

RESISTOR AND INDUCTOR IDENTIFICATION



## DISASSEMBLY INSTRUCTIONS

### CHASSIS REMOVAL

1. Remove 6 push on type control knobs from the front.
2. Remove 8 wood screws and the rear cover.
3. Remove the picture tube socket, yoke plug, HV lead and 2 speaker leads.
4. Remove 2 metal screws holding the chassis to the top and bottom side rails.
5. Remove the chassis.
6. Remove 4 speaker nuts and the speaker.

### CAUTION NOTE

ONE SIDE OF AC LINE CONNECTED TO CHASSIS  
Care should be exercised when connecting test equipment or physically contacting the chassis.



MODEL 621-300 (Ch. 632-36)

MODELS	CHASSIS
621-300, 621-302	632-36
621-300, 621-302	632-56
621-300U, 621-302U	631-36
621-300U, 621-302U	631-56

## SERVICING IN THE FIELD

### TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustment of the VHF oscillator is possible by removing the channel selector and fine tuning knobs. Set the fine tuning at the center of its range. The adjustments are accessible, one at a time, as the channel selector is rotated. Adjust for best picture and sound.

### PICTURE TUBE SAFETY GLASS CLEANING

For picture tube, and safety glass cleaning, it is necessary to remove the chassis. (See disassembly instructions.)

### FOCUS

The focus may be varied by the position of a strap on the base of the picture tube. The strap can be connected between pins 6 and 10 or 6 and 2. Readjust the Ion trap for the best focus consistent with maximum brightness.

### HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

For adjustment of the horizontal oscillator, it is necessary to remove the rear cover and supply power to set. Set the horizontal hold at the center of its range and adjust the Horizontal Frequency plug (R31) until the picture synchronizes horizontally. (For location see tube placement chart.)

### FUSES

A 5.6Ω fusible resistor R73 is used for LV power supply protection. (For location see tube placement chart.)

### CENTERING

Centering is accomplished mechanically by adjusting two magnetic rings around the neck of the picture tube. Rotate the two rings around the neck of the tube until the picture is properly centered.

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# DISASSEMBLY INSTRUCTIONS

## CHASSIS REMOVAL

1. Remove 6 push on type
2. Remove 8 wood screw
3. Remove the picture tube and 2 speaker leads.
4. Remove 2 metal screws top and bottom side rails
5. Remove the chassis.
6. Remove 4 speaker nut

## CAUTION

ONE SIDE OF AC LINE  
Care should be exercised when working on equipment or physical

## TUNER OSCILLATOR /

Touch-up adjustment of removing the channel is the fine tuning at the center are accessible, one at a time. Adjust for best

## PICTURE TUBE SAFETY

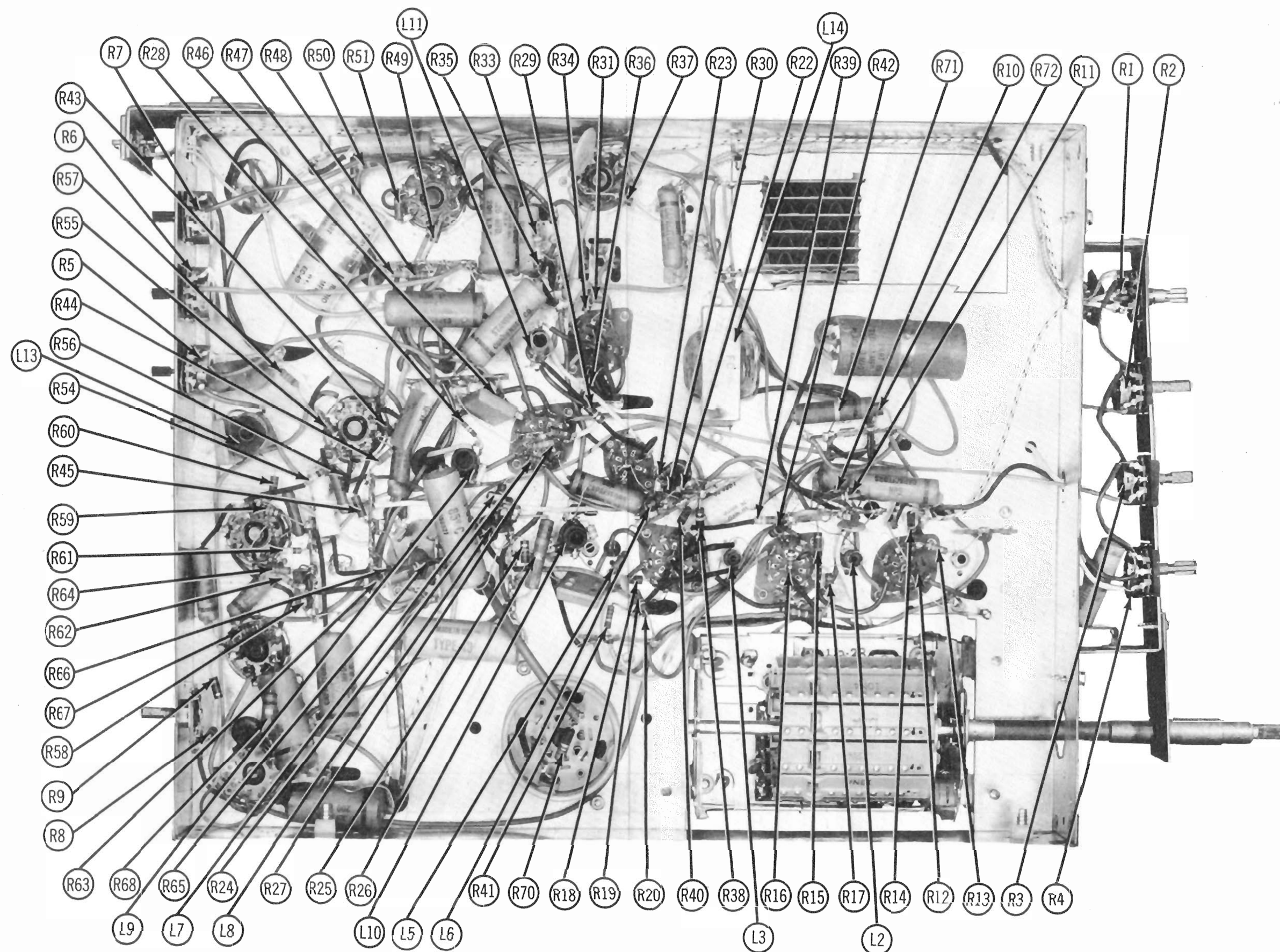
For picture tube, and safety to remove the chassis.

## FOCUS

The focus may be varied by the base of the picture tube between pins 6 and 10 or 11. The best focus consists

## HOW TO

The listing of any available parts not constitute in any way a warranty by Howard W. Sams & Co. and suitability of such parts. These parts have been contributed by Howard W. Sams & Co. H7



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION





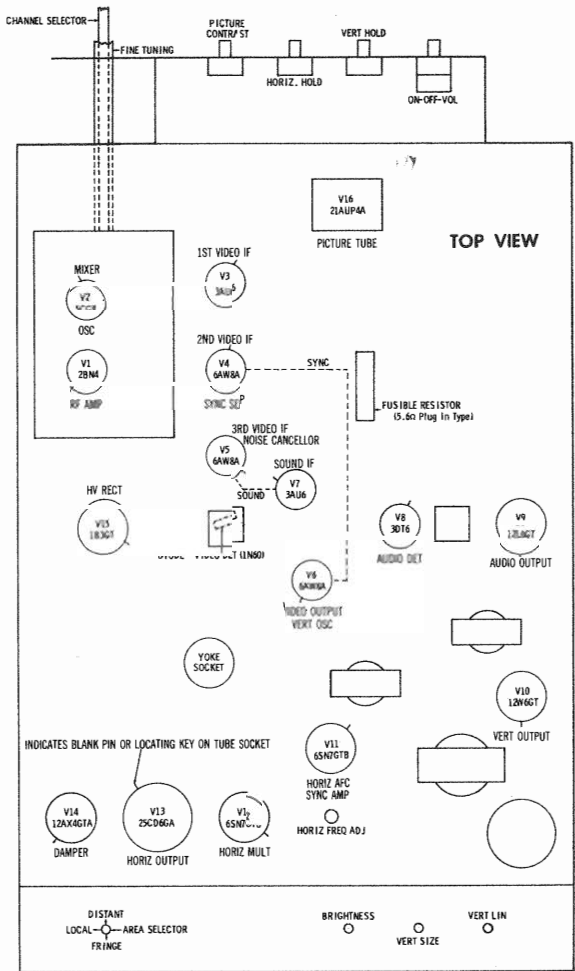


RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	2BN4	0Ω	1.1Meg	1.5Ω	2Ω	†1500Ω	0Ω	1.1Meg		
V2	5CG8	10K	†7300Ω	0Ω	0Ω	1.5Ω	†1500Ω	†10K	0Ω	220K
V3	3AU6	1.1Meg	0Ω	4.5Ω	5.5Ω	†900Ω	†900Ω	33Ω		
V4	6AW8A	0Ω	2.2Meg	†15K	7Ω	5.5Ω	100Ω	1Meg	†900Ω	†900Ω
V5	6AW8A	22K	1.2Meg	†60K	8.5Ω	7Ω	220Ω	.1Ω	†900Ω	†900Ω
V6	6AW8A	0Ω	• 1.3Meg	• †1.3Meg	3Ω	4.5Ω	• 800Ω	2.2Meg	†23Ω	†5600Ω
V7	3AU6	1.3Ω	0Ω	9.5Ω	8.5Ω	†26Ω	†100K	560Ω		
V8	3DT6	5.2Ω	680Ω	9.5Ω	10.5Ω	†490K	†6800Ω	560K		
V9	12L6GT	NC	13Ω	†1400Ω	†1000Ω	0Ω	NC	10.5Ω	180Ω	
V10	12W6GT	TP	13Ω	†268Ω	†23Ω	1Meg	NC	16Ω	• 550Ω	
V11	6SN7GTB	1Meg	†5600Ω	1000Ω	168K	8200Ω	68K	17.5Ω	16Ω	
V12	6SN7GTB	268K	†7000Ω	1200Ω	• 140K	†122K	1200Ω	19Ω	17.5Ω	
V13	25CD6GA	NC	25Ω	0Ω	TP	750K	TP	19Ω	†1000Ω	TOP CAP †16Ω
V14	12AX4GTA	NC	NC	INF	NC	†23Ω	NC	25Ω	28Ω	
V15	1B3GT		PINS	1 THRU 8	HAVE	INFINITE	RESISTANCE			TOP CAP †635Ω
V16	21AUP4A	2Ω	2200Ω	PIN 6 †26Ω	PIN 10 †26Ω	PIN 11 • 165K	PIN 12 3Ω			

† MEASURED FROM OUTPUT OF M1.  
‡ MEASURED FROM PIN 3 OF V14.  
• THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.  
NC NO CONNECTION.  
TP TIE POINT.

TUBE PLACEMENT CHART



TUBE FAILURE CHECK CHART

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

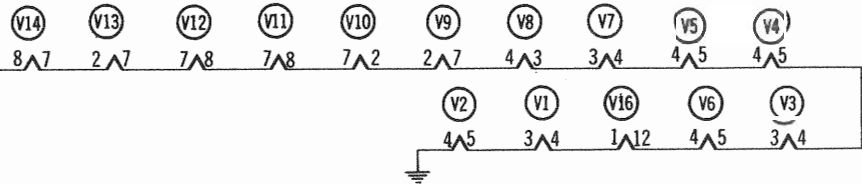
**POWER SUPPLY FAILURE**  
No raster, no sound - Fusible Resistor (R73), Rectifier (M1)

**LOSS OF PICTURE OR SOUND**  
No pic, no sound, has raster - V3, V4, V5, Diode (M2)  
No pic, no sound, has snow - V1, V2  
No pic, has sound, has raster - V6, V16  
Has pic, no sound - V7, V8, V9

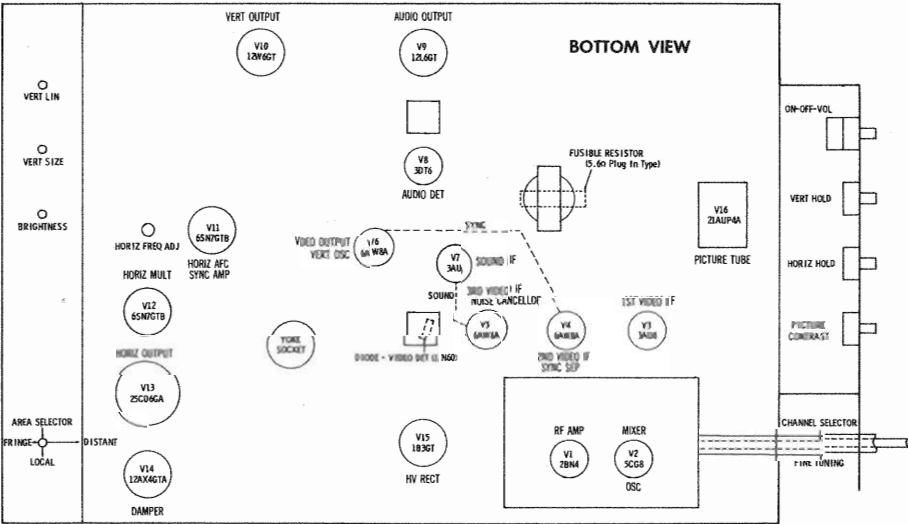
**SYNC FAILURE**  
No vert. sync - V5, V4, V11  
No horiz. sync - V5, V4, V11  
No vert. or horiz. sync - V5, V4, V11

**SWEEP FAILURE**  
No raster, has sound - V11, V12, V13, V14, V15, V16  
No vertical deflection - V6, V10  
Poor vert. linearity or foldover - V6, V10  
Poor horiz. linearity or foldover - V12, V13, V14  
Narrow picture - V12, V13, V14, M1  
Vert. off freq. - V6  
Horiz. off freq. - V12

This receiver employs tubes used in a series filament network, an open filament in any tube in the series will cause the set to be inoperative. (See circuit below.)



TUBE PLACEMENT CHART



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT.  
Do not remove the horizontal multivibrator tube (V12) to disable the high voltage circuit.  
The high voltage lead should be securely taped and kept away from the chassis.

VIDEO IF ALIGNMENT

Turn contrast control fully counter clockwise.  
Connect the negative lead of a 3 volt bias supply to point  $\diamond$ . Positive to chassis.  
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.  
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.  
Use only enough sweep generator output to provide a usable pattern on scope.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Direct	High side to ungrounded tube shield floating over mixer-oscillator tube (V2). Low side to chassis.	44.0MC (10MC Swp)	41.25MC 45.75MC	12	Vert. Amp. thru 10K to point $\diamond$ . Low side to chassis.	A1, A2, A3, A4, A5, A6, A7	Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Adjust A1 for low frequency side of curve, A2 for high side, A3 for high side, A4 for low side, A5 for high side, A6 for low side and A7 for center of curve.

SOUND IF ALIGNMENT

1. Tune in a strong TV signal and adjust controls for normal operation.  
2. Adjust A8 for maximum undistorted audio output. If two peaks occur, use the one producing the higher voltage at point  $\diamond$ . This voltage is normally approximately -5 volts.  
3. Reduce the air signal by disconnecting the antenna or detuning the fine tuning until distortion occurs in the audio. Adjust A9 and A10 for maximum undistorted audio output.  
4. Reduce the signal further and retouch A9 and A10 for maximum undistorted audio output.  
5. It may be advisable in some cases to repeat this procedure for optimum sound.

4.5MC TRAP ALIGNMENT

Tune in a TV station and adjust A11 for MINIMUM 4.5MC beat interference in the picture.

VHF OSCILLATOR ALIGNMENT

Connect bias as under "Video IF Alignment".  
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.  
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.  
Set the fine tuning control to the center of its range.  
Use only enough sweep generator output to provide a usable pattern on scope.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
2. Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC Swp)	211.25MC	13	Vert. Amp. thru 47K to point $\diamond$ . Low side to chassis.	A12	Adjust to place sound marker in trap notch as in Fig. 2. Video marker should fall at 50%.
		207MC (10MC Swp)	205.25	12		A13	
		201MC (10MC Swp)	199.25MC	11		A14	
		195MC (10MC Swp)	203.75MC	10		A15	
		189MC (10MC Swp)	197.75MC	9		A16	
		183MC (10MC Swp)	187.25MC	8		A17	
		177MC (10MC Swp)	181.25MC	7		A18	
		171MC (10MC Swp)	175.25MC	6		A19	
		165MC (10MC Swp)	169.25MC	5		A20	
		159MC (10MC Swp)	163.25MC	4		A21	
		153MC (10MC Swp)	157.25MC	3		A22	
		147MC (10MC Swp)	151.25MC	2		A23	
		141MC (10MC Swp)	145.25MC				
		135MC (10MC Swp)	139.25MC				
		129MC (10MC Swp)	133.25MC				

UHF TUNER AND VHF RF AND MIXER ALIGNMENT

This portion of the receiver has been properly aligned at the factory and is very stable. Alignment of this portion should not be required in the field.

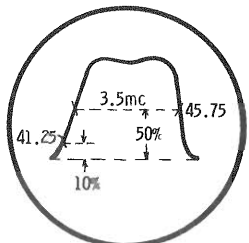


FIG. 1

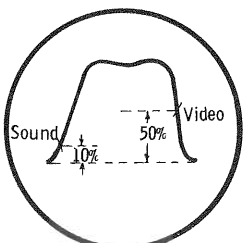
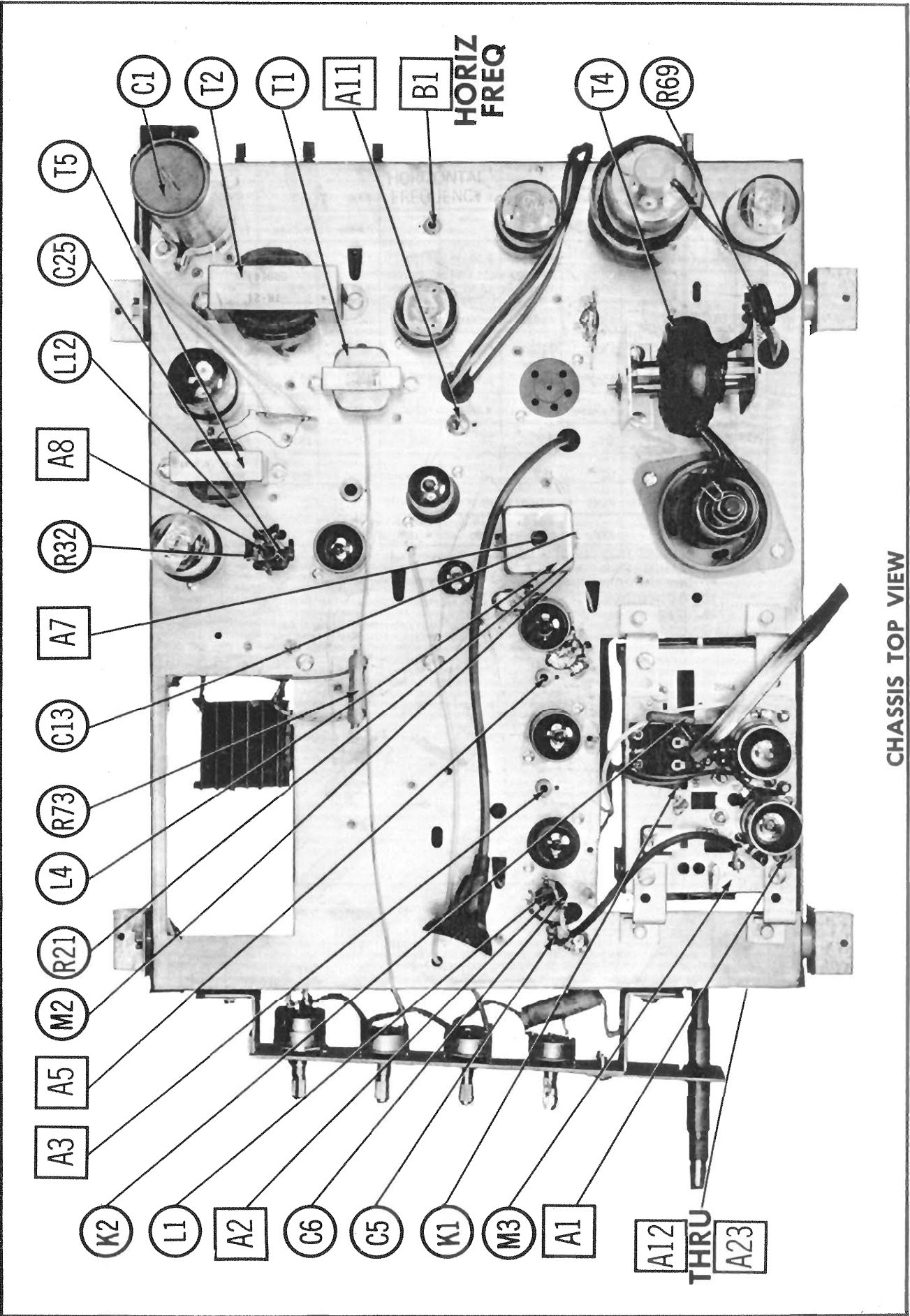
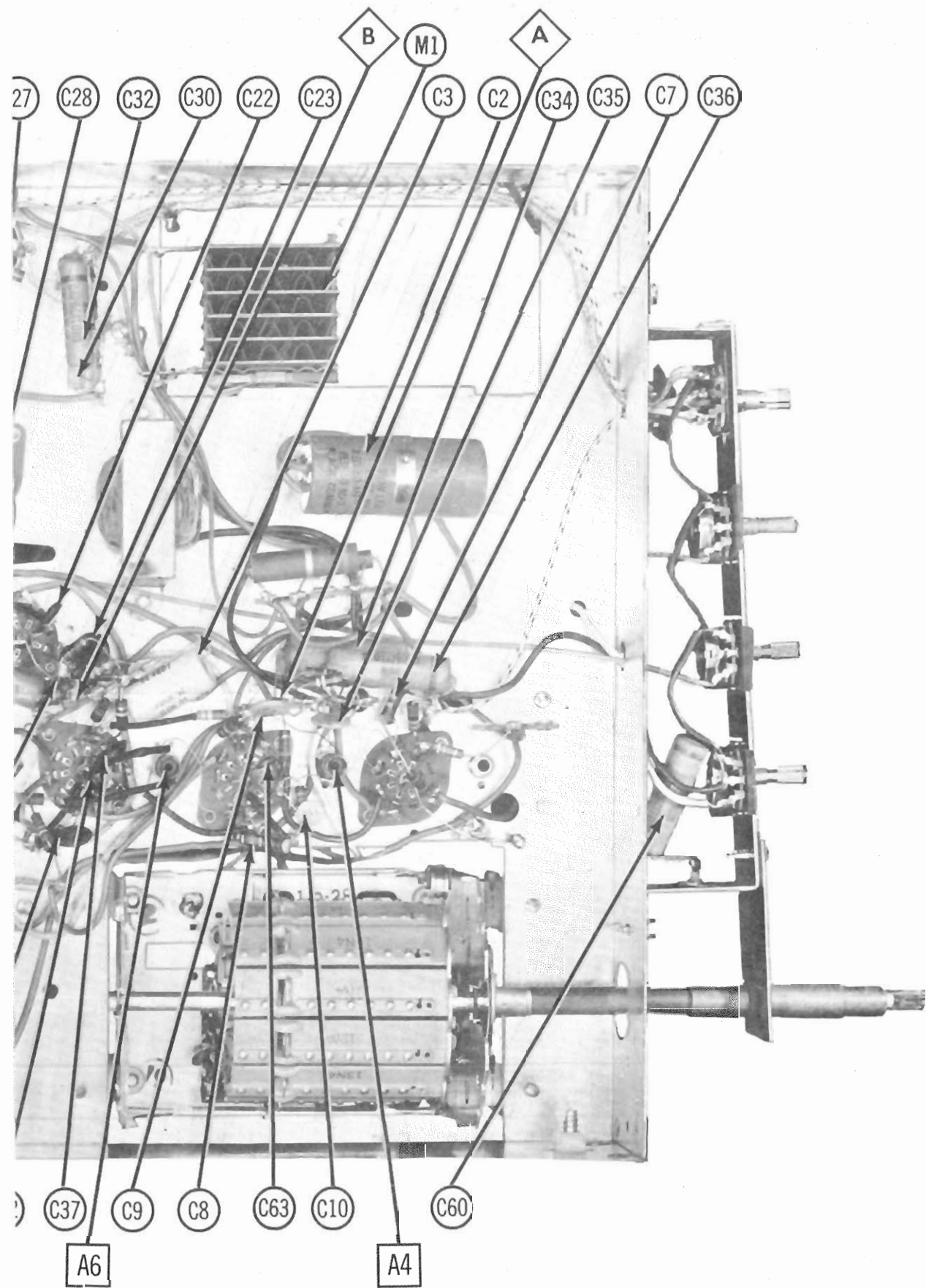
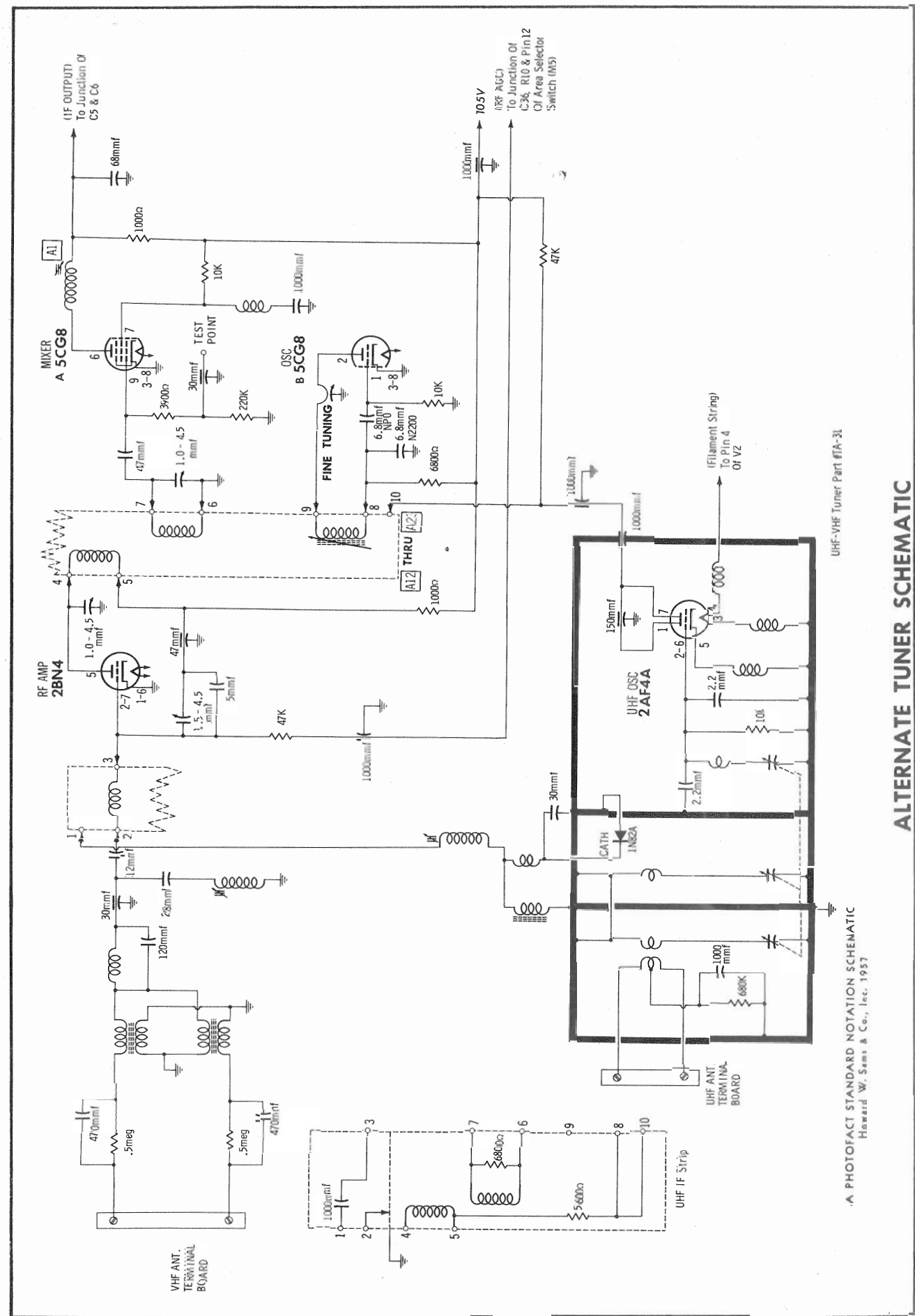


FIG. 2

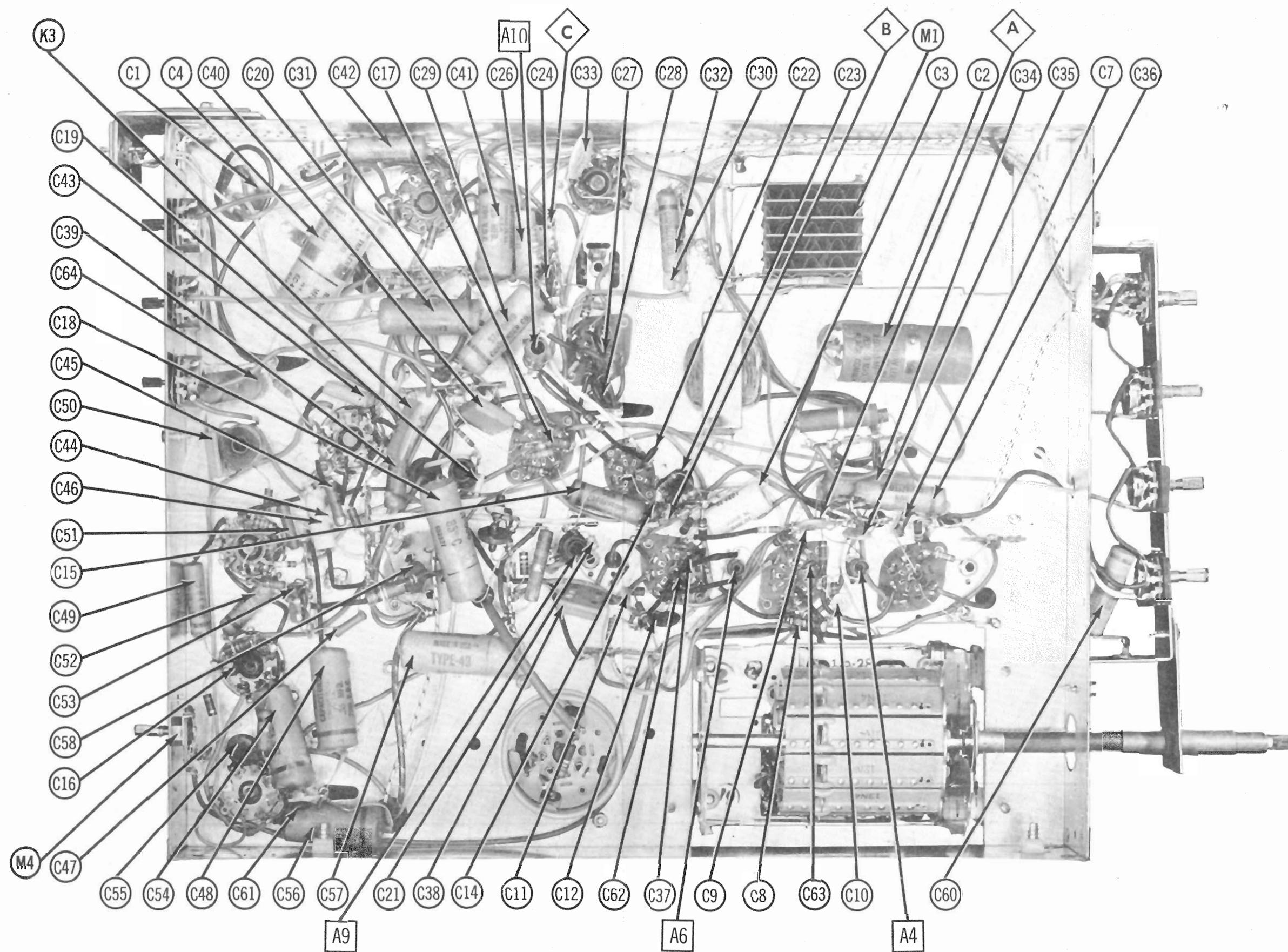




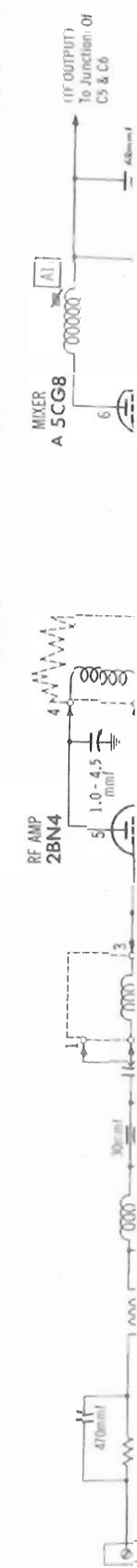
MONITOR AND ALIGNMENT IDENTIFICATION







CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION





## TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	2BN4	
V2	Mixer-Osc.	5CG8	
V3	1st. Video IF Amp.	3AU6	
V4	2nd. Video IF Amp. - Sync Sep.	6AW8A	
V5	3rd. Video IF Amp. - Noise Canceller	6AW8A	
V6	Video Output-Vert. Osc.	6AW8A	

## PICTURE TUBE

ITEM No.	TRAV-LER PART No.	GENERAL ELECTRIC PART No.	SYLVANIA PART No.	NOTES
V16	21AUP4A	21AUP4B/21AUP4A ① 21AUP4	21AUP4B ② 21AUP4A ③ 21AUP4B ④	① Aluminized ② Silver screen "85" ③ 21AUP4A/21AUP4B ④

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING	TRAV-LER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	250	150	EC-47	PR3-012	WT320	CDB-T-1015	D-095	R2298 *
C2A	200	150	EC-24A	PR3150V5050	BBR10-90	TCD49	MT-1550	TVA-2453
C3	10	75	EC-11	PR3150V10	BBR10-90	TCD49	MT-1550	TVA-2453
C4	200	25	EC-40	PR325V250	BBR2502	TCD49	MT-1550	TVA-2453

\* Non-catalog item.

## 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	TRAV-LER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C5	100	CC-31	BPD-001	D6-680	LT6Q68	ED-68	MS-468	10%
C6	88		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C7	330		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C8	330		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C9	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C10	680		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C11	680		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C12	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C13	4.7		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C14	3.0		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C15	.02		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C16	5000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C17	100		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C18	10		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C19	10		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C20	4.7		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C21	4.7		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C22	5000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C23	5000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C24	5000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C25	15		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C26	.02		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C27	5000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C28	5000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C29	1		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C30	470		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C31	.02		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C32	.01		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C33	4700		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C34	.1		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C35	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C36	.05		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C37	5000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C38	4700		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C39	.01		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C40	4700		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C41	.25		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C42	.02		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C43	2200		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C44	.68		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C45	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C46	.02		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C47	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C48	.25		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C49	.01		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C50	3900		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C51	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C52	.005		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C53	470		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C54	.25		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C55	33		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C56	.25		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C57	.22		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C58	47		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C59	56		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C60	.05		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C61	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C62	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C63	1000		BPD-001	D6-680	LT6Q68	ED-68	MS-468	
C64	.1		BPD-001	D6-680	LT6Q68	ED-68	MS-468	

Note 1. Some versions may use 5000MMF in this application.

Note 2. Some versions may use .25MFD in this application.

Note 3. Some versions may use 47MMF @ 1500V in this application.

## PARTS LIST AND DESCRIPTIONS

## CONTROLS

ITEM No.	RATING	TRAV-LER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1Meg	VC-51	B-70	A47-1Meg-Z	Q13-137	U53	Volume
R1B	1Meg	VC-51	B-70	A47-1Meg-Z	Q13-137	U53	Volume
R2A	1.5Meg	VC-63	AB-742	A47-1.5Meg-S	Q11-138	TA155L	Vert. Hold
R3A	50K	VC-72	AK-4	KSS-3	Not Req.	Not Req.	Horiz. Hold
R4A	1000Ω	VC-61	AB-5	A47-50K-S	Q11-123	TA154L	Picture Contrast
R5A	350K	VC-74	AK-4	KSS-3	Not Req.	Not Req.	Brightness
R6A	2.5Meg	VC-78	AK-19	A47-300K-S	Q11-132	TA13L	Vert. Size
R7A	750Ω	VC-77	AK-19	RN-3	Q11-239	SU-565	Vert. Lin.
R8A	750Ω	VC-77	AK-19	RN-3	Q11-239	SU-565	Vert. Lin.

## RESISTORS

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

ITEM No.	RATING	TRAV-LER PART No.	IRC PART No.	NOTES
R8	820K			
R9	1Meg 5%			
R10	100K			
R11	100K			
R12	8200Ω			
R13	430Ω 5%			
R14	33Ω			
R15	8200Ω			
R16	430Ω 5%			
R17	100Ω			
R18	15K			
R19	430Ω 5%			
R20	220Ω			
R21	6800Ω			
R22	3300Ω			
R23	1Meg 5%			
R24	2.2Meg			
R25	56K			
R26	5600Ω			
R27	68K			
R28	150K			
R29	100K			
R30	600Ω			
R31	6800Ω			
R32	180K			
R33	560K			
R34	390K			
R35	100K			
R36	680Ω			
R37	180Ω			
R38	220K			
R39	560K			
R40	22K			

Note 1. Some versions may use a 470Ω, 5% in this application.

Note 2. Some versions may use a 1Meg in this application.

## TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	TRAV-LER PART No.	Hallidson PART No.	Merit PART No.	RCA TYPE No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	Vert. Osc.	TR-22	B6702	A-2903	209T1 ①	V405	A-8125	26A03	A-97X
T2	Vert. Output	TR-21	Z1900 ②	A-2922 ①	V314 ③	V314 ③	A-8125	26A03	A-97X
T3 A	Yoke - Horiz. (20.5MH) (70°) - Vert. (35.5MH)	L-71	DF605 ④	MDF-73 ⑤	222D1 ⑥	Y70F20/3 ⑦	DY-11A ⑧	Y-10 ⑨	Y-21 ⑩
T4	Alt. Yoke	L-71	DF605 ④	MDF-73 ⑤	222D1 ⑥	Y70F20/3 ⑦	DY-11A ⑧	Y-10 ⑨	Y-21 ⑩
T4	Horiz. Output	TR-20	FB419 * ①	HVO-87 ②	235T1 * ③	X093 * ④	A-8280 * ⑤	FLY-16 * ⑥	D-95 * ⑦

① Drill new mounting hole(s).

② Use 6 to 1 turns ratio.

③ Connect blue lead to plate, green or black lead to yellow lead of yoke, remove black lead of yoke from ground, connect black lead of yoke and red lead of transformer to B+ and pin 4 of vertical output.

④ Use original horizontal damping network, if necessary. A new centering device is required.

⑤ Connect same as original.

⑥ Connect horizontal damping capacitor (C59) across yoke terminals #1 and #2.

⑦ Use original mounting bracket.

\* This part may be superseded by Parts Manufacturer's introduction of special unit for this application.

## \* HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

Use Original Width Coil Unless Replacement Type Is Listed

ORIGINAL CONNECTIONS	Hallidson Replacement Connections	Merit Replacement Connections	RCA Replacement Connections	Ram Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
9	9	4	9	2	3	9	5
8	7	8	7	1	2	7	4
7	7	7	7	6	2	7	4
6	NC See Note ⑧	2	NC See Note ⑧	4	NC See Note ⑧	NC See Note ⑧	YCr
5	1	1	1	7	1	1	1
Special Notes	⑧ ⑨		⑩ ⑪	⑫	⑬	⑭ ⑮	

⑧ To reduce yoke "ringing", remove capacitor (C59) from horizontal yoke terminals #1 and #2, and connect it, (in series with 1000Ω, 1/2W) across horizontal yoke terminals #3 and #7.

⑨ Filament requires 2 turns.

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	TRAV-LER PART No.	Hallidson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T5	4400Ω	3-40	AT-16 ①	Z1107	A-2930	A-3850	24S60	S-51X ② ① Alternate Part #AT-18

## SPEAKER

ITEM No.	TYPE	TRAV-LER PART No.	QUAM PART No.	NOTES
SP1	5" 6" X 9"	PM 3-40	SPK-36A ① SPK-45 ②	5A07 60A2 ① Used in Models 621-300, U ② Used in Models 621-302, U

## COILS (RF-IF)

ITEM No.	USE	TRAV-LER PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1	1st. Video IF	L-76				
L2	2nd. Video IF	L-95				
L3	3rd. Video IF	L-95				
L4	4th. Video IF	L-94				
L5	RF Choke	L-85	17-4524	TV-130	6219	
L6	Series Peaking Coil	L-87	19-1005	BC-566	4612	
L7	Series Peaking Coil	L-66	19-7068	TV-186	6172	
L8	Shunt Peaking Coil	L-65	19-3300 *	TV-190 *	6132 *	
L9	4.5MC Trap	L-16B		TV-151	1469	
L10	1st. Sound IF	L-77			1470 *	
L11	2nd. Sound IF	L-80				
L12	Quadrature Coil	L-79	20-1005	TV-121	1480	

\* Parallel with 27K resistor.

▲ Drill mounting hole.

## TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES.	TRAV-LER PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	RCA TYPE No.	Ram PART No.	Thordarson PART No.	NOTES
L13	165Ω	L-64	19-1576 *	TV-165 *	6210			HS-5a	20.8 to 42 Millihenries

\* Disregard Tap

▲ Fabricate mounting

## FILTER CHOKE

ITEM No.	RATINGS	INDUCTANCE (0 CURRENT 1000 Ω)	TRAV-LER PART No.	Hallidson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L14	.230A	23Ω	.6 Hy.	FC-3			28C44 ①	C-2TX

① Drill one new mounting hole.

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	TRAV-LER PART No.	REPLACEMENT DATA
K1	Ant. Isolation	.3-1Meg, 470MMF	CC-55	Centralab RC-47L
K2	Ant. Isolation	.3-1Meg, 470MMF	CC-55	Centralab RC-47L
K3	Vertical Integrator	2000MMF, 5000MMF, 5000MMF 22K, 820Ω, 8200Ω	CC-26	Aerovox PA-110 Centralab PC-110 Cornell-Dubilier 115TM1 Erie 1405-01 Sprague V-1

## RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT (Measured)	TRAV-LER PART No.	FEDERAL PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL PART No.	MALLORY PART No.	SARKES TARZIAN PART No.	
M1	.280A	SR-8 ①	1238A ①	1N1007 ②	MR350 ①	6S350A ①	350A ①	
① Selenium Type			② Germanium Type					

ATTRS	REPLACEMENT DATA					INSTALLATION NOTES
	TRAV-LER PART No.	CENTRALAB PART No.	CLAROSTAR PART No.	IRC PART No.	MALLORY PART No.	
$\frac{1}{2}$	VC-51	B-70 Not Req. KB-1	A47-1Meg-Z KSS-3 SWZ-12	Q13-137 Not Req. 76-1	U53 Not Req. US-26	Volume
$\frac{1}{2}$	VC-63	AB-742	A47-1.5Meg-S	Q1-138	TA155L	Vert. Hold
$\frac{1}{2}$	VC-72	AK-4 B-31 Not Req.	KSS-3 A47-50K-S	Not Req. Q1-123	Not Req. TA54L	Horiz. Hold
$\frac{1}{2}$	VC-61	AB-5	A47-1000-S	Not Req. Q1-108	Not Req. TA13L	Picture Contrast
$\frac{1}{2}$	VC-74	AK-4 AB-59	KSS-3 A47-50K-S	Not Req. Q1-132	Not Req.	Brightness
$\frac{1}{2}$	VC-78	AK-19 AB-83	RN-3 A47-2.5Meg-S	TQ Q1-239	SU-565	Vert. Size
$\frac{1}{2}$	VC-77	AK-19 AB-5 AK-19	RN-3 A47-750-S RN-3	TQ Q1-105 TQ	Not Req. PTA751L Not Req.	Vert. Lin.

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

Note 1. Some versions may use a 4700, 5% in this application.  
Note 2. Some versions may use a 1Meg in this application.

		REPLACEMENT DATA							
TRAV-LER PART No.		Halderson PART No.	Merit PART No.	RCA TYPE No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.	
20. 5MH1 5. 5MH1	TR-22	B8702	A-3003	209T1 ①	V405	A-8125	26A03	A-97X	
	TR-21	Z1900 ②	A-2832 ①	V314 ③	A-8174 ③	26S71 ①	A-108X①		
	L-71-1	DF605 ④	MDF-73 ④	222D1 ④	Y70F20/43 ④	DY-11A ④	Y-10 ④ ⑤	Y-22 ④	
		⑤ ⑥	⑤ ⑥	④ ⑤	④ ⑤ ⑥	④ ⑤		NW2 YCI ⑤ ⑥	
	L-71	DF605 ④	MDF-73 ④	222D1 ④ ⑤	Y70F20/43 ④ ⑤ ⑥	DY-11A ④ ⑤	Y-10 ④ ⑤	Y-22 ④ NW2 YCI ⑤ ⑥	
		⑤ ⑥	⑤ ⑥	④ ⑤ ⑥	④ ⑤ ⑥	④ ⑤			
	TR-20	FB419 * ① ②	HVO-87 ⑦	Z35T1 *① ②	X093 * ① ②	A-8280 * ① ②	FLY-16 * ① ②	D-95 * ① ②	

**\*HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA**  
Use Original Width Coil Unless Replacement Type Is Listed

) To reduce yoke "ringing", remove capacitor (C59) from horizontal yoke terminals #1 and #2, and connect it, (in series with 1000Ω, ½W) across horizontal yoke terminals #3 and #7.  
 ) Filament requires 2 turns.

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
			TRAV - LER PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.							
T5	44000	3-40	AT-16 ①	Z1107	A-2930	A-3850	24S60	S-51X	① Alternate Part #AT-18

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TRAY - LER PART No.	QUAM PART No.	
SPI	5" 6" X 9"	PM PM	3-4Ω 3-4Ω	SPK-36A ① SPK-45 ②	5A07 6A2	① Used in Models 621-300, U ② Used in Models 621-302, U

ITEM No.	USE	DESCRIPTION	TRAV-LER PART No.	REPLACEMENT DATA
K1	Ant. Isolation	. 3-1Meg, 470MMF	CC-55	Centralab RC-471
K2	Ant. Isolation	. 3-1Meg, 470MMF	CC-55	Centralab RC-471
K3	Vertical Integrator	2000MMF, 5000MMF, 5000MMF 22K, 8200Ω, 8200Ω	CC-26	Aerovox PA-110 Centralab PC-100 Cornell-Dubilier 115TMI Erie 1405-01 Sprague V-1

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		TRAV- LER PART No.	CBS PART No.	SYLVANIA PART No.	
M2	IN60	SC-1	IN80	IN80	Video Det. (Pigtall)

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

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