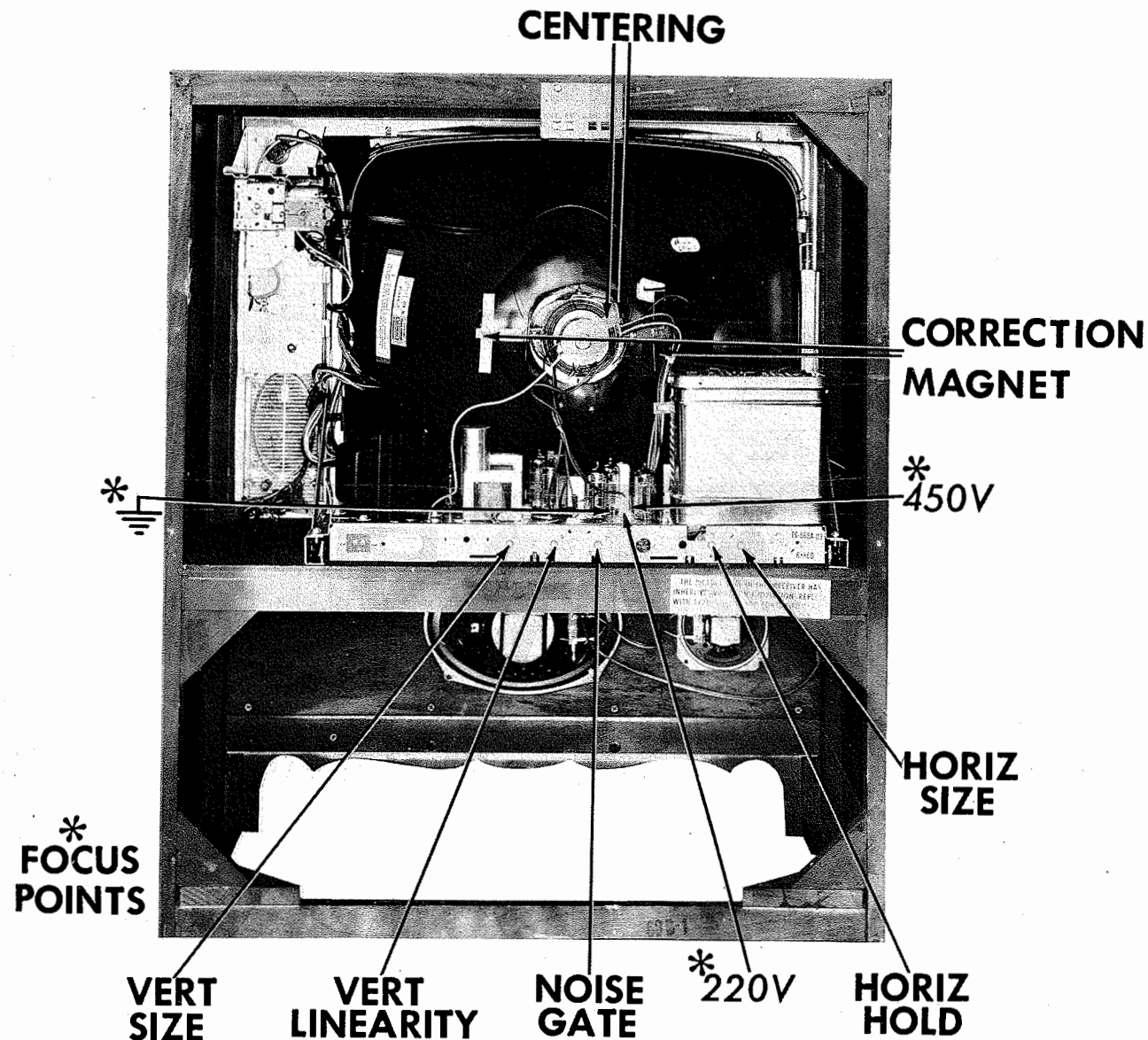


## CENTERING



## CABINET-REAR VIEW

## HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably with a test pattern. Adjust the Brightness and Contrast Controls for a normal picture.

Short out the AFC voltage by connecting a clip lead from point  $\odot$  to chassis. Connect a .1mf, 400 volt capacitor from point  $\odot$  to chassis.

Adjust Horizontal Hold to the point where the picture is almost stable horizontally.

Remove the capacitor from point  $\odot$  and adjust the Horizontal Frequency Slug (B1) to the point where the picture is almost stable horizontally.

Remove the clip lead from point  $\odot$  and chassis. Adjust the Horizontal Hold Control until the picture is synchronized horizontally.

Adjust the Horizontal Size for a picture slightly wider than necessary to fill the picture mask horizontally.

## DISASSEMBLY INSTRUCTIONS

### CHASSIS & PICTURE TUBE ASSEMBLY REMOVAL

1. Remove 10 screws holding rear cover.
2. Remove rear cover.
3. Remove 3 plugs from tuner to chassis.
4. Remove speaker leads.
5. Remove 4 chassis bolts.
6. Remove chassis assembly.

### CONTROL PANEL REMOVAL

1. Remove 5 push-on type knobs.
2. Remove 4 screws and remove control panel.

### PICTURE TUBE REMOVAL

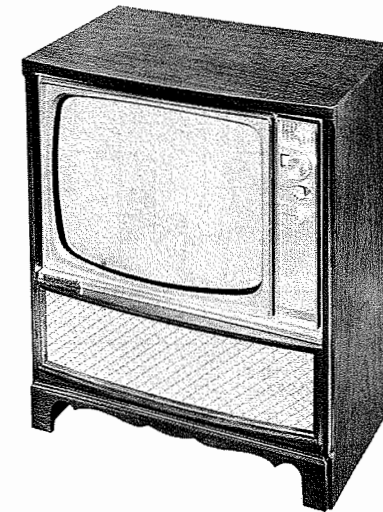
It is necessary to remove the chassis for picture tube removal.

SET 515 FOLDER 1

PHOTOFACT® Folder

MOTOROLA CHASSIS RTS-568, RTS-568Y, TS-568, TS-568Y

MOTOROLA CHASSIS RTS-568, RTS-568Y, TS-568, TS-568Y



MODEL 23K30M (Ch.TS-568)

TRADE NAME	MOTOROLA	MODELS	CHASSIS
		23C6B, 23C6M, 23C7CW, 23K30B, 23K30M, 23K31CW, 23K32M, 23K32W, 23K33B, 23K33M, 23K33W, 23K34CW	TS-568
		23C4B, 23C4M, 23C4W, 23C5CW, 23K28B, 23K28M, 23K28W, 23K29B, 23K29M, 23K29W, 23T2B, 23T2BZ, 23T2CH, 23T2M, 23T2W	RTS-568
		Y23C6B, Y23C6M, Y23C7CW, Y23K30B, Y23K30M, Y23K31CW, Y23K32M, Y23K32W, Y23K33B, Y23K33M, Y23K33W, Y23K34CW	TS-568Y
		Y23C4B, Y23C4M, Y23C4W, Y23C5CW, Y23K28B, Y23K28M, Y23K28W, Y23K29B, Y23K29M, Y23K29W, Y23T2B, Y23T2BZ, Y23T2CH, Y23T2M, Y23T2W	RTS-568Y
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois		
TYPE SET	Television Receiver		
TUBES	VHF - Eighteen, UHF - Nineteen		
POWER SUPPLY	110-120 Volts AC, 60 Cycle		
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Inter-carrier)		

## SERVICING IN THE FIELD

### SAFETY GLASS REMOVAL

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

### FUSE

A 5 amp. line fuse is used for receiver protection and a .5 amp. S/B fuse is used for low voltage supply protection. (For location, see "Tube Placement Chart".)

A fuse wire is used for filament protection. (For location, see M3 in photo "Chassis Bottom View - Capacitor & Misc. Ident.")

### TUNER OSCILLATOR ADJUSTMENT

The VHF Oscillator may be adjusted by removing the Control Panel supporting VHF Tuner.

### AGC

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

### FOCUS

The focus may be varied by connecting the lead from pin 6

of the picture tube to various voltage points. (For location, see photo "Cabinet - Rear View".)

### HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Coarse adjustment of the Horizontal Hold is accomplished by the proper setting of the Horizontal Frequency Slug (B1). (For location, see "Tube Placement Chart".)

### WIDTH

The width may be varied by a Horizontal Size Control. (For location, see "Tube Placement Chart".)

### CENTERING

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

### SYNC STABILITY

Sync stability may be varied by means of a Noise Gate Control. (For location, see "Tube Placement Chart".)

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 KA453

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1961 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

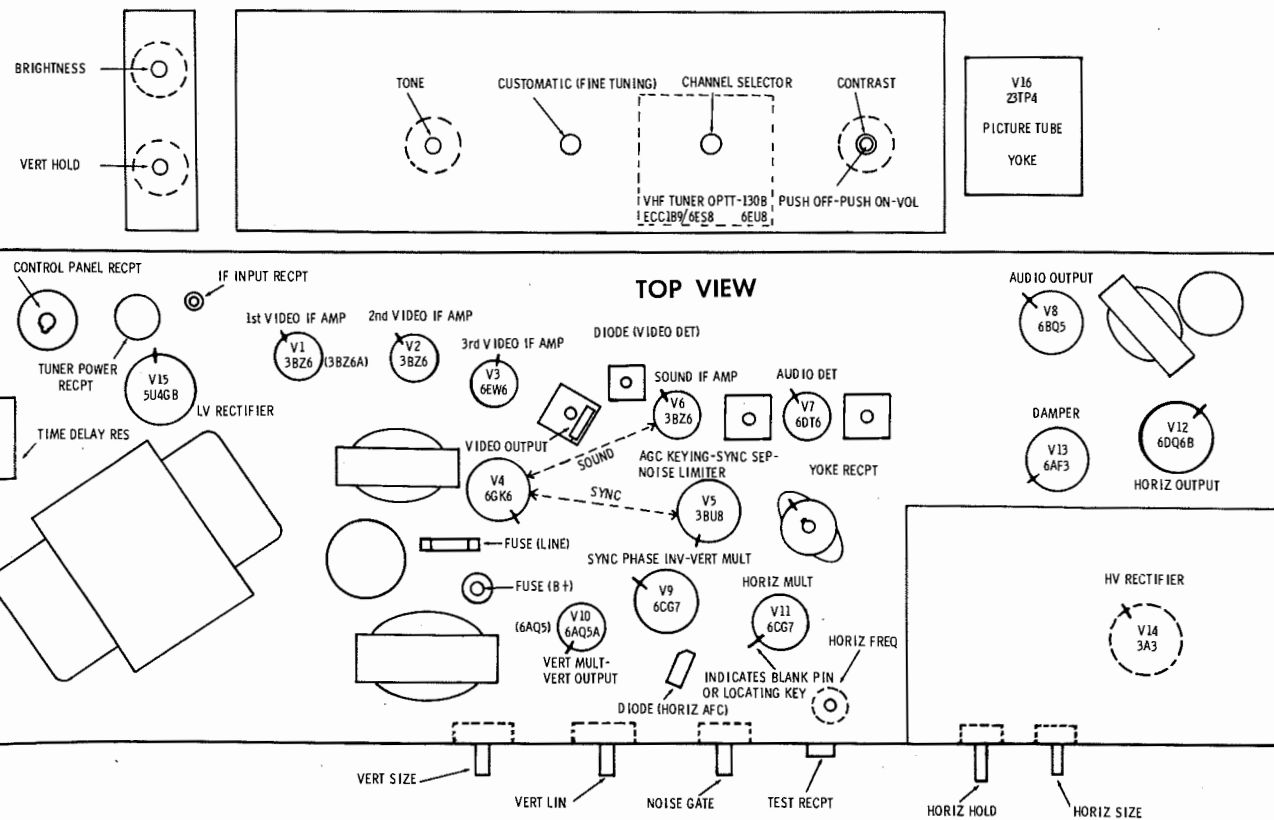
MOTOROLA CHASSIS RTS-568, RTS-568Y, TS-568, TS-568Y

SET 515 FOLDER 1



## RESISTANCE MEASUREMENTS

THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.  
THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.  
↑ MEASURED FROM PIN 2 OF V2.  
↑ MEASURED FROM PIN 8 OF V13.  
↑ MEASURED FROM CAP OF V13.  
TP TIE POINT  
NC NO CONNECTION



## TUBE PLACEMENT CHART

**MOTOROLA CHASSIS RTS-568,  
RTS-568Y, TS-568, TS-568Y**



ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT.  
The High Voltage lead should be securely taped and kept away from the chassis.  
Allow a 20 minute warm-up period for the receiver and test equipment.  
Suggested Alignment Tools: GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440  
WALSCO #2526, 2543, 2544, 2545

VIDEO IF ALIGNMENT

Remove the yoke plug to eliminate interference from the Horizontal Sweep Circuit. Connect a 1500 ohm 50 watt resistor from point A to chassis. Disable the Tuner Oscillator by grounding the grid (Pin 2) of the Oscillator. Set the Noise Gate control fully counterclockwise. 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 the negative lead of a 4.5 volt bias supply to point B. Positive to chassis. Maintain between 2 and 3 volts peak to peak on scope except where otherwise noted.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	High side thru .001mfd to TP2. Low side to chassis.	44.0MC (10MC Swp.)	45.75MC	I3	Vert. Amp. thru 47K to TP3. Low side to chassis. (Across Video Det. load.)	A1, A2	Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown.
2.	High side to ungrounded tube shield floating over Mixer-Osc. Low side to chassis.	"	47.25MC	"	"	A3, A4	Increase scope gain. Remove bias if necessary. Adjust to place marker in trap notch as in Fig. 2. Tune slug at end of coil away from chassis.
3.	"	"	41.25MC	"	"	A5	Adjust to place marker in trap notch as in Fig. 2. Tune slug at end of coil nearest chassis.
4.	"	"	39.75MC	"	"	A6	Adjust to place marker in trap notch as in Fig. 2. Tune slug at end of coil away from chassis.
5.	"	"	41.25MC 42.25MC 44.0MC 45.75MC 47.25MC	"	Vert. Amp. to TP1. Low side to chassis.	Mixer Plate Coil & A7	Set generator for 3 volts peak to peak. Restore 4.5 volts bias. Adjust for maximum gain and symmetry of response similar to Fig. 3 with markers as shown. The Mixer Plate Coil affects the center peak and A7 affects the two outside peaks. Tune slugs at end of coil away from chassis. If a suckout (trap effect) occurs, detune A8 to remove.
6.	"	"	42.25MC 45.75MC	"	Vert. Amp. thru 47K to TP3. Low side to chassis.	A8, A9	Adjust A8 to place 42.25MC marker at 50% or curve as in Fig. 4. Adjust A9 to place 45.75MC marker at 50% on other side. Tune slugs to end of coils nearest chassis. If necessary, retouch Mixer Plate Coil to correct tilt. Retouch A8 and A9 for correct response.

SOUND IF ALIGNMENT

Tune in a strong TV signal and adjust all controls for normal picture and sound. Connect the DC probe of the VTVM to point C. Common to chassis. Adjust A10 for maximum deflection choosing the one of two peaks that produce the highest voltage. While listening to the sound, retouch A10 for maximum sound and MINIMUM distortion. The top slug (A11) is a preset slug which is set near the top of the coil form and left there. Change to a very weak signal (this may be done by loosely coupling the antenna lead to the antenna terminals) that produces a hiss in the sound. Adjust A12 and A13 for maximum sound and MINIMUM distortion. Adjust A14 for maximum undistorted sound. If sound is not clear at this time, repeat the above procedure as necessary.

4.5MC TRAP ALIGNMENT

Tune in a strong TV signal and turn the Contrast fully clockwise. Adjust the Fine Tuning until a strong 4.5MC beat pattern is visible. Adjust A15 to find the two points at which the beat pattern is just visible on the screen. Tune the slug to the center of these two points. (Use the MINIMUM amount of inductance that will result in no apparent beat pattern.)

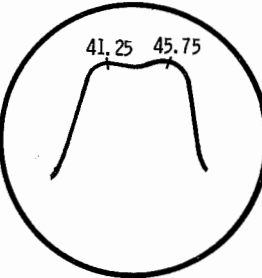


FIG. 1

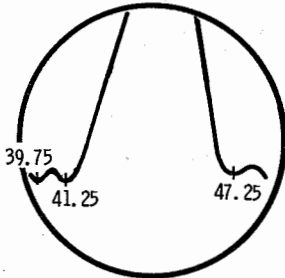


FIG. 2

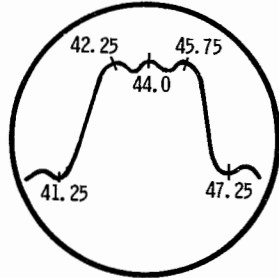


FIG. 3

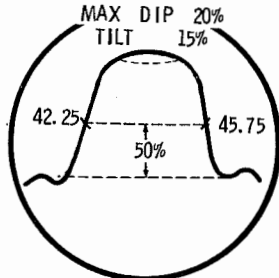
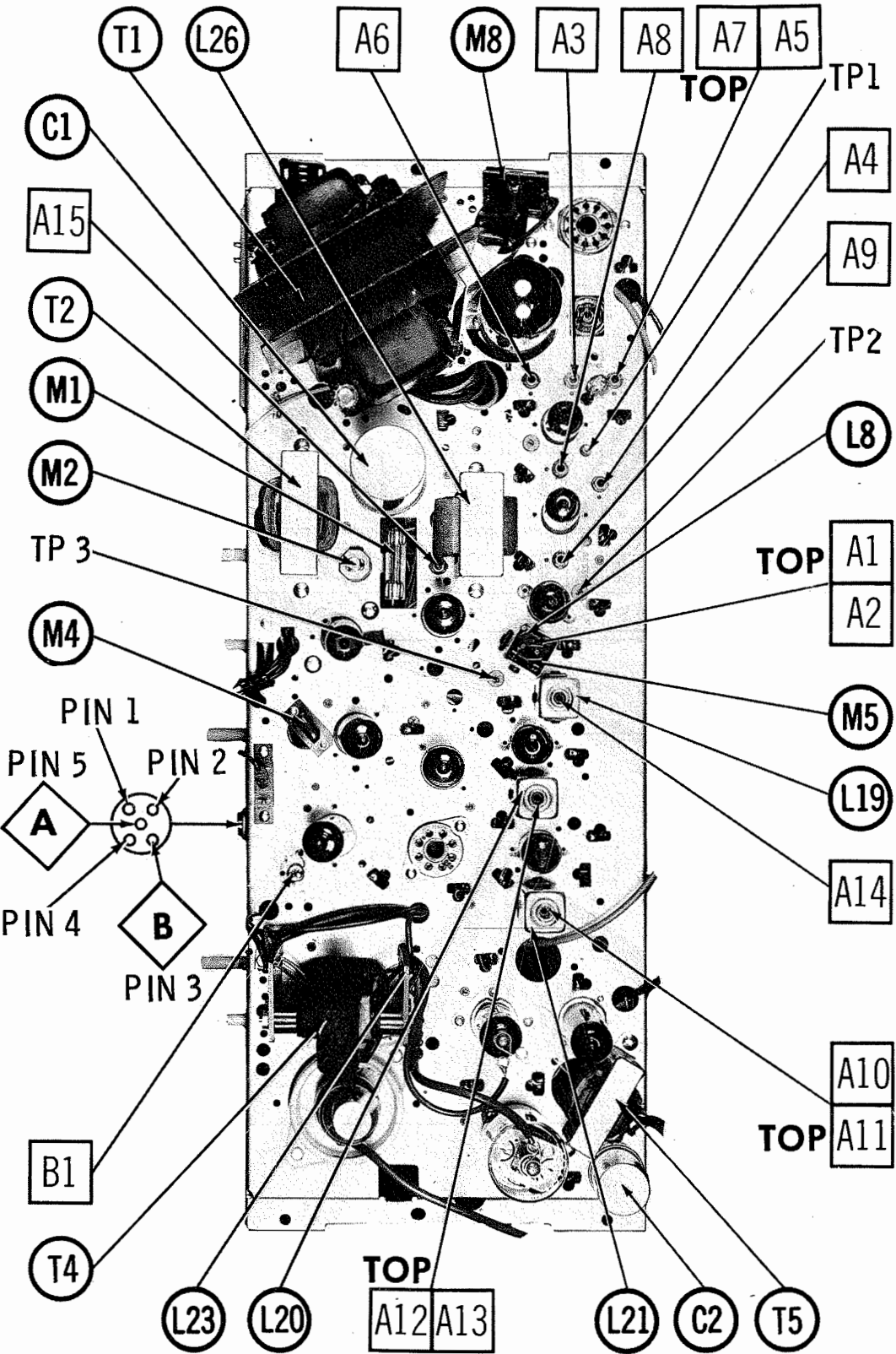


FIG. 4

TEST POINTS

TP1 95V 1st IF SCREEN  
TP2 0V 3rd IF GRID  
TP3 -1.8V VIDEO DET OUTPUT

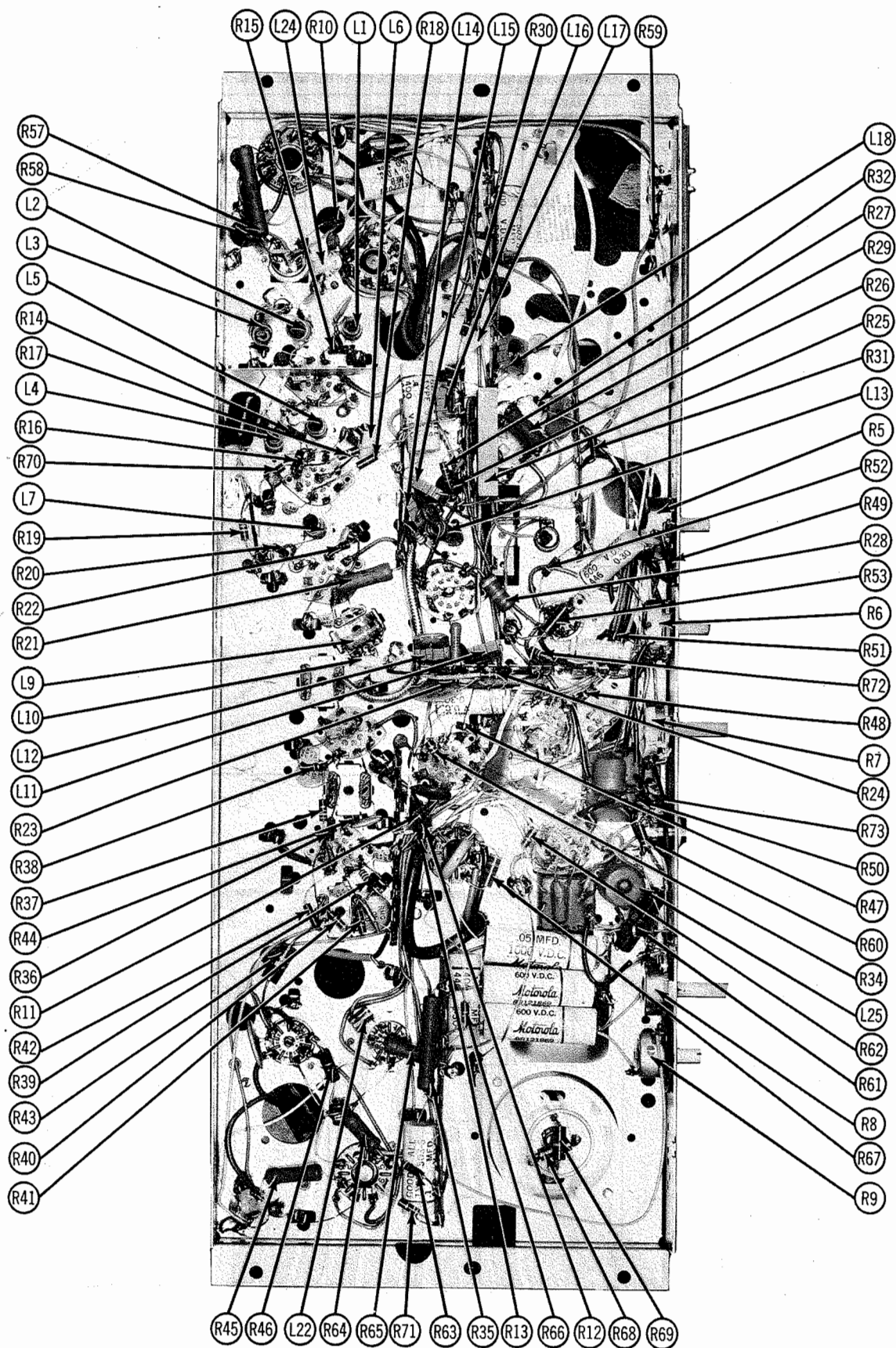
PIN 1 -.3V IF AGC  
PIN 2 200V HORIZ MULT PLATE CIRC  
PIN 3 0V GROUND  
PIN 4 .7V HORIZ AFC  
PIN 5 220V B +



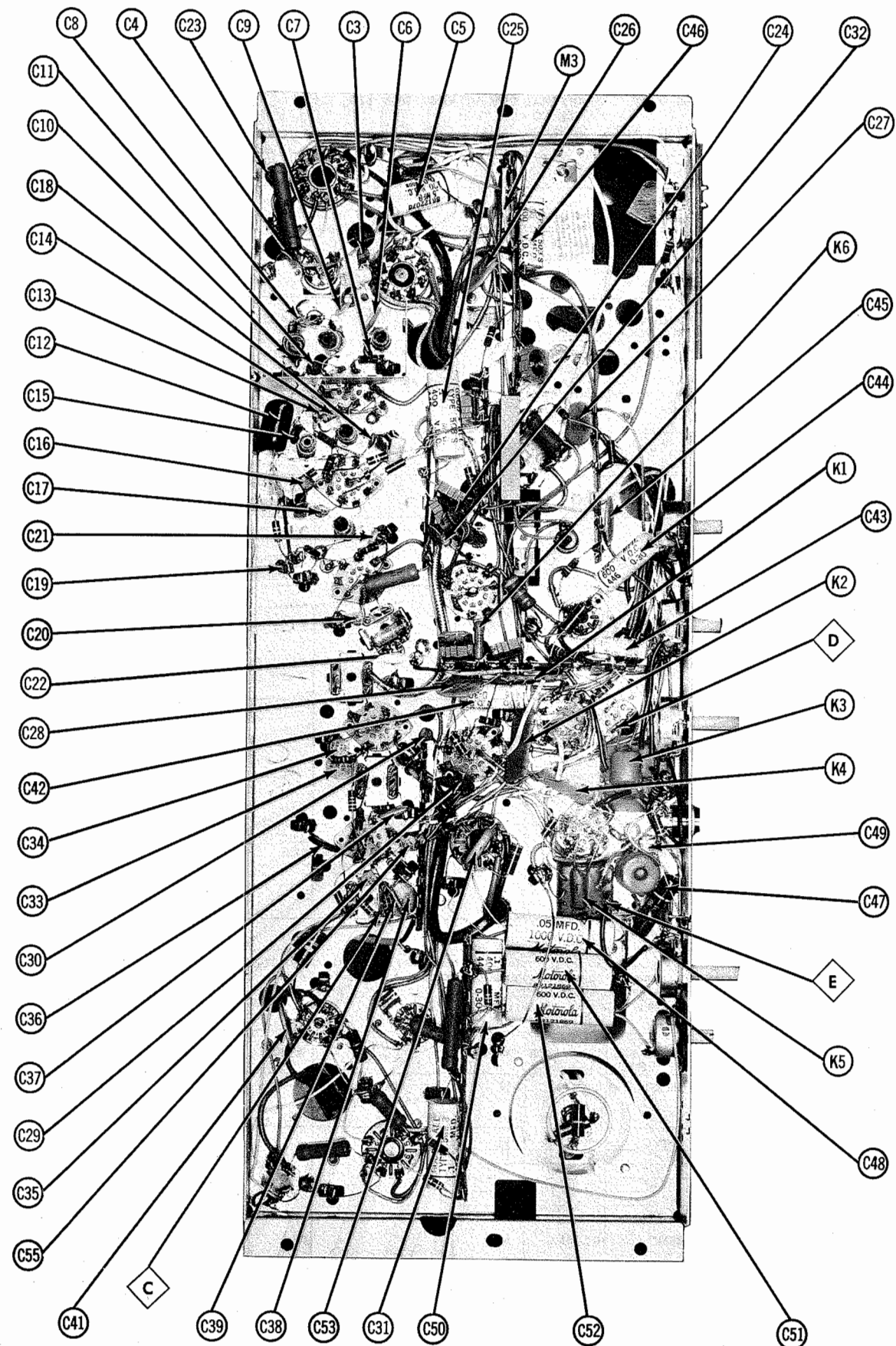
CHASSIS-TOP VIEW

MOTOROLA CHASSIS RTS-568,  
RTS-568Y, TS-568, TS-568Y

FOLDER 1



CHASSIS BOTTOM VIEW - RESISTOR & INDUCTOR IDENT.



CHASSIS BOTTOM VIEW - CAPACITOR, MISC., & ALIGN. IDENT.

TUNER ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

Remove the deflection yoke plug to prevent interference radiation. Connect a 1500Ω 50 watt resistor from pin 3 to pin 5 of the Service Test Receptacle.  
DO NOT remove the tuner cover.  
Suggested Alignment Tools: A206, A207 . . . . . GENERAL CEMENT #5000, 5003, 8276, 8290  
WALSCO #2512, 2525  
A208 thru A213. . . GENERAL CEMENT #9296, 9297  
WALSCO #2546, 2547

VHF RF AND MIXER ALIGNMENT

Connect a clip lead from point ① to chassis.  
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.  
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.  
Use only enough sweep generator output to provide a usable pattern on scope.  
Coils not containing adjustable cores are adjusted by expanding or compressing coil turns.  
Preset A206 and A207 so top of screw is .35" above tuner chassis.  
Use 10MC sweep unless otherwise noted.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC	211. 25MC 215. 75MC	13	Vert. Amp. thru 47K to point ①. Low side to chassis.	A201, A202	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
2. "	"	"	"	"	"	A203, A204	Adjust for proper bandwidth as in Fig. 201.
3. "	"	"	"	"	"	A205	Adjust for maximum amplitude and MINIMUM tilt.
4. "	"	177MC	175. 25MC 179. 75MC	7	"	A206, A207	Adjust A206 for proper marker position. Adjust A207 for MINIMUM tilt.
5. "	"	85MC.	83. 25MC 87. 75MC	6	"	A208, A209, A210	Adjust A208 to place 83. 25MC marker on or near peak, A209 to place 87. 75MC marker on or near other peak and A210 for maximum gain and MINIMUM tilt.
6. "	"	"	94MC	"	"	A211	Adjust for MINIMUM response at marker or until it just starts to affect the high frequency side of response curve. NOTE : A211 may be adjusted to trap out interference between 85 and 108MC. However, make certain that no part of a desired channel is trapped out.
7. "	"	79MC	77. 25MC 81. 75MC	5	"		Check for response similar to Fig. 201. If necessary make compromise adjustment of A208, A209 and A210 for proper curve on each channel.
		69MC	67. 25MC 71. 75MC	4			
		63MC	61. 25MC 65. 75MC	3			
		57MC	55. 25MC 59. 75MC	2			
8. "	"	57MC	43. 5MC 45. 5MC	2	"	A212, A213	Adjust A212 for MINIMUM response at 43. 5MC marker and A213 for MINIMUM response at 45. 5MC marker. Retouch either or both for flat response consistent with MINIMUM amplitude at trap frequencies.

VHF OSCILLATOR 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.  
Set the Fine Tuning to the center of its range.  
Use only enough sweep generator output to provide a usable pattern on scope.  
Use 10MC sweep unless otherwise noted.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
9. Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC	215. 75MC	13	Vert. Amp. thru 47K across Video Det. load	A214	Adjust to place marker in trap notch as in Fig. 202.
10. "	"	207MC 201MC 195MC 189MC 183MC 177MC	209. 75MC 203. 75MC 197. 75MC 191. 75MC 185. 75MC 179. 75MC	12 11 10 9 8 7	"		Marker must fall into trap notch on each channel within plus or minus 750KC of specified marker frequency. If not, make compromise adjustment of A214 for all high band channels.
11. "	"	85MC	87. 75MC	6	"	A215	Adjust to place marker in trap notch as in Fig. 202.
12. "	"	79MC 69MC 63MC 57MC	81. 75MC 71. 75MC 65. 75MC 59. 75MC	5 4 3 2	"		Marker must fall into trap notch on each channel within plus or minus 750KC of specified marker frequency. If not, make compromise adjustment of A215 for all low band channels.

CONTINUED ON PAGE 15

TUNER ALIGNMENT INSTRUCTIONS (cont)

UHF IF ALIGNMENT

Remove the UHF Tuner from the side of the VHF Tuner so that UHF input receptacle of VHF Tuner is accessible. Coils are accessible thru opening in the side of tuner.  
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13. Fig. 203	High side thru matching network to UHF input receptacle. Low side to chassis.	44MC (10MC Swp)	41. 25MC 45. 75MC	UHF	Vert. Amp. thru 47K to point ①. Low side to chassis.	A216, A217	Adjust for maximum gain and symmetry of response similar to Fig. 204 with markers as shown.

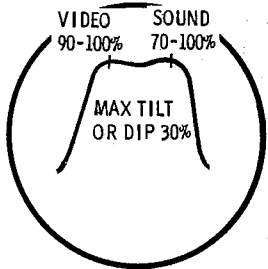


FIG. 201

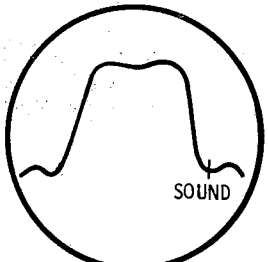


FIG. 202

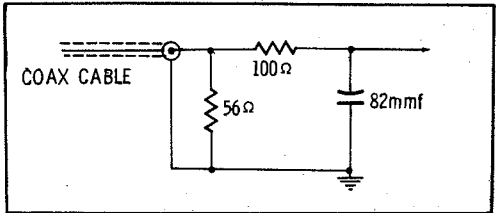


FIG. 203

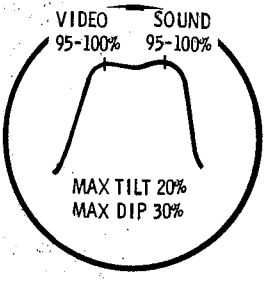
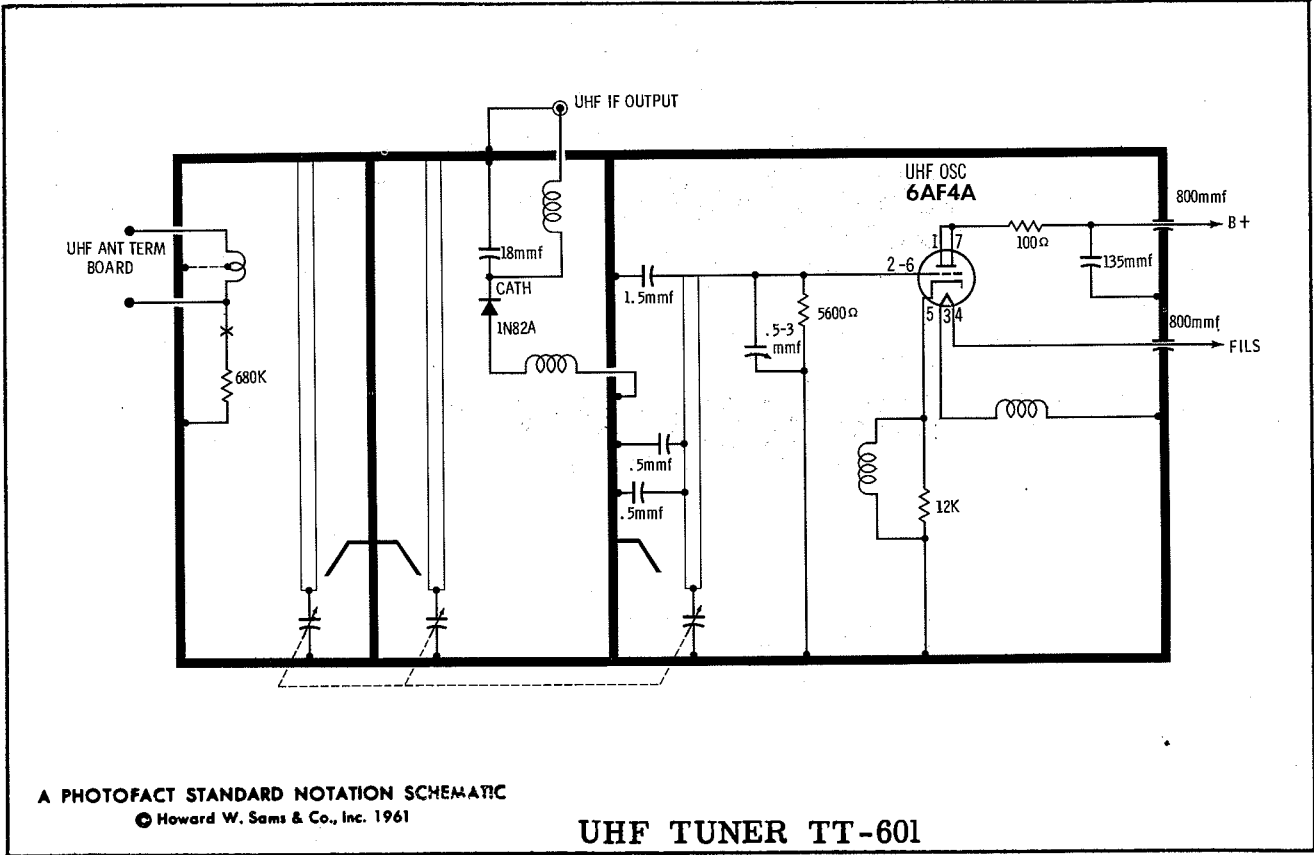


FIG. 204

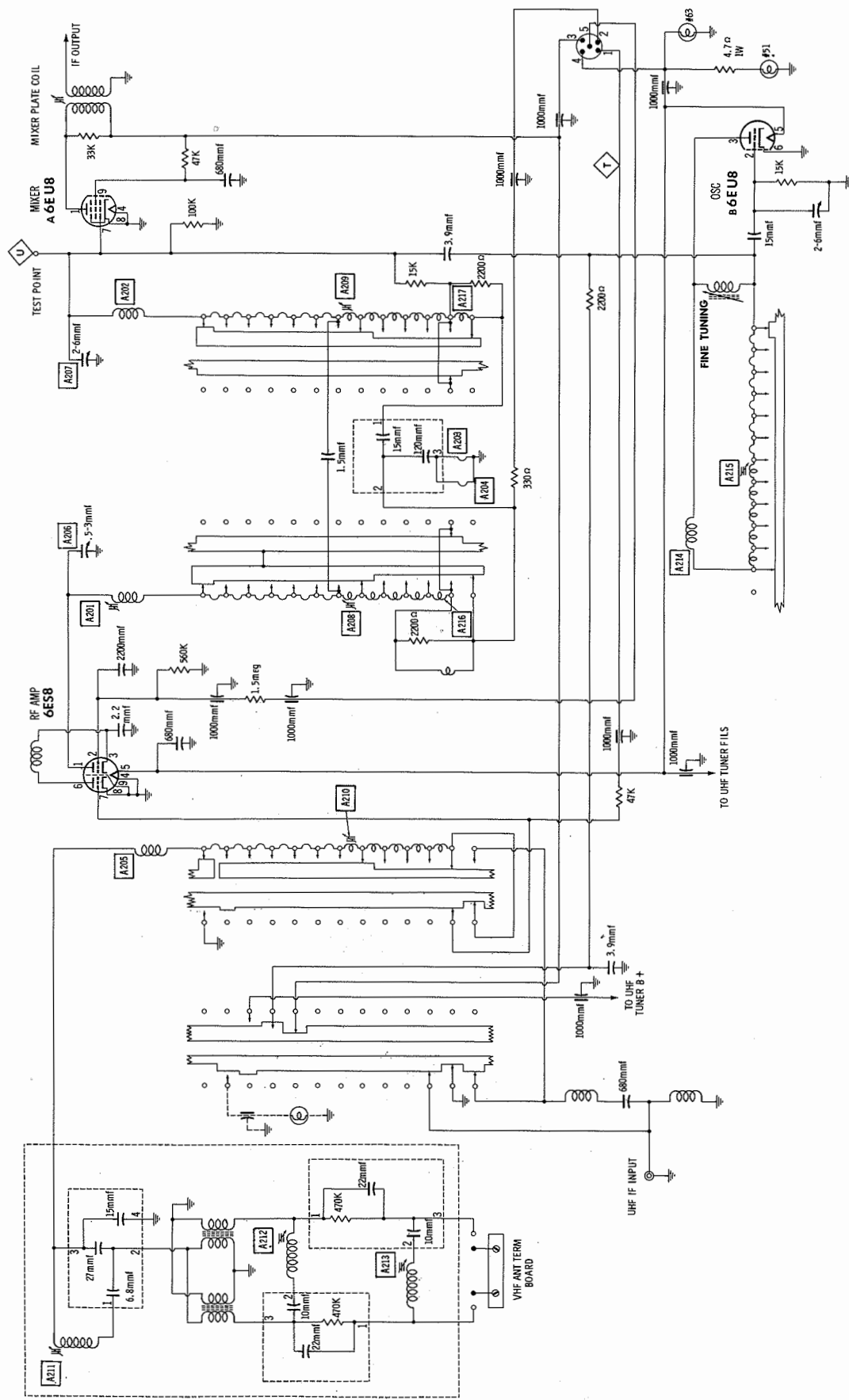


UHF TUNER TT-601

MOTOROLA CHASSIS RTS-568,  
RTS-568Y, TS-568, TS-568Y

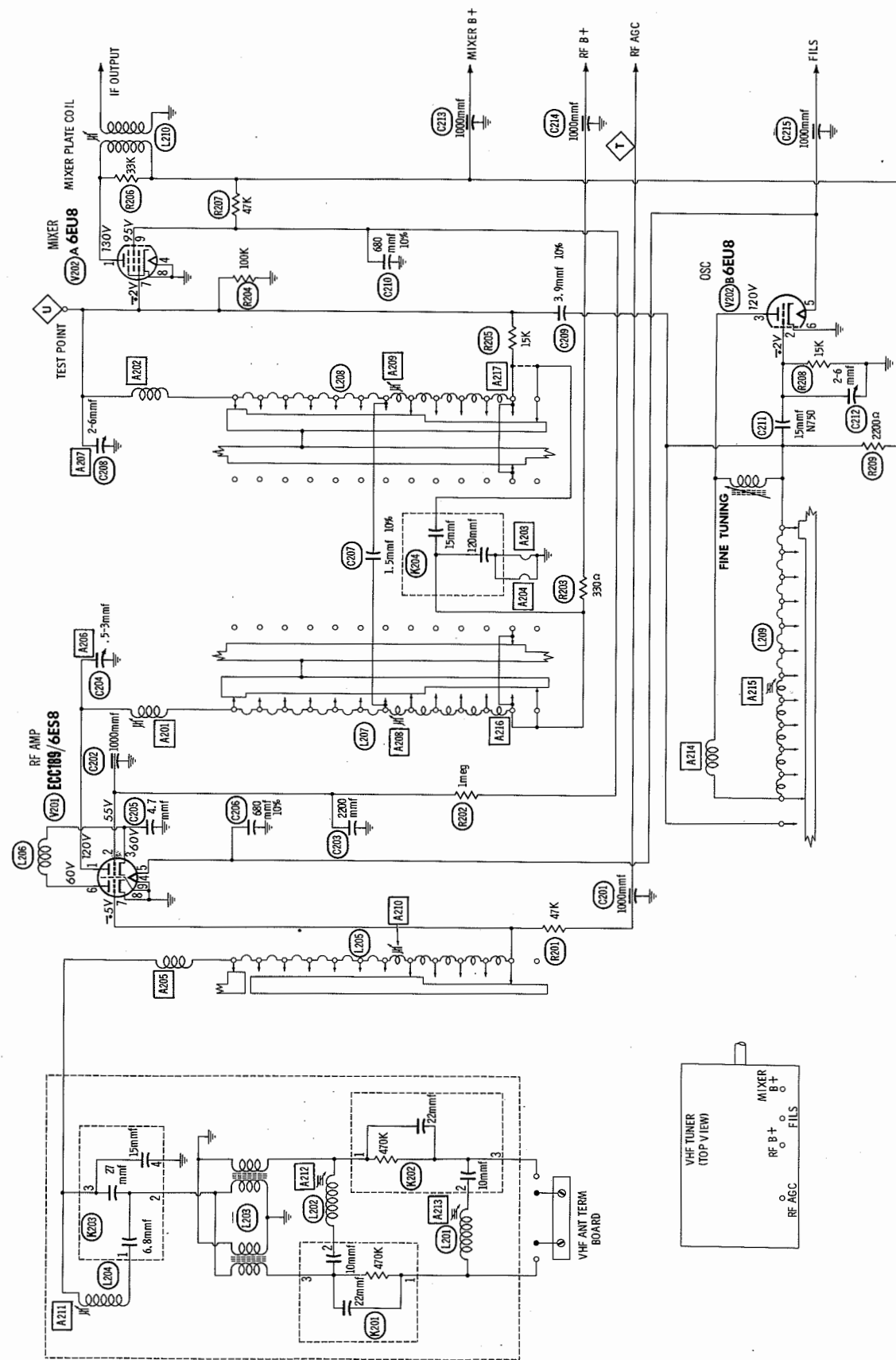
FOLDER 1





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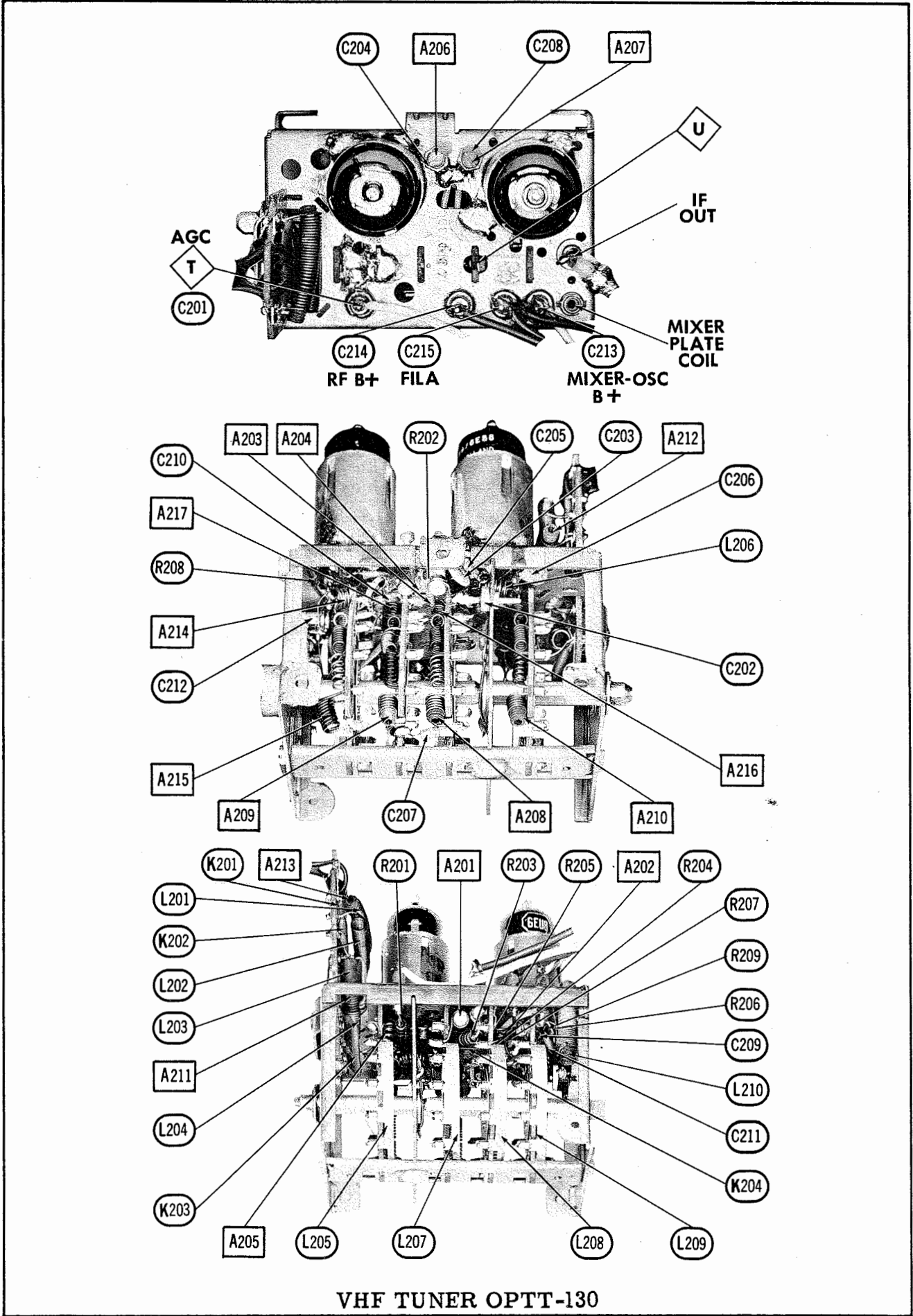
VHF TUNER with UHF Provisions - OPTT-130Y, ROPTT-130Y



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VHF TUNER OPT-130, ROPTT-130

MOTOROLA CHASSIS RTS-568,  
RTS-568Y, TS-568, TS-568Y



TUNER PARTS LIST AND DESCRIPTIONS

OPTT-130

TUBES

GENERAL ELECTRIC		RAYTHEON		SYLVANIA	
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	ECC189/6ES8	V202	Mixer - Osc.	6EU8

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	1000		EF-001	MFT-1000		CCF-102	CT280A	
C202	1000		EF-001	MFT-1000		CCF-102	CT280A	
C203	2200		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C204	.5-3			829-3		CV-1	CT565	
C205	4.7		NPO-SI 4.7	TCZ-4R7	C10V47C	CCTO-4R7	CNO-547	10TCU-V47
C206	680 10%		DI-680	DD-681		CCD-681	GP368	10TS-T68
C207	1.5 10%		NPO-SI 1.5	TCZ-1R5	C10V15C		CNO-515	10TCC-V15
C208	2-6			829-6		CV-3	CT552	
C209	3.9 10%				C10V4C			10TCC-V39
C210	680 10%		DI-680	DD-681		CCD-681	GP368	10TS-T68
C211	15 N750		N750-DI 15	DTN-15	C10Q15U	CCTN-150	CN7-415	10TCU-Q15
C212	2-6			829-6		CV-3	CT552	
C213	1000		EF-001	MFT-1000		CCF-102	CT280A	
C214	1000		EF-001	MFT-1000		CCF-102	CT280A	
C215	1000		EF-001	MFT-1000		CCF-102	CT280A	

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R201	47K				R206	33K			
R202	1meg				R207	47K			
R203	330Ω				R208	15K			
R204	100K				R209	2200Ω			
R205	15K								

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	MOTOROLA PART No.	REPLACEMENT DATA
K201	40KC Filter	10mmf, 22mmf, 470K	51C747535	Centralab PC-360
K202	40KC Filter	10mmf, 22mmf, 470K	51C747535	Centralab PC-360
K203	Antenna Input Coupling	6.8mmf, 15mmf, 27mmf	51K751641	Centralab PC-365
K204	RF Coupling	15mmf, 120mmf	51K752032	

COILS (RF-IF)

ITEM No.	USE	MOTOROLA PART No.	NOTES
L201	40MC Trap	24K751665	
L202	40MC Trap	24K751665	
L203	Ant. Trans.	24C749398	
L204	RF Choke	24K752270	
L205	Ant. Coils	1V752397	Channel 2-13, Includes Wafer Assembly
L206	RF Choke	24K752261	
L207	RF Coils	1V751663	Channel 2-13, Includes Wafer Assembly
L208	Mixer Grid Coils	1V751662	
L209	Osc. Coils	1V65071A57	
L210	Mixer Plate Coil	24B747838	

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M201	Arm and Gears	1V750041	Assembly, Fine Tuning, Includes Oscillator Screw, Actuator, and Idler Gear
	Shaft	1K754145	Fine Tuning, Includes Nylon Driver Gear
	Shaft	1D65339A02	VHF Channel Selector, Includes Pre-Set Wheel

MOTOROLA CHASSIS RTS-568, RTS-568Y, TS-568, TS-568Y

FOLDER 1



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

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

			Y, 21C1B	Y, 21C1M	Y, 21C1W	Y, 21C5CW	Y, 21C1B	Y, 21C1M	Y, 21C1W	Y, 21C7CW	Y, 21C2B	Y, 21C2M	Y, 21C2W	Y, 21C3B	Y, 21C3M	Y, 21C3W	Y, 21B7B	Y, 21B7M	Y, 21B7W
Window, Channel Indicator		61A748191																	
" "	" "	61C748191	•	•	•	•	•	•											
Mask, Pic.Tube		13K754244	•	•	•	•					•	•	•					•	•
" "	" (VHF only)	13E65246A09											•	•	•	•	•		
" "	" (UHF only)	13E65246A11												•	•	•	•		
" "	" (VHF only)	13E65246A07												•	•	•	•		
" "	" (UHF only)	13E65246A08												•	•	•	•		
Mask, Channel Indicator Window		13A748192	•	•	•	•					•	•	•					•	•
Dial Scale, UHF		34D05491A01	•	•	•	•					•	•	•	•	•	•	•	•	•
Knob, VHF Channel Sel.		1K754267	•	•	•	•					•	•	•	•	•	•		•	•
" VHF-UHF "	" "	36C65264A01											•	•	•	•	•		
" UHF "	" "	1K754257	•	•	•	•												•	•
" Fine Tuning		36C65263A01												•	•	•	•	•	
" "	" "	36D05263A01																	
" "	" " Front	1V65294A10	•	•	•	•					•	•	•	•	•	•		•	•
" "	" " Rear	36K754261	•	•	•	•					•	•	•	•	•	•		•	•
" Volume		1V65294A09	•	•	•	•					•	•	•	•	•	•		•	•
" "		36D05261A03												•	•	•	•	•	
" Brt., Vert. Hold		36B743431												•	•	•	•	•	
" "	" " " "	36B751755	•	•	•	•					•	•	•	•	•	•		•	•
" Contrast		36K754262	•	•	•	•					•	•	•					•	•
" "		36D05262A01												•	•	•	•	•	
" Tone		36C65483A01	•	•	•	•							•	•	•	•	•	•	•
" "		36D05261A01												•	•	•	•	•	
" Horiz. Hold		36K743089	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cabinet, Cherry Wood		16E65395A01															•		
" Blond		16E65384A02															•		
" Mahogany		16E65384A01															•		
" Walnut		16E65384A03															•		
" Mahogany		16E65520A01																	
" Walnut		16E65520A02																	
" Cherry Wood		16E5582A01																	
" Blond		16E65518A02																	
" Mahogany		16E65518A01																	
" "		16E65385A01																	
" Blond		16E65385A03																	
" Walnut		16E65385A02																	
" Blond		16E65377A03																	
" Mahogany		16E65377A01																	
" Walnut		16E65377A02																	
" Blond		16E65577A05																•	•
" Cherry Wood		16E65382A01																	
" Blond Oak		16E65340A03																	
" Mahogany		16E65340A01																	
" Cherry Wood		16E6538A01																	
" Blond		16E65334A02	•																
" Mahogany		16E65334A01		•															
" Walnut		16E65334A03			•														
" Charcoal		16E65577A02																	•
" Mahogany		16E69577A04																	•
" Walnut		16E65577A06																	•
Leg, Blond		16E65384A05	•																
" Mahogany		16E65334A04		•															
" Walnut		16E65334A06			•														
" "		16E65358A02				•													
" Blond		16E65340A06					•												
" Mahogany		16E65340A04						•											
" "		16E65382A02							•										
" "		16E65377A06								•									
" "		16B86375A03									•								
" "		16B86375A04										•							
" "		16E65005A06																	
" "		16E65005A05																	
" "		16E65384A04																	
" "		16E65028A03																	
Swivel Base		16E65520A03																	
" "	" "	16E65520A04																	
" "	" "	16E65385A06																	
" "	" "	16E65385A04																	
" "	" "	16E65385A05																	

## TUBES

• GENERAL ELECTRIC •			• RAYTHEON •			• SYLVANIA •		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE			
V1	1st Video IF Amp.	3BZ6 (3BZ6A) *	V9	Sync Phase Inverter - Vert. Mult.	6CG7			
V2	2nd Video IF Amp.	3BZ6			6AQ5A (6AQ5) *			
V3	3rd Video IF Amp.	6EW6	V10	Vert. Mult. - Vert. Output	6CG7			
V4	Video Output	6GK6	V11	Horiz. Mult.	6DQ6B			
V5	AGC Keying - Sync Sep. - Noise Limiter	3BU8	V12	Horiz. Output	6AF3			
V6	Sound IF Amp.	3BZ6	V13	Damper	3A3			
V7	Audio Detector	6DT6	V14	HV Rectifier	5U4GB			
V8	Audio Output	6BQ5	V15	LV Rectifier				

\* Alternate

## REPLACEMENT DATA

ITEM No.	REPLACEMENT DATA					NOTES
	MOTOROLA PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
V16	23TP4					

## REPLACEMENT DATA

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLOY PART No.	PYRAMID PART No.	SPRAGUE PART No.	NOTES
C1A	80	350	23K754011	AFHS4-56-94.4	D0040 BR8035	FP450 TC80	TMQ-4301 TD-80-350	TVL-4783 TVA-1716	
B	80	300							
C	10	300							
D	10	300							
C2A	80	300	23K738750	AFH3-108	C0810	WP326. 63	TMT-3334	TVL-3635.5	
B	10	300							
C	20	25							

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.	CENTRAL PART No.	CORNELL-DUBILER PART No.	ELMENCOR PART No.	MALLORY PART No.	SFRAGUE PART No.
C3	1000	Pt. #21R131238 Pt. #21R125698	BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C4	1000		BPD-2X001	DD3-102	BYD6DD1	CCD-102	B2X210	5HK-2D10
A	1000					CCD-102		
B	1000					CCD-102		
C5	.5	100V	P288N-5		CUB2P5	1DP-4-504	GEM-205	2TM-P50
C6	68	N150 10%			*			10TCP-Q68
C7	10	N150 10%						10TCP-Q68
C8	470		BPD-00047	DD-471	BYA10T47	CCD-471	B-347	10TS-T47
C9	18	N150 10%				*		10TCP-Q18
C10	10	N150 10%				*		10TCP-Q10
C11	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C12	.25	50V	P288N-25		CUB2P25	1DP-3-254	GEM-2025	2TM-P25
C13	1000		EF-001	MFT-1000		CCF-102	CT280A	
C14	.75	10%	Pt. #21K735623					
C15	22	N150 10%	Pt. #21R120539					
C16	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	10TCP-Q22
C17	680	10%	DI-680	DD-681	5RS758	CCD-681	GP368	5HK-D10
C18	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	10TS-T68
C19	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C20	560	10%	DI-560	DD-561	5RS756	CCD-561	GP356	5HK-D10
C21	470	10%	DI-470	DD-471	5RS747	CCD-471	GP374	10TS-T47
C22	3.9	10%			C10VC4			10TCC-V39
C23	68	N750 10%	N750-DI 68	DTN-68	C10Q68U	CCTN-680	CNO-468	10TCC-Q68
C24	27	N150 10%	Pt. #21R119896			*		10TCP-Q27
C25	.1	400V						
C26	10000	1400V	P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C27	5000	2000V	DAC-27	DD16-103	HVE16S1	16DP3-3-103	UAC-110	BL-S10
C28	20000		BPD-02	DD30-502	HVC20D5	3CCD-502	2HV-247	20HK-D5
C29	470	2000V	HVD-30-470	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C30	2.7	NPO ±.25mmf		DD30-471	HVB30T47	3CCD-471	2HV-347	20HK-T47
C31	.1	400V	P488N-1	DF-104	C10VC3			10TCC-V27
C32	3.9	10%			CUB4P1	4DP-3-104	GEM-401	4TM-P10
C33	5000		BPD-005	DD-502	C10VC4			10TCC-V39
C34	1000	10%	DI-1000	DD-102	BYA10D5	CCD-502	B-250	5HK-D50
C35	470		BPD-00047	DD-471	5RSD1	CCD-102	GP210	10TS-D10
C36	5000		BPD-005	DD-502	BYA10T47	CCD-471	B-347	10TS-T47
C37	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C38	10000		BPD-001	DD-103	BYA10D5	CCD-502	B-250	5HK-D50
C39	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C40	3300		BPD-0033	DD-332	BYA10S1	CCD-103	B-110	5HK-S10
C41	5000	2000V		DD30-502	BYA10D3	CCD-332	B-233	5HK-D33
C42	.02	600V	P688N-02	DD-203	HVC20D5	3CCD-502	2HV-247	20HK-D5
C43	.0033	400V 10%	V84CAD33-10%	DD-203	CUB6S2	6DP-2-203	GEM-612	6TM-D20

**MOTOROLA CHASSIS RTS-568,  
RTS-568Y, TS-568, TS-568Y**

**FOLDER 1**

## PARTS LIST AND DESCRIPTIONS (Continued)

## FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C53	68 5000V N150 10%	Pt. #2R131481						
C54	82 3000V 10%	Pt. #2R120150						
C55	1000 10%		DI-1000	DD-102	SR5DI	CCD-102	3DY-482 GP20	10TS-D10

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

## CONTROLS

ITEM No.	RATING	REPLACEMENT DATA						INSTALLATION NOTES	
		MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.			
R1A	350Ω	18D65082A03	F1-0			UE4193-S		Contrast	Note 1
B	2meg		RP8-68					Volume	Note 1
C	Switch		Not Req.					Push-Push Off-On	
R2A	1meg	18D65083A02	B-70	A47-1meg-Z	QJ3-137	U53		Tone	Note 2
B	Shaft		Not Req.	RS-2	Not Req.	Not Req.			
R3A	250K	18D65216A08			BU1-228	TA184L		Brightness	Note 3
B	100K Stop								
R3A	250K	18K752019			TM4	Not Req.		Brightness	Note 4
B	100K Stop				BU1-228	TA184L			
R4A	2.2meg	18D65216A06			TM4	Not Req.		Vert. Hold	Note 3
B	Shaft				BU1-239	TA28L			
R4A	2meg	18K752020			TM4	Not Req.		Vert. Hold	Note 4
B	Shaft				BU1-239	TA28L			
R5	4meg	18K743524	TT-86	B47-5meg-S	HLC4	PTA56L		Vert. Size (Height)	
R6A	2meg	18K743523	TT-75	B47-2meg-S	BU1-139	PTA26L		Vert. Linearity	
B	Shaft		Not Req.	Not Req.	TM4	Not Req.			
R7A	4meg	18K740694	TT-86	B47-5meg-S	BU1-240	PTA56L		Noise Gate	
B	Shaft		Not Req.	Not Req.	TM4	Not Req.			
R8A	70K	18K748235	TT-35	B47-100K-S	BU1-125	PTA15L		Horiz. Hold	
B	Shaft		Not Req.	Not Req.	TM4	Not Req.			
R9A	5000Ω	17K754149	WN-502	A43-5000	WU-114	PFL-5K		Horiz. Size	
B	Shaft		Not Req.	FKS-1/4	SK5	Not Req.			

■ "STA-LOC" Equivalent: FA351L, RUP26A, OSI000A.

\* Use 100K Resistor in series with left hand terminal, viewed shaft end terminals down.

Note 1. Chassis RTS-568 uses Part #18D65082A06.

Note 2. Chassis RTS-568 uses Part #18K754180.

Note 3. Used in Chassis TS-568. Some versions may use Part #18D65216A05 for (R3).

Note 4. Used in Chassis RTS-568.

## RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R10	220Ω				R42	220Ω			
R11	2.2meg				R43	12K 2W			
R12	1.5meg				R44	560Ω			
R13	15meg				R45	470Ω 3W	PW5-470Ω		
R14	220Ω				R46	180Ω			
R15	47Ω				R47	2.7meg			
R16	8200Ω				R48	5.6meg			
R17	120K				R49	1meg			
R18	220Ω				R50	27K			
R19	680K				R51	470K			
R20	1000Ω				R52	22K			
R21	6800Ω 3W	PW5-6800Ω			R53	150Ω 1W			
R22	120Ω				R54	560Ω			
R23	47K				R55	560Ω			
R24	3900Ω				R56	1meg			
R25	5600Ω 10W	PW10-5600Ω	10W-SQ-5600Ω		R57	5600Ω 4W	PW5-5600Ω		
R26	18K				R58	8200Ω 3W	PW5-8200Ω		
R27	33K				R59	470K			
R28	47K 2W				R60	4.7meg			
R29	27K 2W				R61	12Ω 1W			
R30	220K				R62	1000Ω			
R31	1000Ω				R63	470Ω			
R32	100K				R64	18K 2W			
R33	33K				R65	3900Ω * 3W	PW5-3900Ω		
R34	220K				R66	330K			
R35	47K 4W	PW5-47000Ω			R67	8800Ω 1W			
R36	1000Ω				R68	8.2Ω 1W			
R37	39K				R69	22K 1W			
R38	18K				R70	100K			
R39	390K				R71	3900Ω			
R40	82K				R72	180K			
R41	560K				R73	33K			

4700Ω 3W used in some versions (Pt. #17K751479).

▲ May not be used in some versions.

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		MOTOROLA PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	
L1	39.75MC Trap	24K754048	TV-152	6225	RTC-8556	① Includes Complete Assembly.
L2A	47.25MC Trap	24K754050				② IRC Part #CLA.
B	Trap Coil					③ Includes 8200Ω Resistor
L3A	41.25MC Trap	24K747586				④ Includes 2700Ω Resistor
B	1st Video IF					
L4	47.25MC Trap	24K747585	TV-153 ▲	6225 ▲	RTC-8556 ▲	▲ Disregard Tap
L5	2nd Video IF	24K747587	TV-130	6219	RTC-8551	* Parallel with 8200Ω Resistor
L6	Fl. Choke (1.3uh)	24K730391	BC-562	4604	RTC-8516	▲ Parallel with 2700Ω Resistor
L7	3rd Video IF	24K751248	TV-130	6219	RTC-8551	
L8A	4th Video IF	24K750722 ①				
B	Resonant (8.5uh)	24R119889				

## COILS (RF-IF) (cont)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		MOTOROLA PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	
L9	RF Choke (1.8uh)	24K746772 ②	BC-562	9310-18	RTC-8516	
L10	Resonant (8.5uh)	24R119889				
L11	Peaking (500uh)	24C749508	TV-203	6174	RTC-8592	
L12	Peaking (100uh)	24K754220	TV-194 *	6112 *	RTC-8574 *	
L13	4.5MC Trap	24K739290	TV-151 ▲	1469 ▲	RTC-8502 ▲	
L14	Peaking (240uh)	24K752963 ④	TV-185	6181	RTC-8598	
L15	Peaking (500uh)	24C749508	TV-203	6174	RTC-8592	
L16	Peaking (1400uh)	24K749668 ④	BC-514	4664	RTC-8533	
L17	Resonant (8.5uh)	24R119889				
L18	Peaking (100uh)	24K749674	TV-194	6112	RTC-8574	
L19	1st Sound IF	24K754052	TV-154	1470-A	RTC-8604	
L20	2nd Sound IF	24K754051	TV-113	6203	RTC-8545	
L21	Quadrature	24K751492	TV-154	1481	RTC-8606	
L22	RF Choke (7.5uh)	24B747171	BC-565	4611	RTC-8521	
L23	RF Choke (7.5uh)	24B747171	BC-565	4611	RTC-8521	
L24	Fl. Choke	24K742781	BC-562	4604	RTC-8516	

## COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					
		MOTOROLA PART No.	Merit PART No.	Miller PART No.	Rogers PART No.	Stancor PART No.	Thordarson PART No.
L25	Horiz. Stabilizer	24K743426	TV-163	6210	RC110	RTC-8622	HS-5

## FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	MOTOROLA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
L26	.265A	30Ω	.92 Hy.	25K751752AY ①	C-2996	C-2343	26C93	① Alternate Part #25K751752

## TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V ② 1.75A ③ 250V ④ 9A	520VCT ② .290A DC ③ 3A	25K752869M ①				① Alternate Part #25K752869

## TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		MOTOROLA PART No.	Merit PART No.	Rogers PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	Vert. Output	25K744974-AN	A-2855		VO-108	26873	A-133X	
T3	Alt. Vert. Output	25K744974						
	Yoke (Horiz. 24MH)	24D743765-AD	Y-45		Y-45	Y-45-2		
	90° (Vert. 39MH)		② ③					
	Alt. Yoke	24D743765 ①						
	Rear Cover and Centering Device	59C721145						
T4	Yoke Clamp	42A738175						
	Horiz. Output	24K754273-Z						
	Primary Coil	24K754273						
	Secondary Coil	24K745108						

- ① Includes Plug and Leads.  
② Use original Plug; Rear Cover and Centering Device; Core Clamp Assembly. Connect same as original.  
③ Remove Jumper from Yoke Terminals #1 and #4.  
④ Remove Jumper from Yoke Terminals #3 and #6.  
⑤ Remove Horizontal Damping Capacitor from Yoke Terminals #1 and #2. Install across Yoke Terminals #3 and #7.

## \* HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

ORIGINAL TERMINAL CONNECTIONS	Merit Replacement Connections	Rogers Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
8					7
7					6
5					5
4					4
3					3
2					2
1					1

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T5	5100Ω	25K749230-Y ①	A-2901	A-3337	24S07	S-53X	① Alternate Pt. #25K749230.

## SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	6" x 9"	50K749196 ① ⑤	69A328	① Used in Models 23K30B, M, Y23K30V, M, 23K31CW, Y23K31CW
SP2	4"	50K749196 ① ⑤	4A07216	
	5 1/4"	50K751798 ② ⑤	5A18T28.4	② Used in Models 23T2B, BZ, CH, M, W, Y23T2B, BZ, CH, M, W, 23C4B, M, W, Y23C4B, M, W, 23C5CW, Y23C5CW
	3" x 5"	50C752927 ③	35A0528	
	6" x 9"	50D65055A04 ④	89A228	③ Used in Models 23C6B, M, Y23C6B, M, 23C7CW, Y23C7CW
	4"	50D65055A05 ⑤		④ Used in Models 23K28B, M, W, Y23K28B, M, W, 23K29B, M, W, Y23K29B, M, W
		50D65072A01 ⑥		⑤ Used in Models 23K32M, W, Y23K32M, W
				⑥ Used in Models 23K33B, M, W, Y23K33B, M, W, 23K34CW, Y23K34CW

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	MOTOROLA PART No.	REPLACEMENT DATA
K1	Sync Sep. Grid	27mmf, 220mmf, 2000mmf, 56K, 56K, 470K, 560K, 3.3meg	51B747693	Centralab PC-358 Sprague HN-5
K2	Vert. Integrator	2000mmf, 3300mmf, 4700mmf, 2200Ω, 2200Ω, 27K, 180K	51B747379	Centralab PC-355 Sprague VF-3
K3	Vert. Sweep	7000mmf, 10000mmf, 10000mmf, 15000mmf, 50000mmf, 50000mmf, 8200Ω, 15K, 18K, 18K, 22K, 180K, 220K	51K753673	
K4	Horiz. AFC	1000mmf, 1000mmf, 3300mmf, 100K, 100K, 4.7meg	51B747561	Centralab PC-357 Sprague F-4
K5	Horiz. Sweep	82mmf, 390mmf, 680mmf, 5000mmf, 20000mmf, 6800Ω, 8200Ω, 39K, 56K, 1meg	51K753806	
K6	Video Output Grid	4700mmf, 68K	51K744975	

## FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				BUSS PART No.
			MOTOROLA PART No.	LITTELFUSE PART No.	FUSE	HOLDER	
M1	3AG	5A 250V	65A742812	312737466	312005	357001	MT-H-5
M2	N	250V 3A	65K751794	9K750575	333,500 (N 3A 250V S/B)	346009	N <sub>2</sub>
M3		1 1/2" length #26 wire					HN 3/10 to 1/2