Video Det.	6AM8A	V9	Horiz. Mult.	6CG7
V4	Video Output-Sync Sep.	6AW8A	V10	Horiz. Output	6DQ6A
V5	Sound IF Amp. - Noise Inv.	6EA8 (6U8) *	V11	Damper	6DA4
V6	Audio Detector	6CS6	V12	HV Rect.	1G3GT/ 1B3GT

* Alternate.

PICTURE TUBE

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/SF-17 ①	① "Silver Screen 85"

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	NOTES
C1	200	150	30-2568-78	AFHS1-24-24§	XA0262.1 §	FP118 §	TMS-26 §	TVLS-1431.1*§	Note 1
C2A	■80	300	30-2590-52	AFHS4-47-25	D0022		TMT-43	TVLS-4576 *	Note 2
B	▬200	150			BR20015	FP333.8	TD-200-150		
C	▲20	300				WS342			
D	20	300							
C3A	■10	450	30-2590-49	AFH3-157	C1150	FP399	TMD-49	TVL-3928	Note 3
B	▲20	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 3. Alternate Part #30-2590-56.
Note 2. Ch. 10L41, U use 80/20/20/40mfd @ 350V (Part #30-2590-48).

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	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART 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-522	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	L10V5	CCD-050	GP550	10TS-V50
C24	18000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C25	.0047 400V 10%	(.0039mfd)*	V84C6D47-10%			PM6D47	6DP-1-472	JL-247	6TM-D47
C26	.047 400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-S47
C27	10000	①	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C28	8200		DAC-26	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				**		
C36	2200	(4700mmf)*	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	②	DAC-26	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	D6-682	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-033	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%		V84C6D4-10%		PM6D4	6DP-1-392	GEM-1624	6TM-D4
C47	47 10%		1469-000047	TCZ-47	22R5Q47	CM-20B-470K	MCB225	MS-447
C48	390 10%		1469-00039	D6-391	22R5T39	CM-20B-391K	MCB243	MS-339
C49	.01 400V		P488N-01	DD-103	CUB4S1	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-822	B-282	6TM-D8
C52	.022 400V 10%		V84C4S22-10%	DD-203	PM4S22	4DP-2-223	GEM-1612	4TM-S22
C53	120 5000V 10%	#30-1246-26③						
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.
** Not normally in distributor's stock. Available thru distributor on order to manufacturer.
① Not used in some versions.
② Runs 1 thru 3 use 6800mmf in this application.
③ Ch. 10L41, U, 10L42, U use 135mmf 5% @ 5000V in this application (Part #30-1246-17).

ITEM No.	RATING		PHILCO PART No.	CENTR PART
	RESIST-ANCE	WATTS		
R1A	1.5meg	½	33-5592-49	
B	1meg	½		
C	Switch			
R2A	200K	½	33-5593-24	B-46
B	Shaft			Not Re
R3A	75K	½	33-5593-25	B-35
B	Shaft			Not Re
C	Bushing			Not Re
R4A	50K	½	33-5593-30	B-31
B	Shaft			Not Re
R5A	15K	2(WW)	33-5574-7	WW-15
B	Shaft			Not Re
R6	1500Ω	1(WW)	33-5591-20	
	180Ω Stop			
R7A	100K	½	33-5595-3	
B	3meg	½		

* Use 180Ω resistor in series with termina
Note 1. Some versions may use 1500Ω with

All wattages

ITEM No.	RATING	REMARKS
R8	22K	
R9	1000Ω	
R10	27K	
R11	1000Ω	
R12	47Ω	
R13	180K	
R14	15K	
R15	1000Ω	
R16	220K	
R17	22K	
R18	330Ω	
R19	330Ω	
R20	120Ω	
R21	3300Ω	
R22	680K	
R23	18K	
R24	10K	
R25	150K	
R26	6800Ω	
R27	100K	
R28	220K	
R29	1800Ω 2W	
R30	4100Ω 7W	#33-1335-149

* Alternate value.
Note 1. Not used in some versions.
Note 2. Run 4 and later use 5600Ω
Note 3. Not used in Ch. 10L41, U.

ITEM No.	USE	PHILCO PART No.
L1	47.25MC Trap Coil	32-4645-32
L2	47.25MC Trap Coil	32-4645-19
L3	41.25MC Trap Coil	32-4645-34
L4	RF Choke	32-4645-41
L5	1st Video IF Coil	32-4645-36
L6	2nd Video IF	32-4686-22
L7	3rd Video IF	32-4686-2
L8	4th Video IF	32-4686-3
L9	Resonant Choke	32-4674-1
L10	Resonant Choke	32-4645-7
L11	Shunt Peaking Coil	32-4762-8
L12A	Sound Take-Off	32-4688-9
B	4.5MC Trap	
L13	Shunt Peaking Coil	32-4762-8
L14	Series Peaking Coil	32-4762-10
L15	2nd Sound IF	32-4745-2
L16	Quadrature Coil	32-4644-20
L17	RF Choke	32-4112-62
L18	RF Choke	32-4112-62
L19	Fil. Choke	32-4645-40

TRAN

ITEM No.	DC RES.		PHILCO PART No.	Halldo PART
	PRI.	SEC.		
L20	150Ω		32-4754-3	

ITEM No.	RATINGS			PH
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	PAR
L21	.310A	41Ω	1.3 Hy.	32-8

TRA

ITEM No.	RATING			PHILC PART
	PRI.	SEC. 1	SEC. 2	
T1	117V @ 1.7A	120V@ 1.17A (AC)	6.3V @ 8A tap@ 2.7V @ .4A	32-8902

① Ch. 10L41, U use Part #32-8897-1.

PARTS LIST AND DESCRIPTIONS

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	PHILCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1.5meg	1/2	33-5592-49				■ UE4069-S	Contrast
B	1meg	1/2						Volume
C	Switch							Push-Push Off-On
R2A	200K	1/2	33-5593-24	B-46	A47-200K-S	Q11-129	U43	Brightness
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R3A	75K	1/2	33-5593-25	B-35	A47-75K-S	Q11-125	RU753L	Vert. Hold
B	Shaft			Not Req.	FS-3	Not Req.	SS-3500	
C	Bushing			Not Req.	Not Req.	Not Req.	SL38	
R4A	50K	1/2	33-5593-30	B-31	A47-50K-S	Q11-123	TA54L	Horiz. Hold
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R5A	15K	2(WW)	33-5574-7	WW-153	A58-15K	WPKI5000	R15ML	Width
B	Shaft			Not Req.	FKS-1/4	Not Req.	Not Req.	
R6	1500Ω	1(WW)	33-5591-20		39-1500 *	112-1500 *	FL-15K *	Vert. Lin., Note 1
	180Ω Stop							
R7A	100K	1/2	33-5595-3					Horiz. Freq.
B	3meg							Height

* Use 180Ω resistor in series with terminal. ■ "STA-LOC" Equivalent: FA155L, RUP16L, DS1125
Note 1. Some versions may use 1500Ω with 300Ω stop (Part #33-5591-17).

RESISTORS

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

ITEM No.	RATING	REMARKS
R8	22K	
R9	1000Ω	
R10	27K	
R11	1000Ω	
R12	47Ω	
R13	180K	
R14	15K	
R15	1000Ω	
R16	220K	
R17	22K	
R18	330Ω	
R19	330Ω	
R20	120Ω	
R21	3300Ω	
R22	680K	
R23	18K	
R24	10K	
R25	150K	
R26	6800Ω	
R27	100K	
R28	220K	
R29	1800Ω 2W	
R30	4100Ω 7W	#33-1335-149

ITEM No.	RATING	REMARKS
R31	68Ω	
R32	22K	
R33	150Ω	
R34	470Ω	
R35	1500Ω	
R36	180K	
R37	6800Ω 2W	
R38	15K	
R39	270Ω 5%	
R40	100Ω	①
R41	680Ω 2W	
R42	270Ω 1W	
R43	47K	
R44	3.3meg	
R45	12meg	
R46	2.2meg	
R47	470K	
R48	1.8meg	
R49	3.9meg	(8.2meg)*
R50	6800Ω	
R51	4300Ω 5%	#66-24382-40
R52	12meg	
R53	22K 5% 1W	

ITEM No.	RATING	REMARKS
R54	1.5meg	
R55	33K	
R56	100Ω	
R57	1.5meg	
R58	470K	
R59	560K	
R60	100K 1W	
R61	680Ω	
R62	680Ω	
R63	4Ω Cold	#33-1343-19
R64	10K 1W	
R65	1000Ω	
R66	56K	
R67	2.7meg	
R68	5600Ω 2W	#66-2565340 ②
R69	100K 1W	
R70	180K 1W	
R71	1000Ω	
R72	4700Ω	
R73	470K	
R74	5.6Ω	#33-1366-3 ③
R75	3000Ω 7W	#33-1363-36
R76	390Ω 1W	

* Alternate value. # Philco Part Number.
Note 1. Not used in some versions.
Note 2. Run 4 and later use 5600Ω 3W in this application.
Note 3. Not used in Ch. 10L41, U.

COILS (RF-IF)

ITEM No.	USE	PHILCO PART No.	Gramer PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	47.25MC Trap Coil	32-4645-32	19-1001	19-1001	BC-562	4604		
L2	47.25MC Trap Coil	32-4645-19						
L3	41.25MC Trap Coil	32-4645-34						
L4	RF Choke	32-4645-41						
L5	1st Video IF Coil	32-4645-36	19-3001	19-3001	TV-189	6175	VP-9	
L6	2nd Video IF	32-4686-22						Includes C14
L7	3rd Video IF	32-4686-2						
L8	4th Video IF	32-4686-3						
L9	Resonant Choke	32-4674-1						22uh
L10	Resonant Choke	32-4645-7						3uh
L11	Shunt Peaking Coil	32-4762-8	19-4201	19-4201	TV-197	6154		220uh
L12A	Sound Take-Off	32-4688-9						
B	4.5MC Trap							
L13	Shunt Peaking Coil	32-4762-8	19-4201	19-4201	TV-197	6154		220uh
L14	Series Peaking Coil	32-4762-10	19-3330	19-3330	TV-200	6132	VP-7	330uh
L15	2nd Sound IF	32-4745-2						
L16	Quadrature Coil	32-4644-20						
L17	RF Choke	32-4112-62	19-1005	19-1005	BC-566	4612		9uh
L18	RF Choke	32-4112-62	19-1005	19-1005	BC-566	4612		9uh
L19	Fil. Choke	32-4645-40						

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES. PRI.	DC RES. SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Miller PART No.	Ram PART No.	Thordarson PART No.	NOTES
L20	150Ω		32-4754-3						Horiz. Stabilizer

FILTER CHOKE

ITEM No.	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L21	.310A	41Ω	1.3 Hy.	32-8710-8	26C44				26C44	C-28X

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117V ⓐ 1.7A	120V ⓐ 1.17A (AC)	6.3V ⓐ 8A tap ⓐ 2.7V ⓐ 4A	32-8902-1 ①						

① Ch. 10L41, U use Part #32-8897-1.

TR

ITEM No.	USE	PHI L PART
T2	Vert. Output	32-8829
T3	Yoke-Horiz. (24MH) (110°)-Vert. (37MH)	76-1050
	Alt. Yoke	76-1050
	Alt. Yoke	76-1050
	Rear Cover, Clamp, & Centering Assy.	76-11644
	Rear Cover, Clamp, & Centering Assy.	76-10513
T4	Horiz. Output	32-8899

① Use 8 to 1 turns ratio. ④
② Used in Ch. 10L41, U. ⑤
③ Used in Ch. 10L42, U.

TR

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	PHILCO PART No.
T5	4300Ω	3-4Ω	32-8862-2

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.
SP1	4" x 6"	PM	3-4Ω

ITEM No.	USE
K1	2nd Video IF Cathode
K2	Audio Detector Grid
K3	Sync Sep. Grid
K4	Vert. Integrator
K5	Vert. Feedback
K6	Horiz. AFC Network
K7	Horiz. Mult. Network

ITEM No.	RATING CURRENT (Measured)	PHILCO PART No.
M1	.310A	34-8048-1 ① ②
M2	.310A	34-8048-1 ① ②
M3		34-8037 ③

ITEM No.	TYPE	RATING	PH PAR FUSE
M4	2" Length #26 Wire		

ITEM No.	PART NAME	PHILC PART
M5	Tuner	76-10524-
	Tuner	76-10525-
	Tuner	76-10524-
	Tuner	76-10525-
	Tuner	76-10524-
	Tuner	76-10525-
	Tuner	76-10526-
	Tuner	76-10526-
M6	Switch	42-2075-1
	Switch	42-2117-1
	Switch	76-11140-1
	Switch	42-2108
	Magnet	76-10970
	Printed Board	54-6993
	Printed Board	54-6994
	Printed Board	54-6994-2

	TYPE
	6BQ5
utput	6DR7
	6CG7
	6DQ6A
	6DA4
	1G3GT/ 1B3GT

SYLVANIA ◆

	NOTES
IA o.	
-17 ①	① "Silver Screen 85"

	SPRAGUE PART No.	NOTES
	TVLS-1431.1*§	Note 1
0	TVLS-4576 *	Note 2
	TVL-3928	Note 3
0		

§ Use insulating tube.
Part #30-2590-56.

per .

	MALLORY PART No.	SPRAGUE PART No.
	GEM-2022	2TM-P22
	CNO-522	10TCC-V33
	CT565	
	CT565	
	B-210	5HK-D10
	GEM-2022	2TM-P22
	B-368	5GA-T68
	B-210	5HK-D10
	CNO-522	10TCC-V33
	B-347	5GA-T47
	B-210	5HK-D10
	B-368	5GA-T68
	GEM-201	2TM-P1
	B-210	5HK-D10
	B-356	5GA-T56
	B-210	5HK-D10
	B-210	5HK-D10
	GP550	10TS-V50
	B-120	5HK-S20
	JL-247	6TM-D47
	GEM-4147	4TM-S47
	B-110	5HK-S10
	B-282	6TM-D8
	GEM-201	2TM-P1
	B-247	5HK-D47
	B-347	5GA-T47
	B-210	5HK-D10
	GEM-201	2TM-P1
	B-215	5HK-D15
	B-222	5HK-D22
	B-233	5HK-D33
	B-282	6TM-D8
	B-222	5HK-D22
	GEM-6268	6TM-D68
	GEM-2015	2TM-P15
	GEM-401	4TM-P1
	GEM-10215	10TM-D15
	GEM-4133	4TM-S33
	GP239	5HK-D40
	GEM-1624	6TM-D4
0K	MCB225	MS-447
1K	MCB243	MS-339
	GEM-411	4TM-S1
	GEM-201	2TM-P22
	B-282	6TM-D8
	GEM-1612	4TM-S22
	GEM-6122	6TM-S22
	B-210	5HK-D10

mf 5% ⓐ 5000V in this

High Voltage Lead .....
Shielded Hook-up Wire .....
General-use Unshielded Hook-up W
Power Cord (Interlock Type) .....
300Ω Tuner Input Lead .....
300Ω Antenna Lead-in .....
Antenna Rotor Cable .....

IPTIONS

No.	MALLORY PART No.	INSTALLATION NOTES
	■ UE4069-S	Contrast Volume Push-Push Off-On
	U43	Brightness
	Not Req.	
	RU753L	Vert. Hold
	SS-3500	
	SL38	
	TA54L	Horiz. Hold
	Not Req.	
0	R15ML	Width
	Not Req.	
*	FL-15K *	Vert. Lin., Note 1
		Horiz. Freq.
		Height

"STA-LOC" Equivalent: FA155L, RUP16L, DS1125

herwise listed.

S	ITEM No.	RATING	REMARKS
	R54	1.5meg	
	R55	33K	
	R56	100Ω	
	R57	1.5meg	
	R58	470K	
	R59	560K	
	R60	100K 1W	
	R61	680Ω	
	R62	680Ω	
	R63	4Ω Cold	#33-1343-19
	R64	10K 1W	
	R65	1000Ω	
	R66	56K	
	R67	2.7meg	
	R68	5600Ω 2W	#66-2565340 ②
	R69	100K 1W	
	R70	180K 1W	
	R71	1000Ω	
	R72	4700Ω	
	R73	470K	
-40	R74	5.6Ω	#33-1366-3 ③
	R75	3000Ω 7W	#33-1363-36
	R76	390Ω 1W	

DATA			
Merit PART No.	Miller PART No.	Ram PART No.	NOTES
BC-562	4604		
TV-189	6175	VP-9	Includes C14
			22uh
			3uh
TV-197	6154		220uh
TV-197	6154		220uh
TV-200	6132	VP-7	330uh
BC-566	4612		9uh
BC-566	4612		9uh

Z. OSC.)

Ram PART No.	Thordarson PART No.	NOTES
		Horiz. Stabilizer

MENT DATA				
lo.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
			26C44	C-28X

WER)

ACEMENT DATA				
.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.

TRANSFORMERS (SWEEP CIRCUITS)

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

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

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T5	4300Ω	3-4Ω	32-8862-2	24S51	A-2930	AU-601	A-3877	24S51	S-3X	

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	36-1676-8	46A1	

COMPONENT COMBINATIONS

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	

RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA					NOTES
	CURRENT (Measured)	PHILCO PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	SARKES TARZIAN PART No.	SYLVANIA PART No.	
M1	.310A	34-8048-1 ①②	HF-504 ②	SD-500 ②	40K ②	SR500 ②	① Ch. 10L41 use 5U4GB ② Silicon type. ③ Dual Selenium Diode ④ Two Required
M2	.310A	34-8048-1 ①②	HF-504 ②	SD-500 ②	40K ②	SR500 ②	
M3		34-8037 ③	K1615 ③	SD-91 ③④			

FUSES

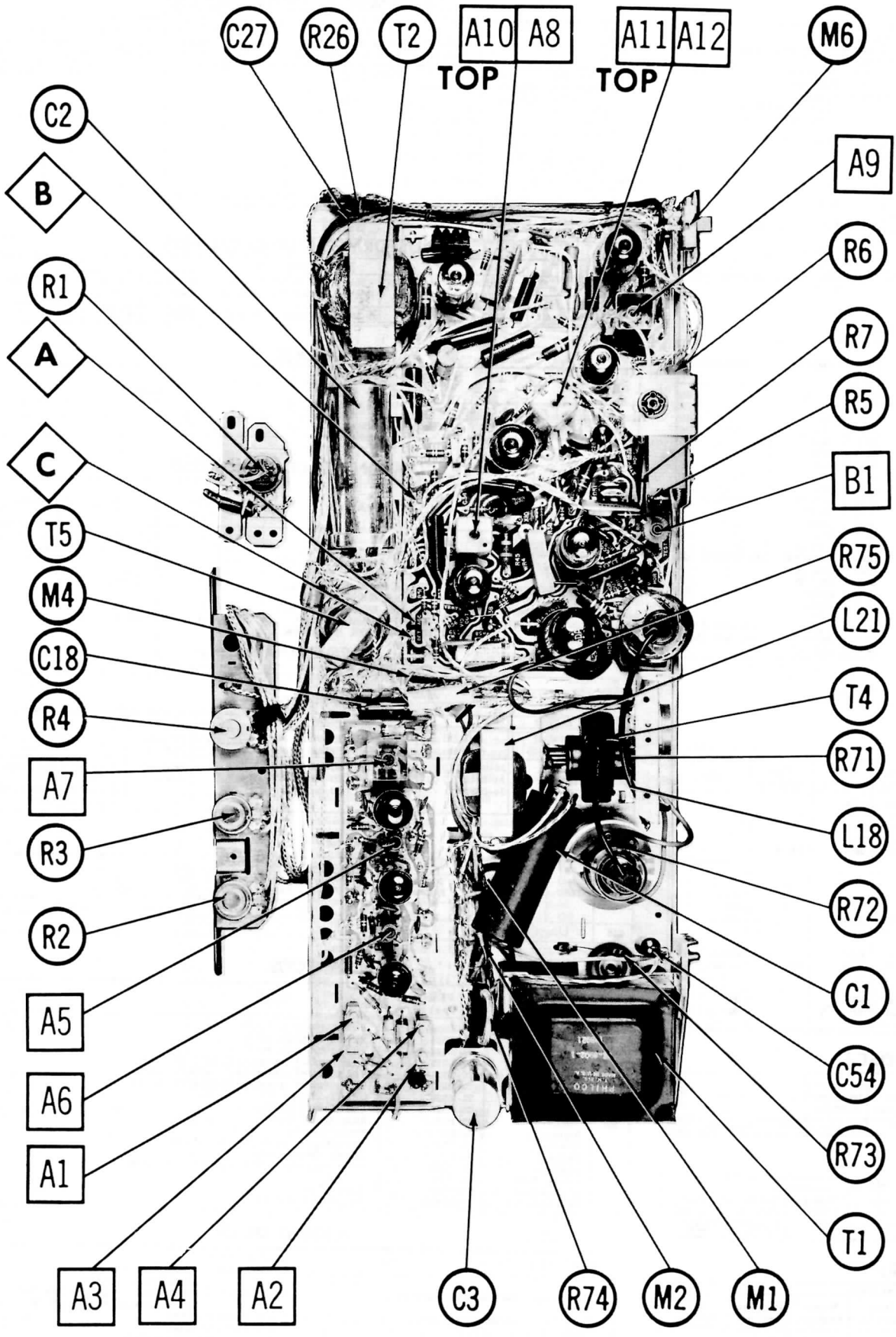
ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PHILCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M4	2" Length #26 Wire							

MISCELLANEOUS

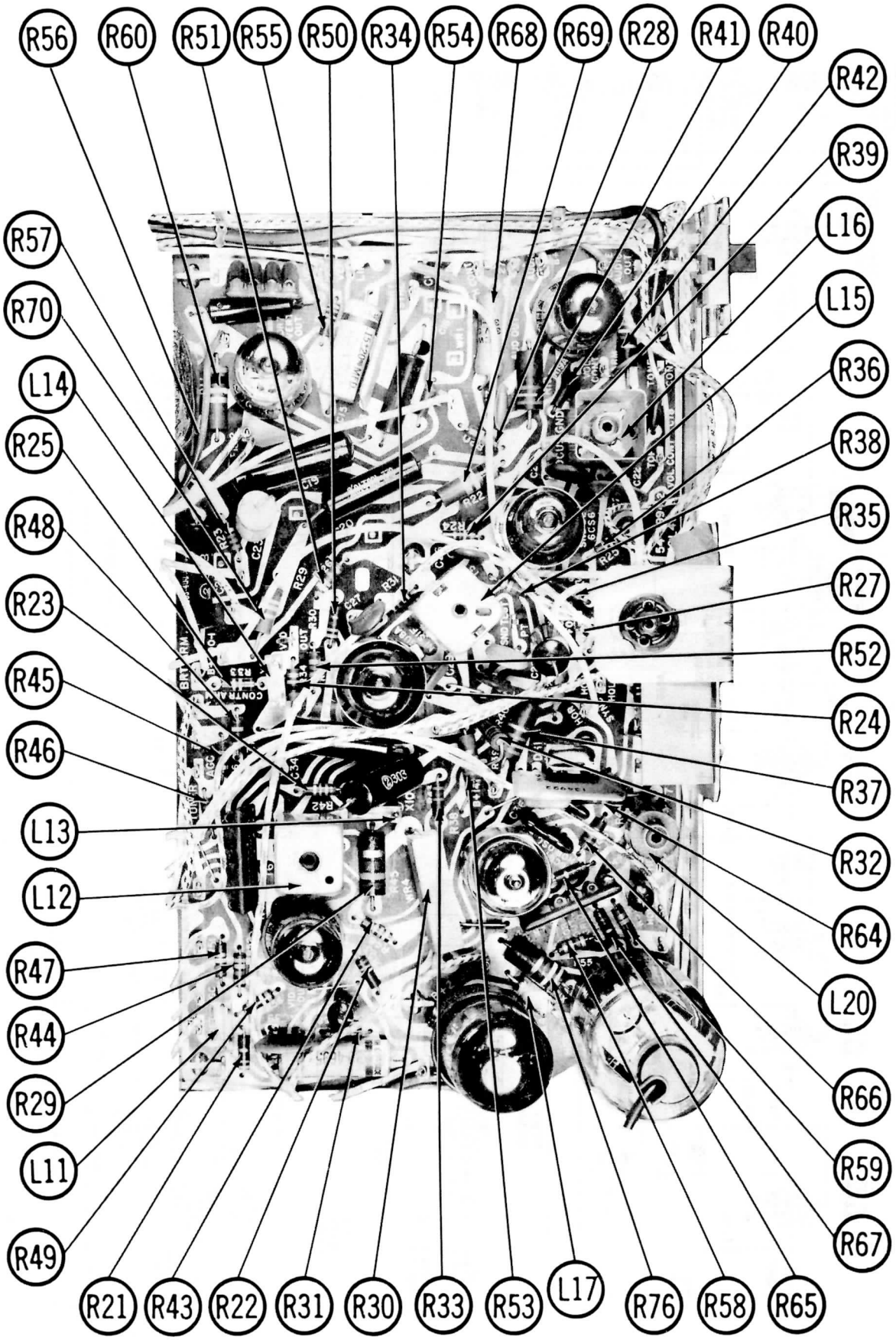
ITEM No.	PART NAME	PHILCO PART No.	NOTES
M5	Tuner	76-10524-3	VHF (T-100D) Ch. 10L43
	Tuner	76-10525-4	VHF (T-100E) Ch. 10L41
	Tuner	76-10524-5	VHF (T-100A) Ch. 10L42
	Tuner	76-10525-3	VHF with UHF provisions (T-101D) Ch. 10L43U
	Tuner	76-10524-4	VHF with UHF provisions (T-101E) Ch. 10L41U
	Tuner	76-10525-5	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)

WIRING DATA

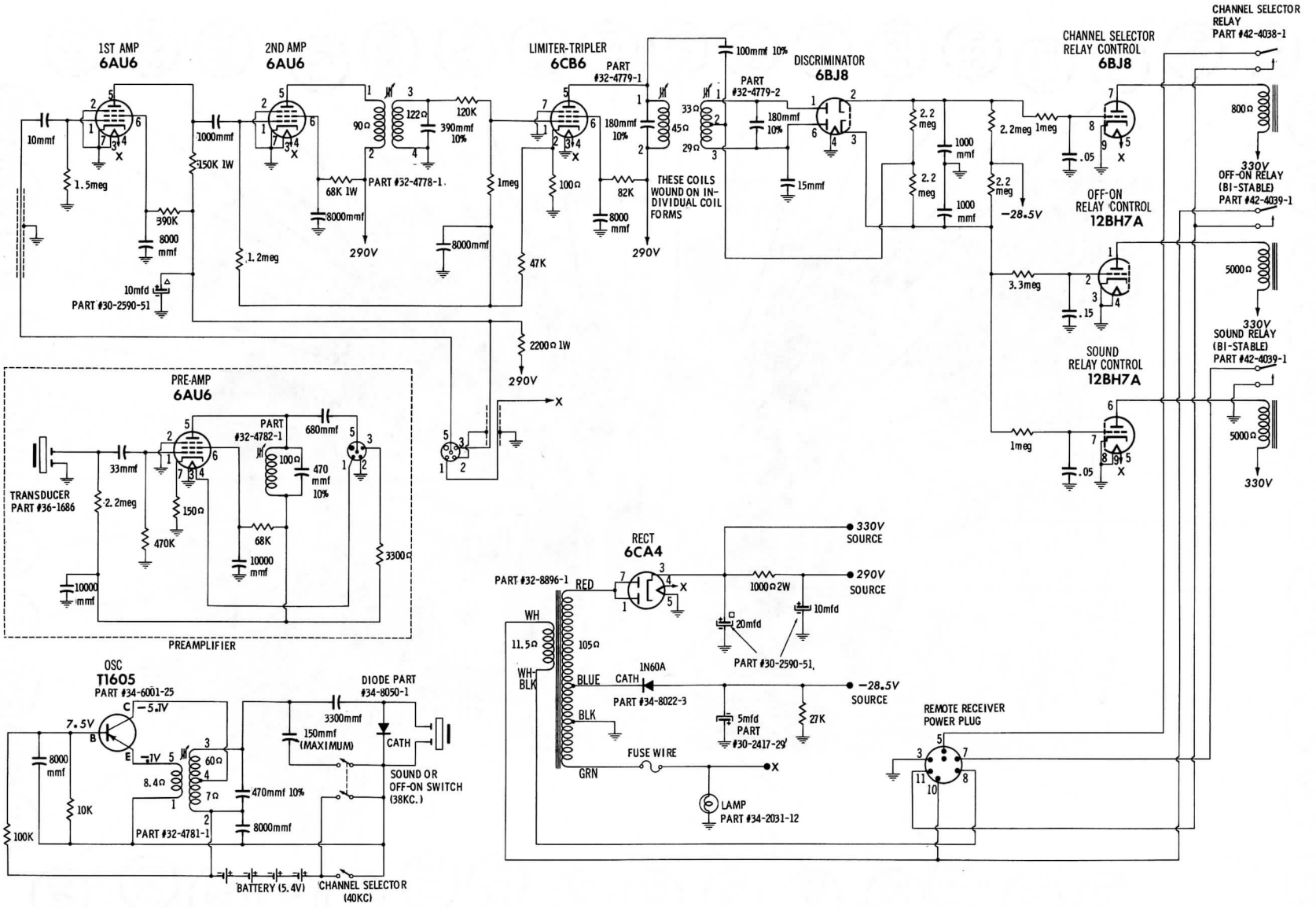
High Voltage Lead	Use BELDEN No. 8869
Shielded Hook-up Wire	Use BELDEN No. 8885 (Single Conductor) 8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type)	Use BELDEN No. 8874
300Ω 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 8484 (Round) - 4 Conductor 8485 (Round) - 5 Conductor 8488 (Round) - 8 Conductor



CHASSIS TOP VIEW

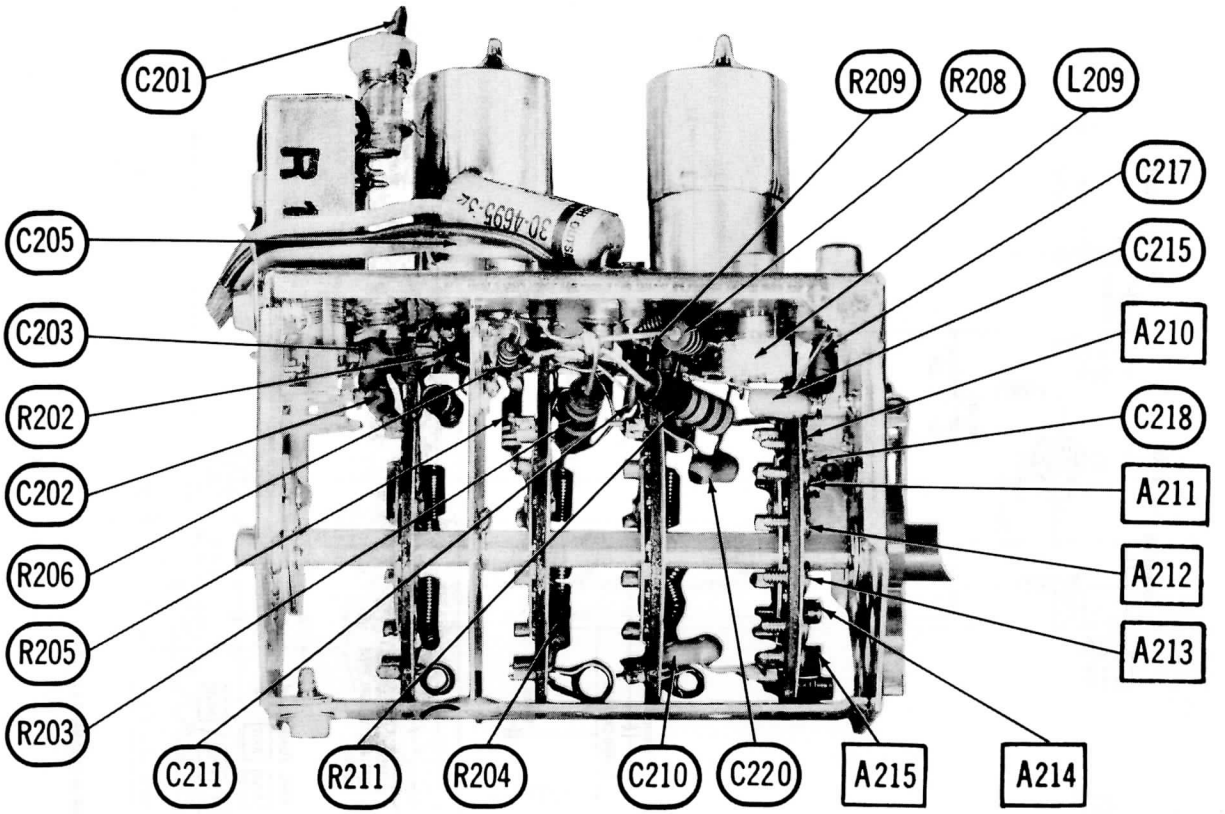


MAIN PRINTED BOARD - RESISTOR & INDUCTOR IDENTIFICATION

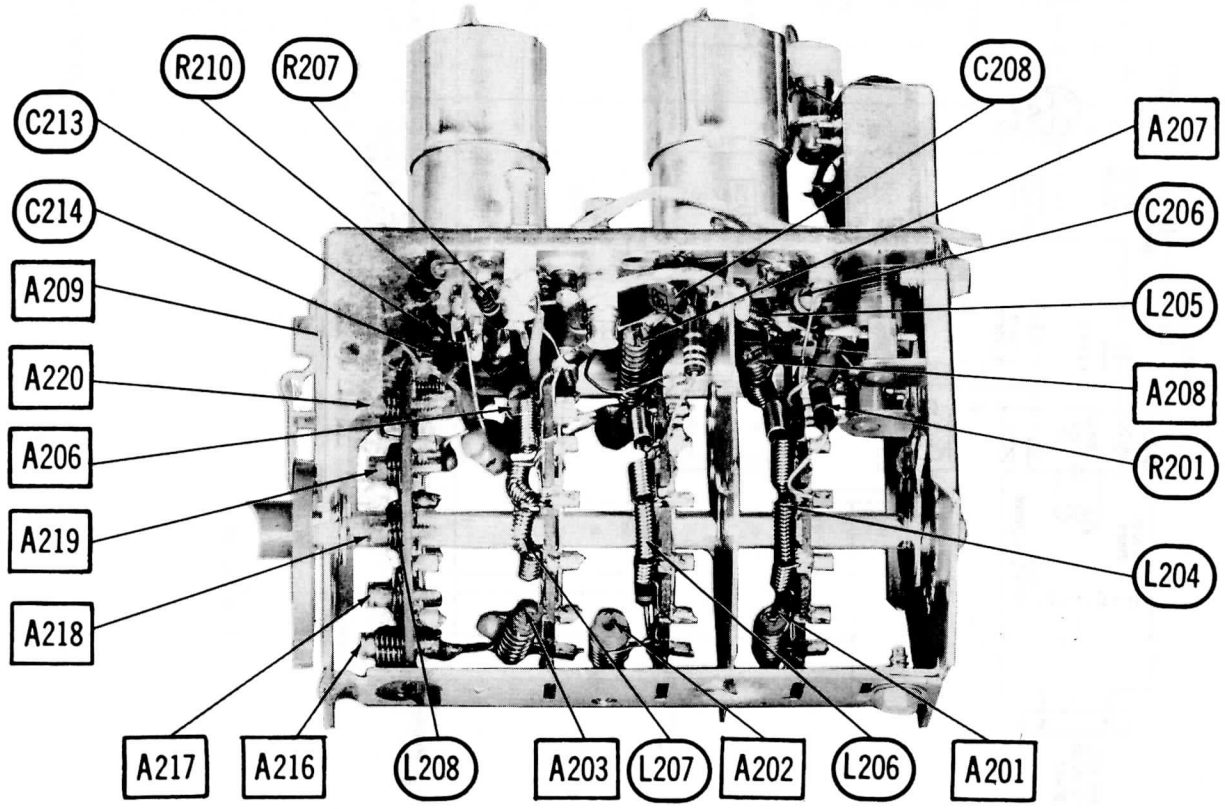


A PHOTOFACT STANDARD NOTATION SCHEMATIC

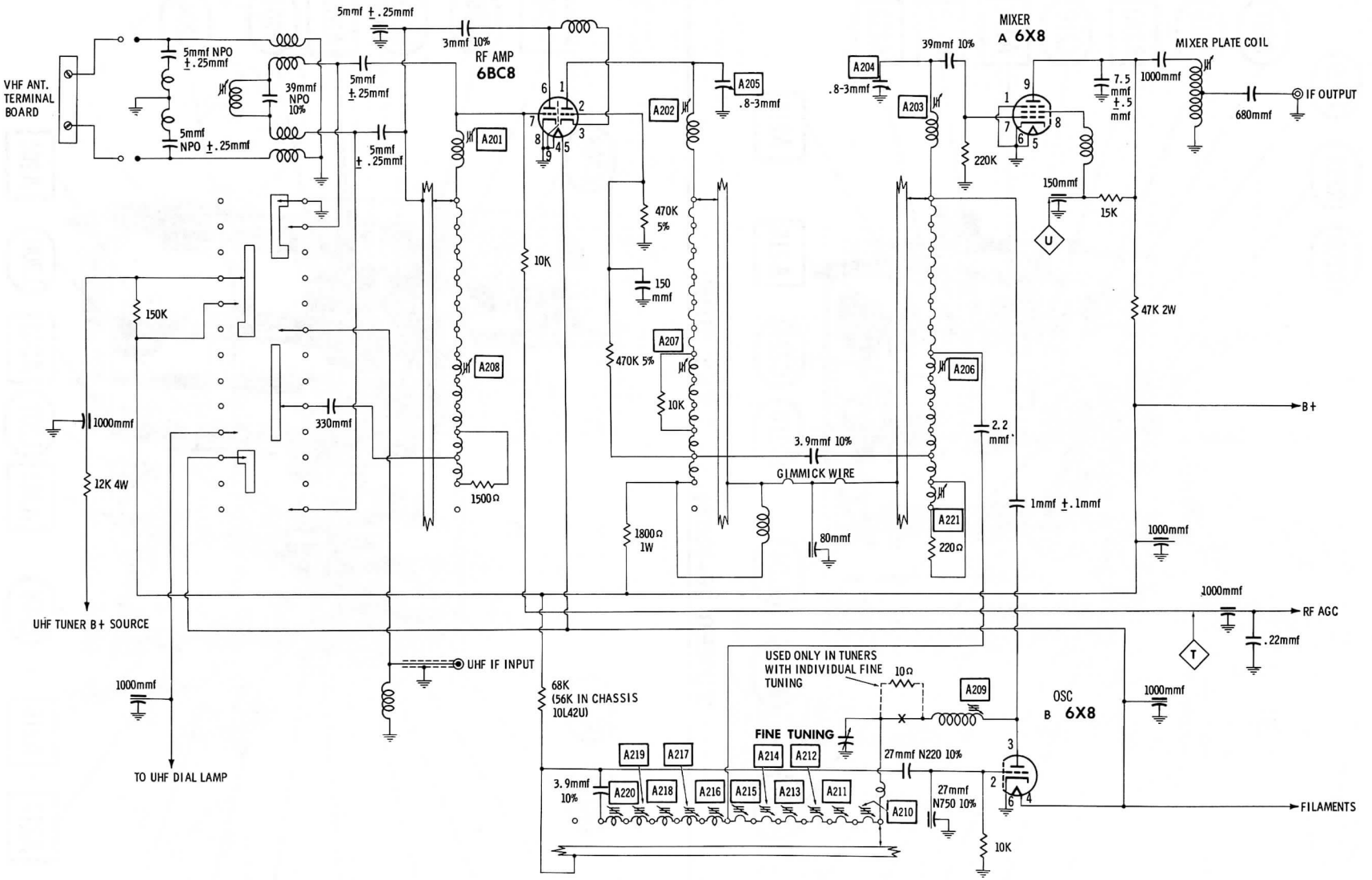
REMOTE CONTROL RC-50



TUNER 76-10524-3 - LEFT SIDE



TUNER 76-10524-3 - RIGHT SIDE

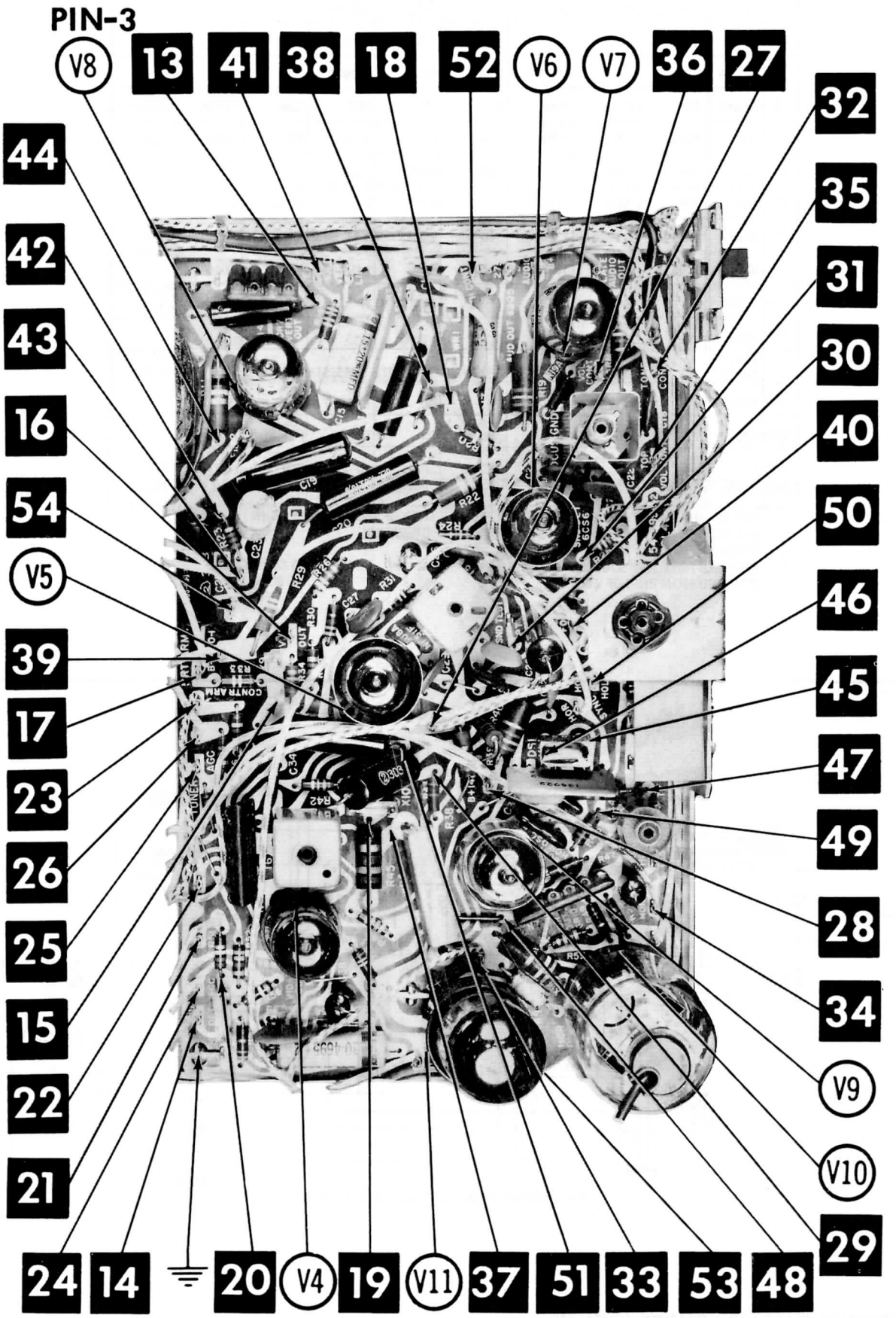


CHANNEL SELECTOR SWITCH SHOWN IN CHANNEL 13 POSITION

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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

CircuiTrace Numbers 13 thru 54



A Howard W. Sams CIRCUITRACE* Photo

MAIN PRINTED BOARD

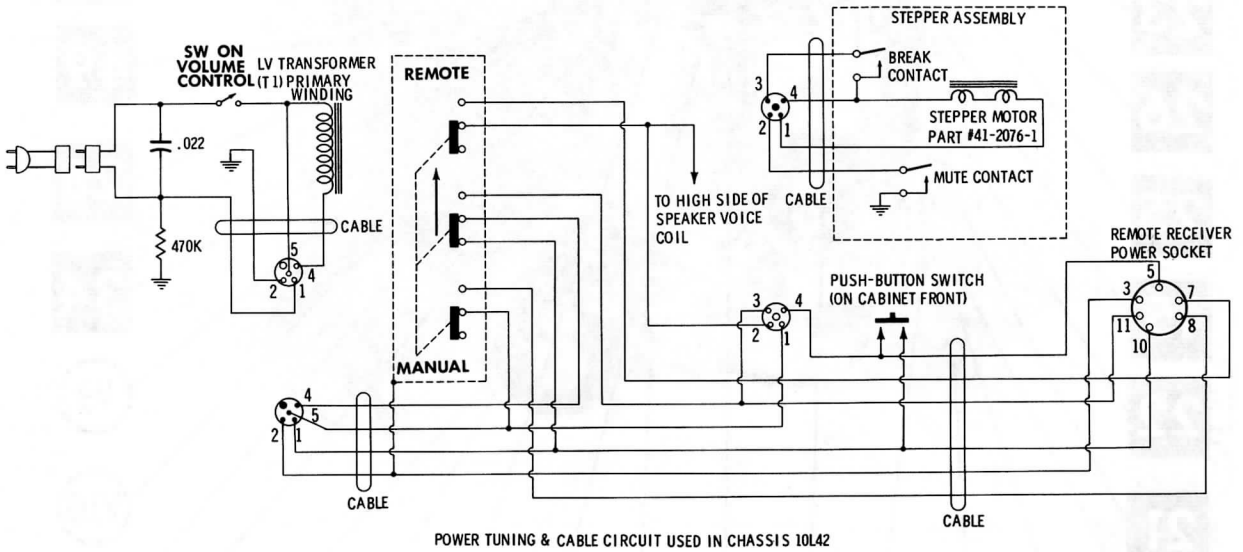
ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

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
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

¶ 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.

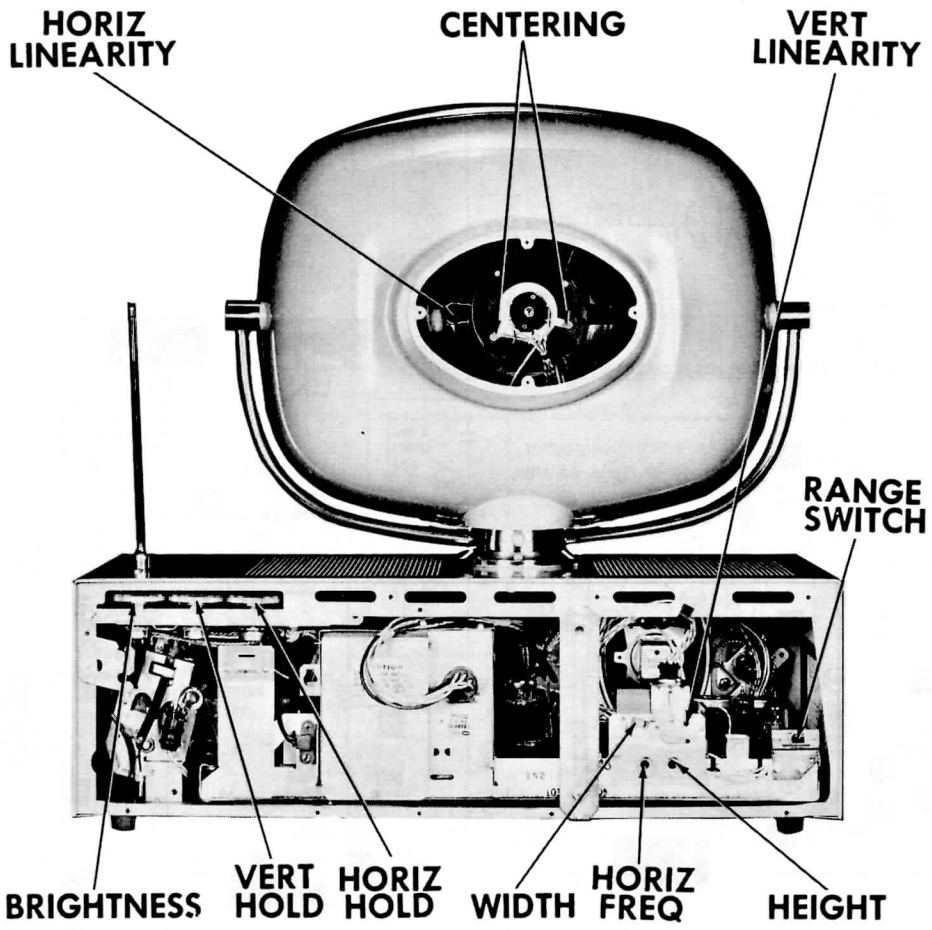
NC NO CONNECTION.
TP TIE POINT.



POWER TUNING & CABLE CIRCUIT USED IN CHASSIS 10L42

A PHOTOFACT STANDARD NOTATION SCHEMATIC

ALTERNATE POWER TUNING



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.