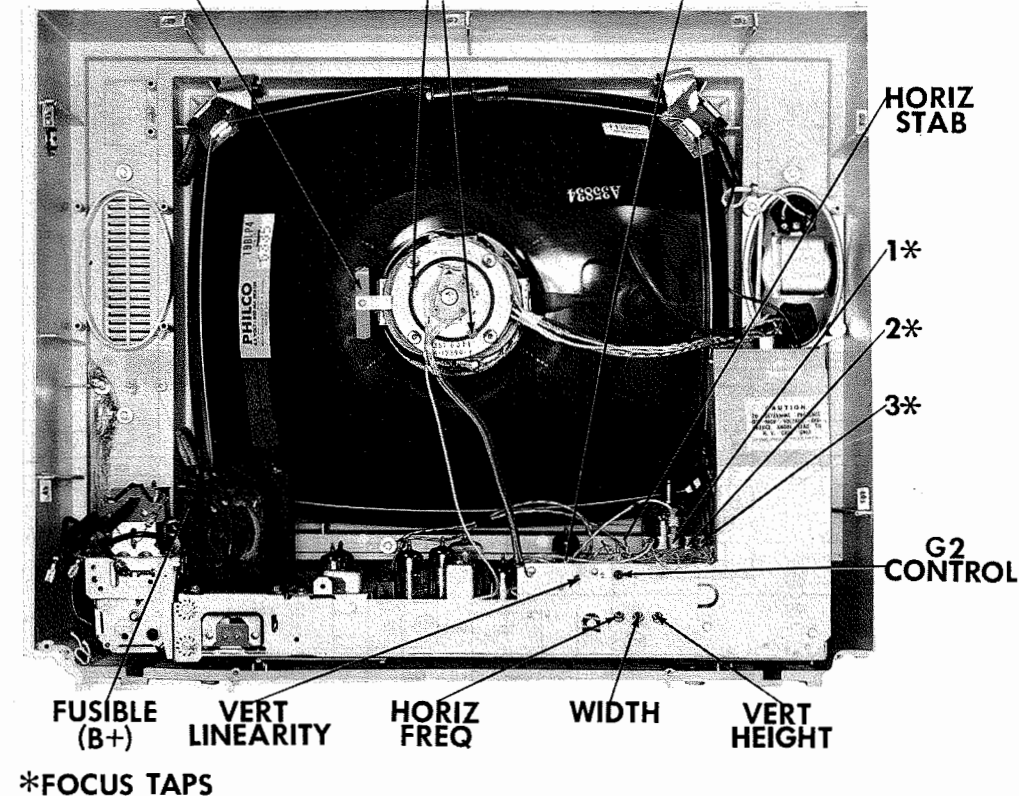


PINCUSHION MAGNET CENTERING QUADRATURE COIL



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Tune in a TV station and adjust all controls for normal operation. Connect a jumper across Horizontal Stabilizer Coil L19. Set the Horizontal Hold Control to the center of its range. Adjust the Horizontal Frequency Control R6-A until the picture tends to float back and forth across the screen. Remove the jumper from across L19 and adjust the Horizontal

Stabilizer Coil slug B1 until the picture synchronizes horizontally.

Adjust the Width Control R6-B until the picture is just wider than necessary to fill the screen.

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove all knobs. Remove cabinet back held by 11 screws. Unplug antenna lead.
2. Unplug picture tube socket, yoke plug, high voltage lead, speaker leads and ground lead to picture tube bracket.
3. Remove 4 bolts from bottom of chassis. Remove pilot lamp. Slide out chassis.

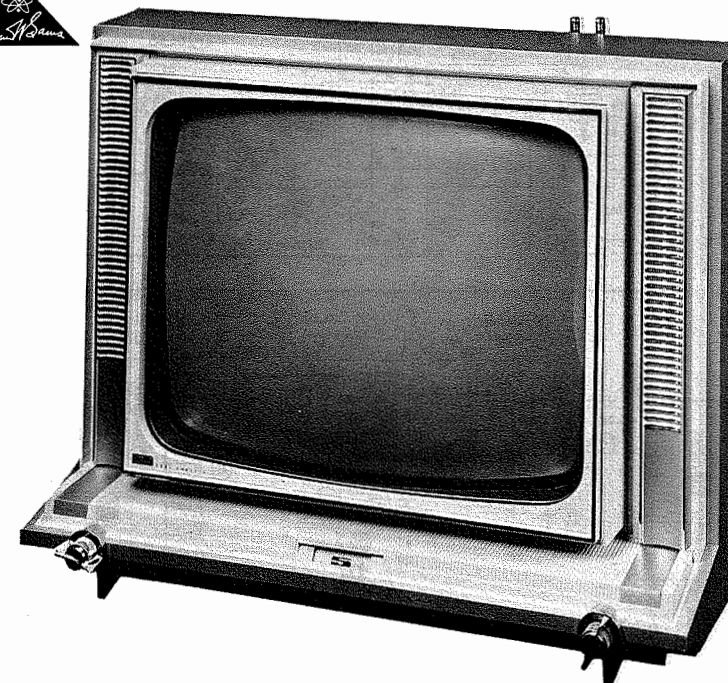
PICTURE TUBE REMOVAL

1. Follow steps 1 thru 3 of disassembly instructions. Loosen yoke clamp and remove yoke.
2. Lay cabinet face down on a soft protective surface. Loosen retainer bolt and remove retainer and clips.
3. Remove picture tube.

SET 697 FOLDER 3

PHILCO
CHASSIS 14J42, 14J43/U

PHOTOFACT® Folder with CIRCUITRACE®



MODEL M3822GD

TRADE NAME	Philco	Models	M3822GD, M3824BK/WH, M3826CH/WA..... M3828RWH..... UM3822GD, UM3824BK/MH, UM3826CH/WA.....	Chassis	14J43 14J42 14J43U
SUPPLIER	Philco Corp., A Subsidiary of Ford Motor Co., Tioga & "C" Streets, Philadelphia, Pa.				
TYPE SET	Television Receiver W/Remote Control used in Model M3828RWH				
TUBES	VHF - Fifteen, UHF - Sixteen				
POWER SUPPLY	110 - 120 Volts AC, 60 Cycles				
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)				
		RATING	160 Watts, 1.65 Amps@117 Volts AC		

SERVICING IN THE FIELD

SAFETY GLASS

For picture tube and safety glass cleaning, it is necessary to remove the chassis. (See "Disassembly Instructions".)

FUSE OR FUSE DEVICE

A 1½" length of fuse wire is used for filament protection. (For location, see M1 in photo "Chassis - Bottom View".)

A 5.6Ω fusible resistor is used for low voltage power supply protection. (For location, see "Chassis Top View".)

VHF OSCILLATOR ADJUSTMENT

The fine tuning mechanically engages osc. slug for adjustment (one slug for each channel).

AGC

No provision is made to vary the AGC on this receiver.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Coarse adjustment of the horizontal hold is accomplished

by the proper setting of the Horizontal Stabilizer Coil.

WIDTH

The width may be varied by a Width Control. (See "Tube Placement Chart" for location.)

FOCUS

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

CENTERING

Centering is accomplished by 2 magnetic rings located on yoke rear cover.

PINCUSHION CORRECTION

Reduce the picture size so that the sides of the raster are visible. Position the magnet so that the sides are straight.

PHILCO
CHASSIS 14J42, 14J43/U

IMPORTANT FILING NOTICE

Some models covered by this PHOTOFACT Folder employ chassis in addition to the TV chassis. PHOTOFACT Folders covering these additional chassis are packaged immediately behind this Folder and should be filed with this Folder in the yellow filing jacket provided. For specific coverage see index below.

INDEX

REMOTE CONTROL RC-68D SET 697, FOLDER 3A

PHILCO
CHASSIS 14J42, 14J43/U

SET 697 FOLDER 3

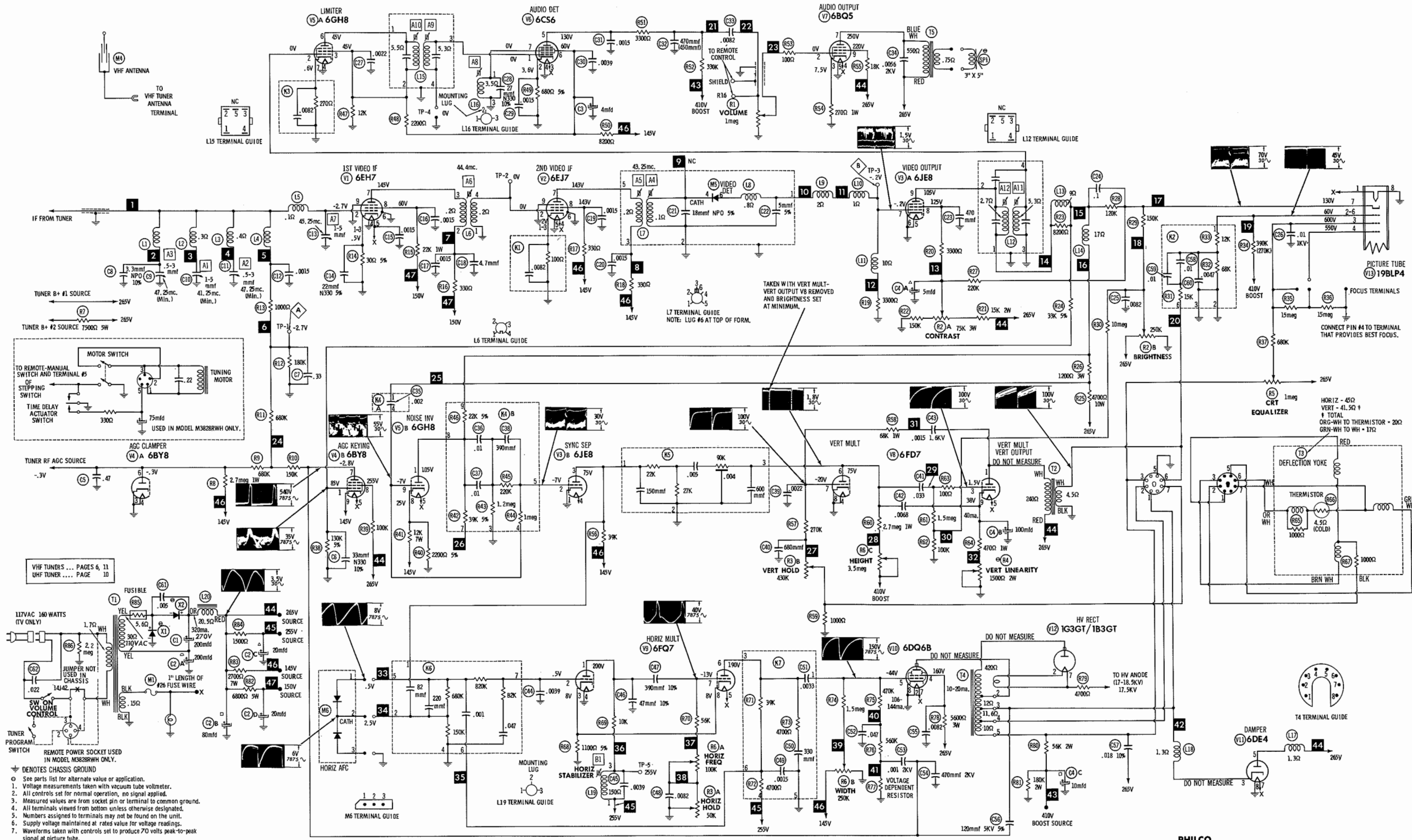
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. MA712

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DATE 6-64 SET 697 FOLDER 3

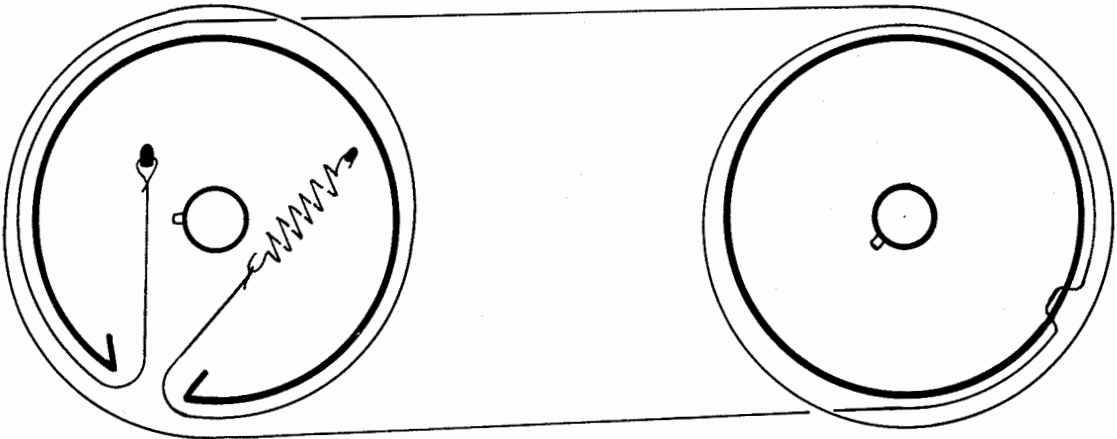


RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6EH7	30Ω	181K	30Ω	FIL	FIL	0Ω	† 7150Ω	† 29K	0Ω
V2	6EJ7	100Ω	.2Ω	100Ω	FIL	FIL	0Ω	#† 3050Ω	#† 3050Ω	0Ω
V3	6JE8	0Ω	1.4meg	#† 28K	FIL	FIL	0Ω	● 3300Ω	† 22K	† 5900Ω
V4	6BY8	† 33K	TP	0Ω	FIL	FIL	# 1meg	# 900K	† 100K	#† 2700Ω
V5	6GH8	† 28K	5.3Ω	#† 10K	FIL	FIL	#† 10K	270Ω	2100Ω	2.4meg
V6	6CS6	5.3Ω	680Ω	FIL	FIL	† 390K	#† 9500Ω	3.5Ω		
V7	6BQ5	NC	80K	270Ω	FIL	FIL	NC	† 570Ω	NC	† 18K
V8	6FD7	† 260Ω	NC	1.6meg	FIL	FIL	† 4.5meg	380K	0Ω	1000Ω
V9	6FQ7	† 11.5K	1.5meg	1100Ω	FIL	FIL	† 45K	110K	1100Ω	0Ω
V10	6DQ6B	NC	FIL	NC	† 5600Ω	1.7meg	0Ω	FIL	0Ω	TOP CAP † 13Ω
V11	6DE4	NC	NC	170K	NC	† 21Ω	NC	FIL	FIL	
V12	1G3GT/ 1B3GT	PINS 1 THRU 8 HAVE INFINITE RESISTANCE								TOP CAP † 433Ω
V13	19BLP4	FIL	NC	#† 770K	#† 770K	NC	#† 190K	70K	FIL	
V201	6GK5	0Ω	1.1meg	FIL	FIL	† 9300Ω	0Ω	0Ω		
V202	6HG8/ ECF86	0Ω	100K	0Ω	FIL	FIL	10K	† 28.5K	† 6700Ω	† 16K
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

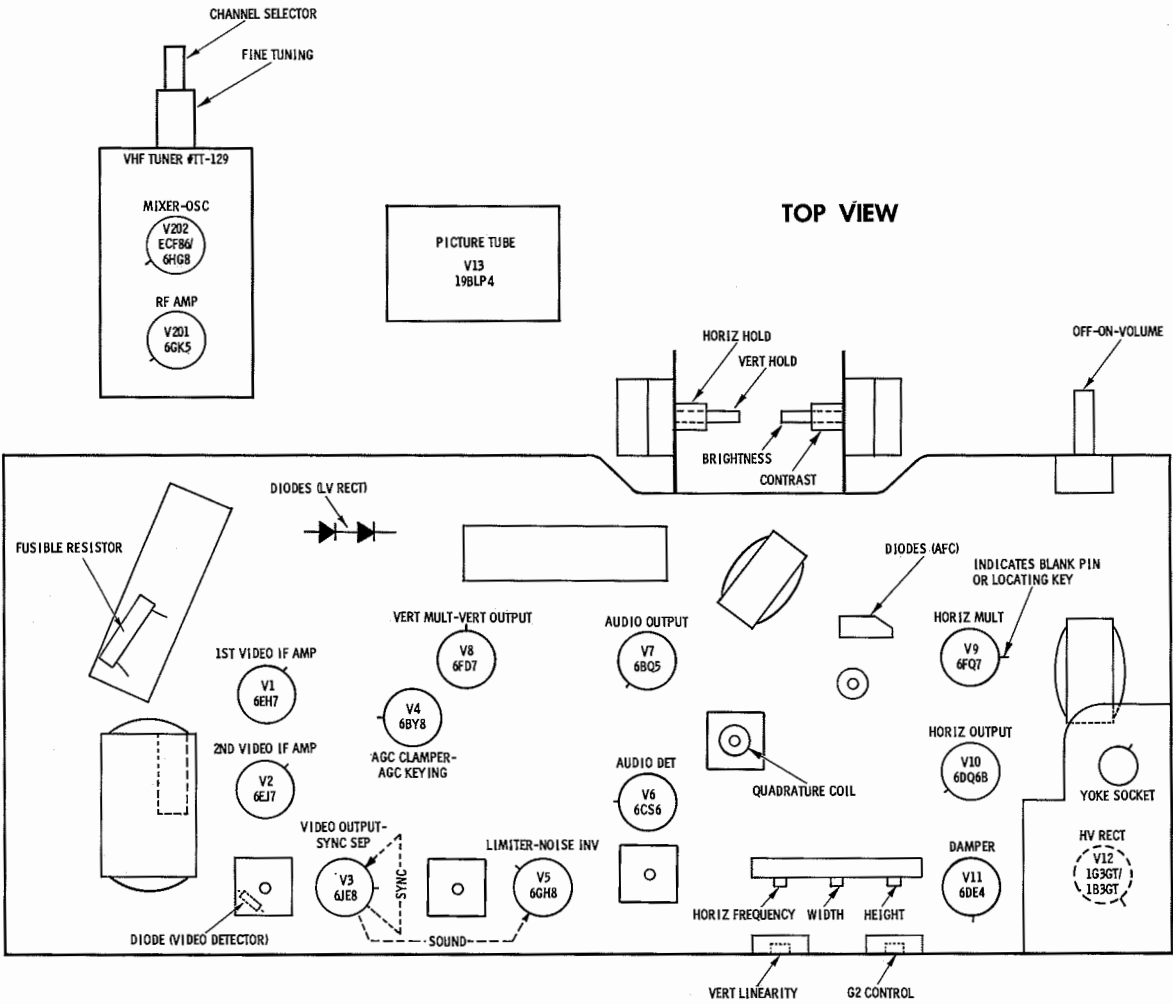
THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
● READING DEPENDS ON POLARITY OF METER CONNECTIONS.
† MEASURED FROM OUTPUT OF VOLTAGE DOUBLER.
‡ MEASURED FROM PIN 3 OF V11.

NC NO CONNECTION
TP TIE POINT



UHF TUNER DIAL CORD STRINGING

TUBE PLACEMENT CHART



PHILCO
CHASSIS 14J42, 14J43/U

TUBE FAILURE CHECK CHART

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

POWER SUPPLY FAILURE
No raster, no sound R85 (Fusible Resistor), X1, X2, M1 (Fuse Wire)

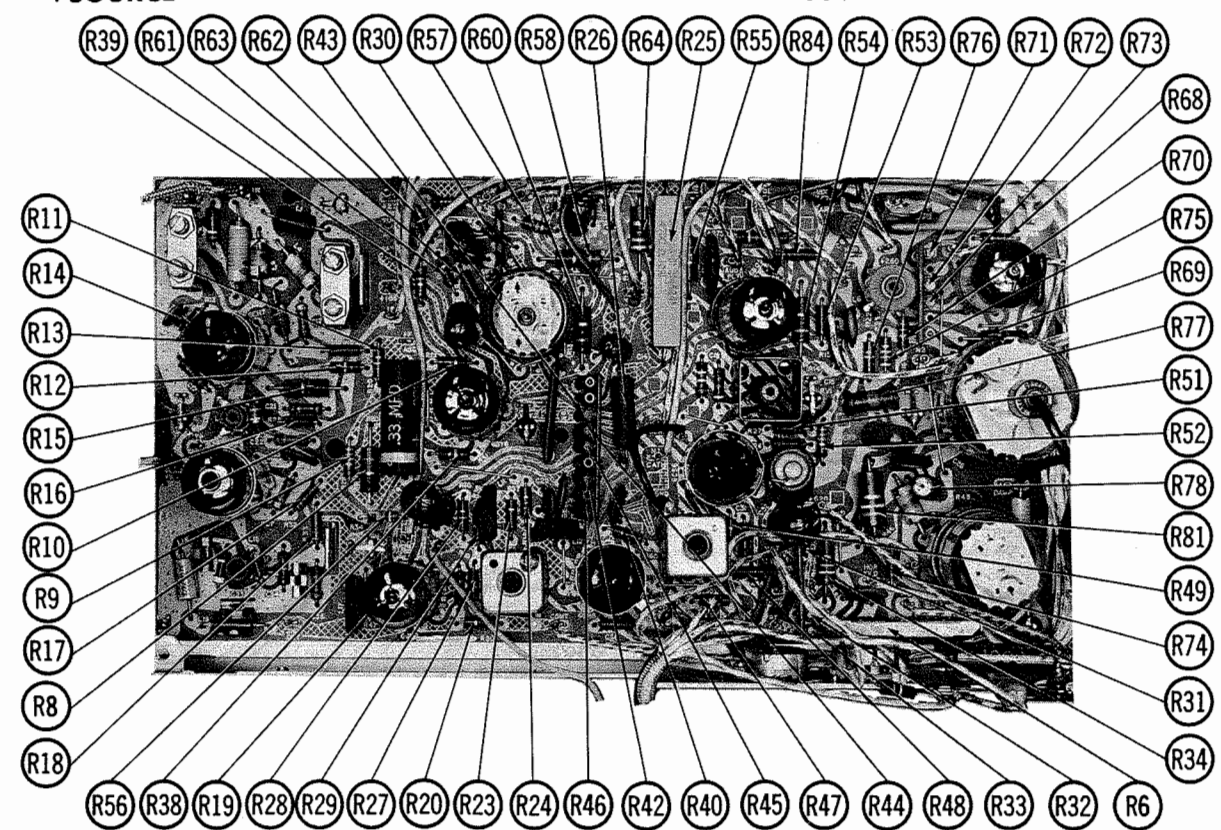
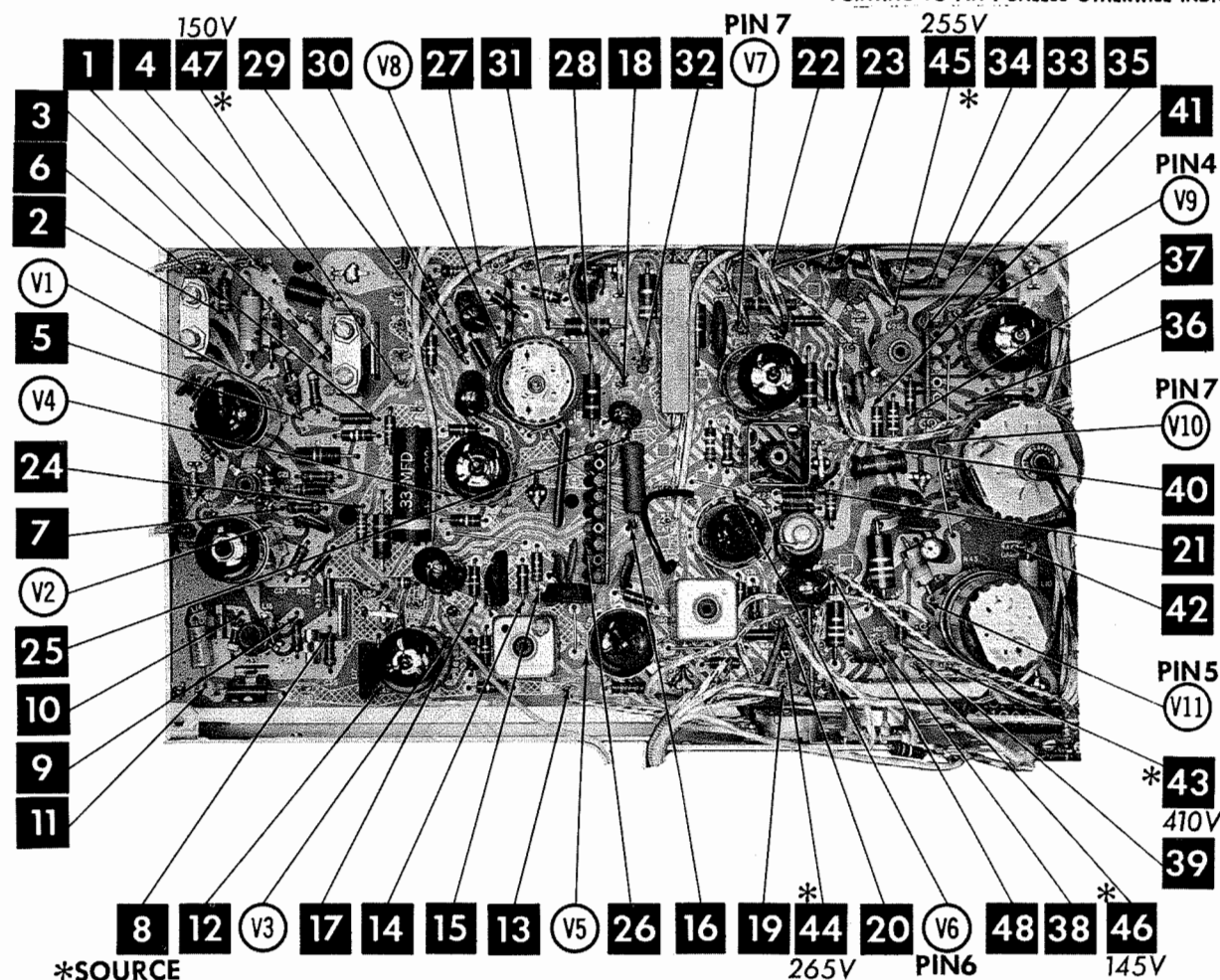
SWEEP FAILURE
No raster, has sound V9, V10, V11, V12, V13
No vertical deflection V8
Poor vert. linearity or foldover V8
Poor horiz. linearity or foldover V9, V10, V11
Narrow picture X1, X2, V9, V10, V11
Vert. off freq. V8
Horiz. off freq. Horiz. AFC Diode M6, V9

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster V1, V2, M5 (Video Det.), V3
No pic, no sound, has snow V201, V202, V1
No pic, has sound, has raster V3, V13
Has pic, no sound V5, V6, V7
Overloaded picture V4

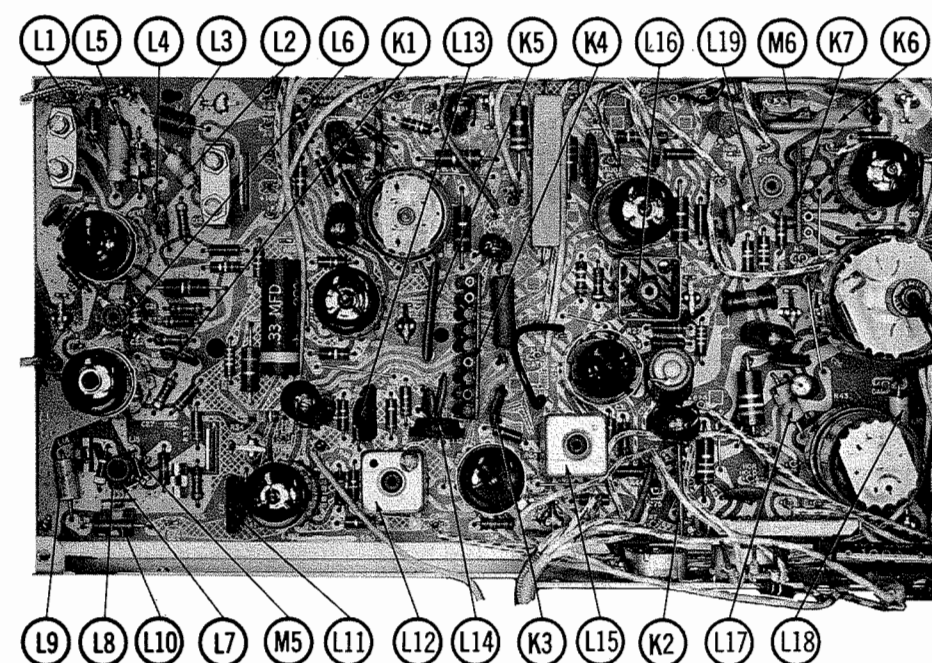
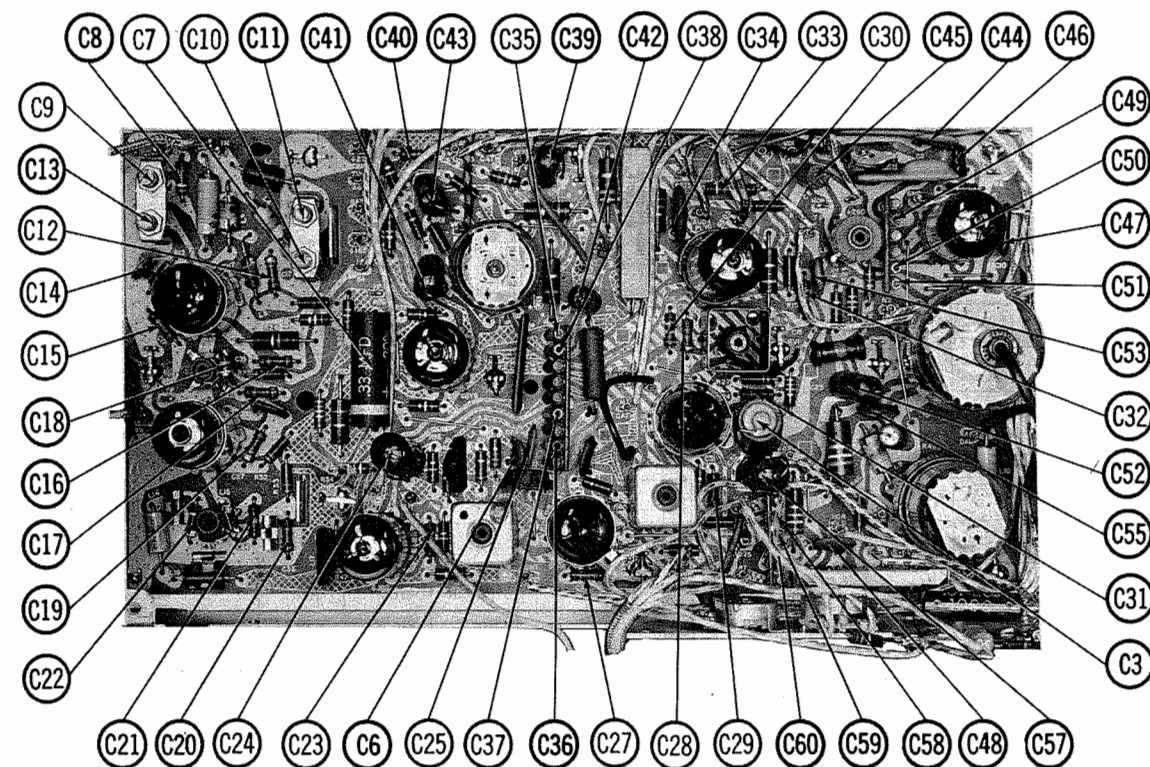
SYNC FAILURE
No vert. sync V3
No horiz. sync V3
No vert. or horiz. sync V3

FOLDER 3

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

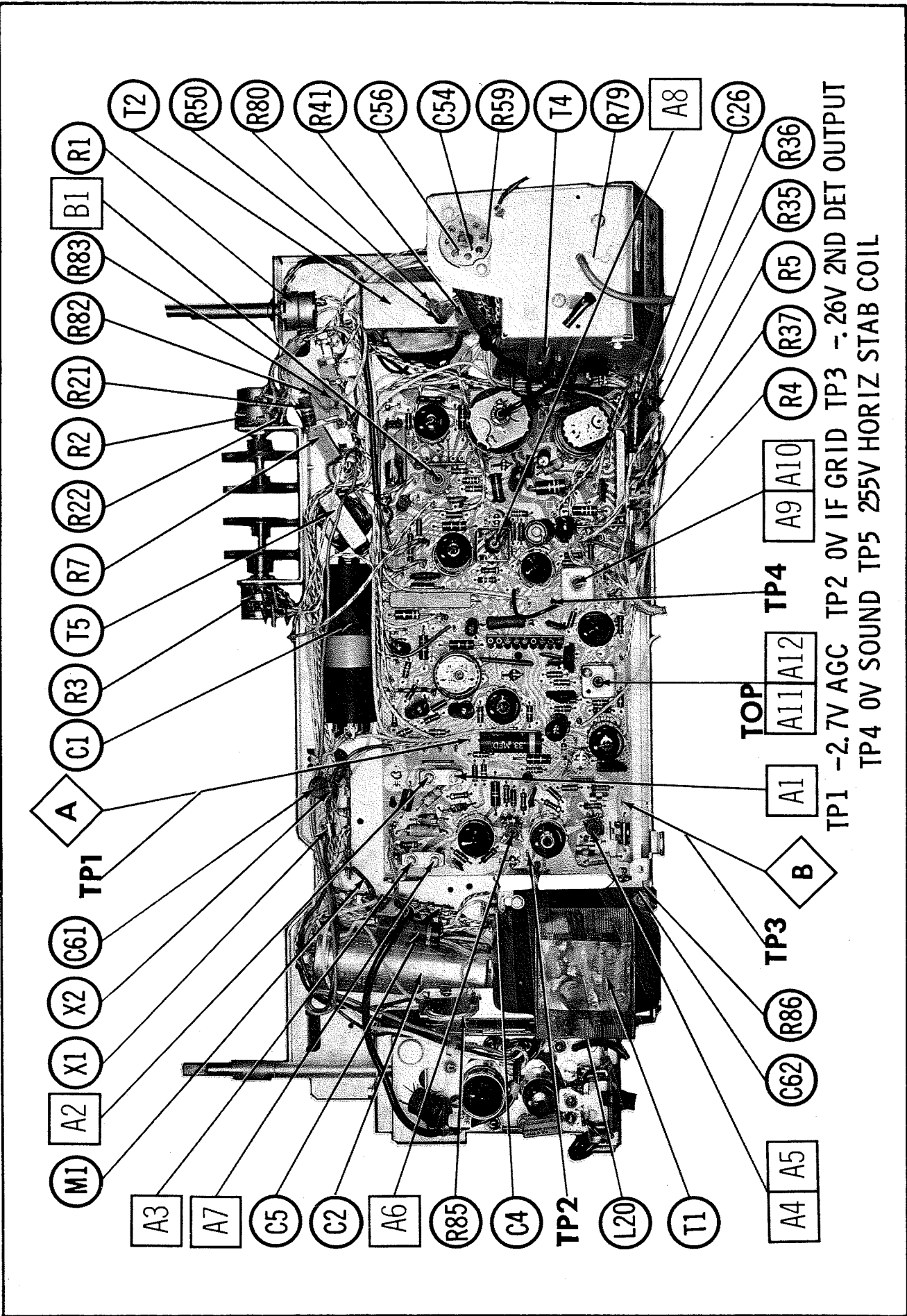


PRINTED BOARD



PHILCO
CHASSIS 14J42, 14J43/U

FOLDER 3



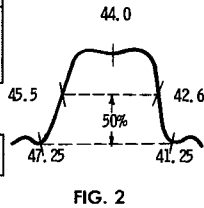
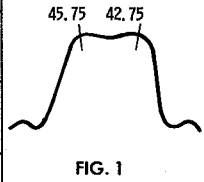
ALIGNMENT INSTRUCTIONS

Use an isolation transformer and maintain voltage at 117 volts. Allow a 20-minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A1, A2, A3, A7.....GENERAL CEMENT #8868, 9087, 9089.....WALSCO #2528, 2541, 2587
A4, A5, A8, A9, A10, A11, A12, Mixer Plate Coll...GENERAL CEMENT #8806, 8806L, 8869.....WALSCO #2543, 2544, 2588

VIDEO IF ALIGNMENT

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

INDICATOR	GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	ADJUST	REMARKS
1. Connect DC probe of a VTVM thru a 47K resistor to point \diamond . Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		41.25MC 47.25MC 47.25MC	A1 A2 A3	Adjust for MINIMUM. Short L1 When adjusting A2 Short L3 When adjusting A3.
2. Connect DC probe of a VTVM thru a 47K resistor to point \diamond . Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		A4 A5 A8 A7 Mixer Plate Coll 42.9MC	43.25MC 43.25MC 44.4MC 45.25MC	Adjust for maximum.
3. Connect vertical input of a scope to point \diamond . Low side to ground.	Connect high side to pin 2 (grid) of V2. Low side to ground.	44MC (10MC Sweep)	45.75MC 42.75MC	A4, A5	Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1.
4. Connect vertical input of a scope to point \diamond . Low side to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.	44MC (10MC Sweep)	41.25MC 42.6MC 44.0MC 45.5MC 47.25MC	A6, A7, Mixer Plate Coll	Adjust for maximum gain and symmetry of response with markers as shown in Figure 2. In order to obtain a proper response, it may be necessary to slightly retouch A4, A5.



4.5 MC TRAP ALIGNMENT

Tune in a strong TV signal and set the Contrast at maximum. Adjust the Fine Tuning until a beat pattern is visible on the screen. Adjust A12 for MINIMUM beat interference.

SOUND IF ALIGNMENT

Tune in a station and adjust A 8 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce signal while aligning for undistorted output by adjusting A8, A10, A11.

VHF TUNER ALIGNMENT INSTRUCTIONS

VHF TUNER ALIGNMENT

Suggested Alignment Tools:
A201.....GENERAL CEMENT #8868, 9087, 9089
WALSCO #2528, 2541, 2587

OSCILLATOR ALIGNMENT (TT-129)

The oscillator on each channel is preset by means of the Fine Tuning Control. Starting with the highest available channel, adjust fine tuning for best picture and sound on each active channel.

OSCILLATOR ALIGNMENT (TT-63)

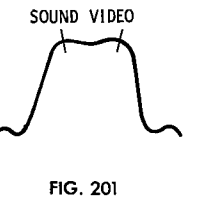
The oscillator on each channel is preset by means of the Fine Tuning Control. Starting with the highest available channel, adjust fine tuning for best picture & sound on each active channel. If any channel cannot be properly tuned in with the fine tuning, adjust the overall oscillator adjustment. Recheck all active channels.

RF MIXER ALIGNMENT

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

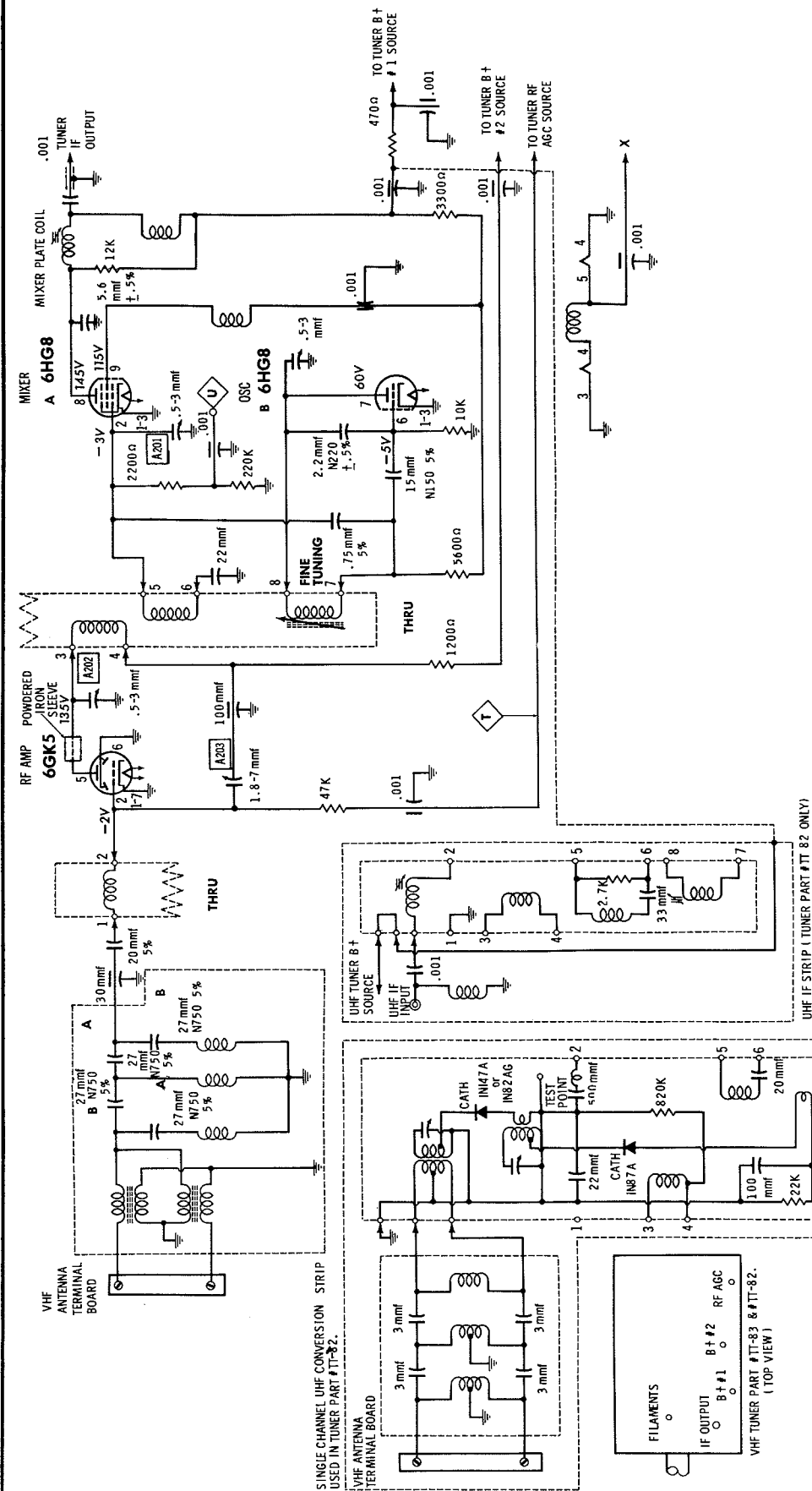
SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Across antenna terminals with 120 Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. input to point \diamond , low side to ground.	A201, A202	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown. Increase bias to -15V and adjust for MINIMUM response. Decrease bias. Check response on all channels and make compromise adjustments of A201 and A202 if required.
	195MC	193.25MC 197.75MC	10	Across video det. load resistor.	A203	
	207MC	205.25MC 209.75MC	12	Vert. input to point \diamond , low side to ground.		
1. Across antenna terminals with 120 Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. input to point \diamond , low side to ground.	A201	TUNER TT-129 Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown. If necessary expand or compress Ch. 13 coils.
	195MC	193.25MC 197.75MC	10	Across Video det. load resistor.	Gimmick	
	213MC	211.25MC 215.75MC	13	Vert. input to point \diamond , low side to ground.		
	207MC	205.25MC 209.75MC	12			
	201MC	199.25MC 203.75MC	11			
	189MC	187.25MC 191.25MC	9			
	177MC	175.25MC 179.75MC	7			
4.	85MC	83.25MC 87.75MC	6			Check response on Channels 6 thru 2 and make compromise adjustments by expanding or compressing appropriate coils.
	79MC	77.25MC 81.75MC	5			
	69MC	67.25MC 71.75MC	4			
	63MC	61.25MC 65.75MC	3			
	57MC	55.25MC 59.75MC	2			

If interference is encountered from a nearby FM station, adjust A202 for MINIMUM interference.

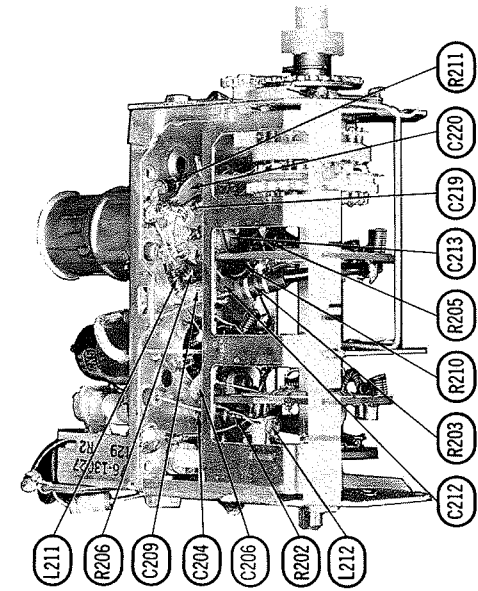
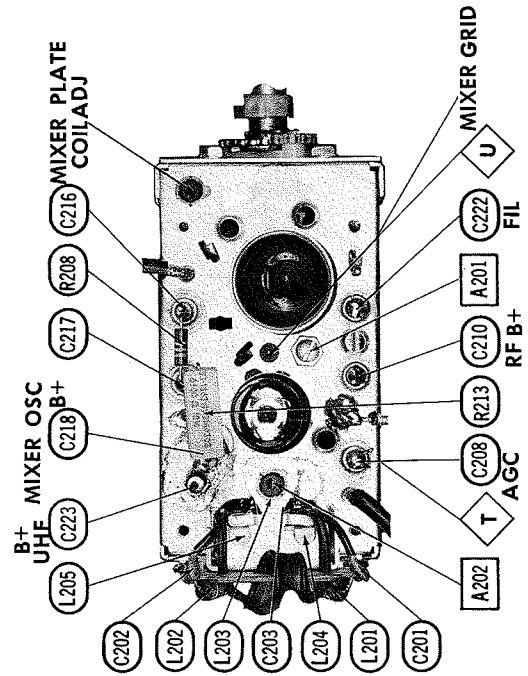
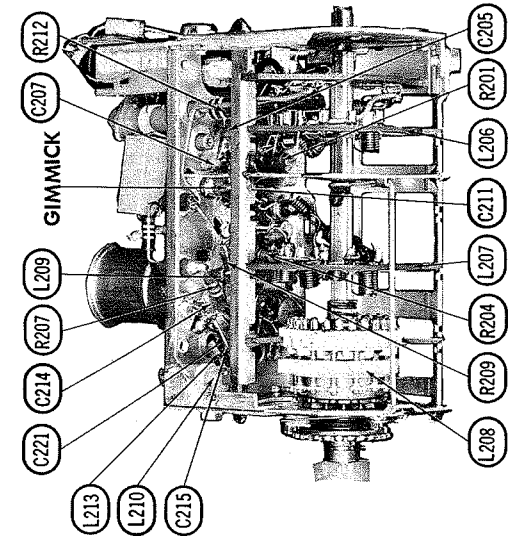
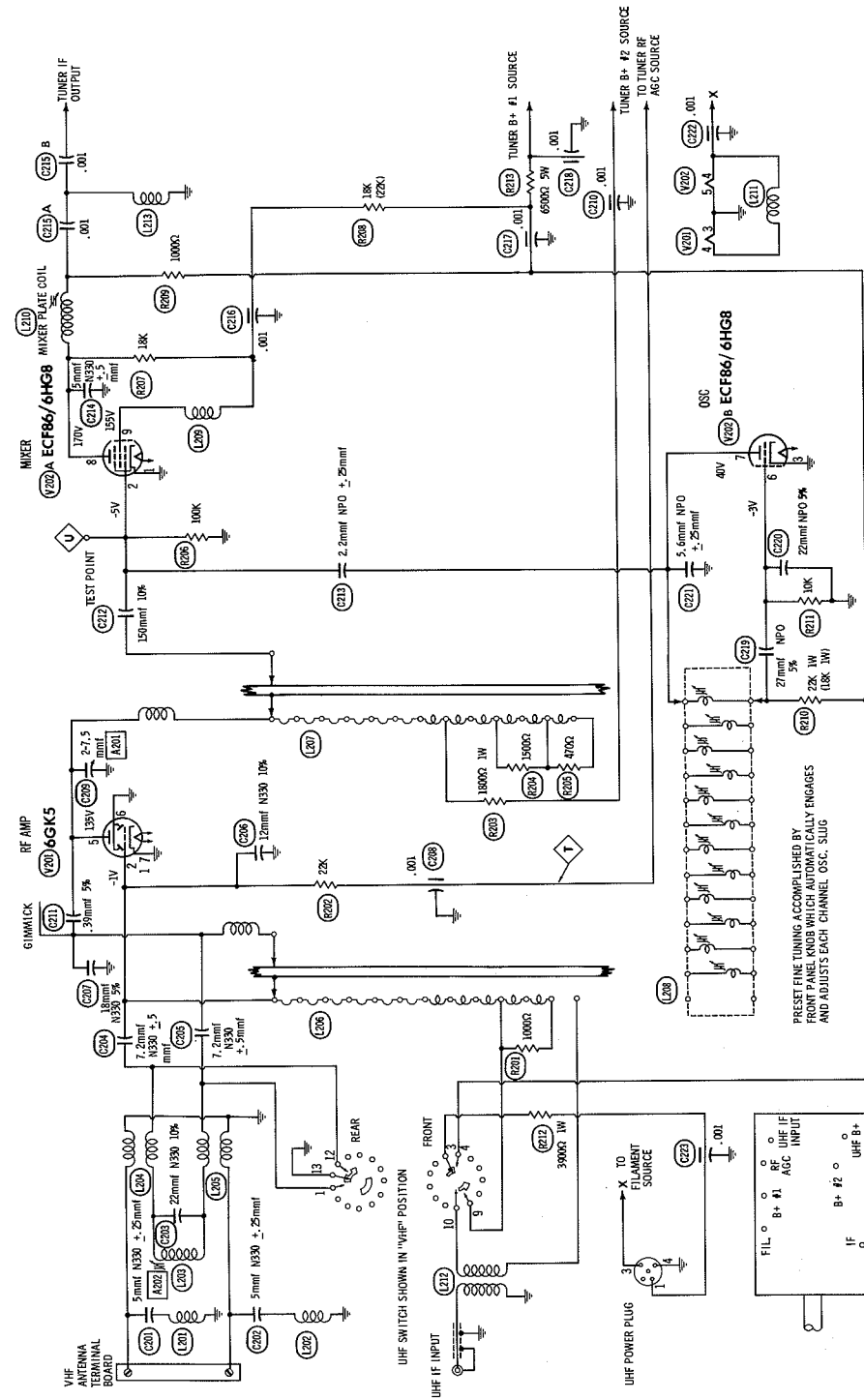


PHILCO
CHASSIS 14J42, 14J43/U

FOLDER 3



13 POSITION TURRET-TYPE VHF TUNER TT-83



I3 POSITION SWITCH-TYPE VHF TUNER TT-129

CHASSIS 14J42, 14J43/U

PHILCO
ITALIA

FOLDER 3

VHF TUNER PARTS LIST AND DESCRIPTION TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	6GK5	V202	Mixer-Osc.	ECF86/6HG8

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	5 N330 ±.25mmf	#30-1251-32						10TCS-V50
C202	5 N330 ±.25mmf	#30-1251-32						10TCS-V50
C203	22 N330 10%	#30-1251-56		TCA-22				10TCS-Q22
C204	7.2 N330 ±.5mmf	#30-1251-66						
C205	7.2 N330 ±.5mmf	#30-1251-66						
C206	12 N330 10%	#30-1251-4						10TCS-Q12
C207	18 N330 5%	#30-1251-36						10TCS-Q18
C208	.001							
C209	2-7.5	#30-6520-34						
C210	.001							
C211	.39mmf 5%	#30-1221-22						
C212	150 10%							
C213	2.2 NPO ±.25mmf							
C214	5 N330 ±.5mmf	#30-1251-1						
C215A	.001							
C216	.001							
C217	.001							
C218	.001							
C219	27 N220 5%	#30-1251-67						
C220	22 NPO 5%							
C221	5.5 NPO ±.25mmf	#30-1251-39						
C222	.001							
C223	.001							

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R213	6500Ω 5W	PW10-7000	5W-SQ-6500	#33-1363-91					

Philco Part Number.

COILS (RF-IF)

ITEM No.	USE	PHILCO PART No.	NOTES	ITEM No.	USE	PHILCO PART No.	NOTES
L201	RF Choke	32-4645-31		L208	Osc. Wafer	76-12755-1	
L202	RF Choke	32-4645-31		L209	RF Choke	32-4652-71	
L203	Ant. Matching	32-4822-3		L210	Mixer Plate	32-4822-1	
L204	Ant. Input Balun	32-4725-6		L211	Fl. Choke	32-4652-72	
L205	Ant. Input Balun	32-4725-5		L212	UHF IF Output	32-4652-1	
L206	Ant. Wafer	76-13081		L213	IF Output		
L207	RF Wafer	76-13031					

PARTS LIST AND DESCRIPTION

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

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	1st Video IF Amp.	6EH7	V7	Audio Output	6BQ5
V2	2nd Video IF Amp.	6EJ7	V8	Vert. Mult.-Vert. Output	6FD7
V3	Video Output-Sync Sep.	6JE8	V9	Horiz. Mult.	6FQ7
V4	AGC Clamper-AGC Keying	6BY8	V10	Horiz. Output	6DQ6B
V5	Limiter-Noise Inv.	6GH8	V11	Damper	6DE4
V6	Audio Det.	6CS6	V12	HV Rectifier	1G3GT/1B3GT

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	PHILCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V13	19BLP4	19BLP4 ①	19AVP4①	19BLP4 ②	① Aluminized ② Silver Screen "85"

POWER RECTIFIERS

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS		
			MALLORY PART No.	RCA PART No.	SARKIS TARZIAN PART No.
X1	.320A	34-8054-2 ①	1N540 ②	1N1764 or 1N2863 or 1N3194	40H or F-4
X2	.320A	34-8054-2 ①	1N540 ②	1N1764 or 1N2863 or 1N3194	40H or F-4

① Alternate Part Number 34-8054-1.
② A single unit for X1 and X2 may be used — VB600.

ELECTROLYTIC CAPACITORS

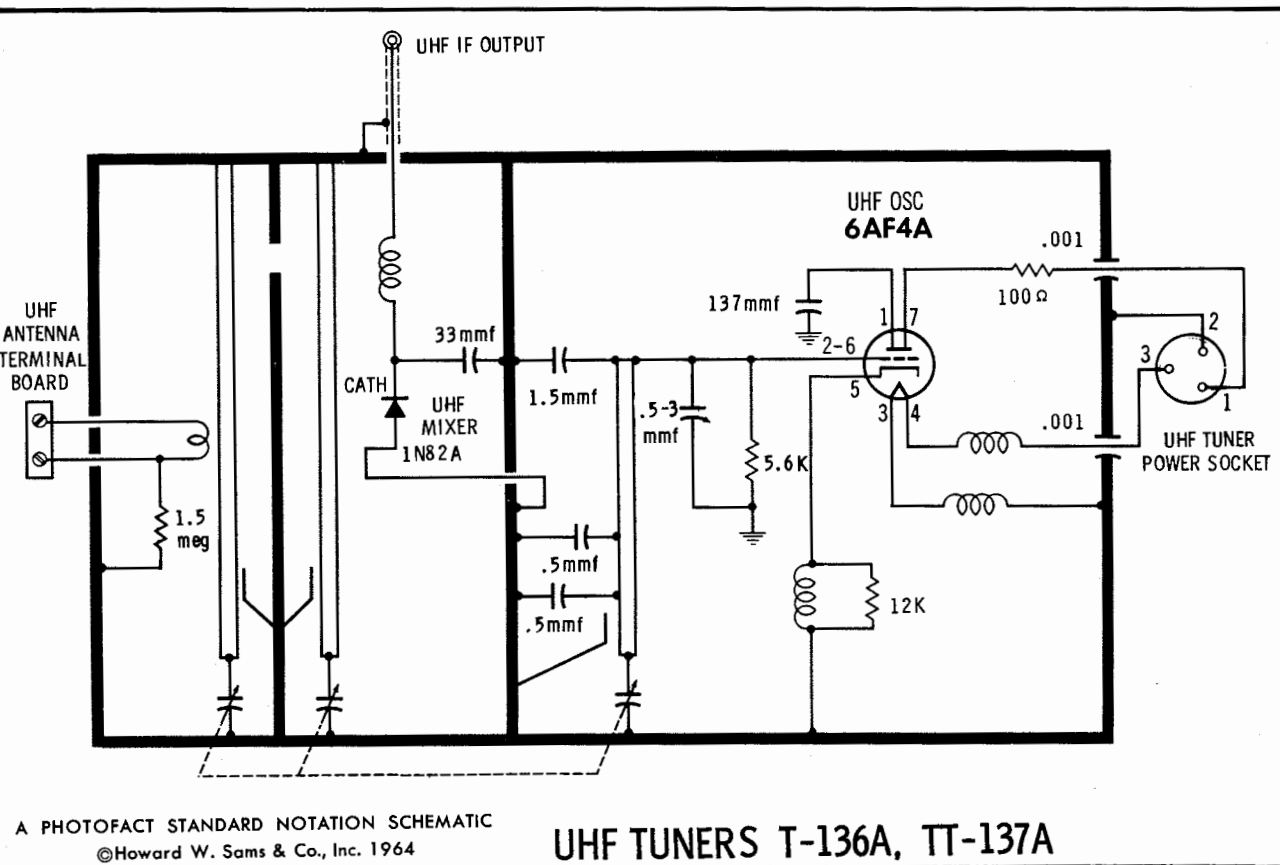
ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	200	200	30-2568-83	AFH1-25-85	BR200-250	QT1-27 ①	TD-200-200	FP217.865	TVLS-1475.1*
C2A	200	200	30-2601-24	AFH4-100-23	C0360	XC3-27	TMT-3754	FP331.2	TVLS-4605.14*
B	80	350			BR200-250	QT1-27	TD-200-200	WS342	
C	20	300							
D	20	300							
C3	4	150	30-2596-10	PRS1400	BBR4-150	QT1-3	TD-4-150	TT150X4	TVA-1402
C4A	5	300	30-2601-18	AFH3-189-40	C1445	XC3-13.1	TMT-3784	FP384.16	TVL-3806.6
B	100	50							
C	10	450							

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
① Use Insulating Sleeve.

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C5	.47 100V		P288N-.47		WMF1P47	IDP-4-474	PVC-1047	2TM-P47
C6	.33 N330 10%							10TCS-Q33
C7	.33 100V		P288N-.33		WMF1P33	IDP-4-334	PVC-1033	2PS-P33
C8	3.3 NPO 10%			TCZ-3R3	C10V33C	CCTO-3R3	CNO-533	10TCC-V30
C9	.5-3			829-3		CV-1		CT565
C10	1-5			829-6		CV-3		CT562
C11	.5-3			829-3		CV-1		CT565
C12	.0015			D6-152	LA10D15-C4	CCD-152	B-215	5HK-D15
C13	1-5			829-6		CV-3		CT562
C14	22 N330 5%							
C15	.0015			D6-152	LA10D15-C4	CCD-152	B-215	10TCR-Q22
C16	.0015			D6-152	LA10D15-C4	CCD-152	B-215	5HK-D15
C17	.0015			D6-152	LA10D15-C4	CCD-152	B-215	5HK-D15
C18	4.7							
C19	.0015			D6-152	LA10D15-C4	CCD-152	B-215	5HK-D15
C20	.0015			D6-152	LA10D15-C4	CCD-152	B-215	5HK-D15
C21	18 NPO 5%			TCZ-18	LA10D15-C4	CCD-152	B-215	5HK-D15
C22	5 5%			TCZ-4R7	LA10V5-SL	CCTO-4R7	CNO-418	10TCC-Q18
C23	.470			D6-471	LA10T47-C4	CCD-471	GP550	10TCC-V50
C24	.1 400V			DF-104	LA10T47-C4	4DP-3-104	GP347	5GA-T47
C25	.0082			DD-822	PM4P1	CCD-822	GM-401	4TM-P10
C26	.01			DD-103		CCD-822	GP275	30GA-D82
C27	.0022			D6-222	PKM10S1	16DP-3-103	GM-1011	10TM-S10
C28	27 N330 10%				LA10D22-C4	CCD-222		5GA-D22
C29	.0015			D6-152				10TCR-Q27
C30	.0039			D6-402	LA10D39-C4	CCD-392	B-215	5HK-D15
C31	.0015			D6-152	LA10D15-C4	CCD-152	B-215	5HK-D15
C32	.470			D6-471	LA10T47-C4	CCD-471	GP347	5GA-T47
C33	.0082			D6-752		CCD-822	GP275	30GA-D82
C34	.0056 2KV			DD30-502		CCD-502		30GA-D80
C35	.002			D6-202	LA10D2-C4	CCD-202	GP220	5GA-D20
C36	.01			D6-103		CCD-103	GP110	5GA-S10
C37	.01			D6-103		CCD-103	GP110	5GA-S10
C38	.390			D6-391	LA10T39-C4	CCD-391	GP339	5GA-T39
C39	.0022 600V			DD-222	DPMS6D22	6DP-1-222	PVC-6222	6TM-D22
C40	.680			D6-681	LA10T68-C4	CCD-681	GP368	5GA-T68
C41	.033 400V			DD-203	DPMS4S33	4DP-2-333	PVC-4133	4PS-S33

SET 697 FOLDER 3



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UHF TUNERS T-136A, TT-137A

PHILCO
CHASSIS 14J42, 14J43/U

FOLDER 3

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

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.
C42	.0068 400V	P488N-0068	DD-682	WMF4D68	6DP-1-682	PVC-4268	6TM-D68	
C43	.0015 1.6KV		DD30-152	PKM16D53	16DP-2-102	GERM-16215	MB-D15	
C44	.0039	BPD-004	DD-392	LA10D39-C4	CDD-392	GP239	5GA-D39	
C45	.0039 100V	B6B53	DD-392	DPMS6D39	6DP-1-392	GPV-6239	6PS-D39	
C46	47 10%	ADM-15-470	CPR-47J	CD15E470K	DM-15-470K	MCB24	MS-447	
C47	30 10%	ADM-15-39J	CPR-39J	CD15F591K	DM-15-391K	MCB34	MS-393	
C48	.0082	SI 7500	DD-822		CDD-822	GZ275	30GA-D82	
C49	.0015	DL 1500	D6-152	LA10D15-C4	CDD-152	B-215	5HK-D15	
C50	330	SI 330	D6-331	LA10T33-C4	CDD-331	GP330	5GA-T33	
C51	.0033	SI 3300	D6-332	LA10D33-C4	CDD-332	GP233	5GA-D33	
C52	.047 200V	P288N-047	DD-503	PM2847	4DP-3-473	GERM-2147	2TM-S47	
C53	.001 2KV	HVD-30-1000	DD30-102		3CCD-102	2HV-210	30GA-D10	
C54	470 2KV	HVD-30-470	DD30-471		3CCD-471	2HV-347	30GA-G47	
C55	.0082	DL-7500	DD-822		CDD-822	GP275	30GA-D82	
C56	120 5KV 5%	HVD-60-120	DD60-121		3CCD-121	6HV-312	30GA-IT12	
C57	.018 600V 10%	B6B18	DD-153	WMF6D15	6DP-1-153	6PS-615	6PS-15	
C58	.01	SI 10000	D6-103		CDD-103	GP110	5GA-S10	
C59	.01	SI 10000	D6-103		CDD-103	GP110	5GA-S10	
C60	.005 500V	SI 4700	D6-472	LA10D47-C4	CDD-472	GP247	5HK-D47	
C61	.005 500V	BPED-005	DD-502	BYA10D5	CDD-502	B-250	5HK-D50	
C62	.022 600V	B6D22		WMF4S22	6DP-2-223	PVC-6122	6PS-S22	

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

† "CONCENTRIKIT" Equivalent; K-6 Kit with Base Elements and Shafts: B11-123, P17-123 (Panel)
B11-133①, R26-215 (Rear)

"SNAPTROL" Equivalent: BU5, CF12, CR11①, SF14, SR17, DC1

* "STA-LOC" Equivalent: FA54L, RU55L①, OF1750, IS2500

① Connect a 33K resistor in series with the left hand terminal of the control and the lead connected to the same terminal of the original control. (Control viewed from shaft end, terminals down).

② Some versions may use Part #33-5591-28.

③ Connect a 180Ω, 2 Watt resistor in series with the terminal.

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ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R7	7500M (5W)	MR4	7W-SQ-7500	#33-1363-83	R77	YDR ↑			#33-1373-4
R25	4700Ω (10W)	MR4	10W-SQ-4700	#33-1363-51	R78	6800Ω (3W)		3G-5600	#33-1363-39
R26	1200Ω (3W)		3G-1200	#33-1363-42	R82	6800Ω (5W)	MR4	7W-SQ-6800	#33-1363-82
R41	12K (7W)		10W-SQ-12K	#33-1335-113	R83	2700Ω (7W)	MR4	7W-SQ-2700	#33-1335-15
R66	4, 5Ω(Cold) Thermistor	PW10-12K			R85	5, 6Ω 5, 6W Fuse	FR5.6	F5.6	33-1366-7

† Voltage Dependent Resistor # Philco Part Number.

ITEM No.	USE	REPLACEMENT DATA				NOTES
		PHILCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	
L1	RF Choke (22 Turns)	32-4645-32				
L2	RF Choke (27 Turns)	32-4645-47				
L3	RF Choke (28 Turns)	32-4645-45				
L4	RF Choke (5 Turns)	32-4645-52				
L5	1st Video IF (13 Turns)	32-4645-53				
L6	2nd Video IF	32-4686-30		7513-P		
L7	3rd Video IF	32-4824-1				
L8	RF Choke (2.3uh)		BC-563	4606	RTC-8517	T857
L9	RF Choke (22uh)	32-4674-3	TV-192	72F225AP	RTC-8584	TA311
L10	RF Choke (3uh)	32-4645-44	BC-564	74F336AP	RTC-8518	TB294
L11	Peaking (22uh)	32-4762-8	BC-673	72F224AP	RTC-8586	T345
L12	Sound Takeoff 4.5MC Trap	32-4688-10	TV-158	7102-P	RTC-9306 ▲	TA602 ▲ Add 4, 7mmf Cap. Ext.
L13	Peaking (150uh)	32-4762-7	BC-672	6180	RTC-8597	T344
L14	Peaking (470uh)	32-4762-12	BC-677	6138	RTC-8580	T352
L15	Sound IF Interstage	32-4745-6	TV-157	6270-PC	RTC-9306	TA603
L16	Quadrature	32-4805-1		7121-P		TB292
L17	RF Choke (9uh)	32-4112-62	BC-566	4611	RTC-8521	T860
L18	RF Choke (9uh)	32-4112-62	BC-566	4611	RTC-8521	T860

ITEM No.	USE	REPLACEMENT DATA							NOTES
		PHILCO PART No.	Merit PART No.	Miller PART No.	Stoncor PART No.	Thordarson PART No.	Tried PART No.	Workman PART No.	
L19	Horiz. Stabilizer	32-4754-3	TV-250	6342-P					T183

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	PHILCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L20	.32ADC	20, 5Ω	.47HY	32-899-2		C-2343	26C79	C-34X

ITEM No.	USE	DESCRIPTION	PHILCO PART No.	REPLACEMENT DATA
K1 K2	Cath. Bias Network Vertical Retrace Supp.	100Ω, .0082mfd 12K, 15K, 68K, .0047mfd, .01mfd, .01mfd	30-6031-19 30-6548-1	
K3 K4	Cath. Bias Network Sync Separator Network	270Ω, .0082mfd 22K, 39K, 220K, 1meg, 1.2meg, 390mmf, .002mfd, .01mfd, .01mfd	30-6031-16 30-6546-1	
K5	Vertical Integrator	22K, 27K, 90K, 150mmf, 600mmf, .004mfd, .005mfd	30-6030-8	Centralab PC-439 Sprague V-27
K6	Horiz. Phase Comparer	82K, 150K, 680K, 620K, 62mmf, 220mmf, .001mfd, .047mfd	30-6035-5	A rovox PA-766 ① Centralab PC-409 ① Sprague C-11 ①
K7	Horiz. Oscillator Network	4700Ω, 4700Ω, 39K, 330mmf, .0033mfd, .0015mfd	30-6549-1	

① Connect a 2.4meg Resistor across Terminals 5 & 7.

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	PHILCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
T1	117VAC Ⓢ 1.65A	110VAC Ⓢ .32A DC	6.3VAC Ⓢ 8.2A	32-10004-1				

ITEM No.	USE	REPLACEMENT DATA					NOTES
		PHILCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.	
T2	Vert. Output	32-10005-1	A-2823	YO-118	26S72	A-135X	① Use Orig. Pin Cushion Magnet if Necessary & position same as orig. ② Remove Brown Lead ③ Use Orig. Leads. ④ Duplicate Orig. Vert Damping Network. ⑤ Add 1KΩ ½ Watt Res. between yoke terms, #1 & #3 & Yoke Plug Pin #2.
T3	Yoke (Horiz=25.5MH) 114° (Vert= 41.5MH)	76-12530-8	MDF-128 † ① ② ③ ④ M47-110 ⑤	DY-54A ④	Y-59 ① ③ ④ ⑤	Y-72-1 ① ④ ⑤	
T4	Rear Cover & Centering Device Horiz. Output	76-12399-1 32-10002-3				YC-111	

ORIGINAL →	HV TRANSFORMER							VERTICAL OUTPUT								YOKE								YOKE PLUG							
REPLACEMENT ↓	Original Connections							Original Connections				Original Connections				Original Connections				1	2	3	4	5	6	7	8				
	1	2	3	4	5	6		Blue White	Red	White	Black		Org Wh	Grn Wh	Grn Blk	Red Blk	Blk Rcr	Wh	TO YOKE TERMINAL												
MERIT								Blue	Red	Green	Yellow	†	5	4	6	8	2	1	3	10	2	1	3	10	8	5	4	6	8		
STANCOR								Blue	Red	Yellow	Green	▲	6	5	8	4	2	1	3	10	2	1	3	10	7	4	6	5	8		
THORDARSON								Blue	Red	Yellow	Green		6	5	8	4	2	1	3	10	2	1	3	10	7	4	6	5	8		
TRIAD								Blue	Red	Yellow	Green	‡	6	5	8	4	2	1	3	10	2	1	3	10	7	4	6	5	8		

† Remove 100mmf capacitor between terminals #1 and #2. ‡ Remove 160mmf capacitor between terminals #1 and #2.
▲ Add a lead between yoke terminals #5 and yoke plug pin #7.

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			PHILCO PART No.	MERIT PART No.	STANCOR PART No.	THORNDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T5	10000Ω	3-4Ω	32-8985-5	A-2998		24583	S-11X	

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		PHILCO PART No.	QUAM PART No.	
SP1	3" x 5" PM 3-4Ω 3" x 5" PM 3-4Ω	36-1689-11 36-1689-12	35A05 35A05	

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PHILCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1		1" Length of #26 Fuse Wire						

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M2	VHF Tuner	TT-129	JFD Replacement TA438 (2 used) Video Det. Dual Diode, Horiz., AFC Det.
M3	VHF Tuner	TT-83	
	UHF Tuner	TT-136A	
M4	UHF Tuner	TT-137A	
M5	Antenna	76-12763-2	
M6	Diode	34-8022-5	
	Diode	34-8037-2	
	Circuit Board	27-10477-1	

(When Ordering Specify Model, Chassis & Color)

[illegible]

High Voltage Lead	Use BELDEN No.	8869 (17KV) or 8868 (25KV)
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 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord (Interlock Type)	Use BELDEN No.	8974 (Rubber) or 8995 (Plastic)
300Q Tuner Input Lead	Use BELDEN No.	8225
300Q Antenna Lead-in	Use BELDEN No.	8230 or 8275
Antenna Rotor Cable	Use BELDEN No.	8480 or 8484 (Round) - 4 Conductor 8485 (Round) - 5 Conductor 8488 (Round) - 8 Conductor

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C2	.1 50V		TTD-1	CK-104	H-05P1		TA-010	TG-P10
C3	.22 100V		P288N-22		WMF1P22E	IDP-3-224	PVC1022	2TM-P22
C4	.05 50V		TTD-05	CK-503	H-05S5		TA-150	TG-S50
C5	.0082			DD-822		CCD-822	B-282	
C6	.1 50V		TTD-1	CK-104	H-05P1		TA-010	TG-P10
C7	680 5%		1469-00068	CPR-680J	5R5T68	DM-19-681J	MCJ249	MS-368
C8	680 5%		1469-00068	CPR-680J	5R5T68	DM-19-681J	MCJ249	MS-368
C9	.047 600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C10	.22 100V	Note 1	P288N-22		WMF1P22E	IDP-3-224	PVC1022	2TM-P22

Note 1 Not used in some versions.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		PHILCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Input	32-4823-2					
L2	40KC	32-4823-1					
L3	38KC	32-4823-1					

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	PHILCO PART No.	REPLACEMENT DATA
K1	Volume Level Network	33K, 150K, 220K, 560K, 820mmf, .0015mfd, .0039mfd, .0068mfd	30-8041-1	

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	PHILCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .017A	11.5VAC @ .017ADC		32-10003-1					

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M1	Switch	42-2075-13	Manual-Remote Channel Selector TV ON-OFF Volume Level Includes Cable
M2	Relay	42-4050-1	
M3	Relay	42-4052-1	
M4	Relay	42-4051-1	
M5	Transducer	36-1692-5	

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid 22AWG) 8524 (Stranded 22AWG) 8570 (Stranded 26AWG)	Available in 12 Colors
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REMOTE CONTROL TRANSMITTER

ITEM	PART No.	ITEM	PART No.
Transmitter Assy. Complete	76-12243-5	Pushbutton, Left	28-13653-5
Back Cover	54-5947-3	Pushbutton, Right	28-13653-6
Front Cover	54-5946-3	Rod, 38KC Tuning	28-13223-3
Grille	28-13660-4	Rod, 40KC Tuning	28-13223-2
Lever	28-13936-1		

SET 697 FOLDER 3-A

PHILCO
REMOTE CONTROL RC-68D

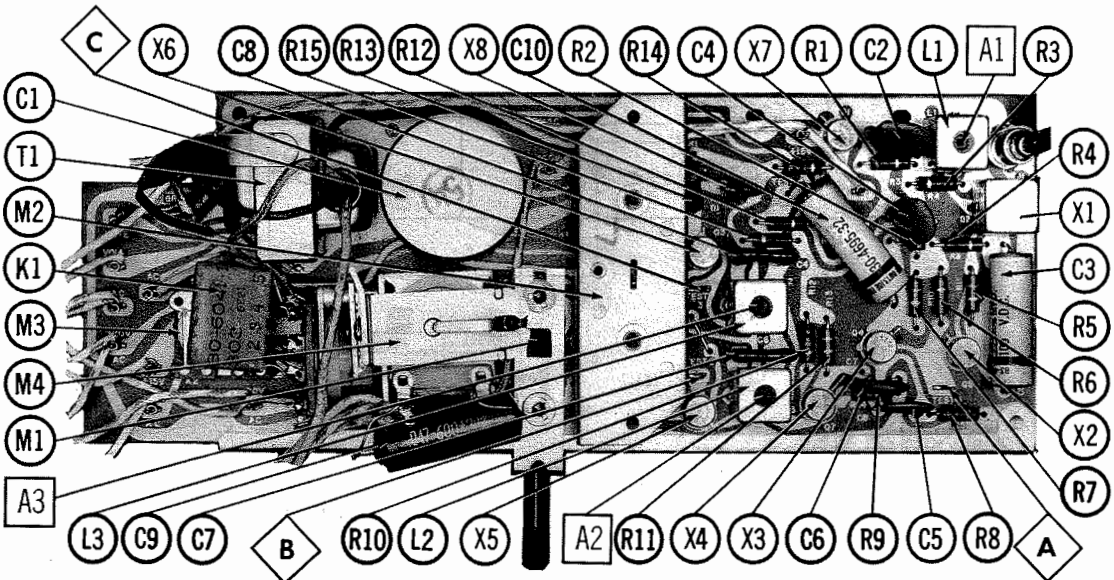
PHOTOFACT® Folder

with CIRCUITRACE®

PHILCO
REMOTE CONTROL RC-68D

IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 697 FOLDER 3. File this Folder with the TV Folder in the yellow filing jacket provided.



PHILCO
REMOTE CONTROL RC-68D

TRADE NAME	Philco
MANUFACTURER	Philco Corp., A Subsidiary of Ford Motor Co., Tioga & C Streets, Philadelphia, Pa.
TYPE SET	Remote Control Receiver with Mechanical Type Transmitter
TRANSISTORS	Seven
POWER SUPPLY	110-120 Volts AC, 60 Cycle
RATING	.017 Amp. @ 115 VAC (Channel Tuning in Operation) .027 Amp. @ 115 VAC (Volume Tuning in Operation)

ALIGNMENT INSTRUCTIONS

REMOTE RECEIVER ALIGNMENT

Suggested Alignment Tools: GENERAL CEMENT #9440
Connect an Audio Generator to speaker and position the speaker approximately 3 inches in front of Ceramic pickup.

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1. None	38KC 40KC	Any non-interfering channel	DC probe to point A. Common to chassis.	A1	Adjust for equal amplitude at both 38KC and 40KC. A1 should be adjusted at the equal amplitude that positions core nearest mounting end of can.
2. None	40KC	"	DC probe to point B. Common to chassis.	A2	Adjust for maximum deflection. A2 should be adjusted to position the core nearest the printed circuit board.
3. None	38KC	"	DC probe to point C. Common to chassis.	A3	Adjust for maximum deflection. A3 should be adjusted to position the core nearest printed circuit board.

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



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. MA191 MA712.

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DATE 6-64 SET 697 FOLDER 3-A

SET 697 FOLDER 3-A

