

PHOTOFACT® Folder



with **CIRCUITRACE®**

**PHILCO MODELS H2010BL,
H2010L (Ch. 10AT10)**

PHILCO MODELS H2010BL,
H2010L (Ch. 10AT10)

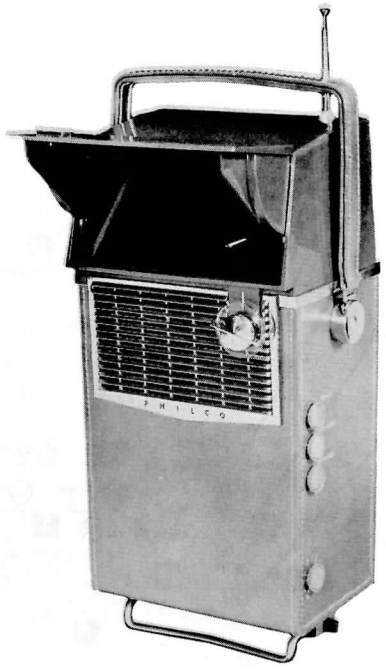
DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove all external push-on type knobs except the Elapsed-Time knob.
2. Remove 4 metal screws on bottom holding cabinet stand and lower section of cabinet to the chassis.
3. Remove 2 metal screws at rear and one in front holding top plastic housing. Remove antenna connection from tuner. Remove metal screw holding ground strap. Remove top plastic housing.
4. Remove 2 metal screws at rear and one at front of optical system. Remove optical unit.
5. Remove 5 metal screws holding battery mounting bracket. Remove bracket.
6. Remove chassis.

PICTURE TUBE REMOVAL

1. Remove chassis.
2. Remove picture tube socket, sleeve and magnet assembly, and HV lead.
3. Slide the picture tube out the top of chassis.



MODEL H2010L (SAFARI)
CHASSIS 10AT10

PHILCO MODELS H2010BL,
H2010L (Ch. 10AT10)

TRADE NAME	Philco Models H2010BL, H2010L (Safari) (Ch. 10AT10)	
MANUFACTURER	Philco Corp., Tioga & "C" Streets, Philadelphia, Pa.	
TYPE SET	Portable Television Receiver	
TRANSISTORS	Twenty-One	
TUBES	Three	
POWER SUPPLY	105-120 Volts AC, 60 Cycles or Battery, 7.5 Volts	RATING 11 Watts, .13 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13 VHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)	

SERVICING IN THE FIELD

SAFETY GLASS REMOVAL

Follow steps 1 thru 4 of "Disassembly Instructions". Remove 4 screws holding upper and lower retainers on optical unit. Remove beam splitter for cleaning.

FUSE

One fuse is used for low voltage power supply protection. (For location, see "Transistor & 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 "Transistor & 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 "Cabinet-Rear View".)

HORIZONTAL OSCILLATOR FIELD ADJUSTMENTS

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

BUZZ ADJUSTMENT

To eliminate intercarrier buzz, adjust the Discriminator secondary (A12) located on top of chassis.

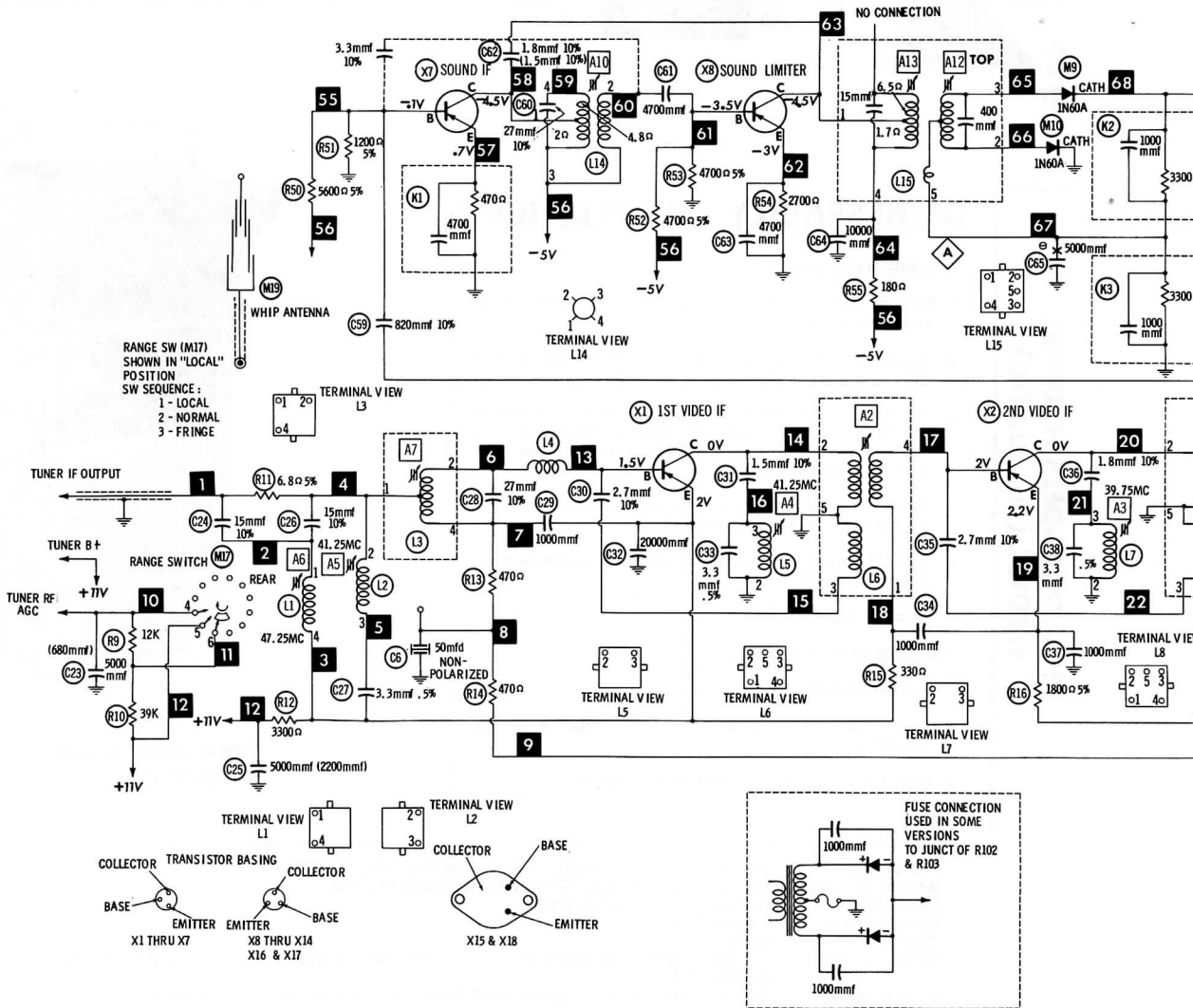
CENTERING

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

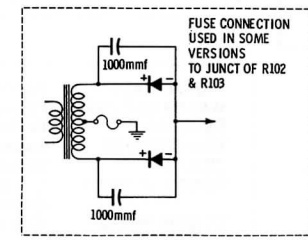
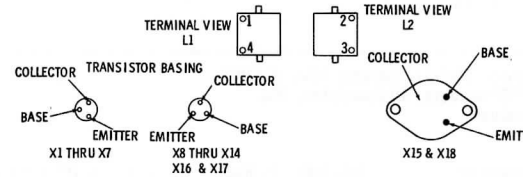
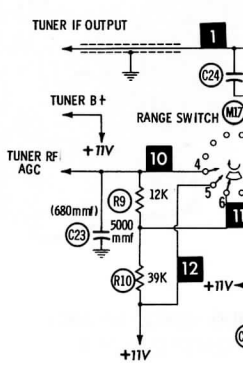
HOWARD W. SAMs & CO., INC. Indianapolis 6, Indiana

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RANGE SW (M17)
SHOWN IN "LOCAL"
POSITION
SW SEQUENCE:
1 - LOCAL
2 - NORMAL
3 - FRINGE



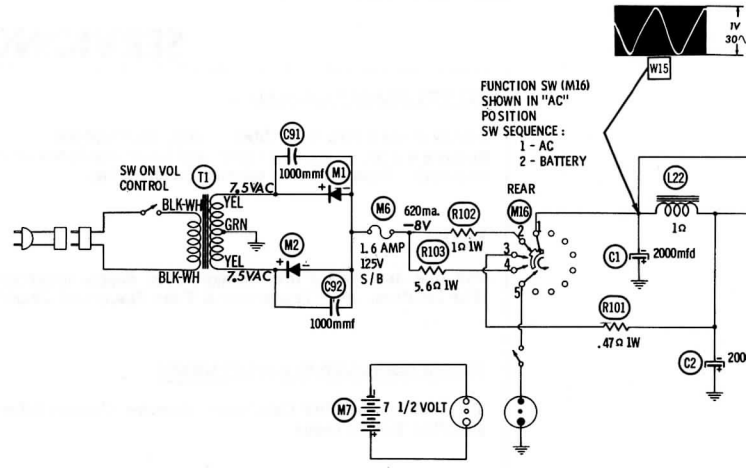
ADDITIONAL SCHEMATIC PAGE
VHF TUNER 76-11773 (T110)..... 14

RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
⊥ DENOTES CHASSIS GROUND
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)

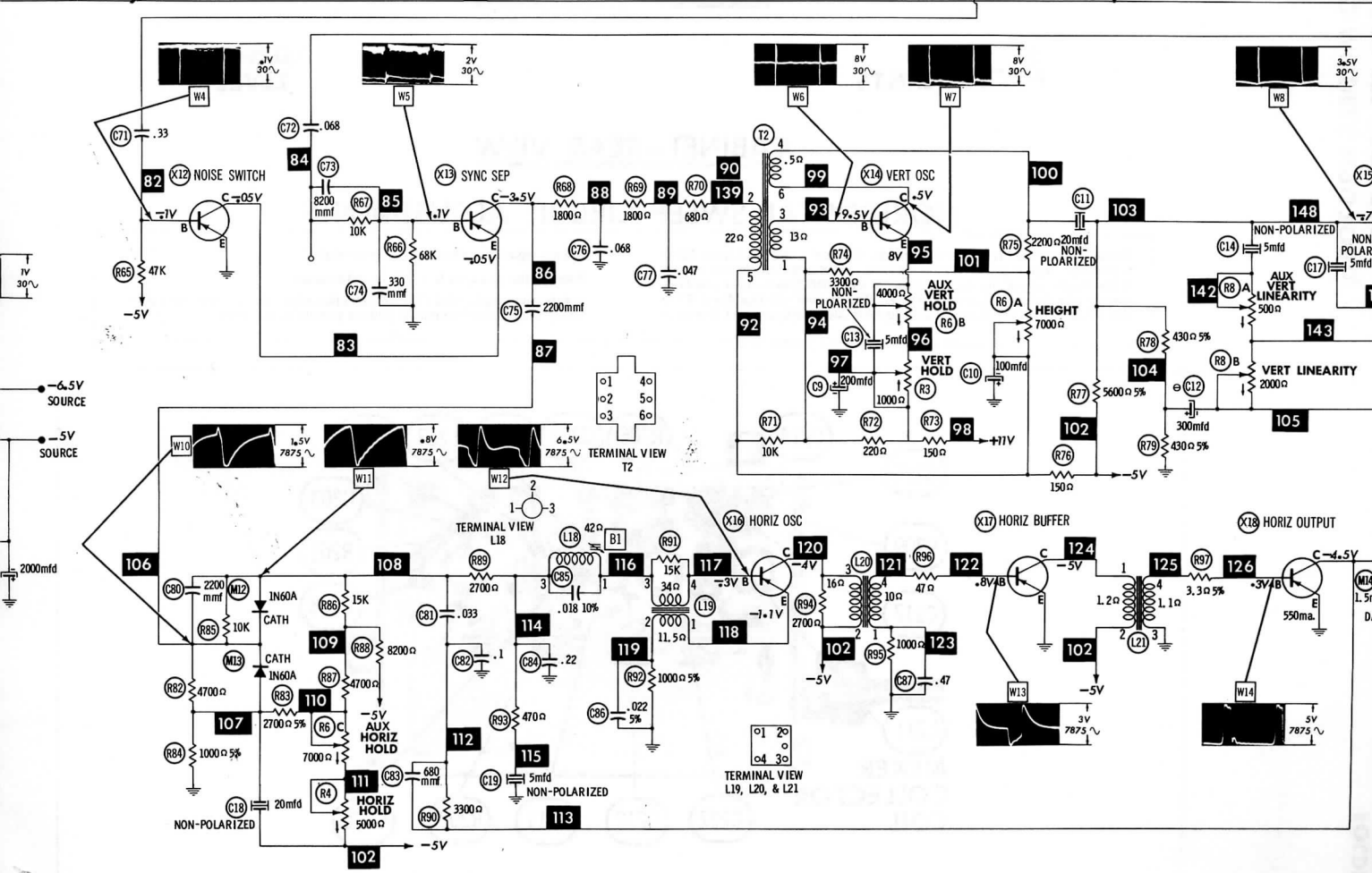
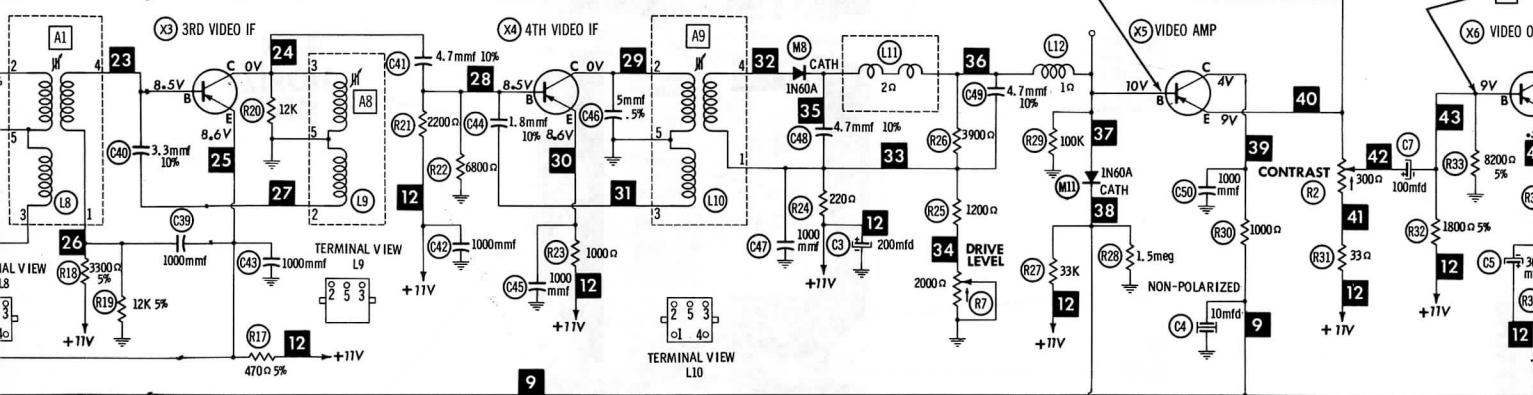
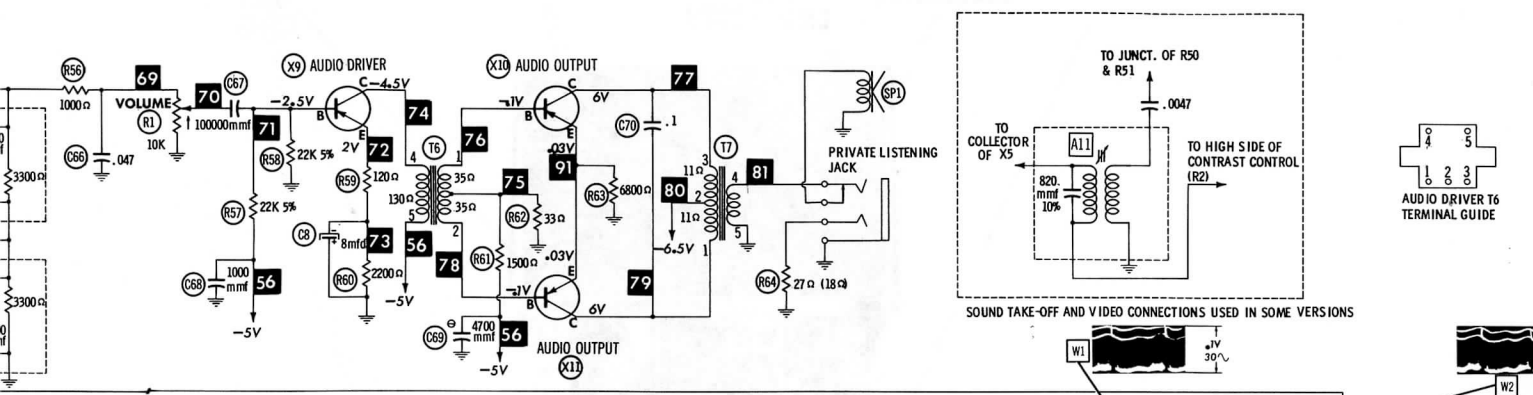
WAVEFORMS TAKEN WITH CONTROLS SET TO PRODUCE 7.5 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE GRID

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



A PHOTOFACIT STANDARD NOTATION SCHEMATIC
with CIRCUITRACE

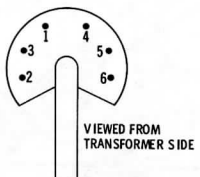
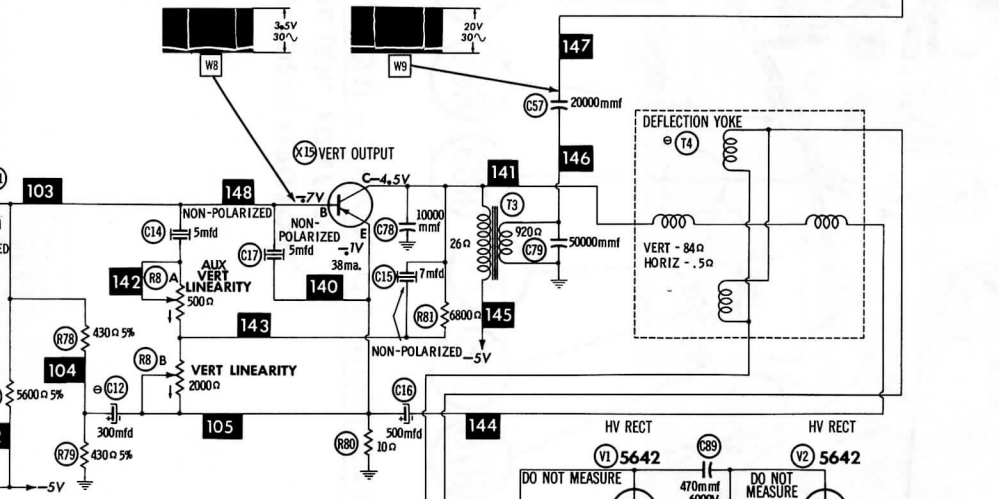
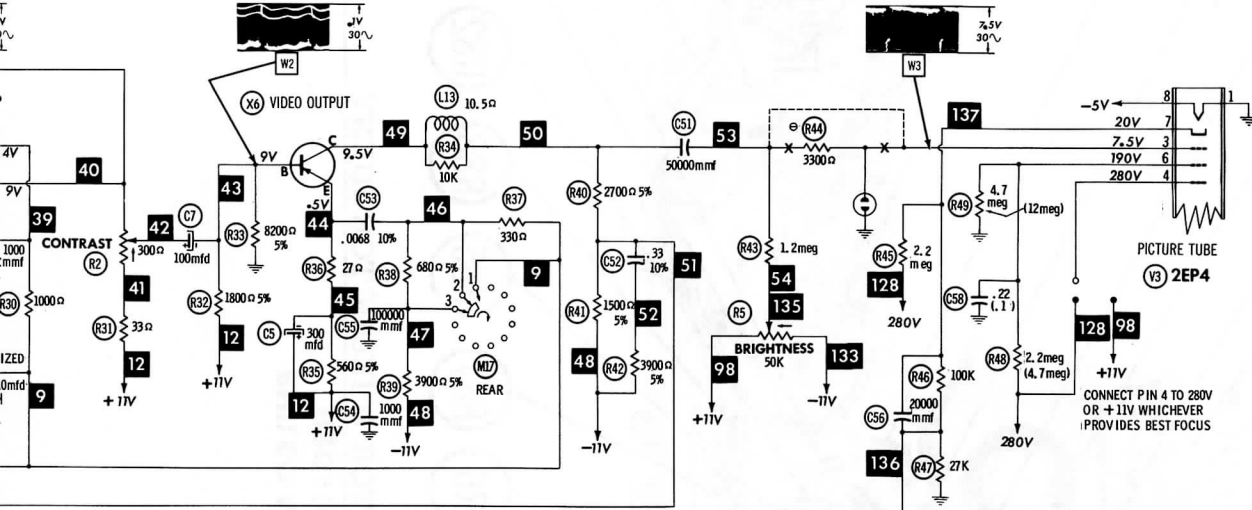
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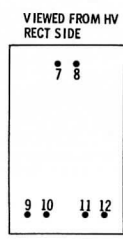
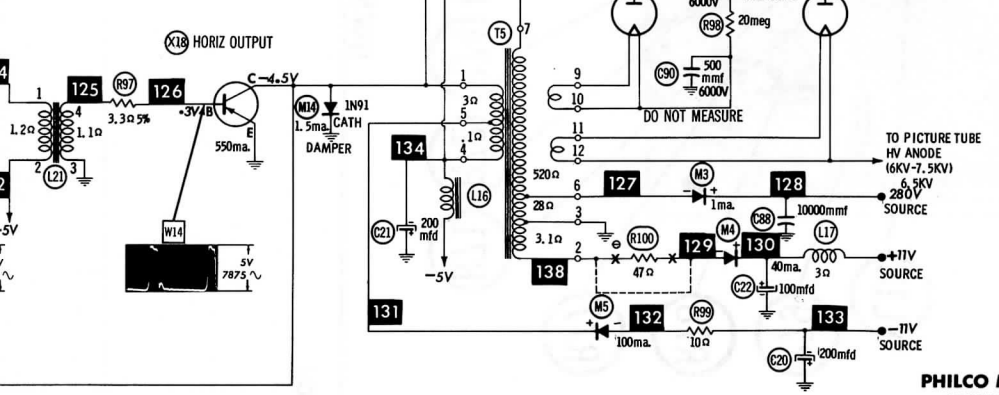
HIGH SIDE OF
CONTRAST CONTROL



USED IN SOME VERSIONS



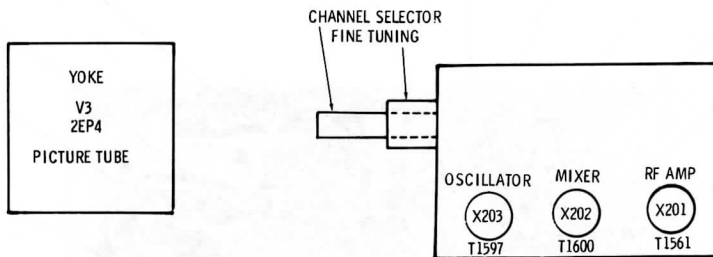
HORIZ OUTPUT
TRANSFORMER
TERMINAL GUIDE



VIEWS FROM HV
RECT SIDE

PHILCO MODELS H2010BL,
H2010L (Ch. 10ATIO)

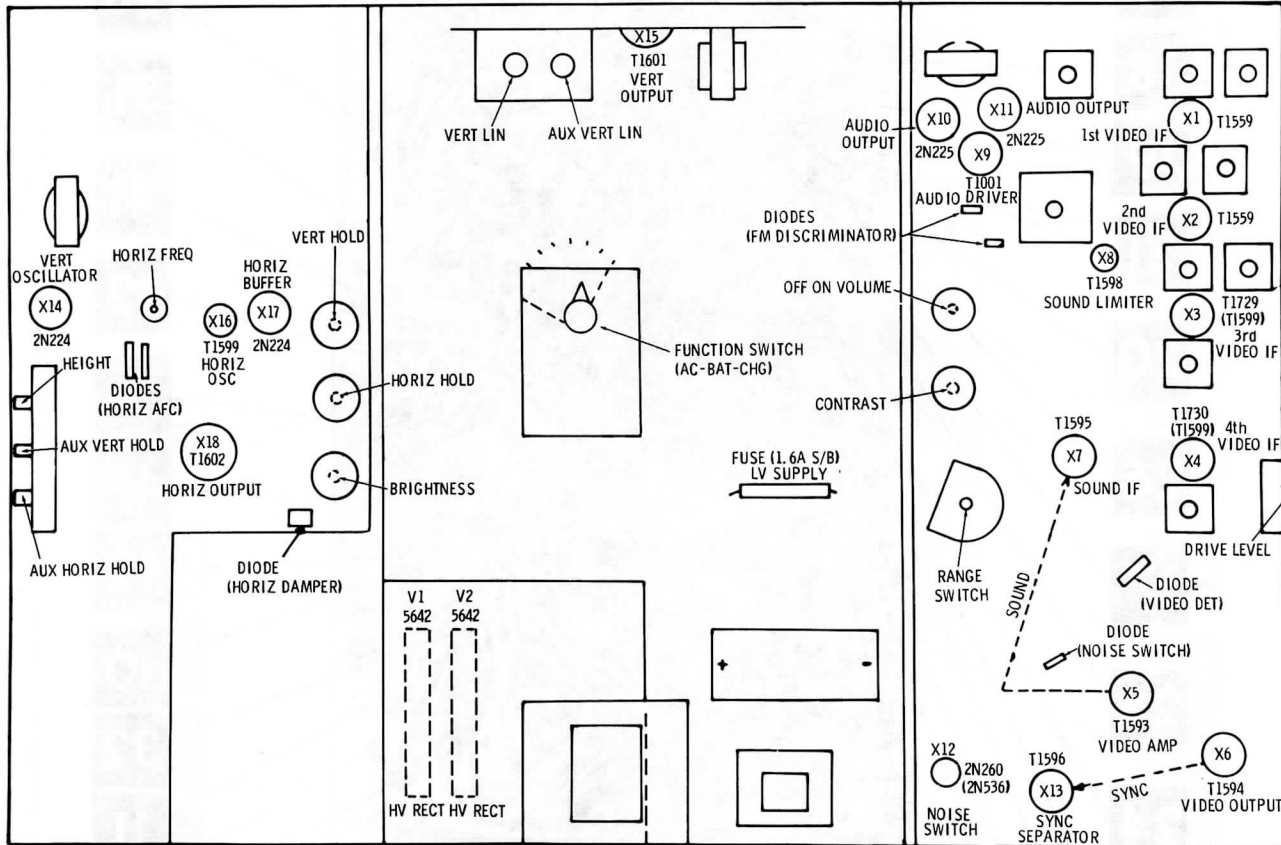
TRANSISTOR AND TUBE PLACEMENT CHART



SWEEP PRINTED BOARD

CHASSIS AND VERT OUTPUT PRINTED BOARD

VIDEO, SOUND, SYNC PRINTED BOARD



PHILCO MODELS H2010BL,
H2010L (Ch. 10A110)

TRANSISTOR AND TUBE FAILURE CHECK CHART

The following chart lists tubes and transistors whose failures are most likely to produce indicated symptoms. Refer to Transistor & Tube Placement Chart for location of tubes and transistors.

POWER SUPPLY FAILURE

No raster, no sound Fuse (1.6A), Rect. (B+)

SWEEP FAILURE

No raster, has sound X16, X17, X18, Diode (Damper), V1, V2, V3

No vertical deflection X14, X15

Poor vert. linearity or foldover X14, X15

Poor horiz. linearity or foldover X16, X19, X18, Diode (Damper)

Narrow picture Rect. (B+), X16, X17, X18, Diode (Damper)

Vert. off freq. X14

Horiz. off freq. X16

LOSS OF PICTURE OR SOUND

No pic, no sound, has raster X1, X2, X3, X4, Diode (Video Det), X5

No pic, no sound, has snow X201, X202, X203, X1

No pic, has sound, has raster X6, V3

Has pic, no sound X7, X8, X9, X10, X11

SYNC FAILURE

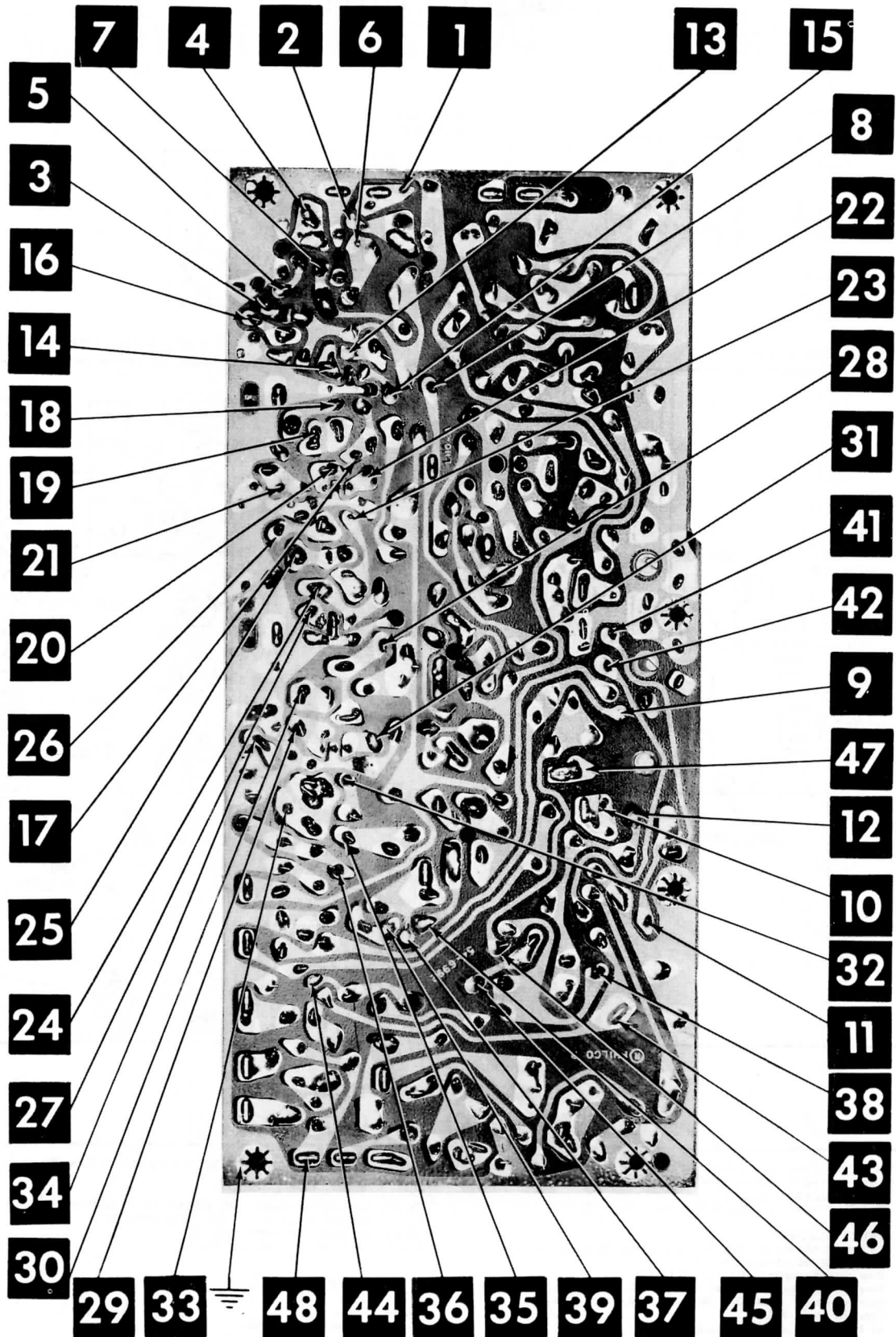
No vert. sync X13

No horiz. sync X13

No vert. or horiz. sync X13

FOLDER 2

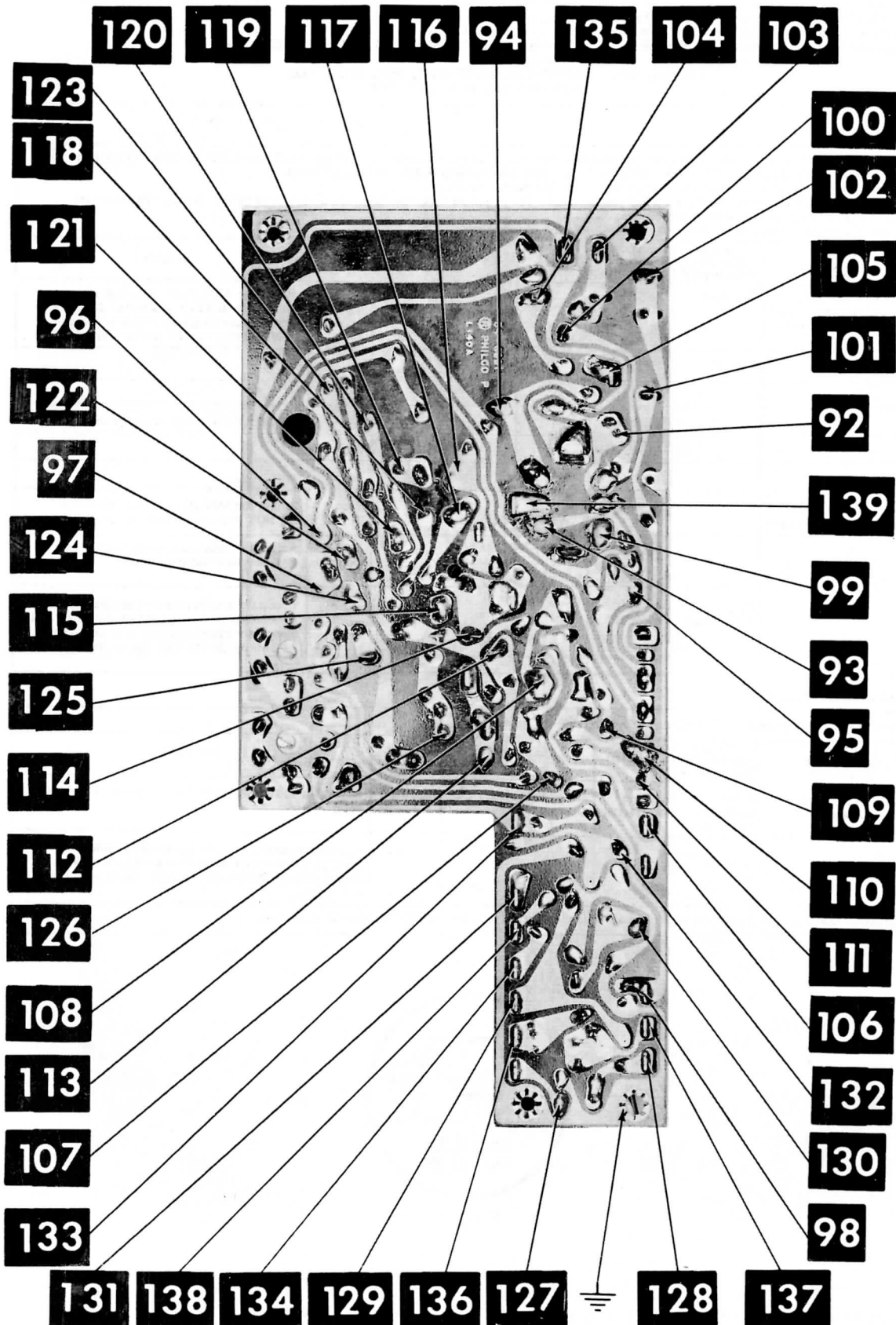
CircuiTrace Numbers 1 thru 48



A Howard W. Sams **CIRCUITRACE** Photo

VIDEO, SOUND, SYNC PRINTED BOARD

CircuiTrace Numbers 92 thru 139



PHILCO MODELS H2010BL,
H2010L (Ch. 10A110)

FOLDER 2

ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

The High Voltage lead should be securely taped and kept away from the chassis.
 Set Range switch to Normal and Drive Level control (R7) to mid-position.
 Suggested Alignment Tools: A1 thru A9 GENERAL CEMENT # 5009, 8195, 8274, 8275, 8728, 8987
 WALSCO #2531
 A10, A12, A13 GENERAL CEMENT #8282, 8606, 8606L, 9295
 WALSCO #2526, 2543, 2544, 2545

VIDEO IF ALIGNMENT

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 sweep generator output to provide a usable pattern on scope.
 Connect a variable bias supply between TP-3 and chassis. The required bias will range from -1.5 to +3 volts. During alignment set bias to +.2 volts unless otherwise stated.
 Adjust A1 and A2 so that top of inner core is flush with top of outer core.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Unplug IF cable from tuner and connect generator across cable plug.	Not used	39.75MC (400v 30% AM Mod)		Vert. Amp. to TP-4. Low side to chassis.	A3	Adjust for MINIMUM scope indication. Raise bias at TP-3 in positive direction if necessary to obtain usable scope deflection being careful not to overload.
2.	"	"	41.25MC		"	A4, A5	"
3.	"	"	47.25MC		"	A6	"
4.	"	"	45.3MC		"	A7	Adjust for maximum scope indication.
5.	"	"	45.0MC		"	A8	"
6.	"	"	44.0MC		"	A9	"
7.	Across antenna input jack. Reconnect IF cable.	"	65.75MC	4	"	Fine Tuning	Adjust for MINIMUM scope indication. DO NOT disturb for balance of alignment.
8.	"	"	44.7MC	"	"	Mixer Collector Coil	Adjust for maximum scope indication. Use peak nearest top of coil.
9.	"	69MC (10MC Swp)	42.5MC 45.75MC	"	"		Check for response curve similar to Fig. 1. If necessary, retouch Mixer Collector coil to correct high frequency side of curve, A5 for low frequency side and A7 for correct tilt.

SOUND IF ALIGNMENT

Connect the negative lead of a 3 volt bias supply to TP-3. Positive to chassis.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
10.	High side thru 10K to TP-4. Low side to chassis.	4.5MC (400v 30% AM Mod)	Any non-interfering	DC probe to point Δ . Common to chassis.	A10, All	Adjust for maximum deflection. (All not used in some sets).
11.	"	"	"	"	A12, A13	Preset for maximum core separation. Adjust for maximum deflection using first peak turning in. Adjust A13 for maximum deflection using first peak turning in.
12.	Disconnect test equipment and tune in a weak air signal. Retouch A12 for MINIMUM noise or distortion.					

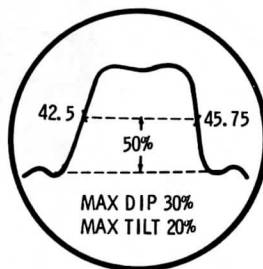


FIG. 1

TUNER ALIGNMENT INSTRUCTIONS

76-11773 (T110)

PRE-ALIGNMENT INSTRUCTIONS

The High Voltage lead should be securely taped and kept away from the chassis.
 Suggested Alignment tools: A201, A208, A210, A212, A219 thru A222 GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8987
 WALSCO #2531
 A217, A218 GENERAL CEMENT #5004, 5008, 5009
 WALSCO #2520

OSCILLATOR ALIGNMENT

Set the Fine Tuning to the center of its range.
 The 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.
 Coils not containing slugs are adjusted by bending toward or away from switch wafer.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Direct	Across antenna terminals.	209.75MC (400v 30% AM Mod)	13	Across Video Det. load	A201	Adjust for MINIMUM scope indication.
2. "	"	203.75MC	12	"	A202	"
3. "	"	197.75MC	11	"	A203	"
4. "	"	191.75MC	10	"	A204	"
5. "	"	185.75MC	9	"	A205	"
6. "	"	179.75MC	8	"	A206	"
7. "	"	173.75MC	7	"	A207	"
8. "	"	81.75MC	6	"	A208	"
9. "	"	75.75MC	5	"	A209	"
10. "	"	65.75MC	4	"	A210	"
11. "	"	59.75MC	3	"	A211	"
12. "	"	53.75MC	2	"	A212	"

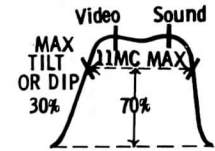


FIG. 201

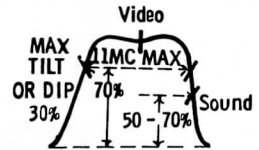


FIG. 202

RF AND MIXER ALIGNMENT

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.
 Connect a 330Ω resistor from Collector of Mixer to chassis. Replace cover.
 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
13. Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Amp. thru special Detector jig (Fig. 204) to point . Low side to chassis.	A213	Adjust for maximum gain and symmetry of response similar to Fig. 201. with markers as shown.
14. "	"	"	213MC	"	"	A214, A215	If necessary, adjust by expanding or compressing coil turns for maximum symmetrical response centered about 113MC. marker.
15. "	"	"	210MC 216MC	"	"	A216	Adjust spacing between "gimmick" wires (A216) for proper bandwidth as in Fig. 201
16. "	"	177MC	177MC	7	"	A217, A218	Adjust to obtain correct tilt on top of curve as in Fig. 203 to compensate for the tuning effect of channel 13. Repeat step 14, retouch only SLIGHTLY. Repeat step 16.
17. "	"	85MC	87.75MC	6	"	A219, A220	Adjust for approximate correct bandwidth with sound carrier between 50 and 70% as in Fig. 202.
18. "	"	"	83.25MC	"	"	A221	Adjust for maximum gain at 83.25MC marker. Repeat step 17 adjust A219 and A220 only SLIGHTLY.
19. "	"	Not used	43.5MC (400v 30% AM Mod)	4	Across Video Det. load	A222	Remove 330Ω resistor. Adjust for MINIMUM 400v indication on scope.

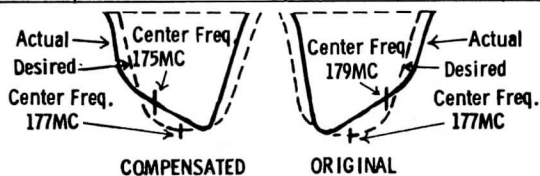


FIG. 203

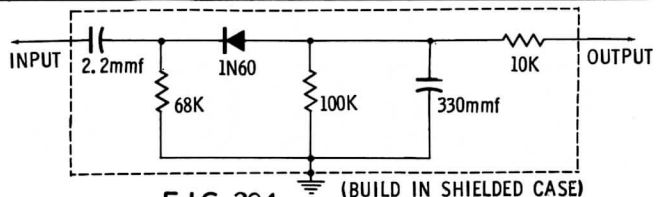


FIG. 204

(BUILD IN SHIELDED CASE)

PHILCO MODELS H2010BL,
H2010L (Ch. 10A110)

FOLDER 2

TUNER PARTS LIST AND DESCRIPTIONS

76-11773(T110)

TRANSISTORS

ITEM No.	PHILCO PART No.	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X201	34-6000-25	RF Amp. (T1561)					PNP
X202	34-6000-26	Mixer (T1600)					PNP
X203	34-6000-27	Oscillator (T1597)					PNP

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	100 N2200					*				
C202	8		NPO-DI 8.2		C10V8C					10TCC-V8
C203	15	#30-1268-8		829-3		CV-1	CT565			
C204	.5-3									
C205	20	#30-1268-17								
C206	3.9	#30-1268-15								
C207	1-3.8			829-4		CV-2	CT551			
C208	1000		EF-001	MFT-1000		CCF-102	CT280A			
C209	.82 10%	#30-1221-10								
C210	1-3.8			829-4		CV-2	CT551			
C211	5		NPO-DI 5.0	DTZ-4R7	C10V5C	CCTO-050	CNO-547			10TCC-V5
C212	30	#30-1268-9								
C213	15	#30-1268-8								
C214	1000		BPD-001	DD-102	BYA10D1	CCD-102	GP210			10TS-D10
C215	1000		EF-001	MFT-1000		CCF-102	CT280A			
C216	7		NPO-DI 6.8	DTZ-6R8	C10V7C	CCTO-628	CNO-568			10TCC-V68
C217	1000		EF-001	MFT-1000		CCF-102	CT280A			
C218	1.5 N2200	#30-1224-136				*				
C219	1.8		NPO-SI 2.0		C10V2C					10TCC-V18
C220	1000		EF-001	MFT-1000		CCF-102	CT280A			
C221	27	#30-1268-16								
C222	1000		EF-001	MFT-1000		CCF-102	CT280A			
C223	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	12K		R205	39K		R209	5600Ω	
R202	12K		R206	12K		R210	10K	(12K)*
R203	4700Ω		R207	1200Ω				
R204	1500Ω		R208	1500Ω	(1200Ω) *			

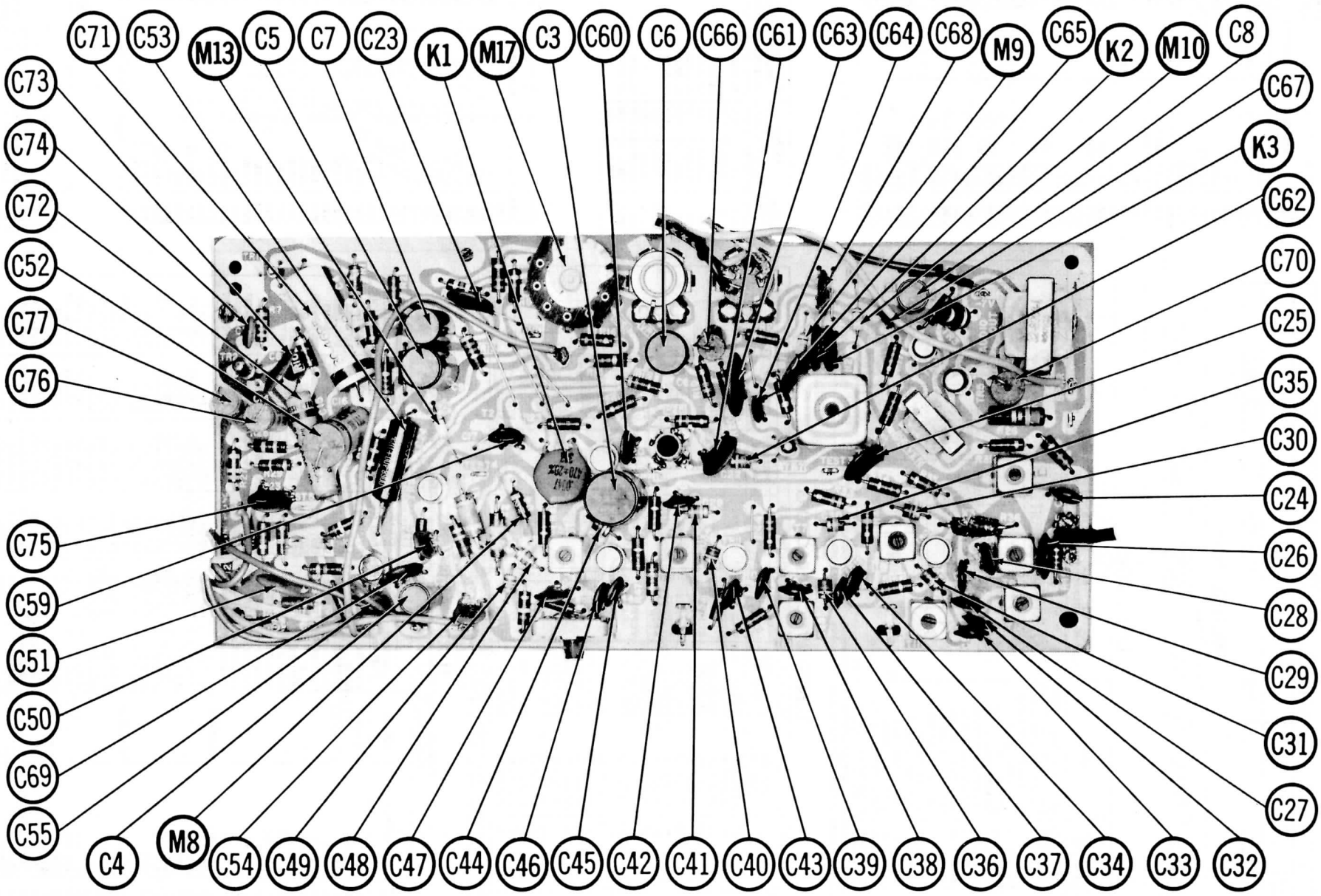
* Alternate value.

COILS (RF-IF)

ITEM No.	USE	PHILCO PART No.	NOTES	ITEM No.	USE	PHILCO PART No.	NOTES
L201	IF Trap Coil	32-4788-2		L207	RF Choke	32-4786-12	
L202	Ant. Coil	32-4786-2	Channel 13	L208	RF Choke	32-4785-1	
L203	RF Choke	32-4785-1		L209	RF Choke	32-4786-14	
L204	RF Coil	32-4786-15	Channel 13	L210	Osc. Coil	32-4788-1	Channel 13
L205	Mixer Coil	32-4786-23	Channel 13	L211	Mixer Collector Coil	32-4787	
L206	IF Trap Coil	32-4786-13					

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
	Shaft	54-5579	
	Switch & Shaft	76-11779	Fine Tuning
	Stator, Osc.		Channel Selector
	Fine Tuning	28-13173-4	



VIDEO, SOUND, SYNC PRINTED BOARD - CAPACITOR & MISC IDENT

PHILCO MODELS H2010BL,
H2010L (Ch. 10A110)

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PHILCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M6	3AG	1.6A 125V S/B P/T	45-2656-23		31501.6 (3AG 1.6A 125V S/B P/T)		MDV 1 6/10	

BATTERIES

ITEM No.	VOLTAGE	PHILCO PART No.	REPLACEMENT DATA				NOTES		
			BURGESS		EVEREADY			MALLORY	
			"A"	"B"	"A"	"B"		"A"	"B"
M7	7½V	41-8066			560				

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA				NOTES
		PHILCO PART No.	CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M8	1N60A	34-8022-3	1N60	1N60	1N60	Video Detector (Pigtail)
M9	1N60A	34-8022-3	1N60	1N60	1N60	FM Discriminator (Pigtail)
M10	1N60A	34-8022-3	1N60	1N60	1N60	FM Discriminator (Pigtail)
M11	1N60A	34-8022-3	1N60	1N60	1N60	Phase Detector (Pigtail)
M12	1N60A	34-8022-3	1N60	1N60	1N60	Phase Detector (Pigtail)
M13	1N60A	34-8022-3	1N60	1N60	1N60	Noise Switch (Pigtail)
M14	1N91	34-8051				Horiz. Damper (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M15	Tuner	76-11773	VHF (T-110)
M16	Switch	42-2116-2	Function (AC-Battery-Charge)
M17	Switch	42-2113-1	Range (Fringe, Normal, Strong)
M18	Magnet	76-10970-1	Beam Aligning
M19	Antenna		JFD Replacement Part #TA390
	Printed Board	54-6992	Video, IF, Sync, Sound
	Printed Board	54-6991	Deflection
	Printed Board	54-6990	Vert. Output

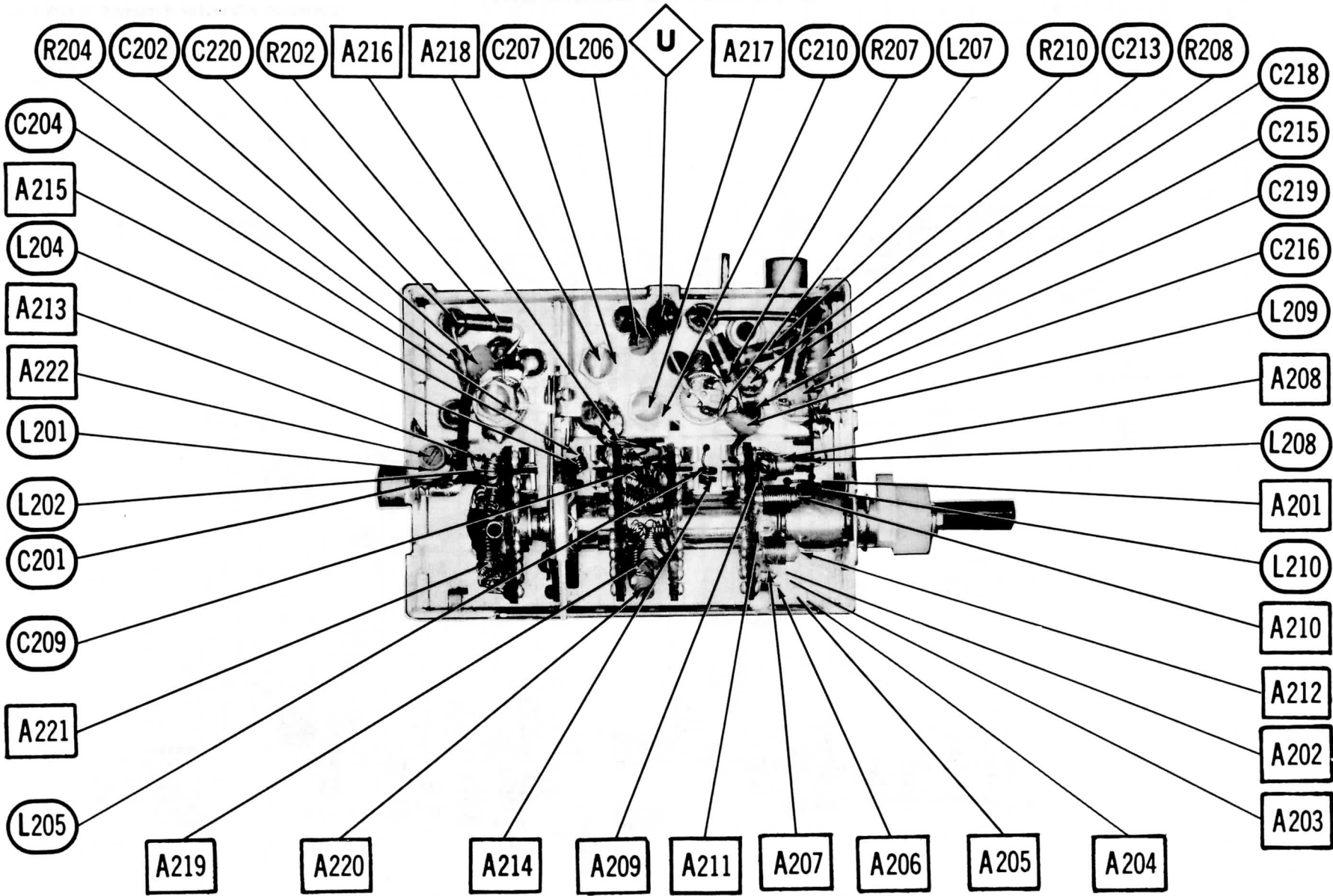
CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	28-11353-2	Channel Selector, Model H-2010L
Knob	28-11353-4	Channel Selector, Model H-2010BL
Knob	54-5577-1	Fine Tuning
Knob	54-6265-48	Off-On-Volume, Brightness, Contrast, Vert. Hold, Model H2010L
Knob	54-6265-51	Off-On-Volume, Brightness, Contrast, Vert. Hold, Model H2010BL
Knob	54-5638-1	Function, Model H2010L
Knob	54-5638-2	Function, Model H2010BL
Knob	54-6265-49	Range, Model H2010L
Knob	54-6265-52	Range, Model H2010BL
Knob	54-6265-50	Time Indicator, Model H2010L
Knob	54-6265-53	Time Indicator, Model H2010BL
Beam Splitter	54-5575	Part of Optical System
Mirror	54-5576	Part of Optical System
Lid	54-5570-1	Visor, Part of Optical System, Model H2010L
Lid	54-5570-2	Visor, Part of Optical System, Model H2010BL
Mask	28-13111	Part of Optical System
Housing	54-5568-1	Part of Optical System
Tilt Mechanism	76-11788	Part of Optical System
Cabinet	54-5575-3	Model H2010L
Cabinet	54-5574-4	Model H2010BL
Cabinet Top	54-5569-1	Brown, Model H2010L, H2010BL
Cabinet Top	54-5569-2	Black, Models H2010L, H2010BL
Handle Assembly	76-11805-1	Model H2010L
Handle Assembly	76-11805-2	Model H2010BL

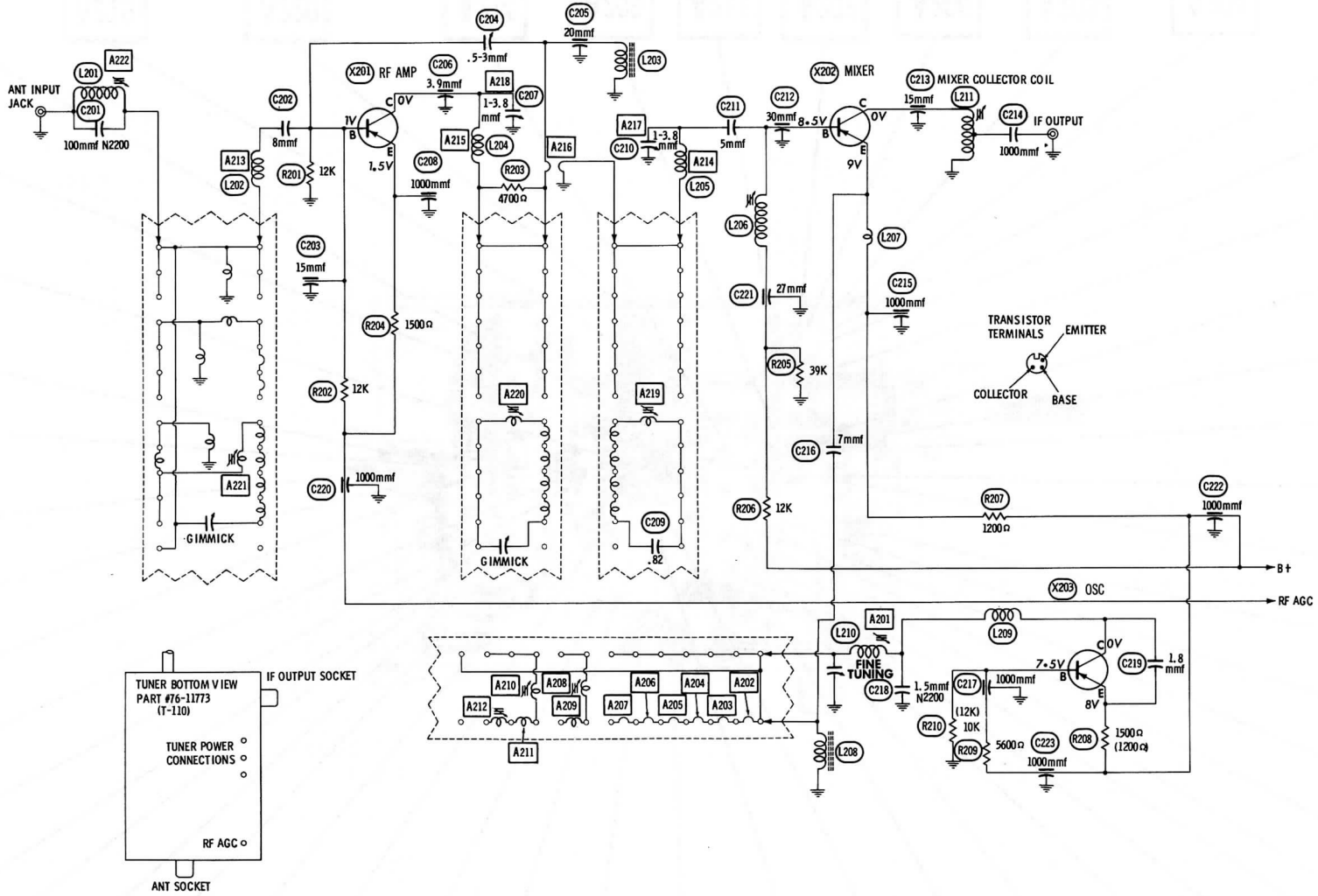
WIRING DATA

High Voltage Lead	Use BELDEN No. 8869
Shielded Hook-up Wire	Use BELDEN No. 8885 (Single Conductor) 8798 (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



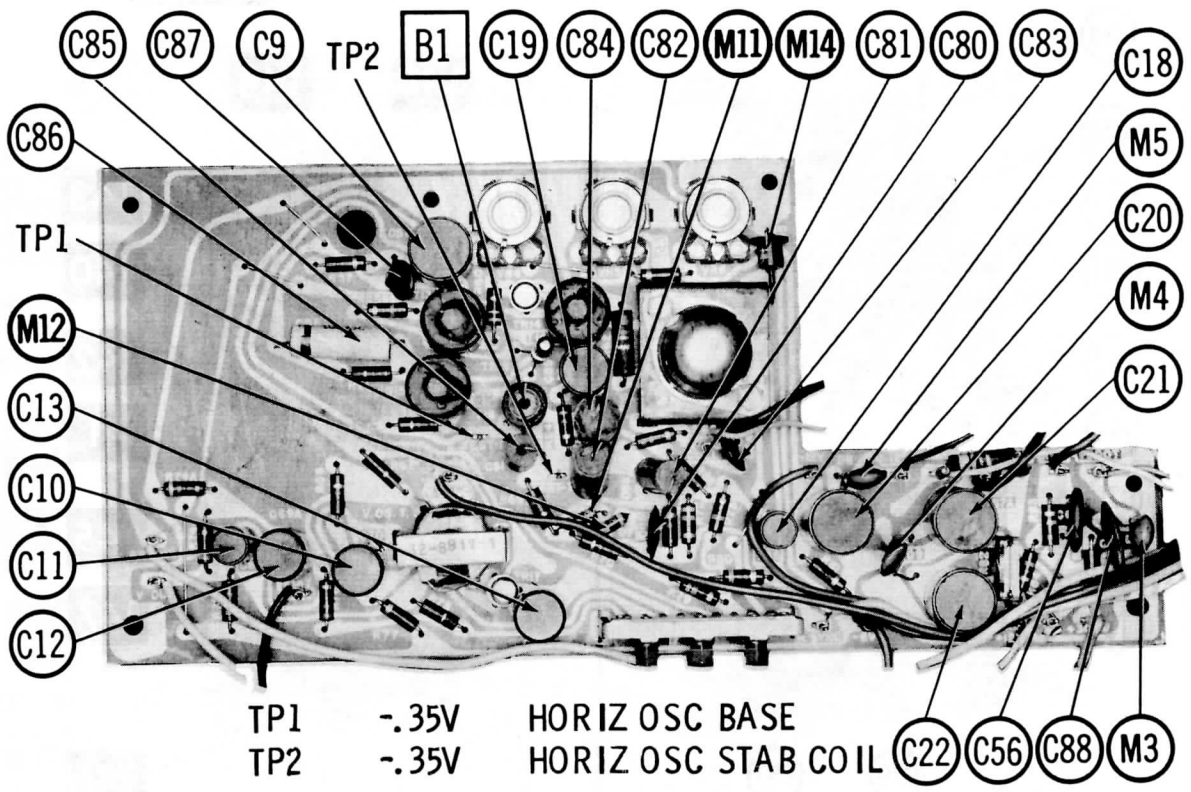
TUNER 76-11773 (T110) BOTTOM VIEW

PHILCO MODELS H2010BL,
H2010L (Ch. 10A110)

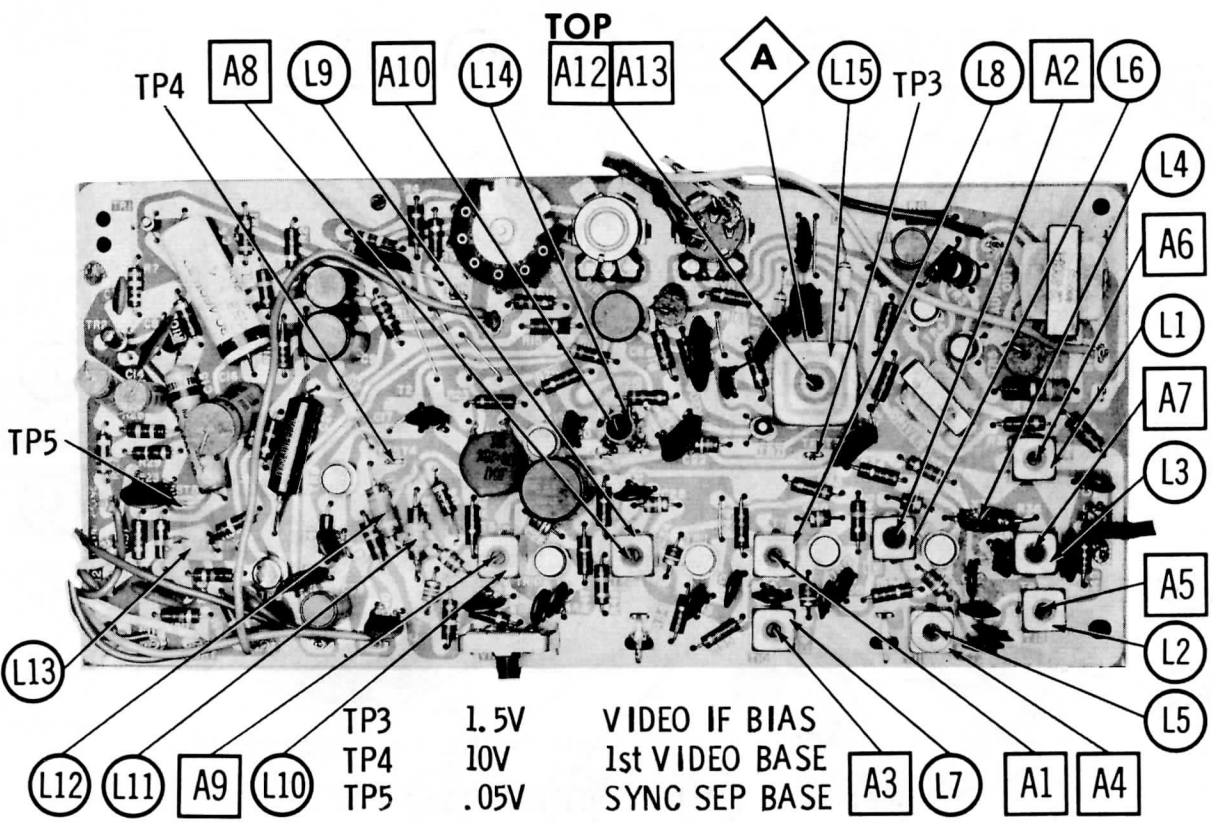


A PHOTOFAC STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1960

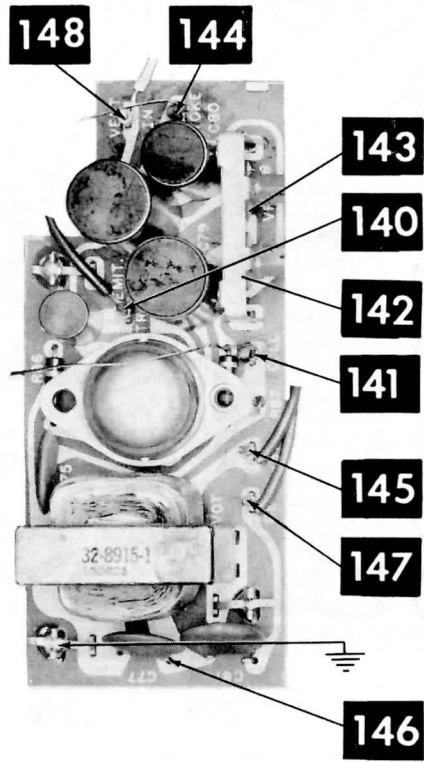
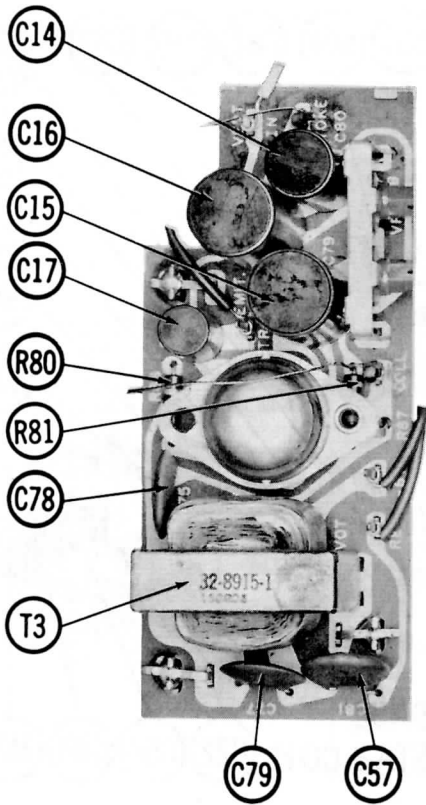
VHF TUNER 76-11773 (T110)



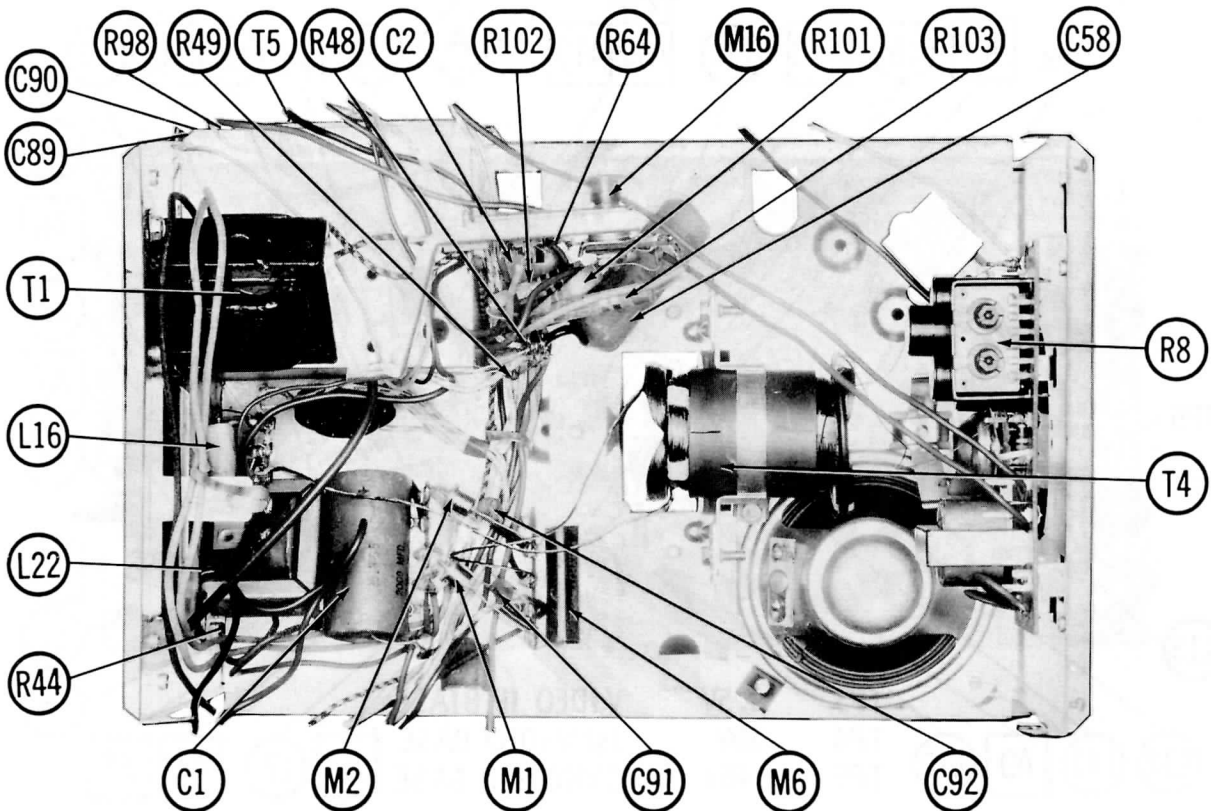
SWEEP PRINTED BOARD - CAPACITOR & MISC IDENT



VIDEO, SOUND, SYNC PRINTED BOARD - ALIGNMENT & INDUCTOR IDENT

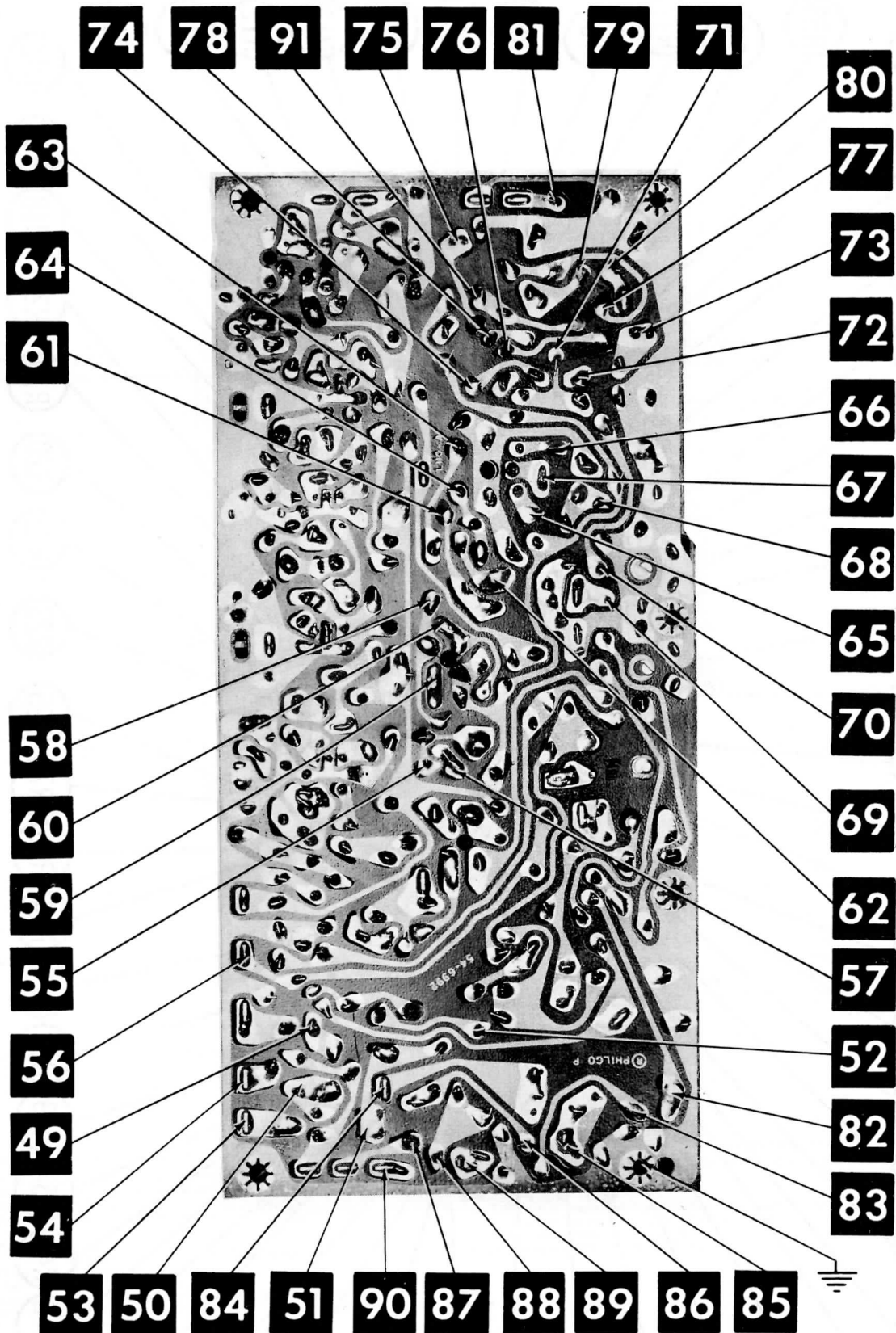


VERT OUTPUT PRINTED BOARD



CHASSIS - RESISTOR, INDUCTOR, TRANSFORMER & MISC IDENT

CircuiTrace Numbers 49 thru 91

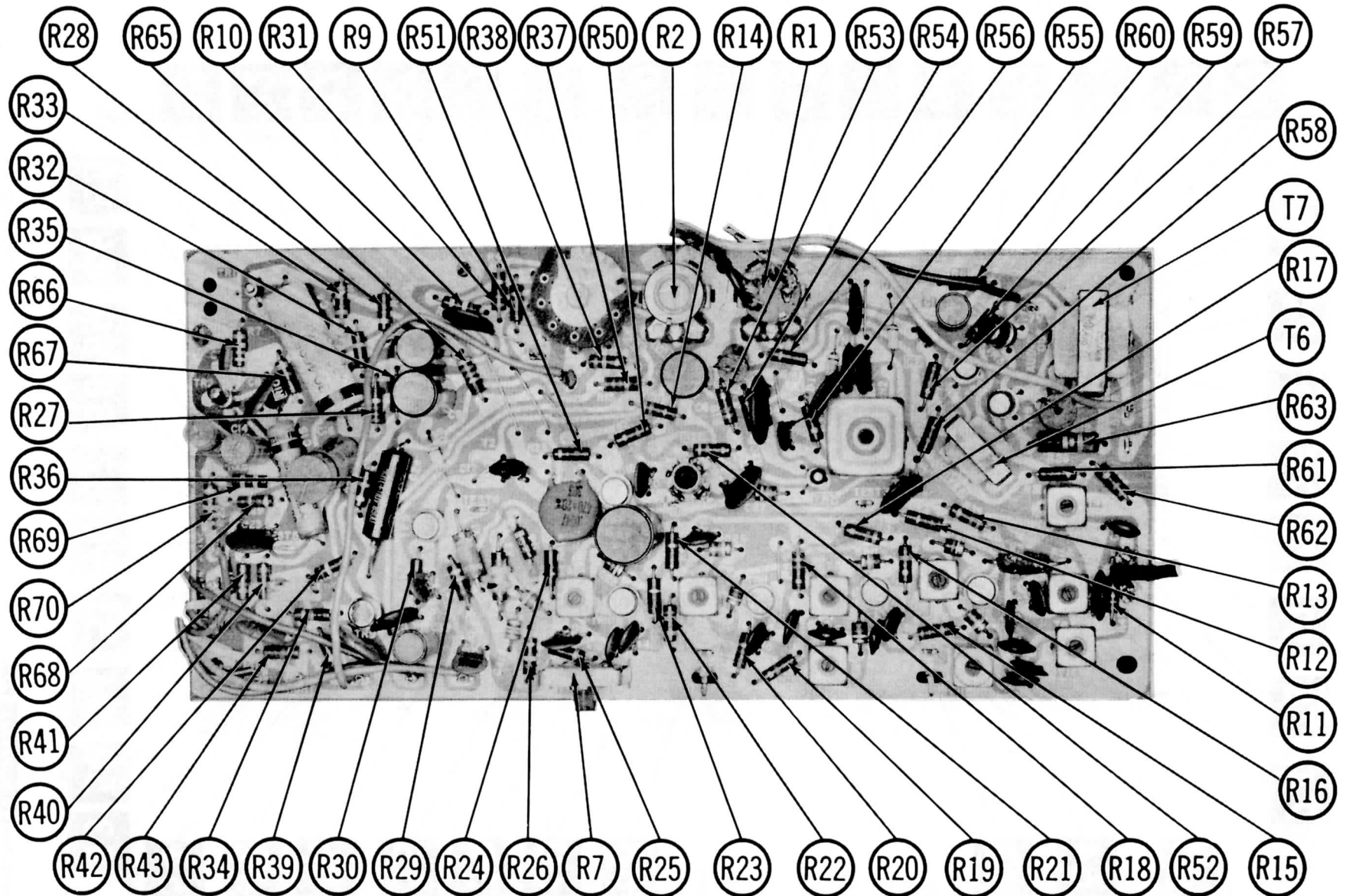


PHILCO MODELS H2010BL,
H2010L (Ch. 10A110)

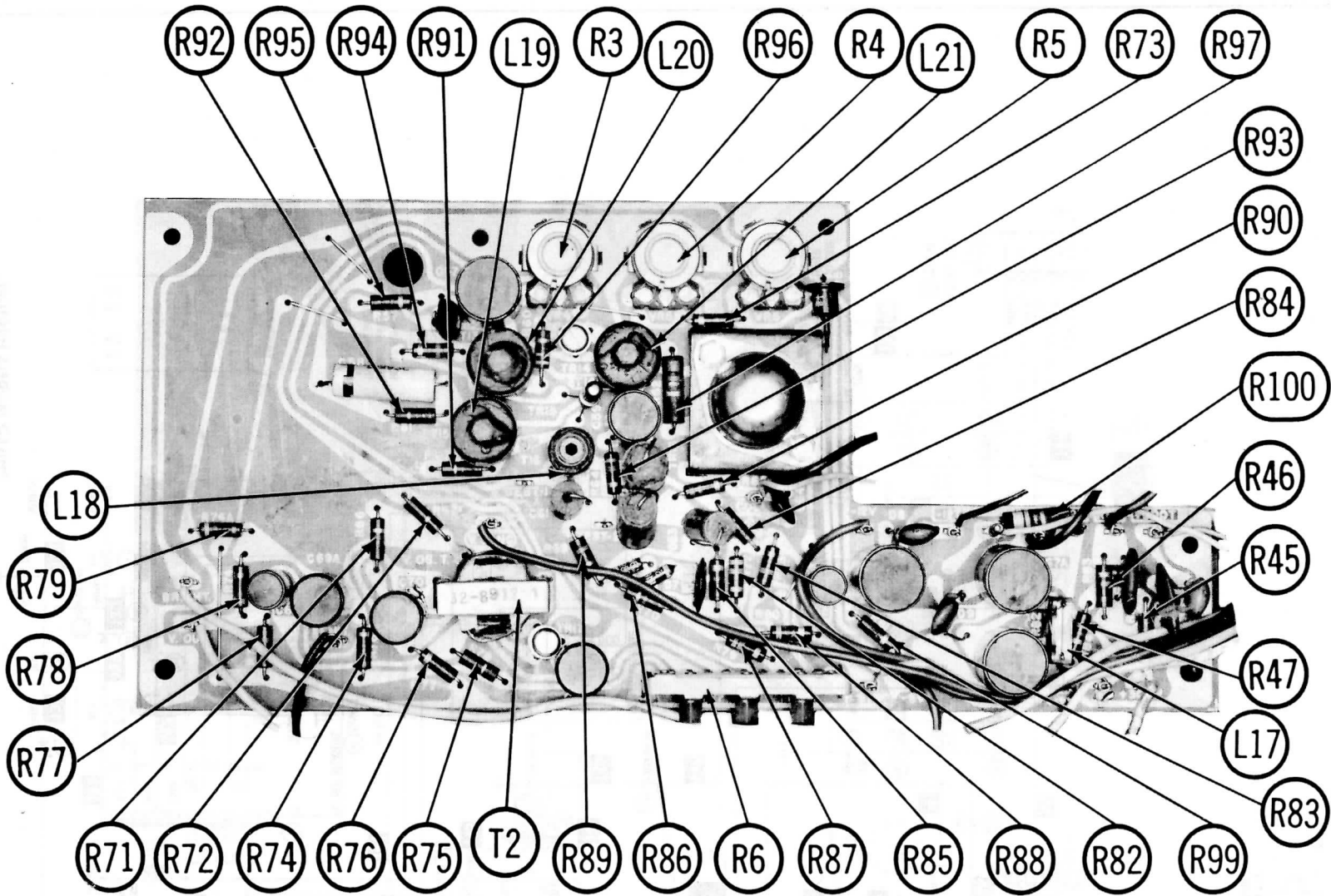
A Howard W. Sams **CIRCUITRACE** Photo

VIDEO, SOUND, SYNC PRINTED BOARD

FOLDER 2

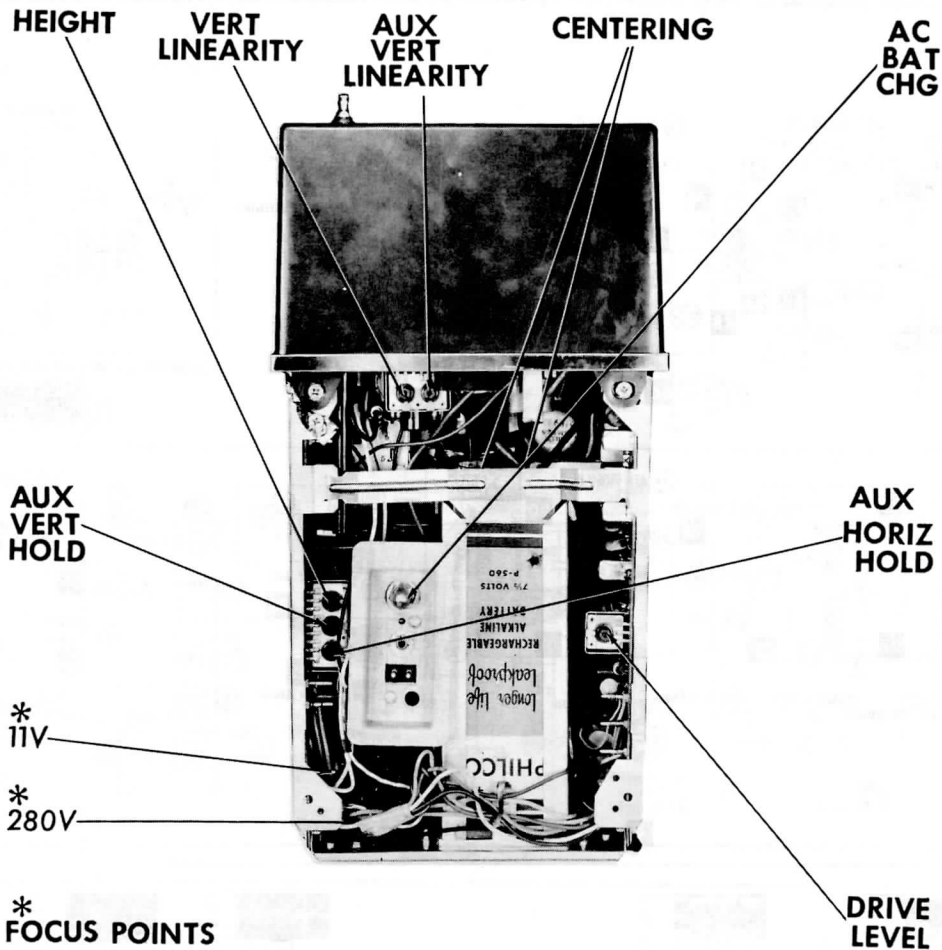


VIDEO, SOUND, SYNC PRINTED BOARD - RESISTOR & TRANSFORMER IDENT



SWEEP PRINTED BOARD - RESISTOR & INDUCTOR IDENT

**PHILCO MODELS H2010BL,
H2010L (Ch. 10A110)**



CABINET-REAR VIEW

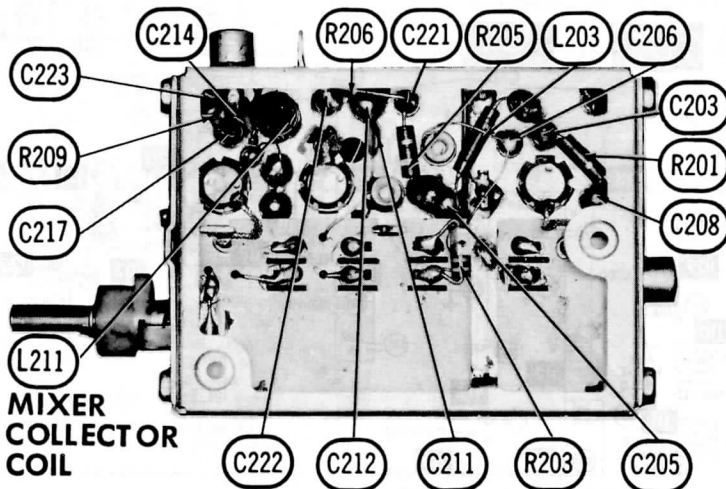
HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Connect a clip lead from TP-1 to TP-2. Connect a clip lead from TP-5 to chassis. With a station signal tuned in, set Horizontal Hold to center of its range. Adjust the Aux. Horizontal Hold (R6C) to correct line frequency (the picture will not be stable). Remove the clip lead from TP-1 and TP-2. Adjust the Horizontal Frequency slug (B1) to correct line fre-

quency (again the picture will not be stable).

Remove the clip lead from TP-5 and chassis.

Rotate Aux. Horizontal Hold counterclockwise until picture loses sync. Then, slowly clockwise until picture just pulls into sync.



TUNER 76-11773(110) —TOP VIEW