

N-RESISTOR IDENTIFICATION



DISASSEMBLY INSTRUCTIONS

- CHASSIS REMOVAL**
1. Remove 4 push-on type control knobs from the top.
 2. Remove 11 metal screws and the rear cover.
 3. Remove 4 metal screws holding the 2 chassis braces to the rear of the cabinet.
 4. Remove the chassis from the front of the cabinet.



MODEL Z1512J (Ch. 16Z25)

CAUTION NOTE

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

MODELS	CHASSIS
Z1510L, Z1511B, Z1512J	16Z25
Z1510LU, Z1511BU, Z1512JU	16Z25U

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. 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

Remove 2 push-on type control knobs from the front. Remove 6 metal screws holding the 2 metal trims under the knobs. Remove the safety glass.

FOCUS

Adjust the ion trap for the best focus consistent with maximum brightness.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

The horizontal frequency coil is used as the horizontal

hold control. Adjust the horizontal hold until the picture synchronizes horizontally. (For location, see tube placement chart).

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate audio detector buzz, adjust the buzz control for MINIMUM buzz and maximum sound. (For location, see tube placement chart).

FUSES

A 6Ω fusible resistor (R96) 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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ZENITH MODELS Z1510L, LU, Z1511B, BU, Z1512J, JU (Ch. 16Z25, U)

DISASSEMBLY

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 2. Remove 11 met
 3. Remove 4 met; the rear of the ca
 4. Remove the ch

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PICTURE TUBE S

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Remove the safety

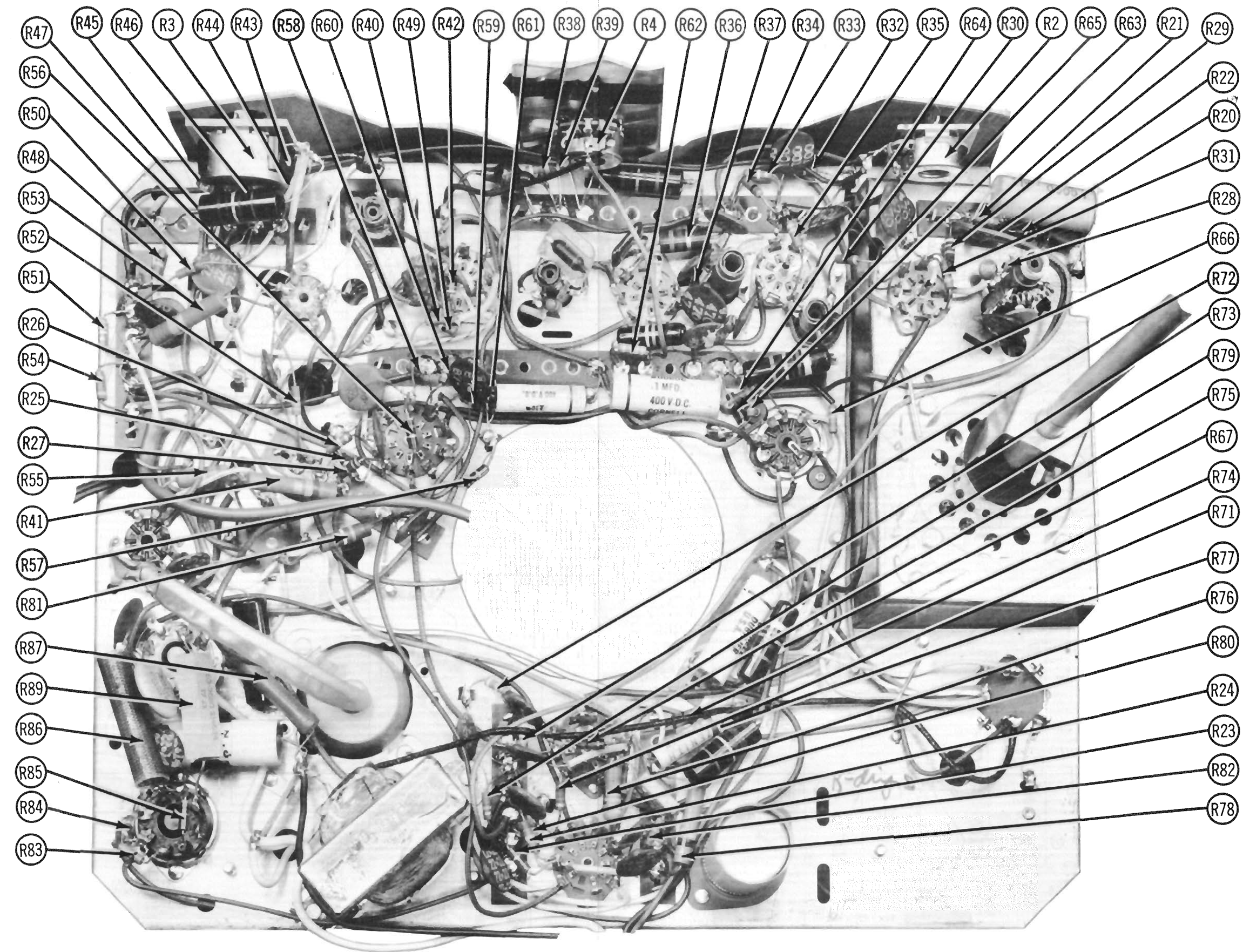
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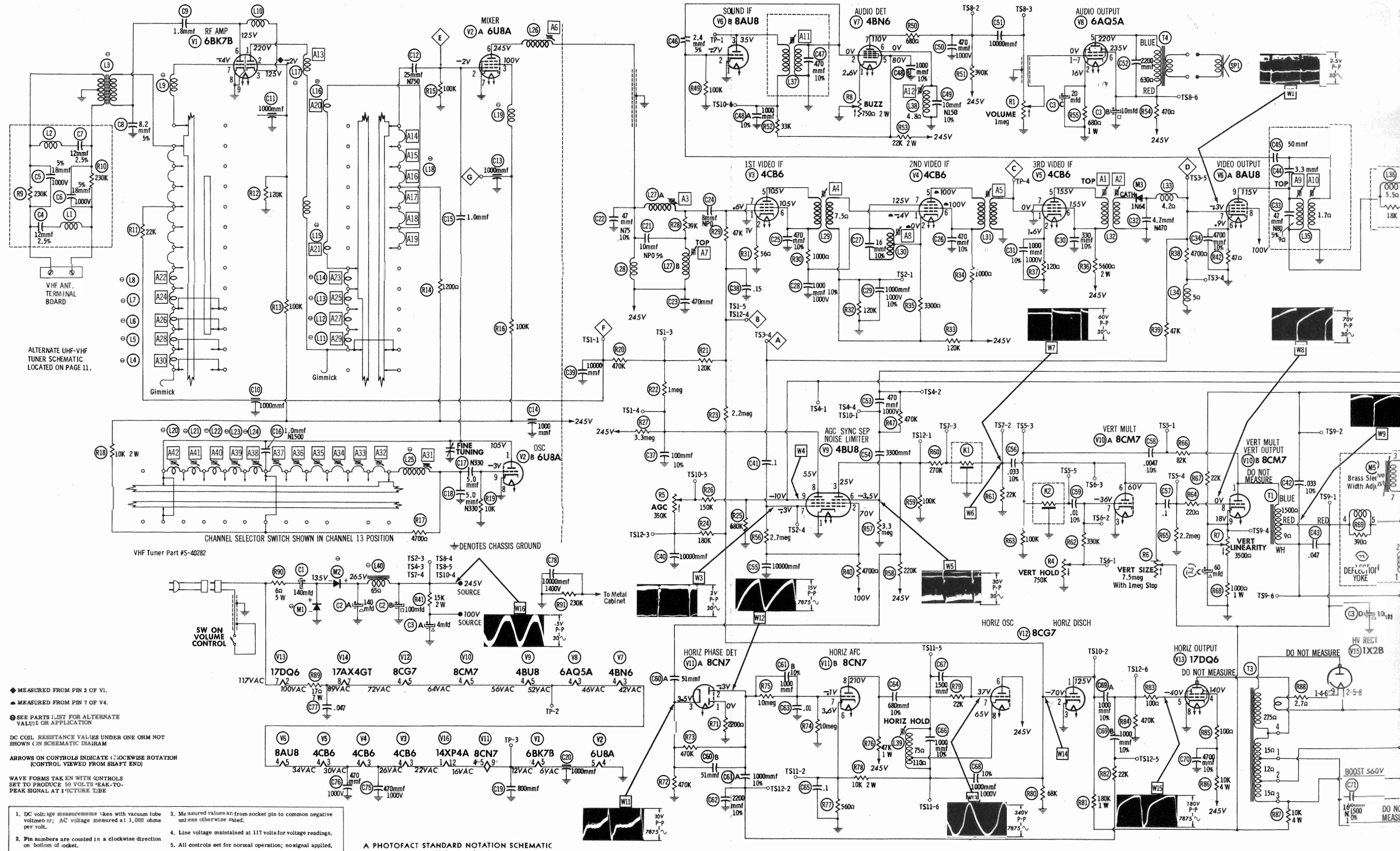
HORIZONTAL OS

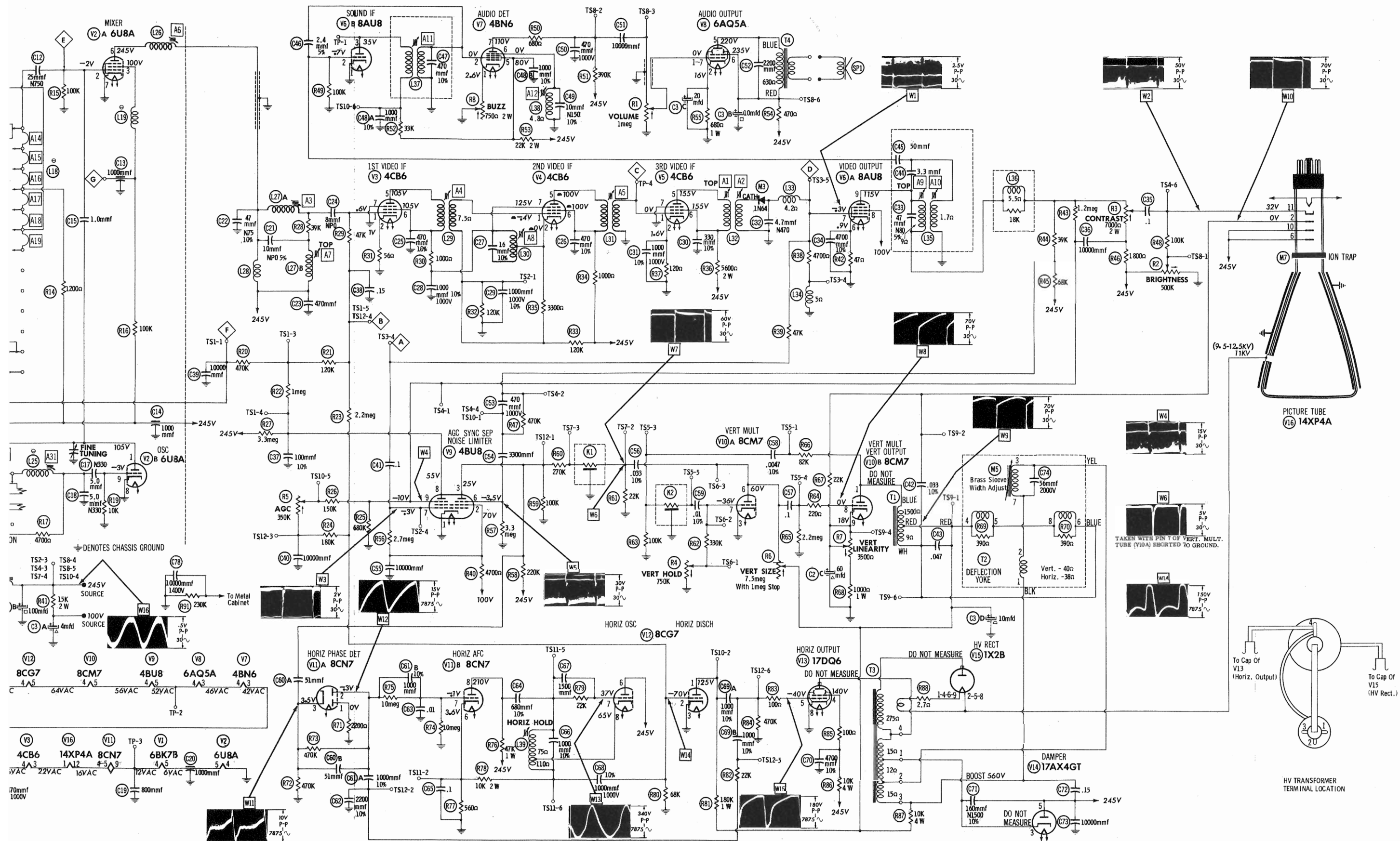
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CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION





ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BK7B	†1200Ω	60K	1Nf	4Ω	2Ω	1Nf	1.8Meg	0Ω	0Ω
V2	6U8A	†10K	100K	†100K	0Ω	2Ω	†65Ω	0Ω	0Ω	10K
V3	4CB6	1.5Meg	56Ω	7.5Ω	8.5Ω	≈ 1000Ω	≈ 1000Ω	0Ω		
V4	4CB6	60K	≈ .5Ω	8.5Ω	9.5Ω	†1000Ω	†1000Ω	60K		
V5	4CB6	.1Ω	120Ω	9.5Ω	10.5Ω	†5600Ω	†5600Ω	0Ω		
V6	8AU8	0Ω	100K	†55K	13.5Ω	10.5Ω	47Ω	4700Ω	†15K	†7000Ω
V7	4BN6	● 400Ω	.5Ω	13.5Ω	14.5Ω	†22K	4.8Ω	†390K		
V8	6AQ5A	0Ω	680Ω	14.5Ω	16.5Ω	†1200Ω	†530Ω	0Ω		
V9	4BU8	0Ω	†20K	†60K	17.5Ω	16.5Ω	3.3Meg	†2.7Meg	†1.6Meg	220K
V10	8CM7	†10K	NC	0Ω	20Ω	17.5Ω	†● 4.5Meg	● 700K	2.2Meg	● 1000Ω
V11	8CN7	2200Ω	850K	420K	6Ω	6Ω	560Ω	5Meg	†47K	4Ω
V12	8CG7	†190K	60K	0Ω	23Ω	20Ω	†65Ω	32K	10K	NC
V13	17DQ6	TP	40Ω	NC	†10K	470K	TP	45Ω	0Ω	TOP CAP †15Ω
V14	17AX4GT	TP	NC	¶	NC	†65Ω	NC	23Ω	45Ω	
V15	1X2B	PINS 1 THRU 9 HAVE INFINITE RESISTANCE								TOP CAP †290Ω
V16	14XP4A	7.5Ω	● 23K	PIN 6 †65Ω	PIN 10 †65Ω	PIN 11 ● 120K	PIN 12 6Ω			

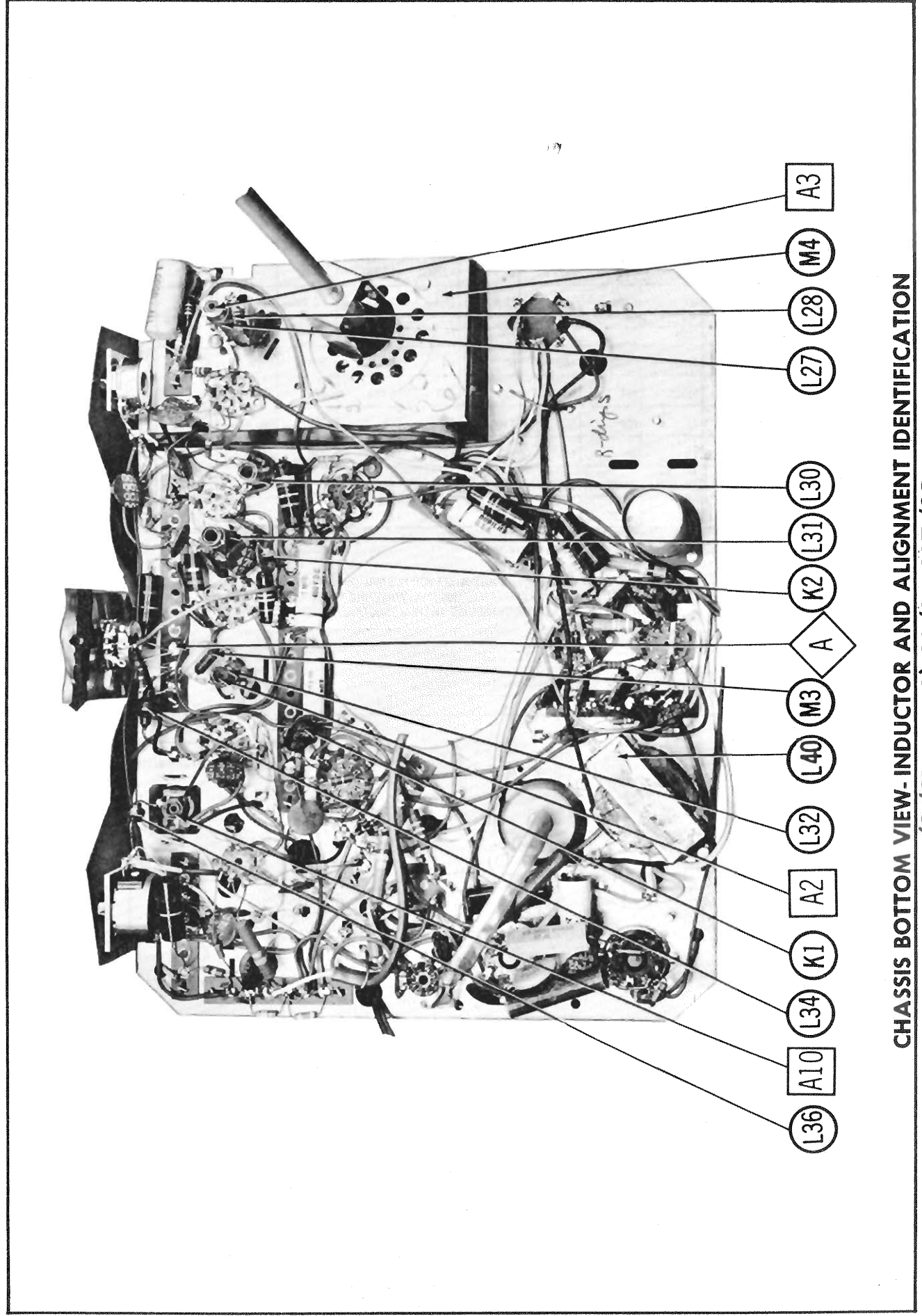
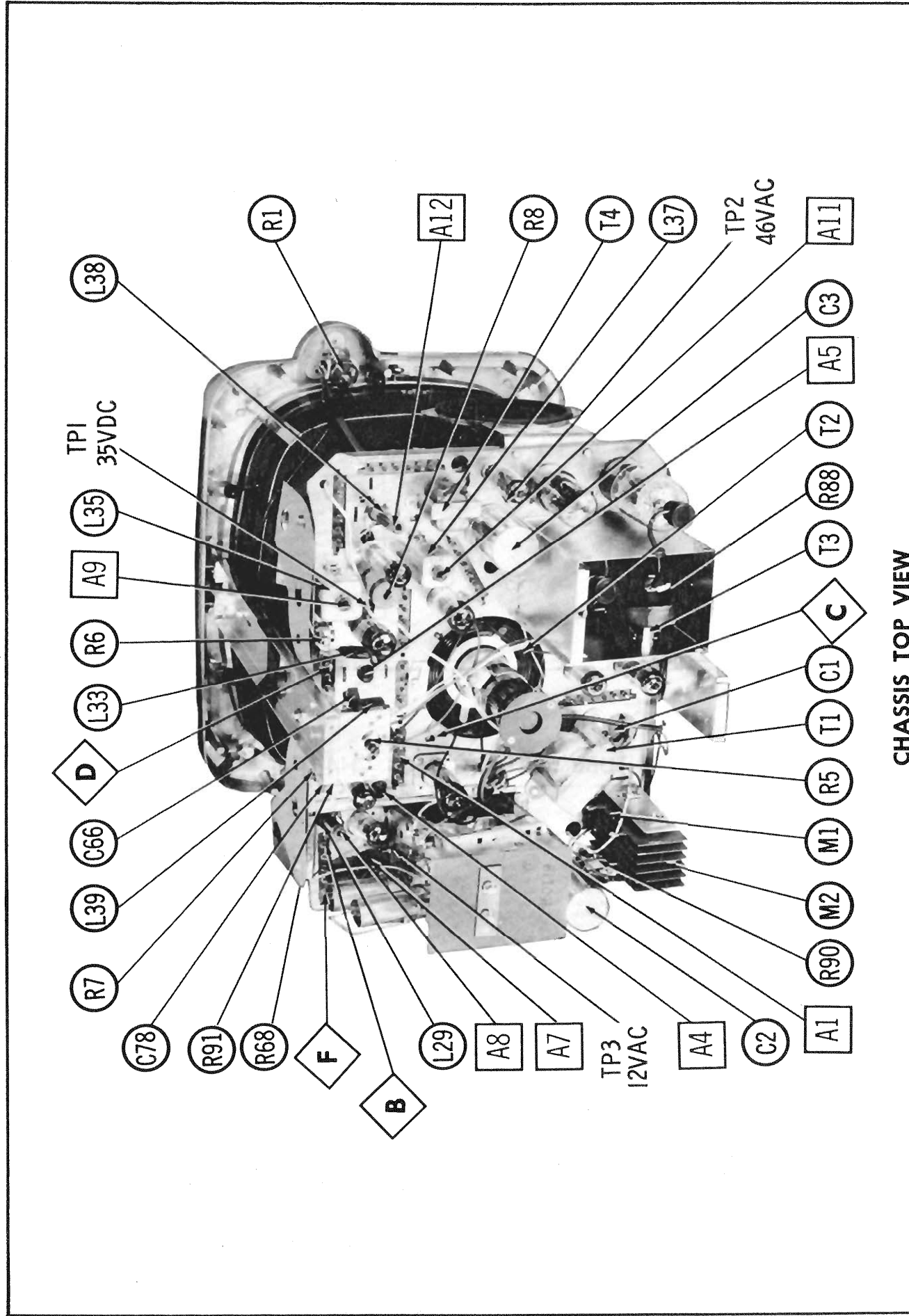
Bottom View

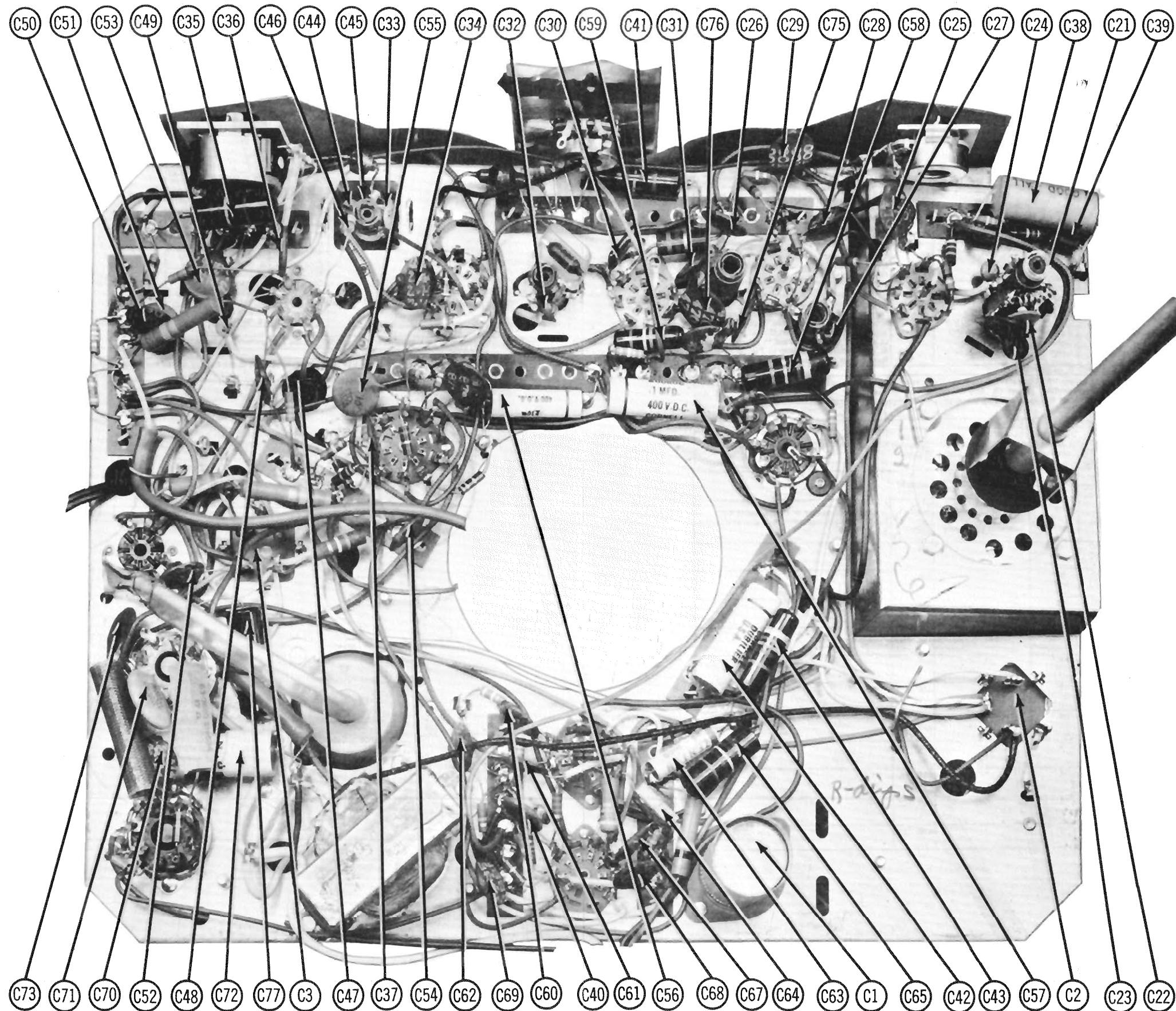
The diagram illustrates the internal layout of a television chassis from the bottom perspective. Key components and their locations are as follows:

- Top Edge:** Controls for CONTRAST, VERT SIZE, HORIZ HOLD, VERT HOLD, VERT LIN, and BRIGHTNESS are located along the top edge.
- Central Area:** The large circle represents the **PICTURE TUBE** (V16, 14XP4A). To its left is the **Yoke** (V16, 14XP4A).
- Left Side:**
 - V7 (4BN6):** AUDIO DET.
 - V6 (8AU8):** SOUND, VIDEO OUTPUT, SOUND IF.
 - V9 (4BU8):** NOISE LIMITER, SYNC SEP, AGC.
 - V8 (6AQ5A):** AUDIO OUTPUT.
 - V14 (17AX4GT):** DAMPER.
 - V13 (17DQ6):** HORIZ OUTPUT.
- Right Side:**
 - V5 (4CB6):** 3RD VIDEO IF.
 - V4 (4CB6):** 2ND VIDEO IF.
 - V10 (8CM7):** VERT MULT, VERT OUTPUT.
 - V11 (8CN7):** HORIZ AFC, HORIZ PHASE DET.
 - V12 (8CG7):** HORIZ DISCH.
- Bottom Right:**
 - V3 (4CB6):** 1ST VIDEO IF.
 - V2 (6U8A):** OSC MIXER.
 - V1 (6BK7B):** RF AMP.
 - Channel Selector:** Located within a dashed box, with a **FINE TUNING** knob.
 - FUSIBLE RESISTOR (60-5W-PIGTAIL):** Located at the bottom right corner.
 - FILAMENT TEST POINT:** Located at the bottom right corner.
- Other Components:**
 - AGC:** Automatic Gain Control, located near the center.
 - BUZZ:** Located near V7.
 - DIODE-VIDEO DET (1N64):** Located near V5.
 - SYNC:** Located near V9.
 - VERT MULT:** Vertical Multiplier, located near V10.

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CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

SET 367 FOLDER 12

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT						
USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT.						
VIDEO IF ALIGNMENT						
Connect a short jumper from point ④ to chassis. Connect the negative lead of a 6 volt bias supply to point ⑤. 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.						
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	REMARKS
1. 470MMF	High side to point ④. Low side to chassis.	43MC (10MC Swp)	41.25MC 45.75MC	Any non-interfering channel	Vert. Amp. thru 10K to point ④. Low side to chassis.	A1, A2 Adjust generator output to maintain 3 volts peak to peak on the scope. Adjust A1 and A2 for a response curve similar to Fig. 1. If proper response cannot be obtained, check to see that the coil slugs are entering their respective windings from the outer end.
2. "	High side to point ④. Low side to chassis.	"	41.25MC 42.75MC 45.0MC 45.75MC 47.25MC	"	"	A3, A4, A5, A6 Adjust generator output to maintain 3 volts peak to peak on the scope. Adjust for response curve similar to Fig. 2. A3 & A6 affect the peak of the curve. A4, the low side and A5, the high side.
3. "	"	"	41.25MC 47.25MC	"	"	A7 Increase scope gain 10 times. Adjust A7 for MINIMUM with 41.25MC marker at 50% as in Fig. 3.
4. "	"	"	40.5MC 41.25MC 42.75MC 45.0MC 45.75MC	"	"	A8 Reduce scope gain to that used in steps 1 and 2. Remove bias from point ④ and connect a jumper to ground. Adjust generator output for a 3 volt peak to peak indication. Adjust A8 for maximum amplitude of 40.5MC marker, but not to exceed 41.25MC marker, similar to Fig. 4. Restore set to normal.
SOUND IF ALIGNMENT						
Connect an attenuator (Zenith part #S-17203 or equivalent) in series with the receiver antenna. Tune in a station below the limiting action of the 4BN6 as evidenced by a hiss similar to super-regeneration. Adjust A9, A10, A11 and A12 for maximum sound and best quality. Adjust the buzz control (R8) for MINIMUM buzz. If the hiss disappears during the alignment, increase the attenuator until it reappears.						
VHF RF AND MIXER ALIGNMENT						
Connect the negative lead of a 2 volt bias supply to point ④. 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	REMARKS
5. Fig. 5	Across antenna terminals thru matching network (Fig. 5).	213MC (10MC Swp)	211.25MC 215.75MC	13	Vert. Amp. thru 10K to point ④. Low side to chassis.	A13 Adjust by expanding or compressing coil turns for maximum amplitude and symmetry as in Fig. 6.
6. "	"	207MC (10MC Swp)	205.25MC 209.75MC	12	"	A14
7. "	"	201MC (10MC Swp)	199.25MC 203.75MC	11	"	A15
8. "	"	195MC (10MC Swp)	193.25MC 197.75MC	10	"	A16
9. "	"	189MC (10MC Swp)	187.25MC 191.75MC	9	"	A17
10. "	"	183MC (10MC Swp)	181.25MC 185.75MC	8	"	A18
11. "	"	177MC (10MC Swp)	175.25MC 179.75MC	7	"	A19
12. "	"	85MC (10MC Swp)	83.25MC 87.75MC	6	"	A20, A21, A22
13. "	"	79MC (10MC Swp)	77.25MC 81.75MC	5	"	A23, A24
14. "	"	69MC (10MC Swp)	67.25MC 71.75MC	4	"	A25, A26
15. "	"	63MC (10MC Swp)	61.25MC 65.75MC	3	"	A27, A28
16. "	"	57MC (10MC Swp)	55.25MC 59.75MC	2	"	A29, A30

ALIGNMENT INSTRUCTIONS (cont)

VHF OSCILLATOR ALIGNMENT							
Connect bias as under "Video IF Alignment". Adjust the fine tuning so that the index hole in the fine tuning cam is centered directly below the channel 13 oscillator adjustment. 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
17. Fig. 5	Across antenna terminals thru matching network (Fig. 5).	213MC (10MC Swp) 207MC (10MC Swp) 201MC (10MC Swp) 195MC (10MC Swp) 189MC (10MC Swp) 183MC (10MC Swp) 177MC (10MC Swp) 85MC (10MC Swp) 79MC (10MC Swp) 69MC (10MC Swp) 63MC (10MC Swp) 57MC (10MC Swp)	211.25MC 215.75MC 205.25MC 209.75MC 199.25MC 203.75MC 193.25MC 197.75MC 187.25MC 191.75MC 181.25MC 185.75MC 175.25MC 179.75MC 83.25MC 87.75MC 77.25MC 81.75MC 67.25MC 71.75MC 61.25MC 65.75MC 55.25MC 59.75MC	13 12 11 10 9 8 7 6 5 4 3 2	Vert. Amp. thru 10K to point ④. Low side to chassis.	A31 A32 A33 A34 A35 A36 A37 A38 A39 A40 A41 A42	Adjust to place sound marker in trap notch as in Fig. 7. Video marker should fall at 50%.
UHF IF ALIGNMENT							
Tune in a UHF channel and adjust A43 for the best picture and least noise.							
UHF TUNER 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.							

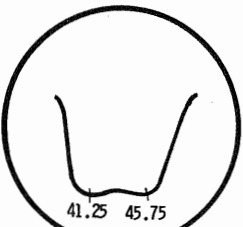


FIG. 1

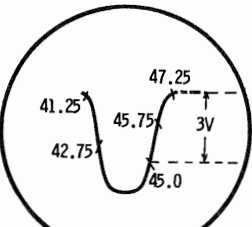


FIG. 2

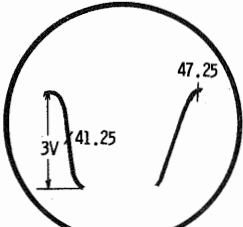


FIG. 3

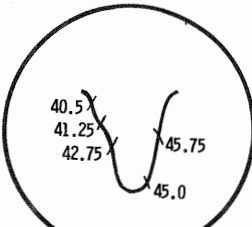
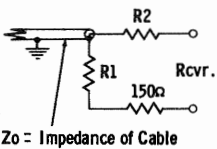


FIG. 4



Zo	R1	R2
50Ω	56Ω	120Ω
75Ω	82Ω	110Ω

FIG. 5

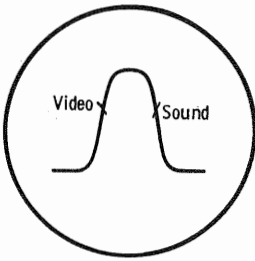


FIG. 6

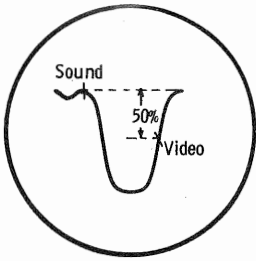
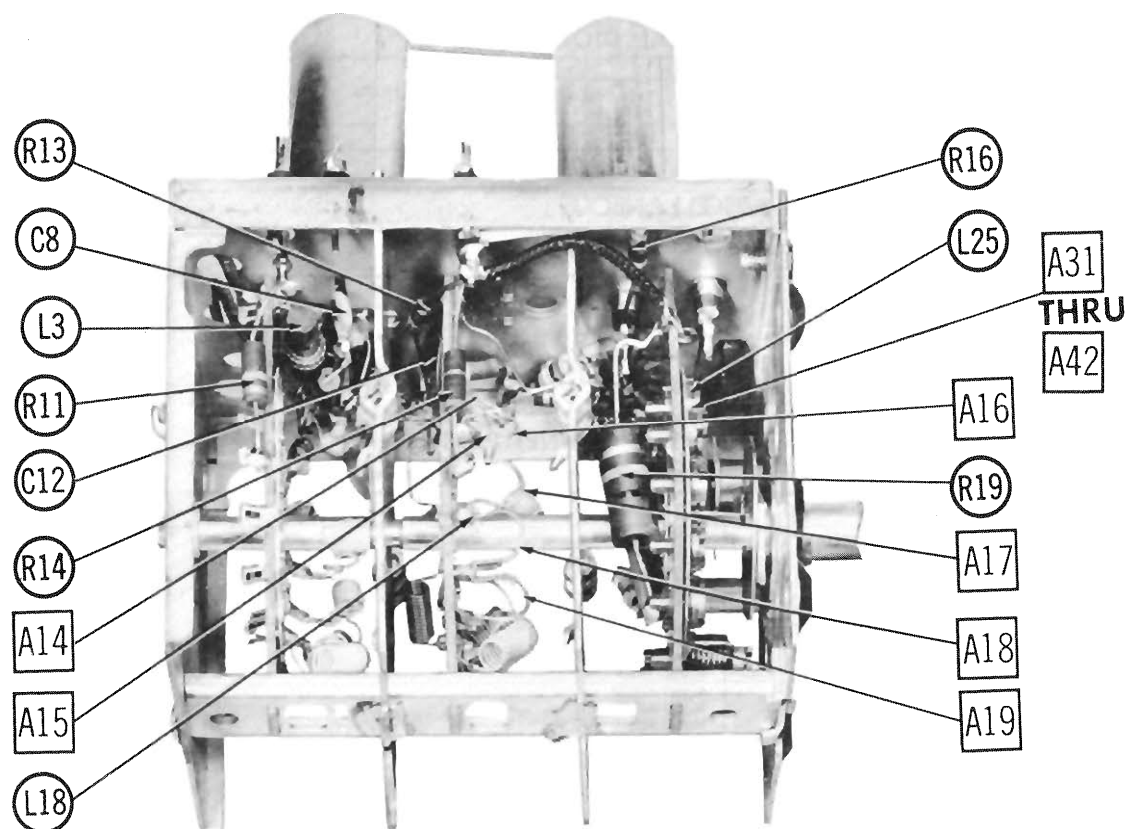
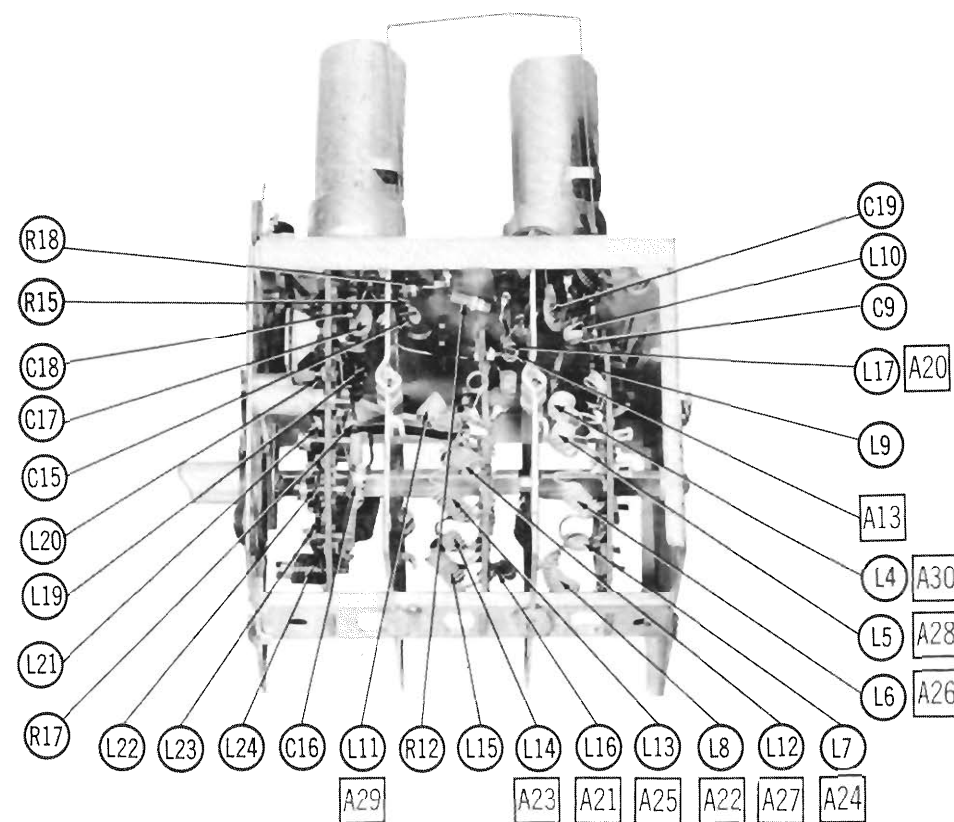


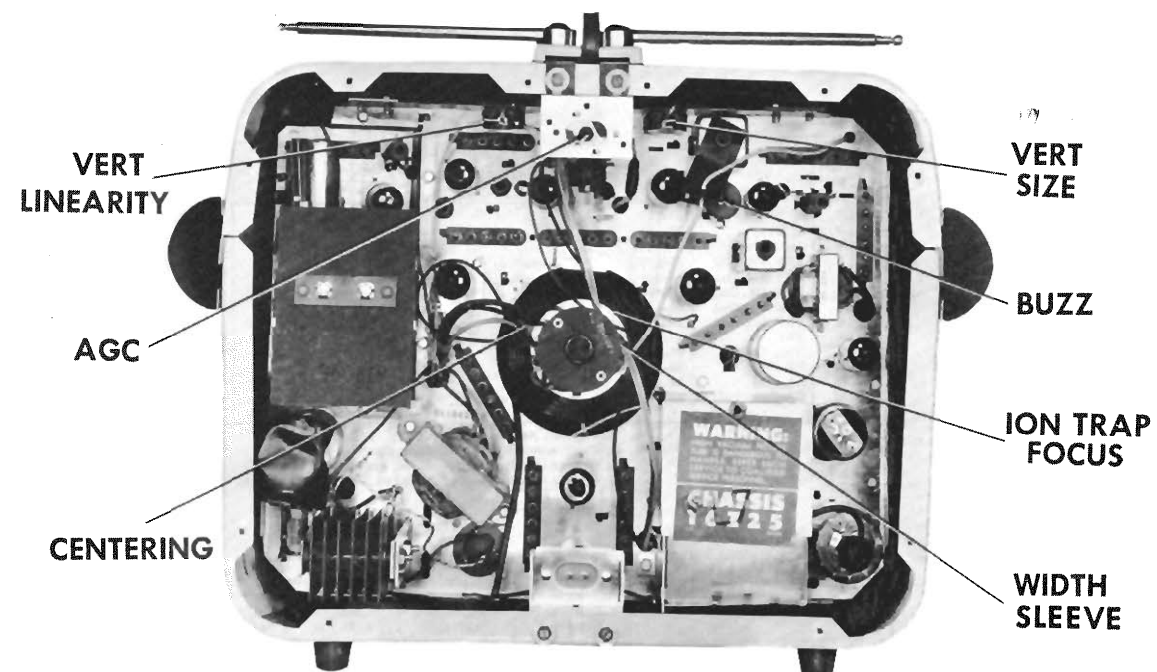
FIG. 7



RF TUNER-LEFT SIDE



RF TUNER-RIGHT SIDE

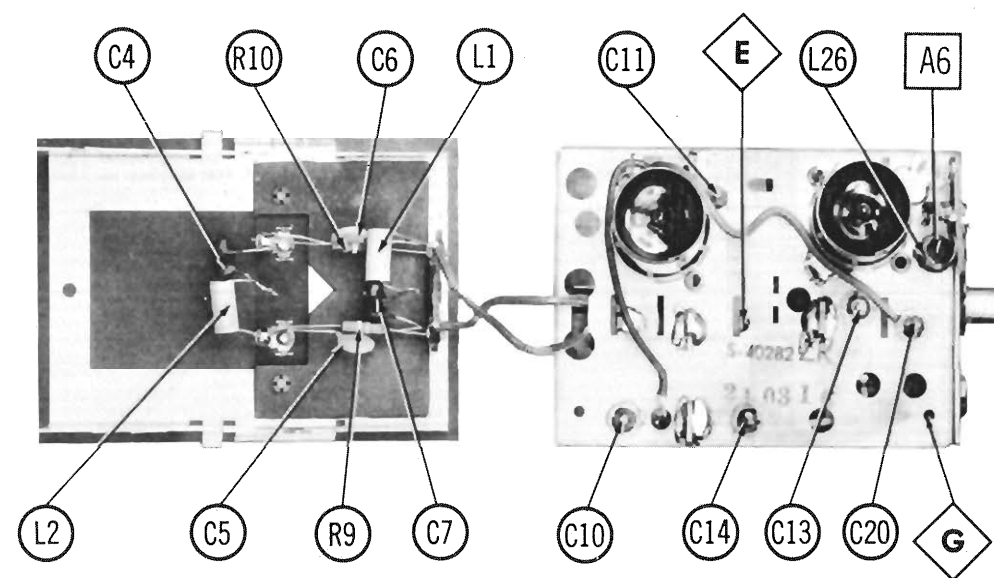


CABINET-REAR VIEW

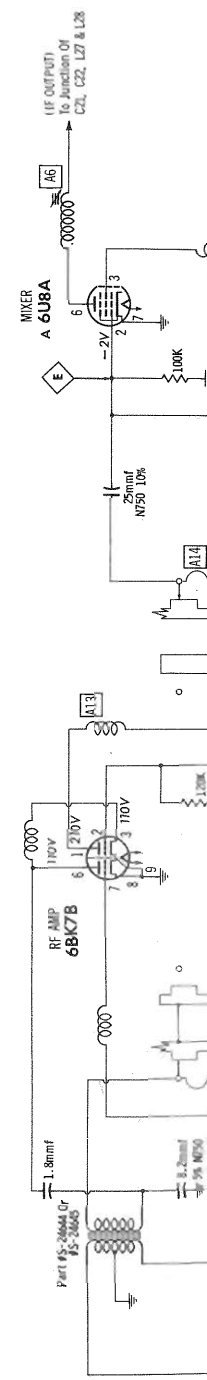
HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

1. Turn the set on and tune in a TV station, preferably with a test pattern.
2. Set the brightness and contrast controls for a normal picture.
3. Turn the horizontal hold clockwise until the picture loses sync.
4. Turn the horizontal hold slowly counter clockwise until the picture just falls into sync.

It may be necessary to switch off channel and back again for picture to lose sync.



RF TUNER TOP VIEW



TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1#	RF Amplifier	6BK7B	
V2	Mixer-Oscillator	6UB8	
V3	1st. Video IF Amp.	4CB6	
V4	2nd. Video IF Amp.	4CB6	
V5	3rd. Video IF Amp.	4CB6	
V6	Video Output-Sound IF Amp.	8AU8	
V7	Audio Det.	4BN6	
V8	Audio Output	6AQ5A	

PICTURE TUBE

ITEM No.	REPLACEMENT DATA	NOTES
ZENITH PART No.	GENERAL ELECTRIC PART No.	SYLVANIA PART No.
V18	14XP4A	14XP4A ① Silver screen "85"

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	ZENITH PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	140	150	22-2745	AFH51-23	XA0261	FP117	TMS-24	T-055	TVL-1428
C2A	140	300	22-2741	AFH3-99-83		FP326.7	TMT-77	Q-221.5	R2300 *
B	100	300					TD-150-500	MT-4580	
C	460	50							
C3A	4	300	22-2874	AFH4-114-55		FP376.6		T-820	R2301 *
B	10	300				TC82		MMT-0220	
C	20	25							
D	10	500							

* 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		REPLACEMENT DATA							NOTES
	CAP.	VOLT	ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	12		22-2679							2.5%
C5	18	1000	22-2680							5%
C6	18	1000	22-2680							5%
C7	12		22-2679							2.5%
C8	6.2		22-2681							5%
C9	1.6		22-2428							
C10	1000		22-2732	EF-001	MFT-1000				503C-DI	
C11	1000		22-2677	EF-001	MFT-1000				503C-DI	
C12	25		22-2671	N750-SI 25	TCZ-25	C10Q25U	TC7-25		57CU-Q25	N750
C13	1000		22-2732	EF-001	MFT-1000				503C-DI	
C14	1000		22-2732	EF-001	MFT-1000				503C-DI	
C15	1.0		22-2720	NP0-SI 1.0	TCZ-1		TCO-1		57CCB-VI	
C16	1.0		22-2714							N1500
C17	5.0		22-2716							N330
C18	5.0		22-2716							N330
C19	800		22-2331	BPD-0008	DD-801					
C20	1000		22-2732	EF-001	MFT-1000					
C21	10		22-2731	NP0-SI 10	TCZ-10	C10Q1C	TCO-10	ZT-10	503C-DI	NP0 5%
C22	47		22-2376						57CCB-QI	N75 10%
C23	470	1000	22-6	BPD-00047	DD-47I	BYA10T47	ED-470	UC-5347	5GA-T47	
C24	8		22-2481			C10V8C				NP0
C25	470		22-16		D6-47I	L10T47	ED-470			10%
C26	470		22-16		D6-47I	L10T47	ED-470			10%
C27	16		22-2296							10%
C28	1000	1000	22-17							10%
C29	1000	1000	22-17							10%
C30	330		22-2686	1469-00033						10%
C31	1000	1000	22-17			5R5T33			MS-333	10%
C32	4.7		22-2867							10%
C33	47		22-2467							N470
C34	4700		22-14		D6-47I	L10T47	ED-470			N80 5%
C35	.1	200	22-1777	P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	10%
C36	10000		22-3	BPD-01	DD-103	BYA6S1	ED-01	DC51I	5HK-S1	
C37	100		22-9		D6-101	L10T1	ED-100			10%
C38	.15	200	22-2852	P288N-15		CUB2P15		GEM-2015	2TM-P15	
C39	10000		22-3	BPD-01	DD-103	BYA6S1	ED-01	DC52I	5HK-S1	
C40	10000		22-3	BPD-01	DD-103	BYA6S1	ED-01	DC52I	5HK-S1	
C41	.1	200	22-2790	P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	
C42	.033	600	22-2235							10%
C43	.047	200	22-2792	BPD-05	DF-503	CUB2847		GEM-2147	2TM-S47	
C44	3.3		22-2343	NP0-SI 3.3	TCZ-3R3	CTA6V33C	TCO-3.3	ZT-5533	57CCB-V33	
C45	50		22-2460	SI 50	D6-500	L76Q5	ED-50	UC-545	5GA-Q5	
C46	2.4		22-2596			CTA6V22C	TCO-2.2		57CCB-Y22	5%
C47	470		22-2480	1469-00047		5R5T47			MS-347	10%
C48A	1000		22-21							10%
B	1000									10%
C49	10		22-2731							N150 5%
C50	470	1000	22-6	BPD-00047	DD-47I	BYA10T47	ED-470	UC-5347	5GA-T47	
C51	10000		22-3	BPD-01	DD-103	BYA6S1	ED-01	DC51I	5HK-S1	
C52	2200		22-6	BPD-0022	D6-222	BYA10D22	ED-0022	UC-5222	5GA-D22	
C53	470	1000	22-6	BPD-00047	DD-47I	BYA10T47	ED-470	UC-5347	5GA-T47	
C54	3300		22-11	BPD-0033	D6-332	BYA10D33	ED-0033	UC-5233	5GA-D33	
C55	10000		22-3	BPD-01	DD-103	BYA6S1	ED-01	DC51I	5HK-S1	
C56	.033	400	22-2335							10%
C57	.1	400	22-2061	P488N-1	DF-104	CUB4P1		GEM-401	4TM-P1	
C58	.0047	800	22-1849							10%
C59	.01	200	22-2565							10%
C60A	51		22-25	SI 51	TCZ-51	L10Q51	ED-51			
B	51			SI 51	TCZ-51	L10Q51	ED-51			
C61A	1000		22-21							10%
B	1000									10%
C62	2200		22-18							10%
C63	.01	200	22-1809	BPD-01	DD-103	CUB2S1	GP-10000	GEM-211	2TM-S1	
C64	680		22-2668	1464-00068		5R5T68			MS-368	10%
C65	.1	200	22-2780	P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	
C66	1000		22-2183	1464-001		5R5D1			MS-221	10%
C67	1500		22-12							10%
C68	1000	1000	22-17							10%
C69A	1000		22-21							10%
B	1000									10%
C70	4700		22-14							10%
C71	160	4000	22-2683	P488N-15						N1500 10%
C72	.15	400	22-2281			CUB4P15		GEM-4015	4TM-P15	

PARTS LIST AND DESCRIPTIONS

CAPACITORS (cont)

ITEM No.	RATING		ZENITH PART No.	AEROVOX PART No.	REPLACEMENT DATA				NOTES
	CAP.	VOLT.			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	
C73	10000		22-3	BPD-01	DD-103	BYA681	ED-01	DC521	5HK-SI
C74	56	2000			DD30-560	HVA20Q56	HD3-56	DC30456	75GA-Q56
C75	470	1000	22-6	HVD-15-470	DD30-47I	BYA10T47	HD15-470	DC30347	10GB-T47
C76	470	1000	22-6	HVD-15-470	DD30-47I	BYA10T47	HD15-470	DC30347	10GB-T47
C77	.047	600	22-1844	BPD-05	DF-503	CMB6847		GEM-6147	6TM-S47
C78	10000	1400	22-2655						

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST- ANCE	WATTS	ZENITH PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	1Meg	1/2	63-3696	B-69	A47-1Meg-S	Q11-137	U54	Volume
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
C	Switch			KB-1	SWE-12	76-1	US-26	
R2	500K	1/2	63-3264	B-61		Q17-133	TA55R	Brightness
R3	7000Ω	2	63-3609			WP K7500		Contrast
R4A	750K	1/2	63-3262	B-66	A47-750K-S	Q11-136	U54	Vert. Hold
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R5A	350K	1/2	63-3625			BI1-132	TA55L	AGC
B	Shaft					TMI-Kit	Not Req.	
R6A	7.5Meg	1/2	63-3263	AB-89 *	A47-7.5Meg-S *	Q11-142 *	PTA855L *	Vert. Size with 1Meg Stop
B	Shaft							
R7A	3500Ω	1/2	63-3266	AK-19	RN-3	TQ	Not Req.	Vert. Lin.
B	Shaft			AB-9	A47-4000-S	Q11-114	PTA352L	
	B			AK-19	RN-3	TQ	Not Req.	
R8	750Ω	2	63-3284		39-800		Not Req. FL750	Buzz - wire wound

* Connect a 1Meg resistor in series with the right hand terminal.

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA	NOTES
OHMS	WATT	ZENITH PART No.	IRC PART No.
R9	230K		BTS-230K
R10	230K		BTS-230K
R11	22K		BTS-22K
R12	120K		BTS-120K
R13	100K		BTS-100K
R14	1200Ω		BTS-1200
R15	100K		BTS-100K
R16	100K		BTS-100K
R17	4700Ω		BTS-4700
R18	10K		BTB-10K
R19	10K		BTS-10K
R20	470K		BTS-470K
R21	120K		BTS-120K
R22	1Meg		BTS-1Meg
R23	2.2Meg		BTS-2.2Meg
R24	180K		BTS-180K
R25	680K		BTS-680K
R26	150K		BTS-150K
R27	3.3Meg		BTS-3.3Meg
R28	39K		BTS-39K
R29	47K		BTS-47K
R30	1000Ω		BTS-1000
R31	56K		BTS-56K
R32	120K		BTS-120K
R33	120K		BTS-120K
R34	1000Ω		BTS-1000
R35	3300Ω		BTS-3300
R36	5800Ω		BTB-5800
R37	120Ω		BTS-120
R38	4700Ω		BTS-4700
R39	47K		BTS-47K
R40	4700Ω		BTS-4700
R41	15K		BTB-15K
R42	47K		BTS-47K
R43	1.2Meg		BTS-1.2Meg
R44	39K		BTS-39K
R45	68K		BTS-68K
R46	1800Ω		BTS-1800
R47	470K		BTS-470K
R48	100K		BTS-100K
R49	100K		BTS-100K

Note 1. Some versions may use a 150K in this application.
Note 2. Some versions may use a 180K in this application.

TRANSFORMERS (SWEEP CIRCUITS)

		REPLACEMENT DATA							
ITEM No.	USE	ZENITH PART No.	Halldorson PART No.	Merit PART No.	RCA TYPE No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	Vert. Output	95-1535	Z1807 ①	A-2824 ①		V315 ①	YO-101 ②	26875 ③	A-112X ①
M6	Yoke-Horiz. (13.5MH)	95-1527 ④	DF606 ⑤	MDF-91 ⑤	237DI ⑤	Y90F12/47 ⑤	DY-13 A ⑤	Y-14 ⑤	Y-40-3 ⑤
	90°- Vert. (38MH)								
T3	Yoke Rear Cover & Centering Device	S-23237							
	Horiz. Output	S-40284 ⑦		HVO-128					

① Cut and tape blanking lead.
② Drill new mounting hole(s).
③ Connect as auto transformer. Use 15 to 1 turns ratio.
④ Includes resistors R69, R70 and capacitor C74.
⑤ Cut and form a piece of .010 gauge fish paper inside the yoke, support with an acetate cement, to provide an insulation between the width sleeve and the yoke. Use original yoke damping network, if necessary.
⑥ Use original rear cover and centering device.
⑦ Includes coil parts #S-40425 and #S-40427.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
			ZENITH PART No.	Halldarson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.							
T4	9700Ω	3-4Ω	95-1534	Z1117 ①	A-2932 ①	A-3879①	24583	S-11X	① Drill one new mounting hole.

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				ZENITH PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	4"	PM	3-4Ω	49-814	4A07	

COILS (RF-IF)

ITEM No.	USE	ZENITH PART No.	NOTES
L1	IF Trap	20-587	
L2	IF Trap	20-587	
L3	Ant. Trans.	S-24644 ①	
L4	VHF Ant. Coil	20-680 ②	Channel 2
L5	VHF Ant. Coil	20-680 ②	Channel 3
L6	VHF Ant. Coil	20-680 ②	Channel 4
L7	VHF Ant. Coil	20-680 ②	Channel 5
L8	VHF Ant. Coil	20-680 ②	Channel 6
L9	VHF Ant. Coil	20-600 ②	Channel 13
L10	Neut. Coil	20-633	
L11	RF Coil	20-629 ③	Channel 2
L12	RF Coil	20-629 ③	Channel 3
L13	RF Coil	20-629 ③	Channel 4

① Alternate part #S-24645.
② Wafer Assembly part #S-23641 includes L4 thru L9.
③ Wafer Assembly part #S-23640 includes L11 thru L19.
④ Wafer Assembly part #S-23639 includes L20 thru L25.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		ZENITH PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L27	1st. Video IF	S-40289	19-1000		4602	Includes trap coil assy. 1 Microhenry
L28	RF Choke	20-879				
L29	2nd. Video IF	S-40279				
L30	40.5MC Trap	S-24080				
L31	3rd. Video IF	S-40280	19-3300	TV-190	6132	25 Microhenries 325 Microhenries
L32	4th. Video IF	S-23940				
L33	Resonant Choke	S-22444				
L34	Shunt Peaking Coil	S-16015				
L35A	4.5MC Trap	S-40818	19-3125 *		6153 *	137 Microhenries, wound on 18K resistor
B	1st. Sound IF					
L36	Series Peaking Coil	S-20880				
L37	2nd. Sound IF	S-40276			1480 ▲	
L38	Quadrature Coil	S-19020				

PARTS LIST AND DESCRIPTIONS (Continued)

CRYSTAL DIODES

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	ZENITH PART No.	QUAM PART No.	
SP1	4"	PM	3-40	49-814	4A07	

MISCELLANEOUS

ITEM No.	USE	ZENITH PART No.	NOTES
L1	IF Trap	20-567	
L2	IF Trap	20-567	
L3	Ant. Trans.	S-24644 ①	
L4	VHF Ant. Coil	20-680 ②	Channel 2
L5	VHF Ant. Coil	20-680 ②	Channel 3
L6	VHF Ant. Coil	20-680 ②	Channel 4
L7	VHF Ant. Coil	20-680 ②	Channel 5
L8	VHF Ant. Coil	20-680 ②	Channel 6
L9	VHF Ant. Coil	20-600 ②	Channel 13
L10	Neut. Coil	20-633	
L11	RF Coil	20-629 ③	Channel 2
L12	RF Coil	20-629 ③	Channel 3
L13	RF Coil	20-629 ③	Channel 4

ITEM No.	USE	ZENITH PART No.	NOTES
L14	RF Coil	20-629 ③	Channel 5
L15	RF Coil	20-629 ③	Channel 6
L16	RF Coil	20-579 ③	Channel 6
L17	RF Coil	20-654 ③	Channel 13
L18	RF Coils	20-681 ②	Channel 7 thru 13
L19	Mixer Screen	20-632 ③	
L20	Osc. Coil	20-662 ①	Channel 2
L21	Osc. Coil	20-663 ①	Channel 3
L22	Osc. Coil	20-664 ①	Channel 4
L23	Osc. Coil	20-665 ①	Channel 5
L24	Osc. Coil	20-666 ①	Channel 6
L25	Osc. Coil	20-667 ①	Channel 7
L26	Mixer Plate Coil	S-24377	

- ① Alternate part #S-24645.
- ② Wafer Assembly part #S-23641 includes L4 thru L9.
- ③ Wafer Assembly part #S-23640 includes L11 thru L19.
- ④ Wafer Assembly part #S-23639 includes L20 thru L25.

CABINETS & CABINET PARTS

ITEM No.	PART NAME	ZENITH PART No.	NOTES
M4	Tuner	S-40282	VHF, Ch. 16Z25
	Tuner	S-40283	VHF, Ch. 16Z25U
	Tuner	S-40504	UHF, Ch. 16Z25U
M5	Width Sleeve	199-227	
M6	Centering Device	S-23237	Includes yoke rear cover
M7	Ion Trap	S-17164	

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

NAME	PART NO.	DESCRIPTION
Safety Glass	192-231	Models Z1512J, Z1511B
Safety Glass	192-230	Model Z1510L
Knob	46-1648	Channel Selector - Models Z1512J, Z1511B
Knob	46-1649	Channel Selector - Model Z1510L
Knob	46-1644	On-off-volume - Models Z1512J, Z1511B
Knob	46-1645	On-off-volume - Model Z1510L
Knob	S-40431	Fine Tuning
Knob	S-24915	Brightness, Contrast, Vert. Hold
Knob	S-40439	Horiz. Hold
Cabinet	14-2095	Model Z1512J
Cabinet	14-2096	Model Z1510L
Cabinet	14-2097	Model Z1511B
Handle	36-149	Model Z1512J
Handle	36-150	Models Z1511B, Z1510L

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		ZENITH PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L27	1st. Video IF	S-40289	19-1000	TV-190	4802	Includes trap coil assy. 1 Microhenry
L28	RF Choke	20-879				
L29	2nd. Video IF	S-40279				
L30	40.5MC Trap	S-24080				
L31	3rd. Video IF	S-40280				
L32	4th. Video IF	S-23940	19-3300	TV-190	6132	25 Microhenries 325 Microhenries
L33	Resonant Choke	S-22444				
L34	Shunt Peaking Coil	S-19015				
L35A	4.5MC Trap	S-40818				
B	1st. Sound IF					
L36	Series Peaking Coil	S-20880	19-3125 *		6153 *	137 Microhenries, wound on 18K resistor
L37	2nd. Sound IF	S-40276				
L38	Quadrature Coil	S-19020			1480 A	

* Parallel with 18K resistor.
▲ Drill new mounting hole.

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES.		REPLACEMENT DATA						NOTES	
	PRI.	SEC.	ZENITH PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	RCA TYPE No.	Ram PART No.		Thordarson PART No.
L39	185Ω		S-40275							Tapped @10Ω, 59-110 Millihenries

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (Ø CURRENT 1000 \sqrt{v})	ZENITH PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.
L40	210A	95Ω	2.15 Hy.	96-1523 ①	C5030 ②	C-2874	C-2325 ②	28C43	C-21X

- ① Alternate part #95-1543.
- ② Drill one new mounting hole.

TRANSFORMERS (SWEEP CIRCUITS)

USE	REPLACEMENT DATA							
	ZENITH PART No.	Halldorson PART No.	Merit PART No.	RCA TYPE No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Tsai PART No.
input riz. (13.5 MH) t. (38MH) ar Cover & g Device output	95-1535 95-1527 ④ S-23237 S-40284 ⑦	Z1807 DF606 ③③	A-2824 ① MDF-91 ⑤⑥ HYO-128	237D1 ⑤⑥	V315 ① Y90F12/47 ⑤⑥	YO-101 ② DY-13A ⑤⑧	26875 ③ Y-14 ⑤⑧	A-111X ④ Y-4U-3 ⑤

Blanking lead.
Counting hole(s).
Auto transformer. Use 1:5 to 1 turns ratio.
Resistors R69, R70 and capacitor C74.
Fit a piece of .010 gauge fish paper inside the yoke, support with an acetate cement, to provide an even width sleeve and the yoke. Use original yoke damping network, if necessary.
Install rear cover and centering device.
1 parts #S-40425 and #S-40427.

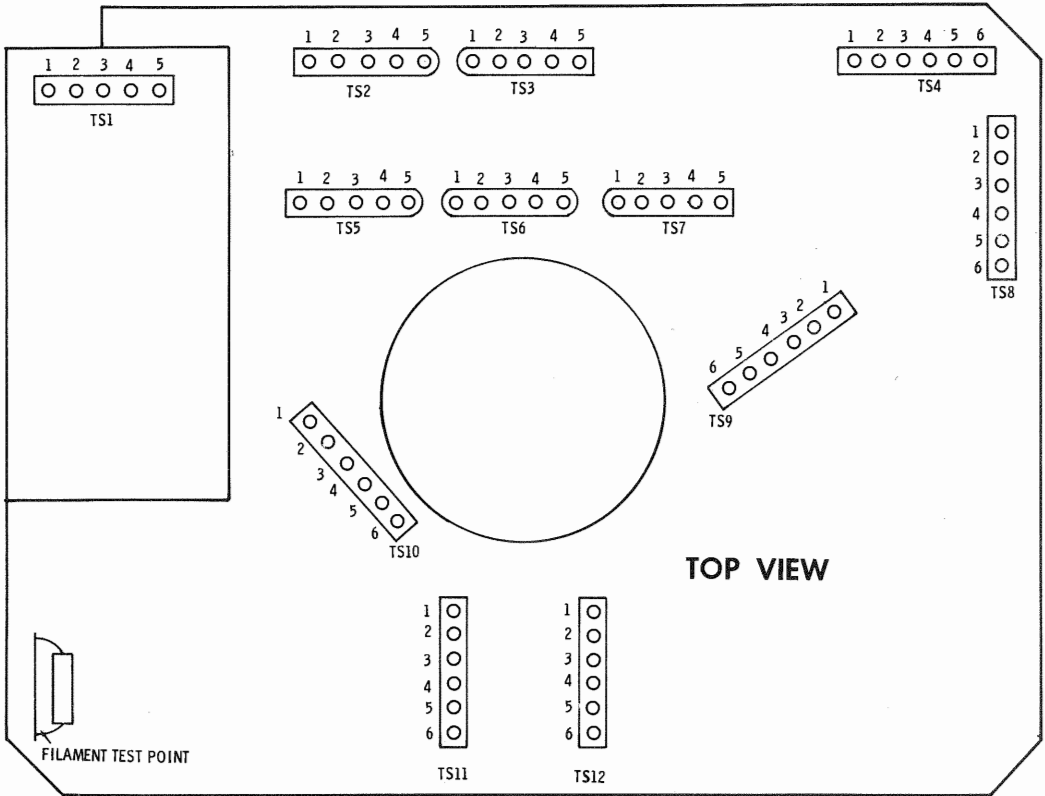
TRANSFORMER (AUDIO OUTPUT)

CE	REPLACEMENT DATA						NOTES
	ZENITH PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
10	95-1534	Z1117 ①	A-2932 ①	A-3879 ①	24S83	S-11X	① Drill one new mounting hole.

RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT (Measured)	ZENITH PART No.	FEDERAL PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL PART No.	MALLORY PART No.	SARKES TARZIAN PART No.	
M1	.210A	212-14 ①②	1236A ②	1N007 ③	MR300 ②	6S300 ②	300 ②	
M2	.210A	212-14 ①②	1236A ②	1N007 ③	MR300 ②	6S300 ②	300 ②	

① Alternate part #212-19 ② Selenium Type. ③ Germanium Type.



TERMINAL LOCATION CHART