

**CABINET-REAR VIEW**

## HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Tune in a TV station and adjust all controls for normal operation. Connect a clip lead from pin 1 of V4, Sync Separator, to ground, and a clip lead across the Horizontal Stabilizer coil, L13. Adjust the Horizontal Hold control until the picture floats across the screen. Remove the jumper across the Horizontal Stabilizer coil and adjust "B1" until the picture floats across the screen. Remove clip lead from pin 1 of V4.

## DISASSEMBLY INSTRUCTIONS

### TV CHASSIS REMOVAL

1. Remove 8 screws holding cabinet back and disconnect antenna leads. Remove cabinet back and all control knobs. Remove 2 screws, one on either side of chassis, and tilt chassis down. Most components can be serviced from this position.
2. Remove 4 screws holding tuner and controls. Remove high voltage lead, picture tube socket, yoke leads, and grounding spring.

3. Unhinge and remove chassis from cabinet.

### PICTURE TUBE REMOVAL

1. Follow "Chassis Removal" procedure. Lay set face down on a soft protective surface.
2. Remove chassis hinge brackets and remove 4 bolts holding picture tube mounting brackets. Lift picture tube, by bulb, out of cabinet. Do not lift out picture tube by the neck of the tube.

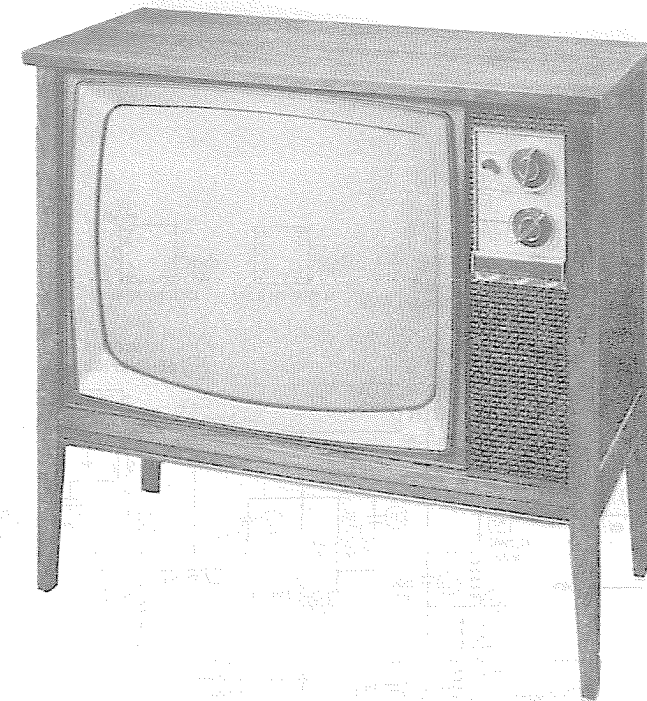
SET 937 FOLDER 1

PHOTOFACT® Folder



ELECTROHOME  
CHASSIS M4

ELECTROHOME  
CHASSIS M4



MODEL HURON U

TRADE NAME	Electrohome Models:	Aurora MKI, MKU Avalon MKI, MKU Bradford MKII, MKIII Cadet MKII, MKIII Clinton, U Hollyburn	Huron, U Jupiter MKI, MKIU Severn, U Sutton MKIV, MKIUV Townsmen MKI, MKIU Westview, U
	<div>Chassis M4 All Models</div>		
SUPPLIER	For current address, see Annual Index.		
TYPE SET	Television Receiver		
TUBES	Sixteen,	TRANSISTOR One	
POWER SUPPLY	110-120 Volts AC, 60 Cycles	RATING 145 Watts, 1.55 Amp. @ 117 Volts AC	
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)		

## SERVICING IN THE FIELD

### SAFETY GLASS

The safety glass is an integral part of the picture tube.

### FUSE OR FUSE DEVICE

A Circuit Breaker is used for low voltage power supply protection and may be reset by depressing the reset button. (See "Cabinet - Rear View" photo, for location.)

### VHF OSCILLATOR ADJUSTMENT

The Fine Tuning mechanically engages oscillator slug for adjustment (one slug for each channel). It may be necessary to adjust overall oscillator trimmer for best results.

### AGC

The AGC may be varied by means of an AGC control. (See "Cabinet - Rear View" photo, for location.)

### HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Coarse adjustment of the horizontal hold is accomplished by the proper setting of the Horizontal Stabilizer coil. (See "Cabinet - Rear View" photo, 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" photo.)

### CENTERING

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

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206



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. SA532 10 9 8 7 6 5 4 3 2 1 0

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DATE 2 -68 SET 937 FOLDER 1

REMOTE RECEIVER ALIGNMENT

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
Connect high side thru .002mfd capacitor to Point $\diamond$ Low side to ground.	38.285KC		DC probe to Point $\diamond$ Low side to Point $\diamond$	A1	Adjust for maximum deflection.
"	41.805KC		DC probe to Point $\diamond$ Low side to Point $\diamond$	A2	Adjust for maximum deflection.

SENSITIVITY BALANCE CONTROL ADJUSTMENT

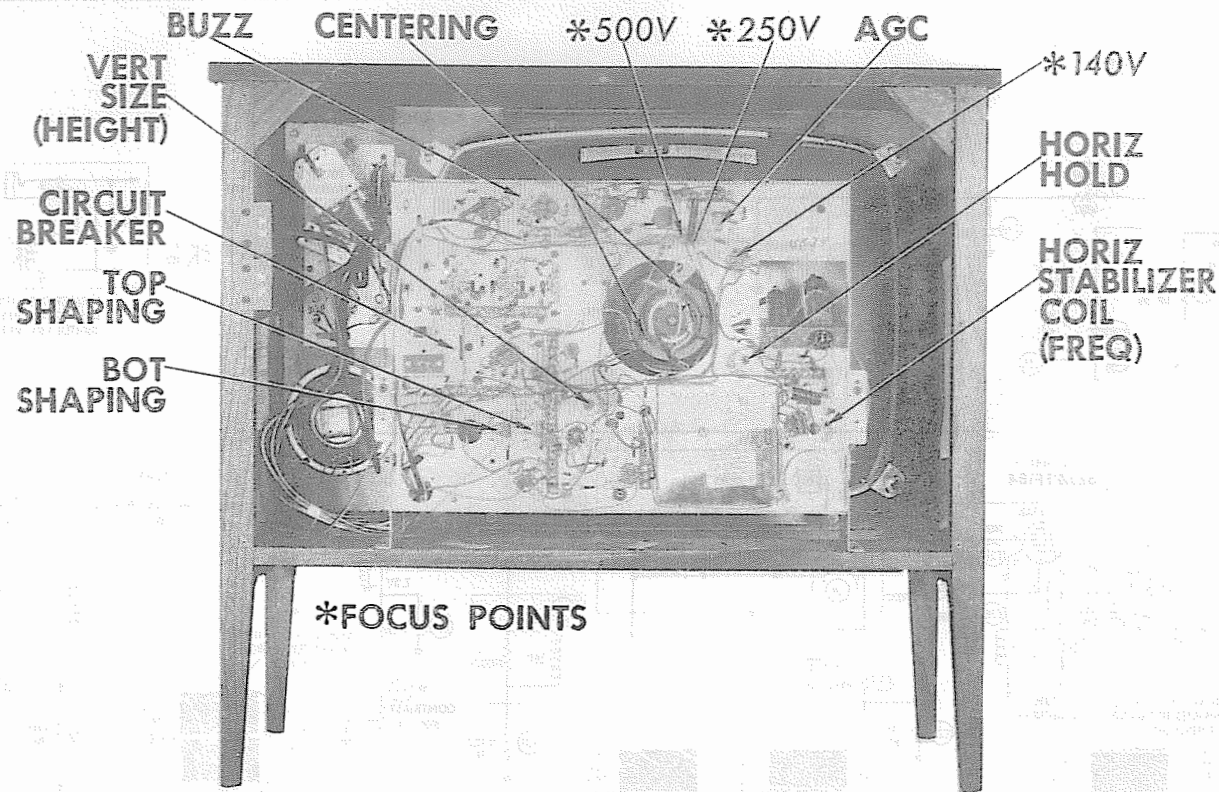
Adjust Sensitivity Balance control to obtain the same DC voltage between Points  $\diamond$  and  $\diamond$  as between Points  $\diamond$  and  $\diamond$ .

SENSITIVITY CONTROL ADJUSTMENT

Adjust Sensitivity control for normal operation with Transmitter approximately 8 feet away.

ELECTROHOME  
CHASSIS M4

FOLDER 1



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Tune in a TV station and adjust all controls for normal operation. Connect a clip lead from pin 1 of V4, Sync Separator, to ground, and a clip lead across the Horizontal Stabilizer coil, L18. Adjust the Horizontal Hold control until the picture floats across the screen. Remove the jumper across the Horizontal Stabilizer coil and adjust "B1" until the picture floats across the screen. Remove clip lead from pin 1 of V4.

DISASSEMBLY INSTRUCTIONS

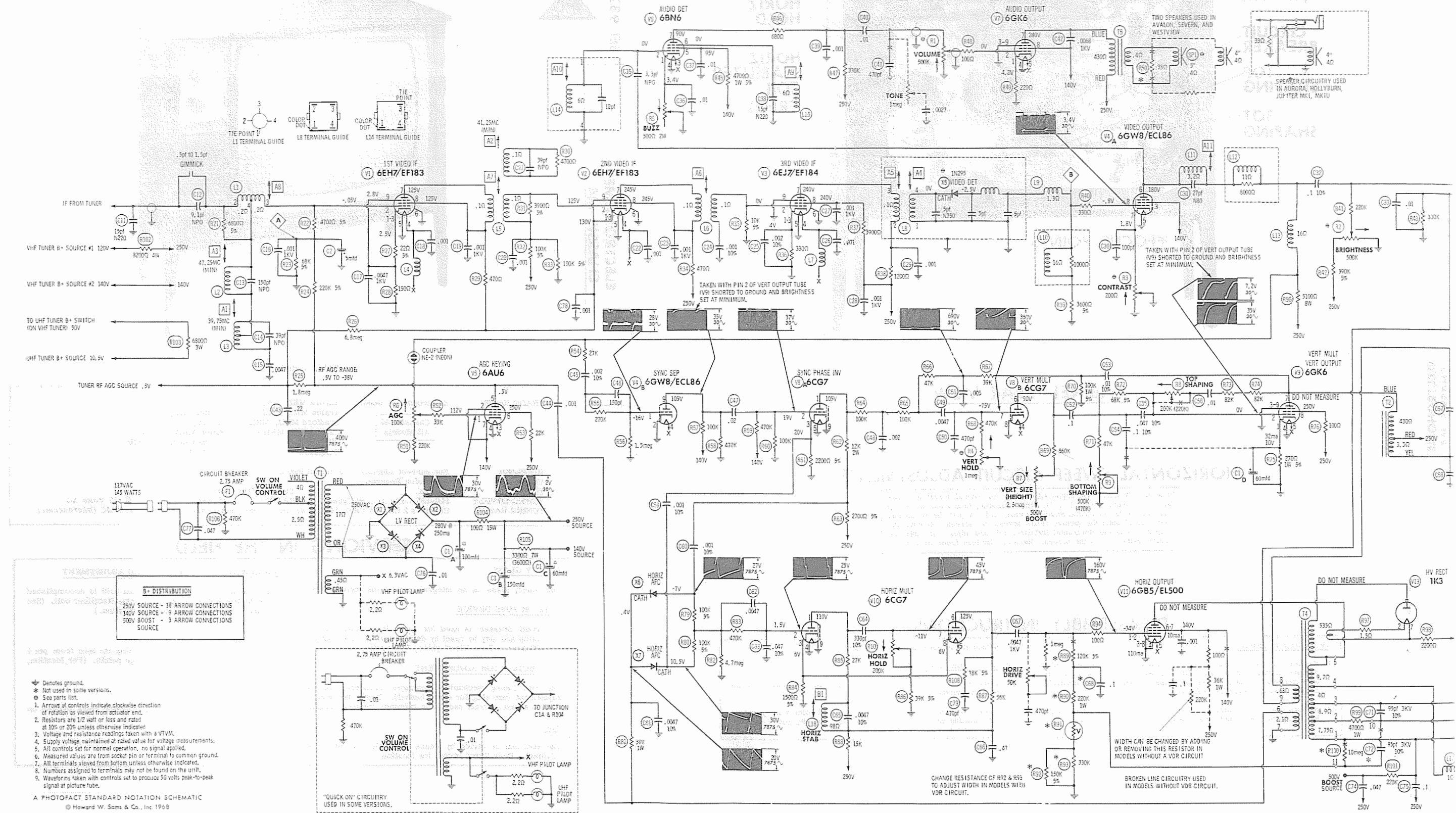
TV CHASSIS REMOVAL

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2. Remove 4 screws holding tuner and controls. Remove high voltage lead, picture tube socket, yoke leads, and grounding spring.

3. Unhinge and remove chassis from cabinet.

PICTURE TUBE REMOVAL

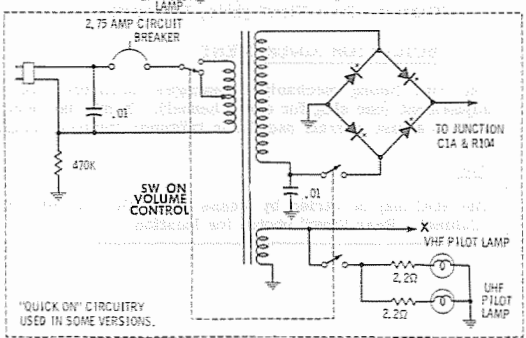
1. Follow "Chassis Removal" procedure. Lay set face down on a soft protective surface.
2. Remove chassis hinge brackets and remove 4 bolts holding picture tube mounting brackets. Lift picture tube, by bulb, out of cabinet. Do not lift out picture tube by the neck of the tube.



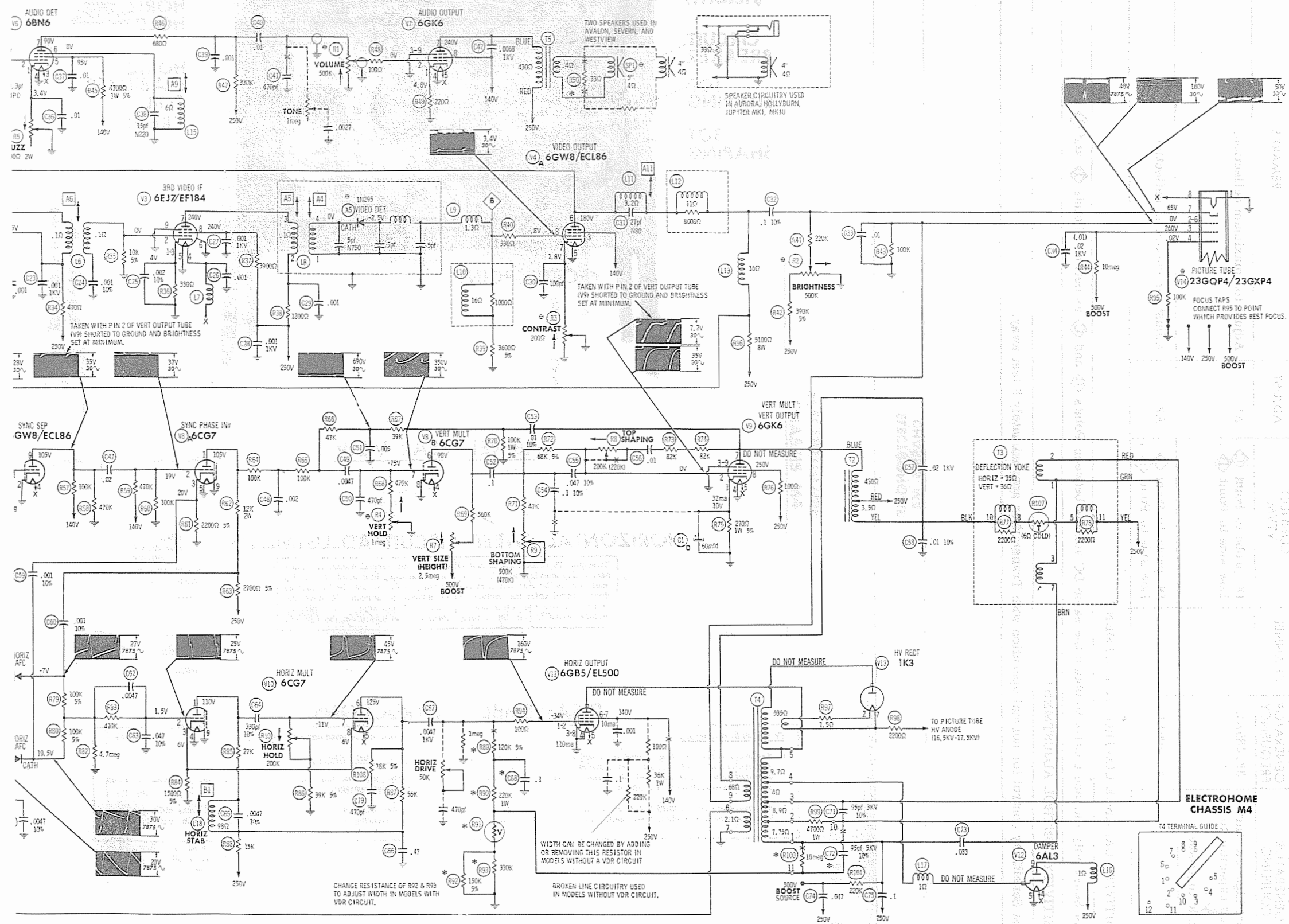
**B-DISTRIBUTION**  
250V SOURCE - 18 ARROW CONNECTIONS  
140V SOURCE - 9 ARROW CONNECTIONS  
500V BOOST - 3 ARROW CONNECTIONS  
SOURCE

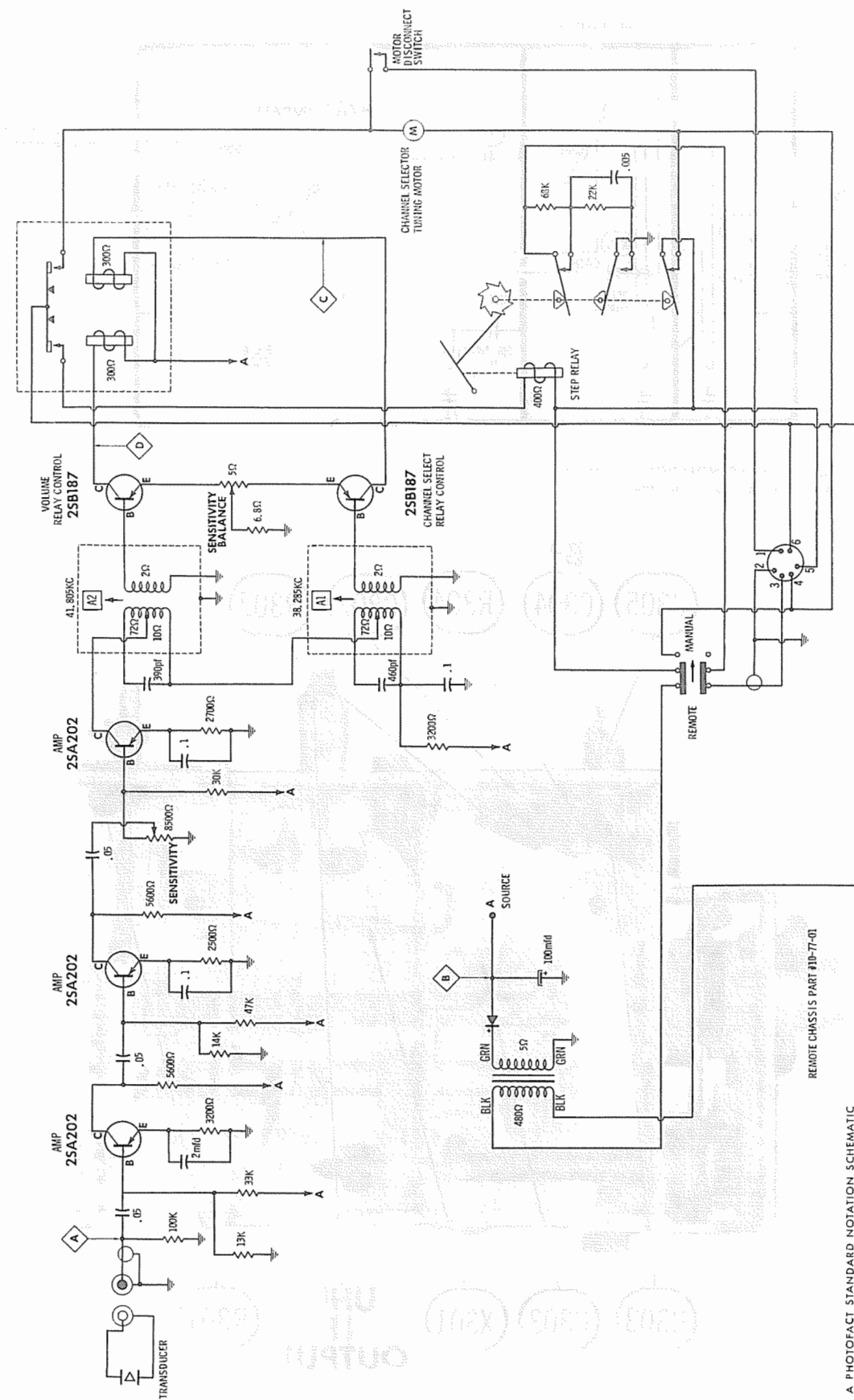
- \* Denotes ground.
- \* Not used in some versions.
- See parts list.
- 1. Arrows of controls indicate clockwise direction of rotation as viewed from actuator end.
- 2. Resistors are 1/2 watt or less and rated at 10% or 20% unless otherwise indicated.
- 3. Voltage and resistance readings taken with a VTVM.
- 4. Supply voltage maintained at rated value for voltage measurements.
- 5. All controls set for normal operation, no signal applied.
- 6. Measured values are from socket pin or terminal to common ground.
- 7. All terminals viewed from bottom unless otherwise indicated.
- 8. Numbers assigned to terminals may not be found on the unit.
- 9. Waveforms taken with controls set to produce 50 volts peak-to-peak signal at picture tube.

A PHOTOFACT STANDARD NOTATION SCHEMATIC  
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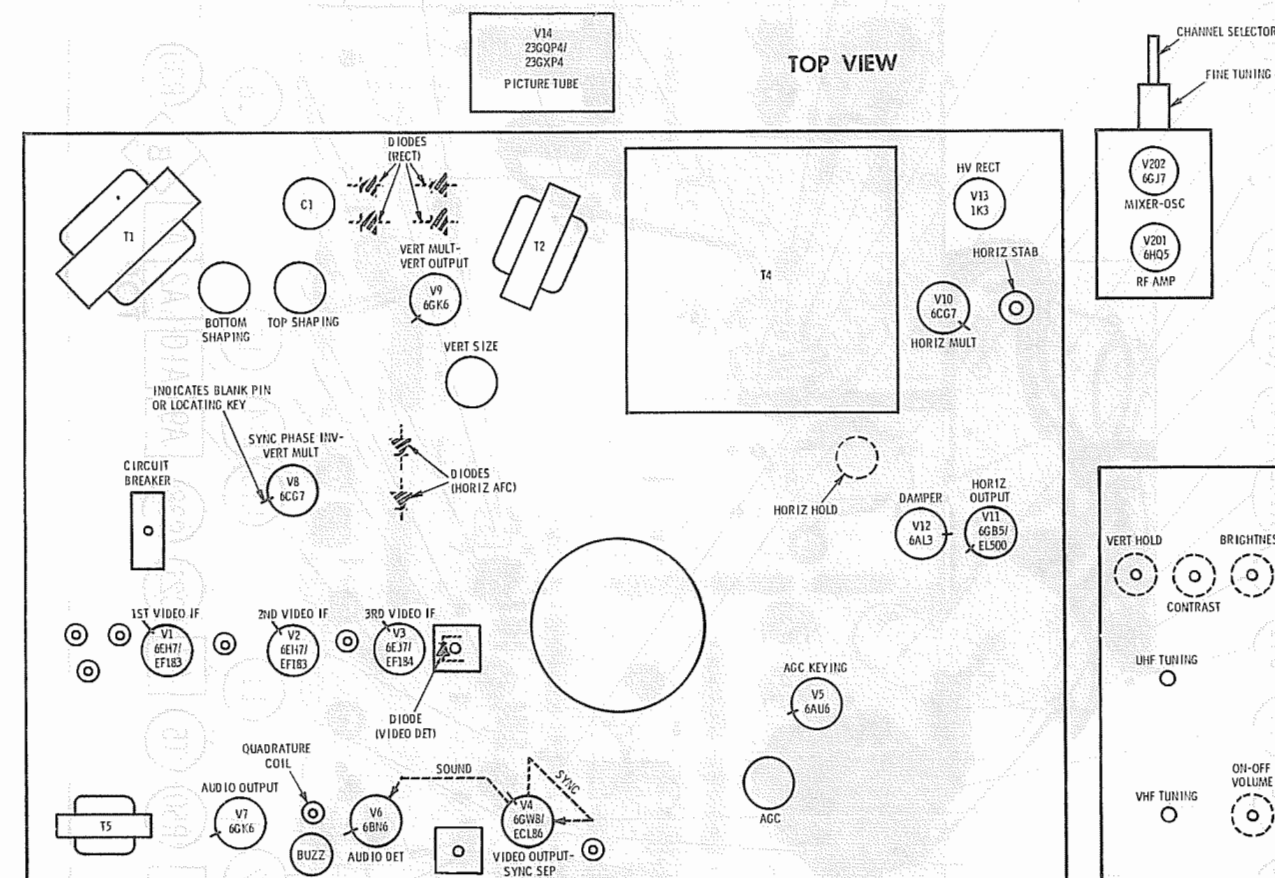




REMOTE CHASSIS PART #10-77-01

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## 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 F1 Circuit Breaker, X1 thru X4 Rectifiers

**SWEEP FAILURE**  
No raster, has sound V10, V11, V12, V13  
No vertical deflection V8, V9  
Poor vert. linearity or foldover V8, V9  
Poor horiz. linearity or foldover V10, V11, V12  
Narrow picture X1 thru X4, V10, V11, V12  
Vert. off freq. V8, V9  
Horiz. off freq. X6, X7 (Horiz. AFC Diodes), V10

LOSS OF PICTURE OR SOUND  
No pic, no sound, has raster V1, V2, V3, X5 (Video Detector Diode)  
No pic, no sound, has snow V201, V202, V1  
No pic, has sound, has raster V4, V14  
Has pic, no sound V8, V7  
Overloaded picture V5

**SYNC FAILURE**  
No vert. sync V4, V8  
No horiz. sync V4, V8  
No vert. or horiz. sync V4, V8

# ELECTROHOME CHASSIS M4

**FOLDER 1**

RESISTANCE MEASUREMENTS

ITEM	TUBE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	TOP CAP
V1	6EH7/EF183	172Ω	70K	172Ω	FIL	FIL	0Ω	470Ω Δ	470Ω Δ	150Ω				
V2	6EH7/EF183	8meg	60K	8meg	FIL	FIL	0Ω	570Ω †	570Ω †	8meg				
V3	6EJ7/EF184	330Ω	10K	330Ω	FIL	FIL	0Ω	1300Ω †	4000Ω †	0Ω				
V4	6GW8/ECL86	1.5meg	0Ω	3700Ω †	FIL	FIL	5000Ω †	120Ω	600Ω *	80K †				
V5	6AU6	330K †	3700Ω †	FIL	FIL	300K	23K †	3700Ω †						
V6	6BN6	310Ω	6Ω	FIL	FIL	8400Ω †	6Ω	330K †						
V7	6GK6	220Ω	150K	NC	FIL	FIL	TP	520Ω †	3700Ω †	0Ω				
V8	6CG7	15K †	85K	2200Ω	FIL	FIL	1.1meg †	750K	0Ω	0Ω				
V9	6GK6	270Ω	300K	0Ω	FIL	FIL	TP	520Ω †	200Ω †	0Ω				
V10	6CG7	42K †	850K	1500Ω	FIL	FIL	70K †	80K	1500Ω	0Ω				
V11	6GB5/EL500	INF	INF	0Ω	FIL	FIL	3700Ω †	3700Ω †	0Ω	TP				9.7Ω †
V12	6AL3	NC	NC	NC	FIL	FIL	NC	NC	NC	100Ω †				INF
V13	1K3	NC	INF	NC	INF	NC	TP	INF	NC					544.7Ω †
V14	23GQP4/23GXP4	FIL	100K	10meg †	100K	TP	NC	400K	FIL					
V201	6HQ5	2.2meg	0Ω	FIL	FIL	9400Ω †	0Ω	0Ω						
V202	6GJ7	0Ω	220K	0Ω	FIL	FIL	4400Ω †	8000Ω †	15K †	47K				
ITEM	TUBE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	TOP CAP

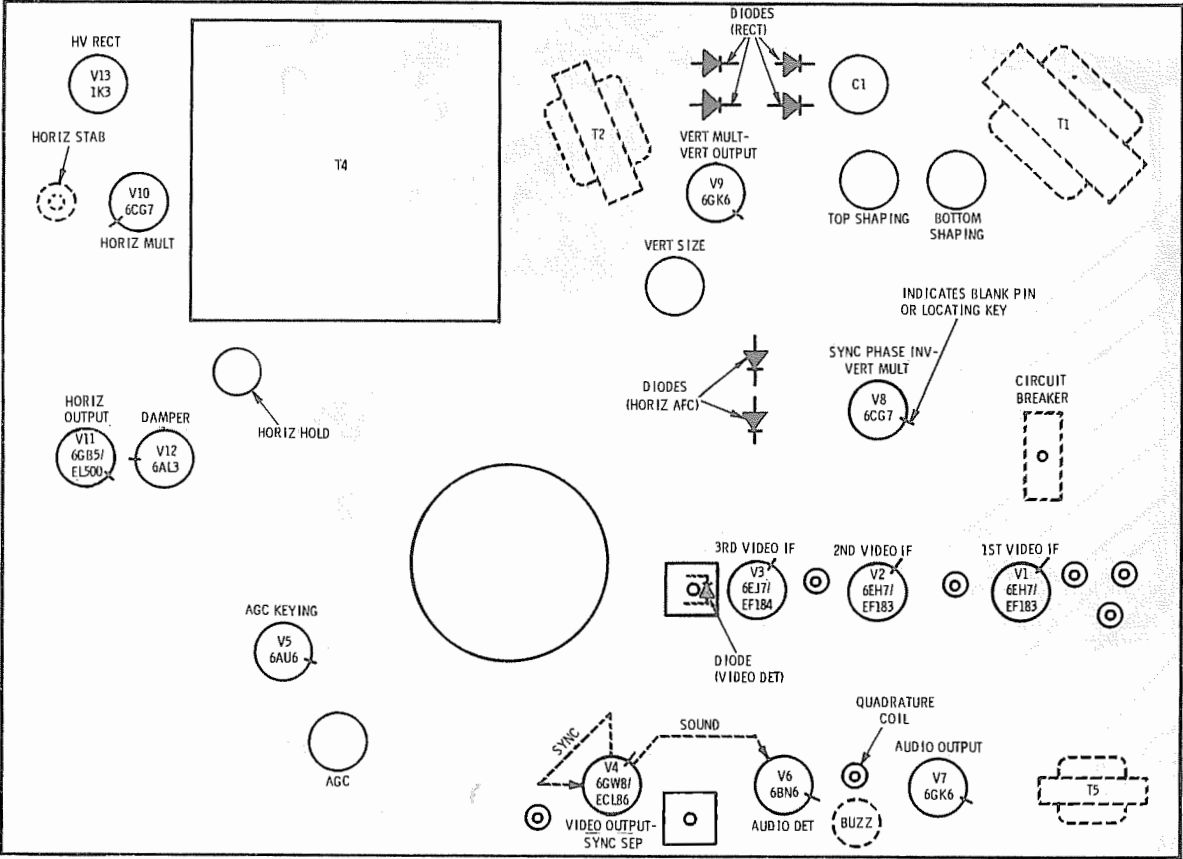
\* READING DEPENDS UPON POLARITY OF METER CONNECTIONS.  
† MEASURED FROM TOP CAP OF V12.  
NC NO CONNECTION

TP TIE POINT

Δ MEASURED FROM PIN 1 AND 3 OF V2.  
† MEASURED FROM OUTPUT OF X2 AND X4.  
INF INFINITE

BOTTOM VIEW

V14  
23GQP4/  
23GXP4  
PICTURE TUBE



TUBE PLACEMENT CHART

ALIGNMENT INSTRUCTIONS

Use an isolation transformer and maintain voltage at 117 volts. Allow a 20-minute warm-up period for the receiver and test equipment.  
Suggested Alignment Tools: A1 thru A10 ..... GENERAL CEMENT #8606, 8606L, 8869 ... WALSCO #2543, 2544, 2588  
Mixer Plate Coil .. GENERAL CEMENT #9296, 9297, 9300 ..... WALSCO #2510, 2546, 2547

VIDEO IF ALIGNMENT

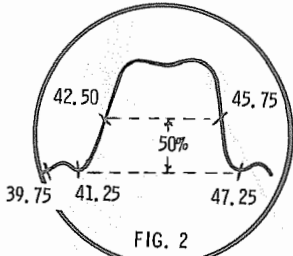
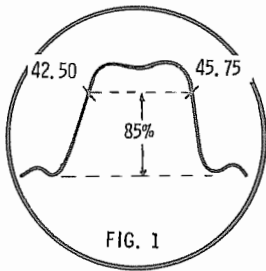
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from those shown. Connect a variable bias supply to the IF AGC line ( point Δ ) 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 B. Common to ground.	Connect high side to ungrounded tube shield over Osc. - Mixer tube. Low side to ground.		39.75 MC 41.25 MC 47.25 MC	A1 A2 A3	Adjust for MINIMUM.
2. Connect vertical input of a scope to point B. Low side to ground.	Connect high side thru .002mfd capacitor to pin 2 (grid) of V3. Low side to ground.	44MC (10MC Sweep)	42.5 MC 45.75 MC	A4, A5	Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1.
3. Connect vertical input of a scope to point B. Low side to ground.	Connect high side to ungrounded tube shield over Osc. - Mixer tube. Low side to ground.	44MC (10MC Sweep)	39.75 MC 41.25 MC 42.5 MC 45.75 MC 47.25 MC	A6, A7, A8 and Mixer Plate Coil	Adjust for maximum gain and symmetry of response with markers as shown in Figure 2. In order to obtain a proper response, it may be necessary to slightly retouch A4 and A5.

SOUND IF ALIGNMENT

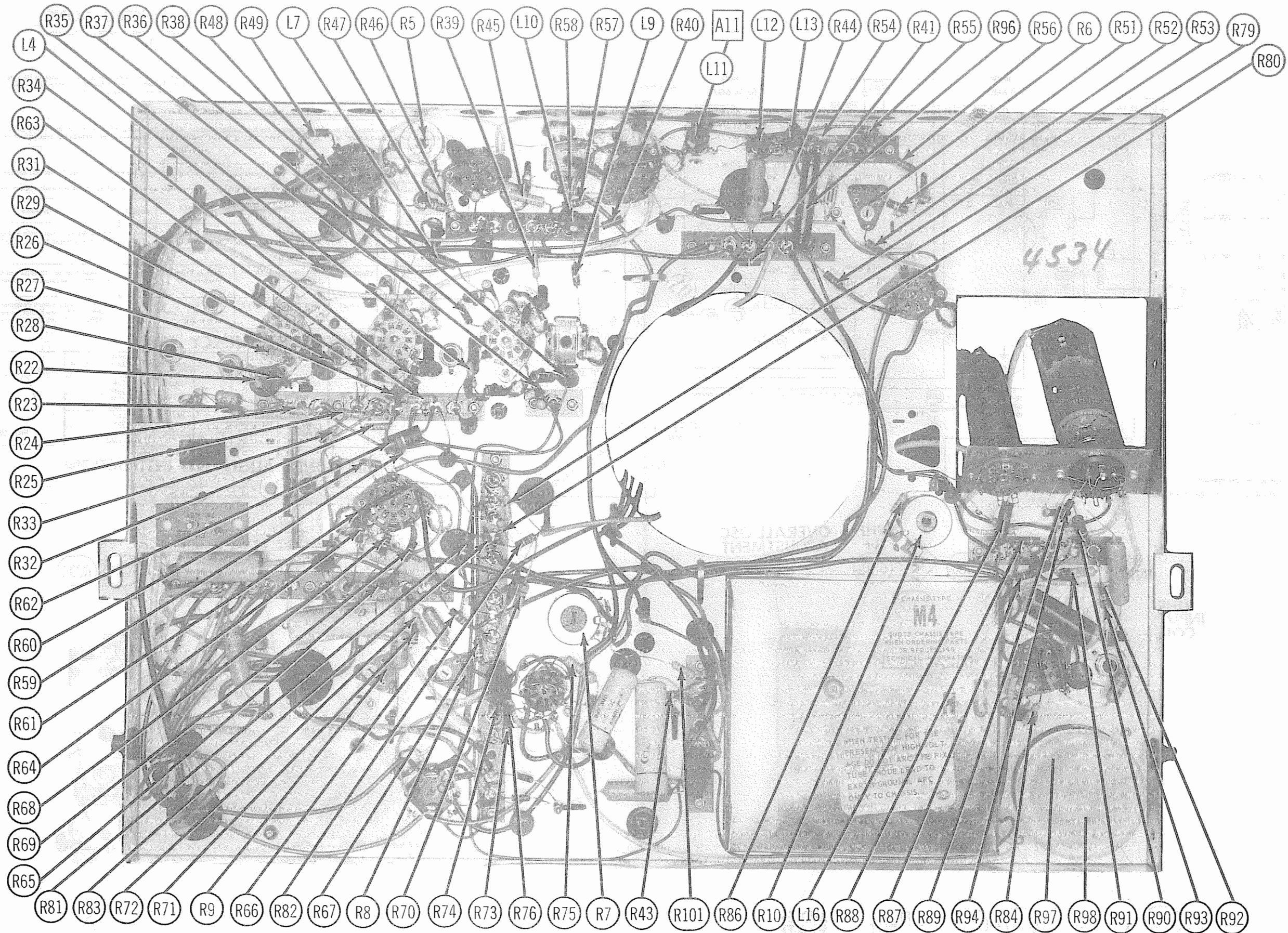
Tune in a station and reduce the signal strength at the antenna terminals until a hiss is heard in the sound. Align for maximum undistorted sound with MINIMUM buzz by adjusting A9, A10, and R5. If the hiss disappears during alignment, further reduce the signal strength.

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 A11 for MINIMUM beat interference.







CHASSIS - REAR VIEW

## VHF TUNER PARTS LIST

### TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE		
V201	RF Amp.		6HQ5			V202	Mixer - Oscillator		6GJ7		

### 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.
C201A	27	(12) †	DI-27	DD-270		CCD-270	GP427	10TS-Q27
B 27			DI-27	DD-270		CCD-270	GP427	10TS-Q27
C 27			DI-27	DD-270		CCD-270	GP427	10TS-Q27
D 27			DI-27	DD-270		CCD-270	GP427	10TS-Q27
C202	15		DI-15	DD-150		CCD-150	GP415	10TS-Q15
C203	15		DI-15	DD-150		CCD-150	GP415	10TS-Q15
C204	.5-4.5							
C205	30							
C206	.5-4.5							
C207	.75pf							
C208	18							
C209	.75pf N033							
C210	.5-4.5	(1.2) † (1) † (15) †						
C211	.001		EF-001	MFT-1000		CCF-102	CT280A	
C212	.001		EF-001	MFT-1000		CCF-102	CT280A	
C213	.5-3.7							
C214	1.8 N150 ±.25							
C215	10 N150 ±2%							
C216	.001		EF-001	MFT-1000		CCF-102	CT280A	10TCP-Q10
C217	.001		EF-001	MFT-1000		CCF-102	CT280A	
C218	.001		EF-001	MFT-1000		CCF-102	CT280A	
C219	.001		EF-001	MFT-1000		CCF-102	CT280A	
C220	.001		EF-001	MFT-1000		CCF-102	CT280A	
C221	3							

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

† Alternate Value

## UHF TUNER PARTS LIST

### TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				Electrohome PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.		
Q301	2N2616 S1019 *	UHF Oscillator		GE-11	TR-24			NPN NPN

\* Alternate Transistor used in Tuner 23-244-00 Series.

### POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X301		1N82AG	1N82A	1N82AG			

### CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C301								
C302								
C303	.5pf N470 1%		EF-001	MFT-1000		CCF-102	CT280A	
C304	.001							
C305								

## PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, 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.

### WIRING DATA

High Voltage Lead .....	Use BELDEN No. 8869 (17KV)
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
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

### TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE		
Q301	UHF Osc. (Transistor)		2N2616 †			V6	Audio Detector		6BN6		
V201	RF Amp.		6HQ5			V7	Audio Output		6GK6		
V202	Mixer-Oscillator		6GJ7			V8	Sync Phase Inv. - Vert. Mult.		6CG7		
V1	1st Video IF		6EH7/EF183			V9	Vert. Mult. - Vert. Output		6GK6		
V2	2nd Video IF		6EH7/EF183			V10	Horiz. Mult.		6CG7		
V3	3rd Video IF		6EJ7/EF184			V11	Horiz. Output		6GB5/EL500		
V4	Video Output - Sync Sep.		6GW8/ECL86			V12	Dampier		6AL3		
V5	AGC Keying		6AU6			V13	HV Rectifier		1K3		

† Alternate Part #S1019 used in Tuner 23-244-00 Series.

### PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	Electrohome PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V14	23GXPM ① or 23GXP4 ② 21FWP4 ③ 20VP4 ④ 19BSP4 ⑤ 19EUP4 ⑥		23GXP4 *	23GXP4 † 19BSP4 †	* Aluminized † Silver Screen "85"

① Models Avalon MKI/MKU, Bradford MKII/MKIU, Clinton/U, Huron/U, Severn/U, Sutton MKIV/MKIVU, Townsman MKI/MKIU, Westview/U.

② Models Jupiter MKI, MKIU.

③ Model Hollyburn.

④ Models Cadet MKII/MKIU.

⑤ Models Aurora MKI/MKU.

### POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.25A	2B-22-01	GE-504A	8D6 or 18DC6A ①	1N2071 or FW600 ①	SK-3016 or SK-3017A	F-6 or S-5981-2 ①
X2	.25A	2B-22-01	GE-504A	8D6 or 18DC6A ①	1N2071 or FW600 ①	SK-3016 or SK-3017A	F-6 or S-5981-2 ①
X3	.25A	2B-22-01	GE-504A	8D6 or 18DC6A ①	1N2071 or FW600 ①	SK-3016 or SK-3017A	F-6 or S-5981-2 ①
X4	.25A	2B-22-01	GE-504A	8D6 or 18DC6A ①	1N2071 or FW600 ①	SK-3016 or SK-3017A	F-6 or S-5981-2 ①
X5		1N295A or 1N60 or 1N87A	1N295	18DC6A ① 1N295	1N295	SK-3016 or SK-3017A	F-6 or S-5981-2 ①
X6		14-514-12 (FD17-08)	1N34AS	1N34A			
X7		14-514-12 (FD17-08)	1N34AS	1N34A			

① A single unit replaces X1 thru X4.

### ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA					
		Electrohome PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.
C1A	100 300V	44-204-07	AFH4-46-10		CC0734.3 & BR60-350	XC4-70.1 & QT1-14	WP419.554 & TC29
B	150 300V						
C	60 300V						
D	60 25V						
C2	5 64V	①	CRE904A		NLW5-150	MT1-4	TT100X5

① Some versions may use 5mfd @ 50V, Part #44-205-40 in this application.

### 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.
C11	15 N220							10TCR-Q15
C12	9.1 NPO ±.5		NPO-DI 8.2					10TCC-V82
C13	150 NPO		NPO-DI 150					10TCC-T15
C14	39 NPO		NPO-DI 39					10TCC-Q39
C15	.0047		DI-4700	DTZ-150		CC0-151	CNO315	10TS-D47
C16	.001 1KV		DI-1000	TCZ-39		CC0-390	CNO439	5GA-D10
C17	.0047 1KV		DI-4700	DD-472	JBT601YP472K	CCD-472	GP247	5GA-D47
C18	.001		DI-1000	DD-102	BYZ601ZU102M	CCD-102	GP210	10TS-D10
C19	.001 1KV		DI-1000	DD-102	BYZ601ZU472M	CCD-472	GP247	5GA-D10
C20	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
					BYZ601ZU102M	CCD-102	GP210	10TS-D10
					JBS601YP102K	CCD-102	GP210	10TS-D10



## CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOPART No.	MALLORY PART No.	SPRAGUE PART No.
C21	39 NPO		NPO-DI 39	TCZ-39	JBS601Y P102K	CCO-390	CNO439	10TCC-Q39
C22	.001		DI-1000	DD-102	BYZ601ZU102M	CCD-102	GP210	10TS-D10
C23	.001 1KV		DI-1000	DD-102	BYZ601ZU102M	CCD-102	GP210	5GA-D10
C24	.001 10%		DI-1000	DD-102	JBS601Y P102K	CCD-102	GP210	10TS-D10
C25	.002 10%		DI-2000	DD-202	JBS601Y P202K	CCD-202	GP220	10TS-D20
C26	.001 1KV		DI-1000	DD-102	JBS601Y P102K	CCD-102	GP210	10TS-D10
C27	.001 1KV		DI-1000	DD-102	BYZ601ZU102M	CCD-102	GP210	5GA-D10
C28	.001 1KV		DI-1000	DD-102	BYZ601ZU102M	CCD-102	GP210	5GA-D10
C29	.001		DI-1000	DD-102	JBS601Y P102K	CCD-102	GP210	10TS-D10
C30	100		DI-100	DD-101	JBS601Y P101K	CCD-101	GP310	10TS-T10
C31	27 N80							
C32	.1 400V 10%		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C33	.01				BYT601ZU203Z	CCD-203	GP120	5GA-S20
C34	.02 1KV					CCO-390	CNO533	10TCC-V30
C35	3.3 NPO ±.25	(.01) †	NPO-DI 3.0	DTZ-3R3	BYX601ZU103M	CCD-103	GP110	10TS-S10
C36	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C37	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C38	15 N220		DI-15	DD-150	UK-225	CCD-150	GP415	10TS-Q15
C39	.001		DI-1000	DD-102	JBS601Y P102K	CCD-102	GP210	10TS-D10
C40	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C41	.470		DI-470	DD-471	JBZ601Y P471K	CCD-471	GP347	10TS-T47
C42	.0068 1KV		DI-6800	DD-682	BYX601ZU682P	CCD-682	GP268	
C43	.22		DI-220	DD-225	HCT300X225P	CCD-225	MAC32P2	HY150
C44	.001		DI-1000	DD-102	JBS601Y P102K	CCD-102	GP210	10TS-D10
C45	.002 10%		DI-2000	DD-202	JBS601Y P202K	CCD-202	GP220	10TS-D20
C46	150		DI-150	DD-151	JBS601Y P150K	CCD-151	GP315	10TS-T15
C47	.02		BPD-02	DD-02	BYT601ZU203Z	CCD-203	GP120	10TS-S20
C48	.002		DI-2000	DD-202	JBS601Y P202K	CCD-202	GP220	10TS-D20
C49	.0047 600V 15%		DBE6D47		DMF6D47	6DP-1-472	PVC6247	6PS-D47
C50	.470		DI-470	DD-471	JBZ601Y P471K	CCD-471	GP347	10TS-T47
C51	.005		DI-5000	DD-502	JBT601Y P502K	CCD-502	GP250	10TS-D50
C52	.1 600V		DBE6P1		DMF6P1	6DP-4-104	PVC601	6PS-P10
C53	.01 10%		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C54	.1 200V 10%		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P10
C55	.047 200V 10%		DBE2S47		DMF2S47	4DP-3-473	PVC2147	2PS-S47
C56	.01 600V		DBE6S1	CPR-10000J	DMF6S1	6DP-1-103	PVC611	6PS-S10
C57	.02 1KV		DI-10000	DD-103	BYT601ZU203Z	CCD-203	GP120	10TS-S10
C58	.01 10%		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C59	.001 10%		DI-1000	DD-102	JBS601Y P102K	CCD-102	GP210	10TS-D10
C60	.001 10%		DI-1000	DD-102	JBS601Y P102K	CCD-102	GP210	10TS-D10
C61	.0047 10%		DI-4700	DD-472	JBT601Y P472K	CCD-472	GP247	10TS-D47
C62	.0047		DI-4700	DD-472	JBT601Y P472K	CCD-472	GP247	10TS-D47
C63	.047 200V 10%		DBE2S47		DMF2S47	4DP-3-473	PVC2147	2PS-S47
C64	.330 500V 10%			CPR-330J	CD15F331J500	DM-15-331J	SK333	MS-333
C65	.0047 400V 10%		DBE6D47		DMF6D47	6DP-1-472	PVC6247	6PS-D47
C66	.47 300V				DPMS4P47			
C67	.0047 1KV		DI-4700	DD-472	BYX601ZU472M	CCD-472	GP247	5GA-D47
C68	.1 400V 10%		DBE4P1		DMF4P1	4DP-3-104	PVC601	4PS-P10
C71	95 3KV 10%		HVD-30-82	DD30-820	HYV302X P101M	3CCD-101	3DY310	30GA-T10
C72	95 3KV 10%		HVD-30-82	DD30-820	HYV302X P101M	3CCD-101	3DY310	30GA-T10
C73	.033 600V		DBE6S33		DMF6S33	6DP-2-333	PVC6133	6PS-S33
C74	.047 600V		DBE6S47		DMF6S47	6DP-3-473	PVC6147	6PS-S47
C75	.1 600V		DBE6P1		DMF6P1	6DP-4-104	PVC601	6PS-P10
C76	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C77	.047 600V		DBE6S47		DMF6S47	6DP-3-473	PVC6147	6PS-S47
C78	.001		DI-1000	DD-102	JBS601Y P102K	CCD-102	GP210	10TS-D10
C79	.470		DI-470	DD-471	JBZ601Y P471K	CCD-471	GP347	10TS-T47

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

## CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			Electrohome PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Switch	500K	41-237-35 ①	F2-500K, SFS212, KR-1	A47-500K-Z, RS-3/16, SWE-12 or (NP-500K-Z, SE-T-400, NWE-12)	D13-132, SK9, 76-1 or (BU2, CF25, SS4, GC) *	UA55A, SD3500, US41 or (RU55A, SL35, IS1075, US41) or (U40, US26, DS37)
R2	Brightness	500K	41-237-33 ①	F1-500K, SSK108	A47-500K-S, KSS-3 or (NP-500K-S, UP-C-400)	Q11-133 or (BU2, CF16, SS1, DC1) *	UA55L, SK3500 or (RU55L, SL38, SK3500) or (U50)
R3	Contrast	200Ω	41-237-32				
R4	Vert. Hold	1meg	41-237-34 ①	F1-1meg, SSK108	A47-1meg-S, KSS-3 or (NP-1meg-S, UP-C-400)	Q11-137 or (BU2, CF17, SS1, DC1) *	UA16L, SK3500 or (RU16L, SL38, SK3500) or (U54)
R5	Buzz	500Ω, 2W	41-228-05	V-500	U39-500	112-500 or (117BS01A)	MR500F
R6	AGC	100K	41-192-08	TT-40 or (F1-100K, SNK010, AK-38)	B47-100K-S or (NP-100K-S, NML-A-300, TT-2)	B11-128, TM4 or (BU11, CF13, SS6) *	PTA15L or (RU15L, SL37, SN281) or (TA15L)
R7	Vert. Size (Height)	2.5meg	41-146-06	F1-2.5meg, SNK010	B47-2.5meg-S or (NP-2.5meg-S, NML-A-300, TT-2)	HLC2	RU255L, SL37, SN281 or (UA255L, SN201) or (SU565)
R8	Top Shaping	200K (220K)	41-192-09	TT-46 or (F1-200K, SNK010, AK-38)	B47-200K-S or (NP-200K-S, NML-A-300, TT-2)	B11-129, TM4 or (BU11, CF14, SS6) *	TA254L or (RU25L, SL37, SN281)
R9	Bottom Shaping	500K (470K)	41-192-10	TT-59 or (F1-500K, SNK010, AK-38)	B47-500K-S or (NP-500K-S, NML-A-300, TT-2)	B11-133, TM4 or (BU11, CF16, SS6) *	PTA55L or (RU55L, SL37, SN281) or (TA55L)
R10	Horiz. Hold	200K	41-189-01	F1-200K, SNK010	B47-200K-S or (NP-200K-S, NML-A-300, TT-2)	B11-129, TM4 or (BU11, CF14, SS6) *	RU25L, SL37, SN281 or (UA25L, SN281) or (TA254L)
	Tone Horiz. Drive	1meg 50K	41-237-31 ① 41-192-07 ②				

① See following chart - Alternate Part's List.  
② May be used in some versions.

\* "SNAPTROL"

## PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, 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.

## CONTROLS NOTES

FUNCTION	PART NO.	MODELS									
		Aurora MKI, MKU	Avalon MKI, MKU	Bradford MKII, MKIUI	Cadet MKI, MKIUI	Clinton, U	Hollyburn	Jupiter MKI, MKIUI	Sutton MKI, MKIUI	Townsmen MKI, MKIUI	Westview, U
Brightness	41-215-61							X			
Vert. Hold	41-215-62								X		
Vert. Hold	41-215-98						X	X			
Brightness	41-221-99					X	X				
Brightness, Vert. Hold	41-221-43		X	X					X		
Brightness, Vert. Hold	41-221-61			X							
Brightness, Vert. Hold	41-221-67	X									
Contrast, Volume, Switch	41-221-74		X	X					X		
Contrast, Volume, Switch	41-221-79			X							
Contrast, Volume, Switch	41-221-80	X									
Contrast	41-237-19							X			
Volume, Switch	41-237-20								X		
Contrast	41-237-24						X				
Volume, Switch	41-237-25						X				
Tone	41-237-31	X									
Contrast	41-237-46					X					
Volume, Switch	41-247-02	X								X	
Volume, Switch	41-274-03					X					

## RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	Electrohome PART No.			IRC PART No.	WORKMAN PART No.	Electrohome PART No.
R91	V. D. R. †				R105	3300Ω 7W	PW10-3300	TG-3.3K	
R96	5100Ω 8W	PW10-5000	10W-SQ-5K	42-8-08	R107	3600Ω 7W Thermistor (6Ω Cold)	PW10-3500	10W-SQ-3.5K FRI0	42-21-53
R102	8200Ω 4W		5G-8.2K						
R103	6800Ω 3W		3G-6.8K						
R104	100Ω 15W	PW15-100	20W-SQ-100	42-21-10					

† Voltage Dependent Resistor.

\* Alternate Value used in some versions.

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		Electrohome PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	1st Video IF	21-393-01	17-4523	TV-130	6224	T231
L2	47.25MC Trap	21-394-01	17-1538	TV-131	6225	TM244
L3	39.75MC Trap	21-338-03				
L4	Filament Choke (21 turns)	21-300-01				
L5	2nd Video IF/41.25MC Trap	21-391-01	17-4535 *	TV-245 *	6221 *	T224 *
L6	3rd Video IF	21-392-01	17-4523	TV-130	6224	T231
L7	Filament Choke (21 turns)	21-300-01				
L8	4th Video IF - Detector	21-390-01				
L9	RF Choke (17uh)	21-1400-05			72F185AP	
L10	Peaking (380uh)	21-314-25 ①		TV-190 †	6134 †	
L11	4.5MC Trap	21-347-01				
L12	Peaking (190uh)	21-314-40 ②	19-3180 *	TV-184 *	6180 *	T310 *
L13	Peaking (305uh)	21-314-33	19-3300	TV-190	6155	T318
L14	Sound Takeoff	21-355-02		TV-234	1491	
L15	Sound Quadrature	21-360-01	20-1005	TV-121	1480	T251
L16	RF Choke (10uh)	21-1400-01	19-2016	BC-566	4612	T823
L17	RF Choke (10uh)	21-1400-04	19-2016	BC-566	4612	T823

① Wound on 1000Ω Resistor.  
② Wound on 8000Ω Resistor.

† Shunt with 1000Ω Resistor.  
\* Shunt with 8000Ω Resistor.

\* It may be necessary to shunt trap with 4700Ω Resistor.

## COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					
		Electrohome PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON PART No.	WORKMAN PART No.
L18	Horiz. Stabilizer	21-334-03	TV-163	6210	RTC-8629	HS-5	WLC-25 ①

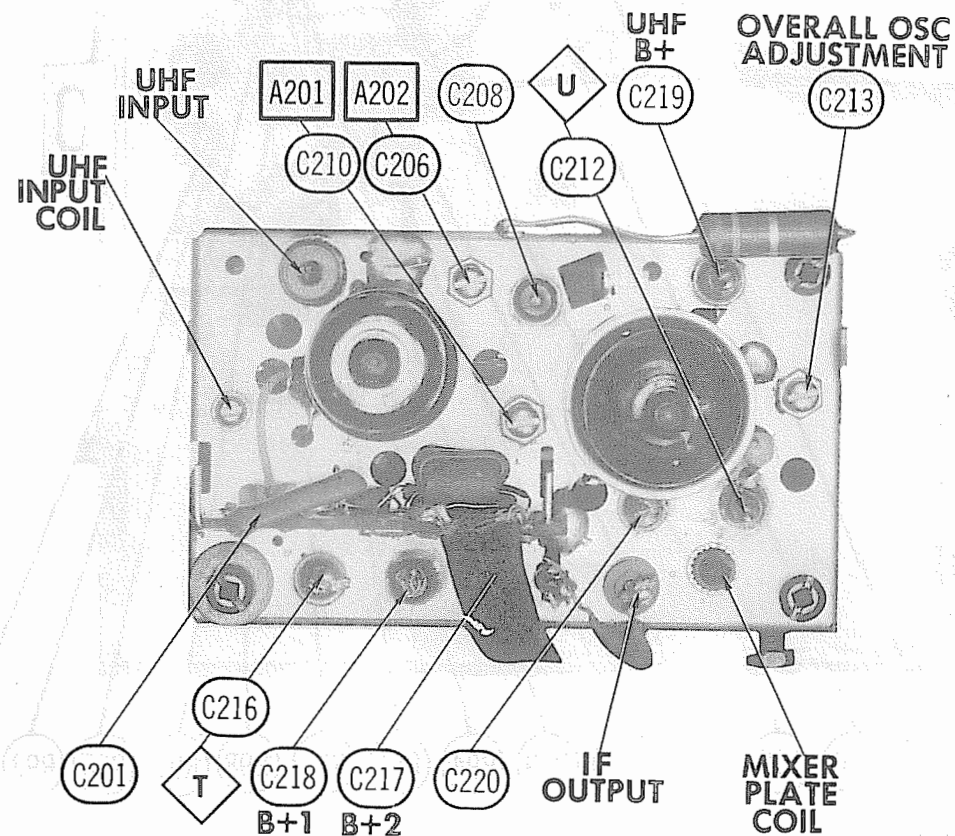
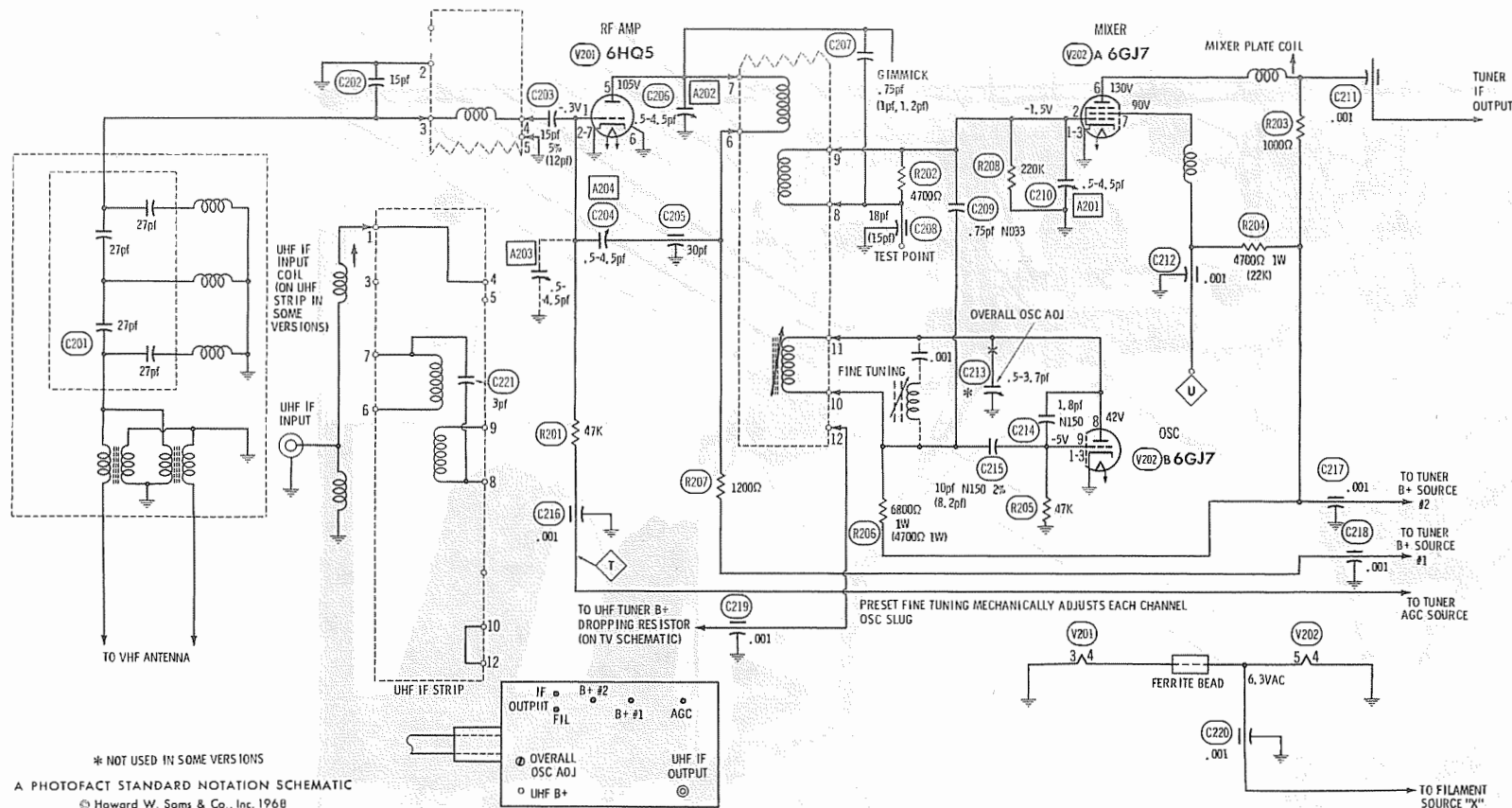
① Disregard Tap.

## TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA						NOTES
	PRI.	SEC. 1	SEC. 2	Electrohome PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	WORKMAN PART No.	
T1	117VAC @ 1.55A AC	215VAC @ .25A DC	6.3VAC @ 7AAC	24-10124-01 (24-10124-02)						

## TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		ELECTROHOME PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	Vertical Output	24-100013-02 (24-100013-01)	A-2986 ⑤	VO-115 ⑤	26807 ⑤	A-140X ⑤	
T3	Yoke (Horiz. 20mh) 114ø (Vert. 95mh)	21-107-01	MFD-143 1255	DY-57AT 13345	Y-105 1⑤	YT-103-1 1255	
T4	Horiz. Output	21-213-01					



VHF TUNER

## VHF TUNER ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: A201, A202, A203, A204, UHF Input Coil .. GENERAL CEMENT #8606, 8606L, 8869  
WALSCO #2543, 2544, 2568

### OSCILLATOR ADJUSTMENTS (For Models with Manual Fine Tuning)

The individual oscillator slugs are accessible through a hole in the front of the tuner. Set the fine tuning to the center of its range. Starting with the highest channel in the area, adjust appropriate oscillator slugs in descending order for best picture and sound. If individual slugs show insufficient range, adjust overall oscillator adjustment and recheck all available channels.

### OSCILLATOR ADJUSTMENTS (For Models with Preset Fine Tuning)

The oscillator for each channel is preset by means of the fine tuning control. Adjust fine tuning for best picture and sound on each channel. If any channel cannot be properly tuned in with the fine tuning, adjust overall oscillator adjustment and recheck all available channels.

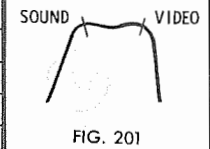
### RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use 10MC sweep unless otherwise noted. Connect a variable bias to the RF AGC line at point U. 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 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Input to Point U, low side to ground.	A201 A202 A203	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
2. "	195MC	193.25MC 197.75MC	10	Across Video Det. load resistor.	A204	Increase bias to -15 volts and adjust for MINIMUM amplitude of response.
3. "	See Chart	See Chart	12 thru 2	Vert. Input to Point U, low side to ground.		Decrease bias. Check response on all channels and make compromise adjustment of A201, A202 and A203 if necessary.

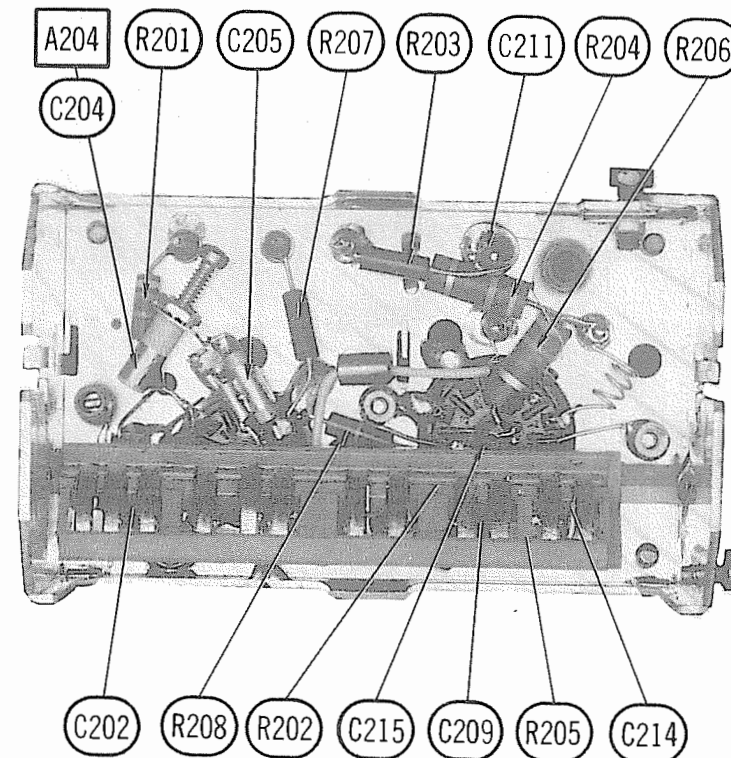
## CHANNEL & FREQUENCY CHART

SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL
57MC	55.25MC 59.75MC	2	85MC	83.25MC 87.75MC	6	195MC	193.25MC 197.75MC	10
63MC	61.25MC 65.75MC	3	177MC	175.25MC 179.75MC	7	201MC	199.25MC 203.75MC	11
69MC	67.25MC 71.75MC	4	183MC	181.25MC 185.75MC	8	207MC	205.25MC 209.75MC	12
75MC	73.25MC 77.75MC	5	189MC	187.25MC 191.75MC	9	213MC	211.25MC 215.75MC	13

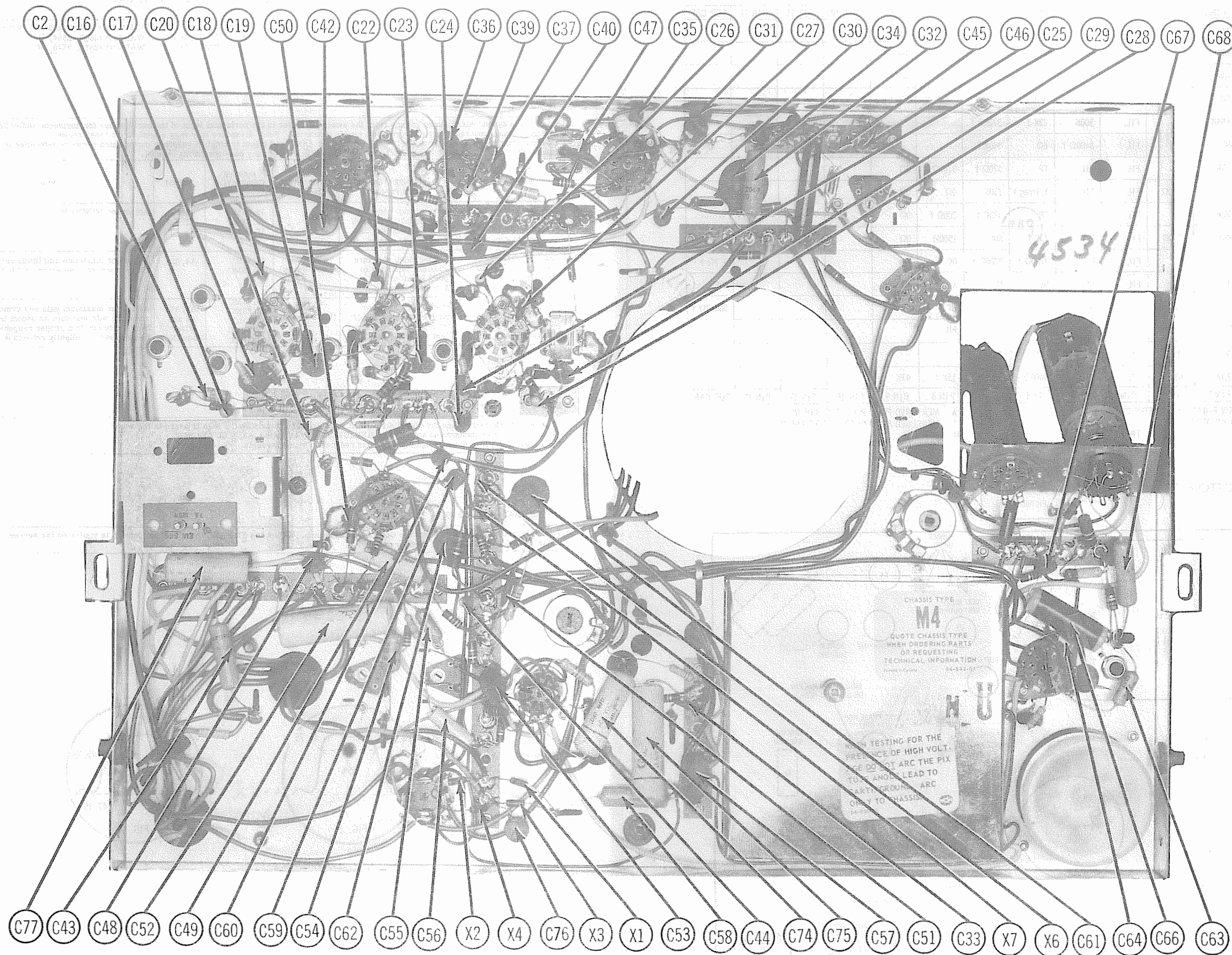


## UHF TUNER ALIGNMENT INSTRUCTIONS

Tune to a UHF station and adjust UHF IF Input Coil for best picture and sound.





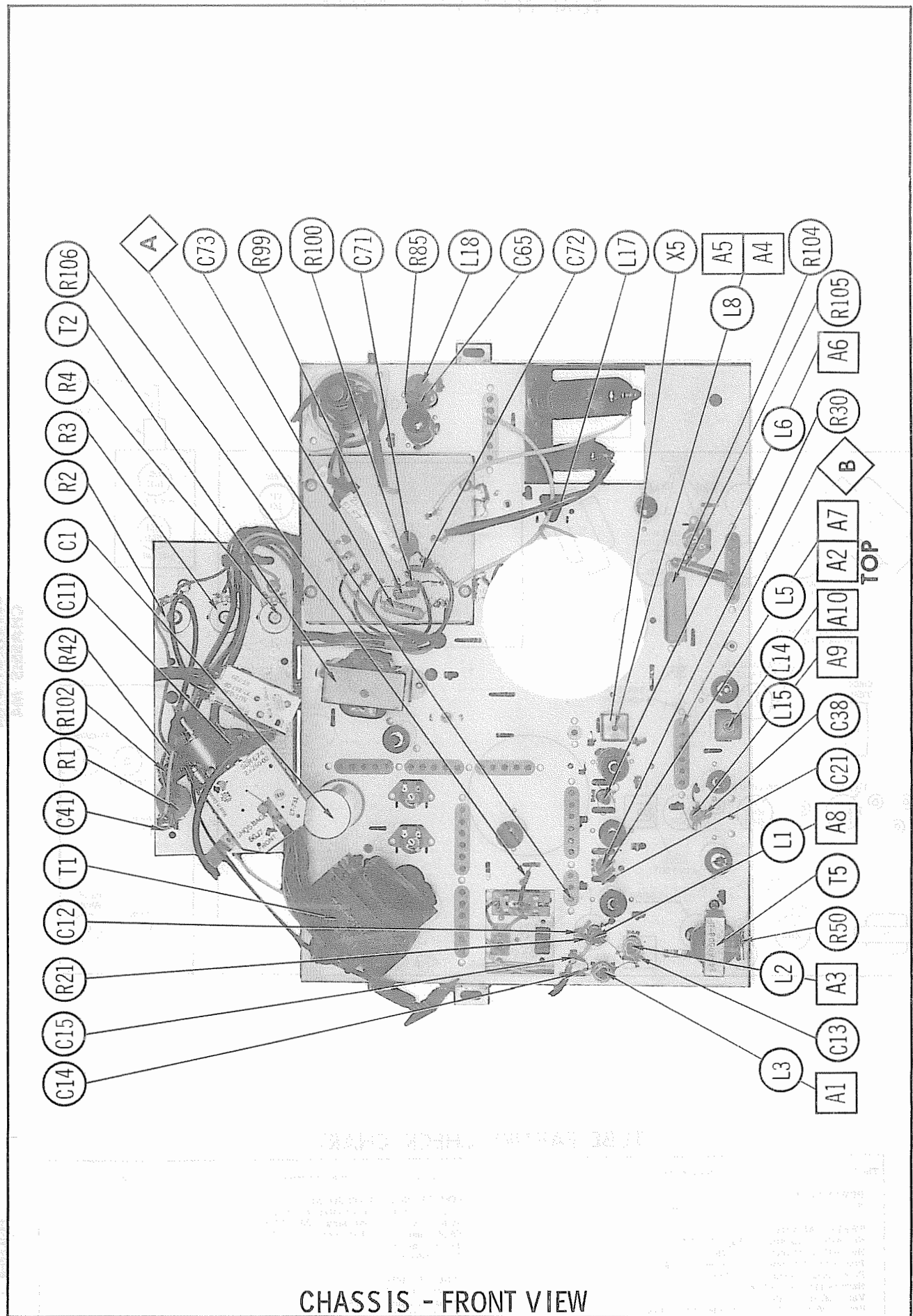


CHASSIS - REAR VIEW

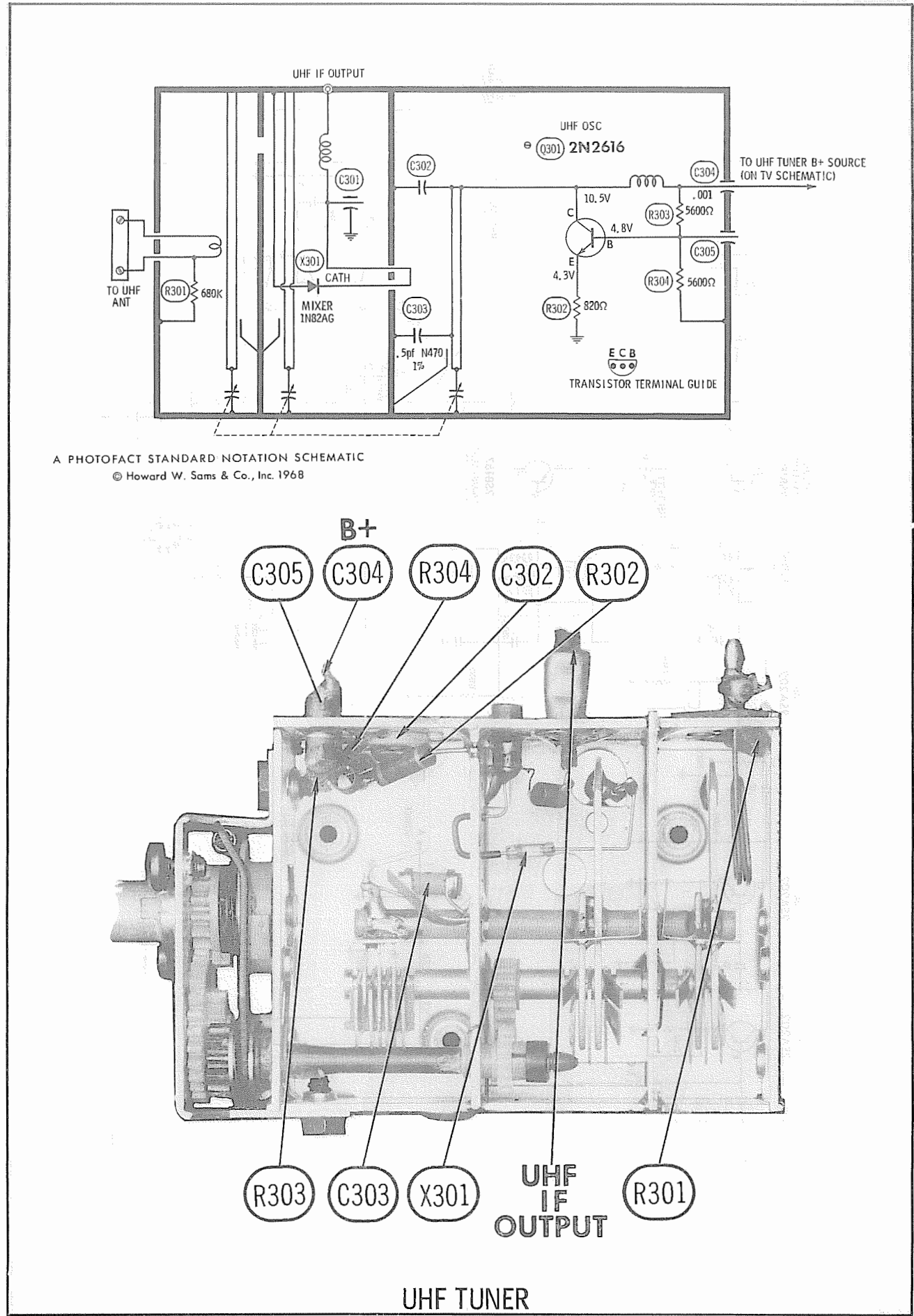
ELECTROHOME  
CHASSIS M4

FOLDER 1





CHASSIS - FRONT VIEW



UHF TUNER