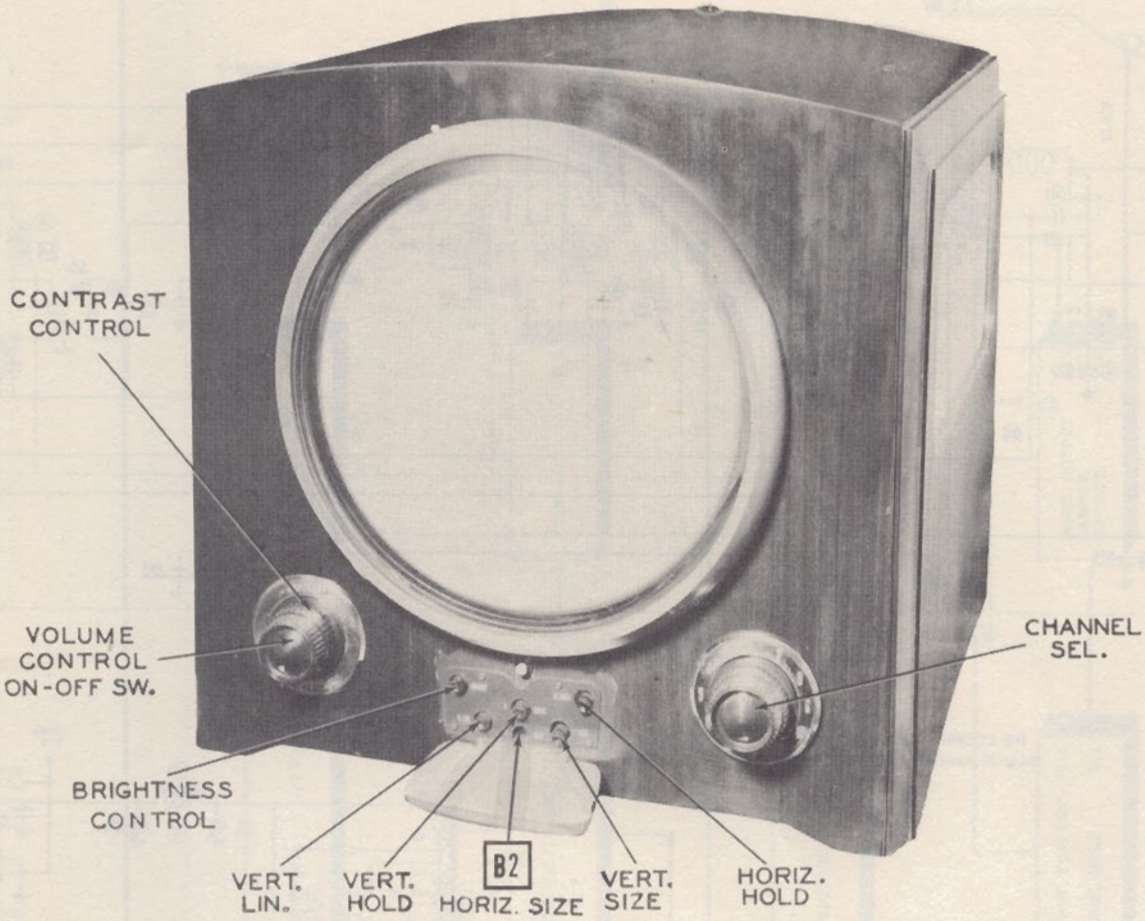
PHOTOFACT* Folder

RAYTHEON MODELS C-1102, C-1104, (Ch. 12AX22), M-701, (Ch. 10AX22), M-1101, M-1103, M-1105, (Ch. 12AX22)



RAYTHEON MODELS C-1102, C-1104, (Ch. 12AX22), M-701, (Ch. 10AX22), M-1101, M-1103, M-1105, (Ch. 12AX22)

RAYTHEON MODEL M-1101

TRADE NAME	Raytheon, Models C-1102, C-1104 (Ch. 12AX22), M-701 (Ch. 10AX22), M-1101, M-1103, M-1105 (Ch.12AX22)
MANUFACTURER	Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Illinois
TYPE SET	Television Receiver
TUBES	Twenty
POWER SUPPLY	110 - 120 Volts AC - 60 Cycles RATING 1.9 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13

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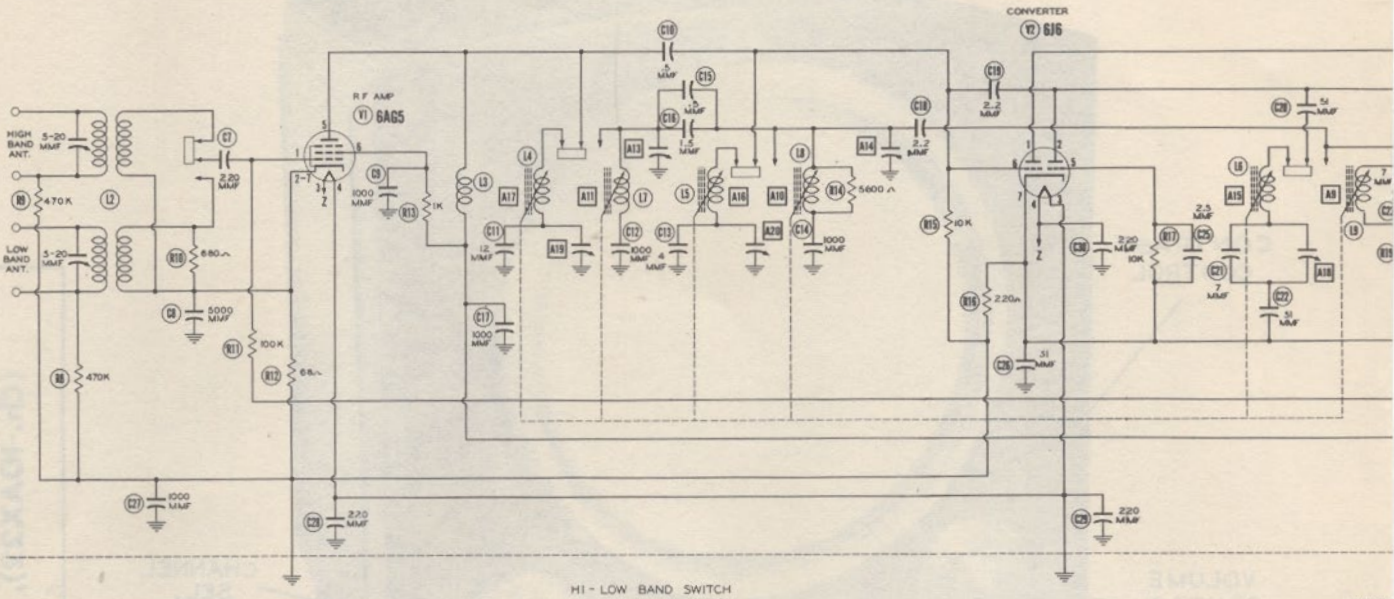
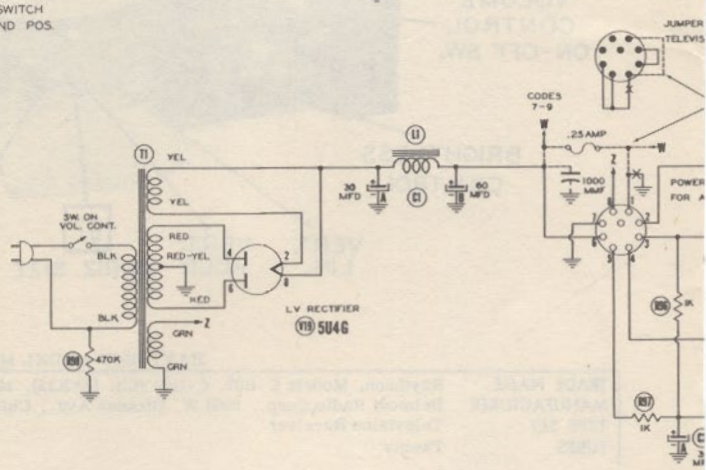
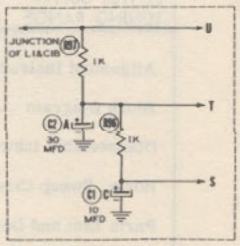


HI - LOW BAND SWITCH
SHOWN IN HI BAND POS.

THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE





ALTERNATE CIRCUIT FOR MODEL M 701

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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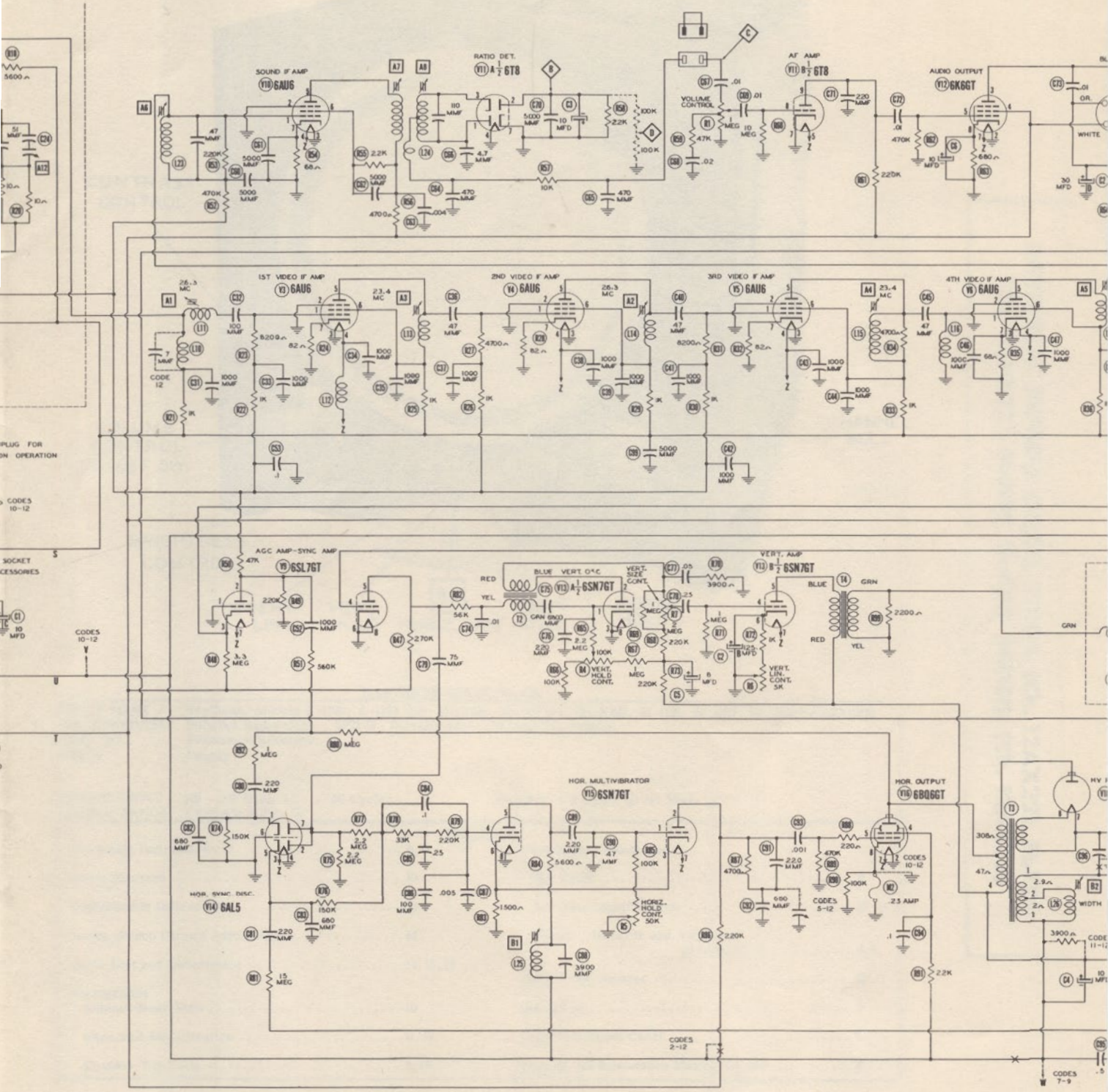
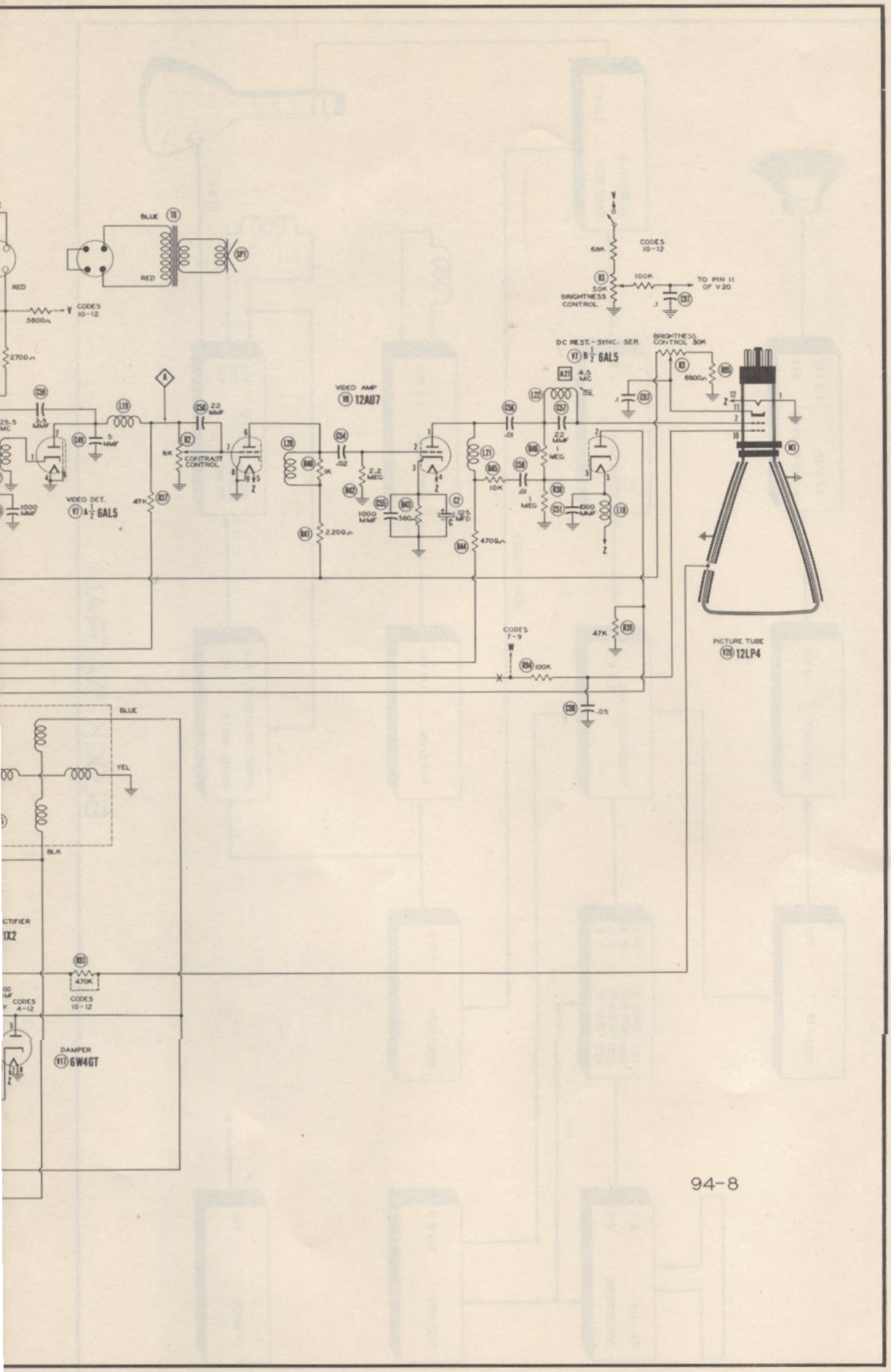
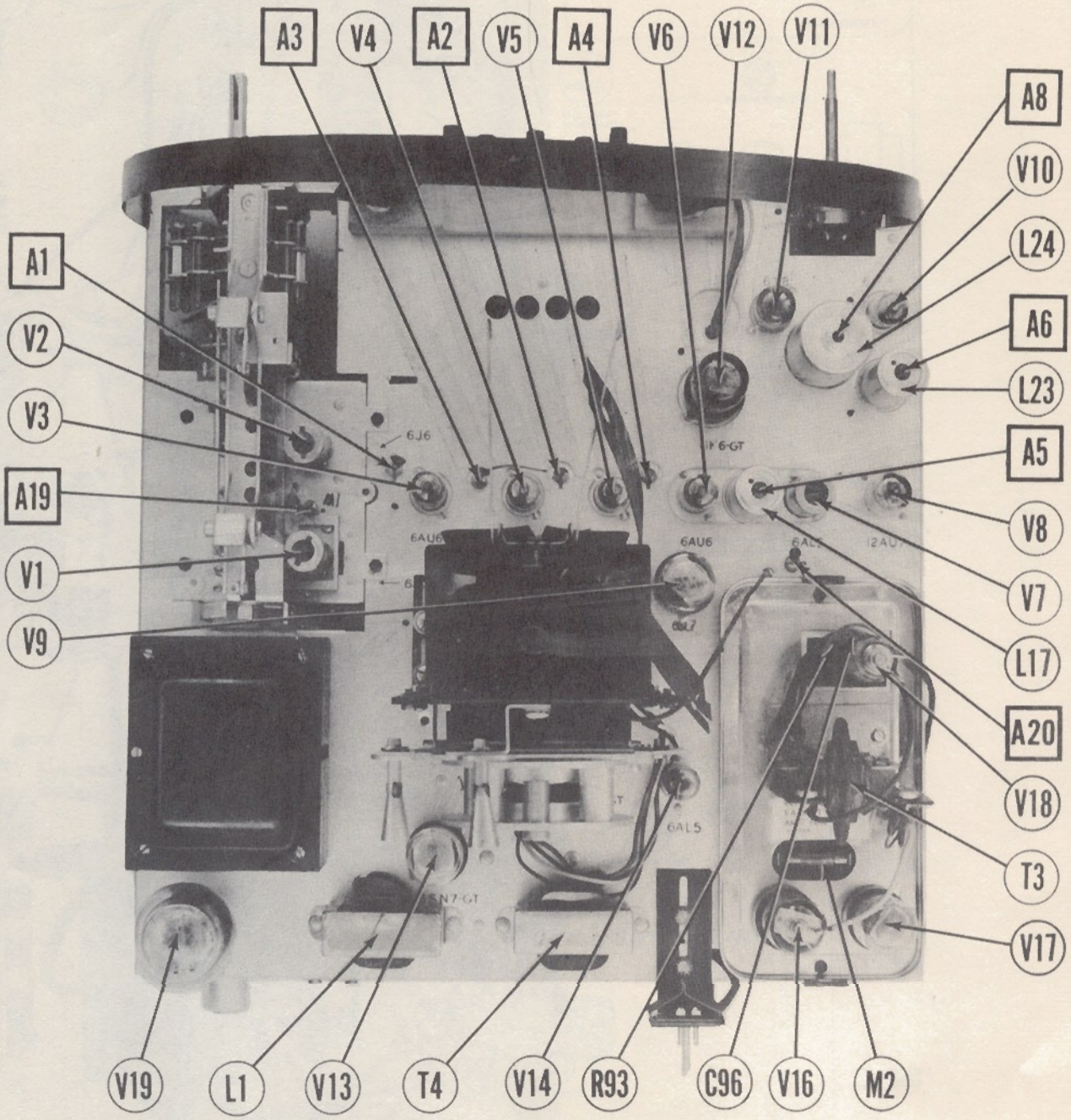
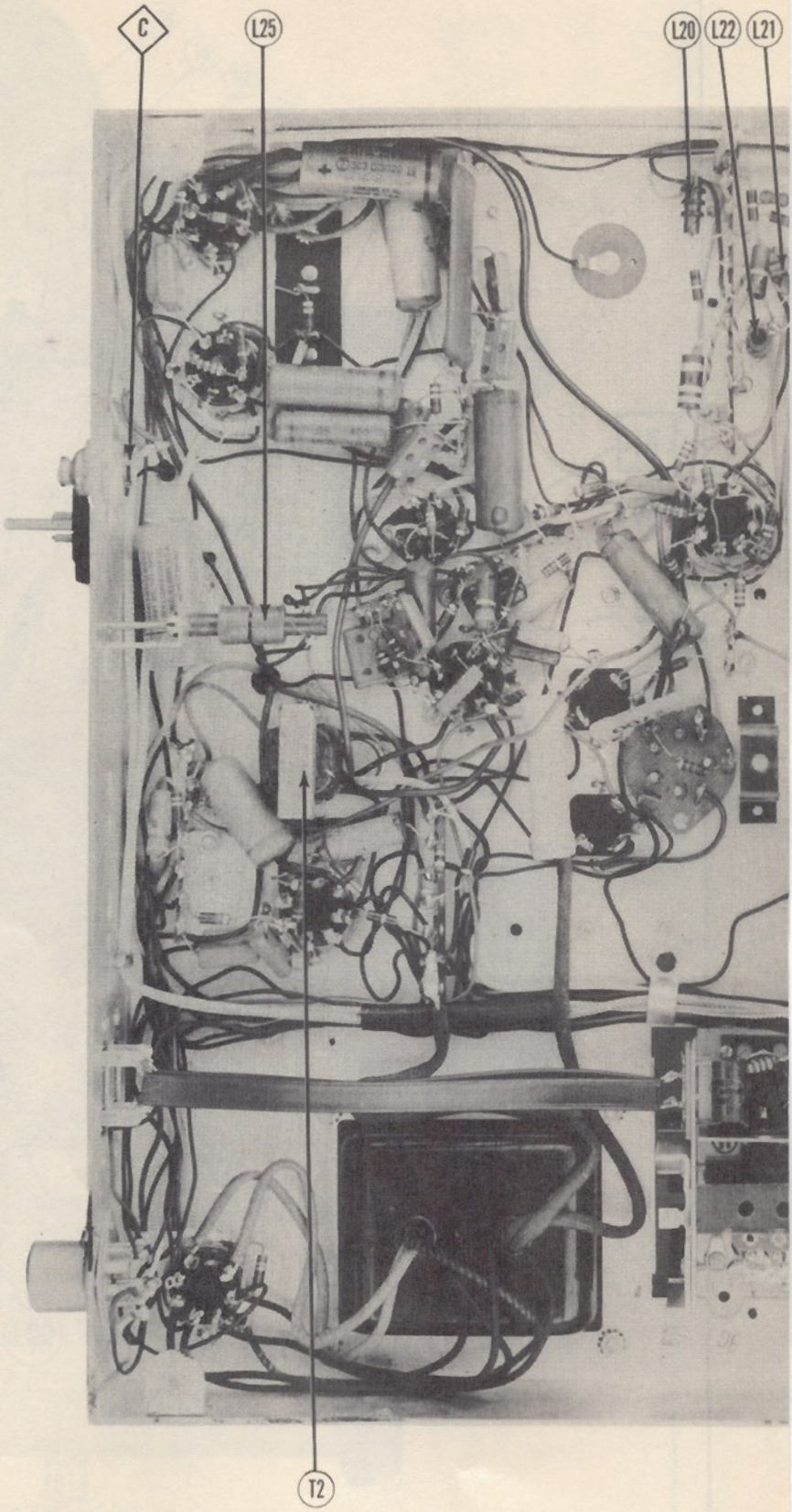

SOUND IF AMP
Y10 6AU6
RATIO DET.
Y11 A½ 6T8
VOLUME CONTROL
AF AMP
Y11 B½ 6T8
AUDIO OUTPUT
Y12 6K6GT
1ST VIDEO IF AMP
Y3 6AU6
2ND VIDEO IF AMP
Y4 6AU6
3RD VIDEO IF AMP
Y5 6AU6
4TH VIDEO IF AMP
Y6 6AU6
AGC AMP-SYNC AMP
Y9 6SL7GT
VERT. OSC.
Y13 A½ 6SN7GT
VERT. AMP
Y12 B½ 6SN7GT
VERT. HOLD CONT.
VERT. SIZE CONT.
VERT. LIN. CONT. 5K
HOR. MULTIVIBRATOR
Y15 6SN7GT
HOR. OUTPUT
Y16 6BQ6GT
HOR. SYNC. DISC.
Y14 6AL5
HORIZ. HOLD CONT. 50K
WIDTH
CODES 10-12
CODES 2-12
CODES 7-9
CODES 5-12
CODE 12
PLUG FOR
ON OPERATION
SOCKET
CESSORIES

RAYTHEON MODELS C-1102, C-1104, (Ch. 12AX22), M-701, (Ch. 10AX22), M-1101, M-1103, M-1105, (Ch. 12AX22)

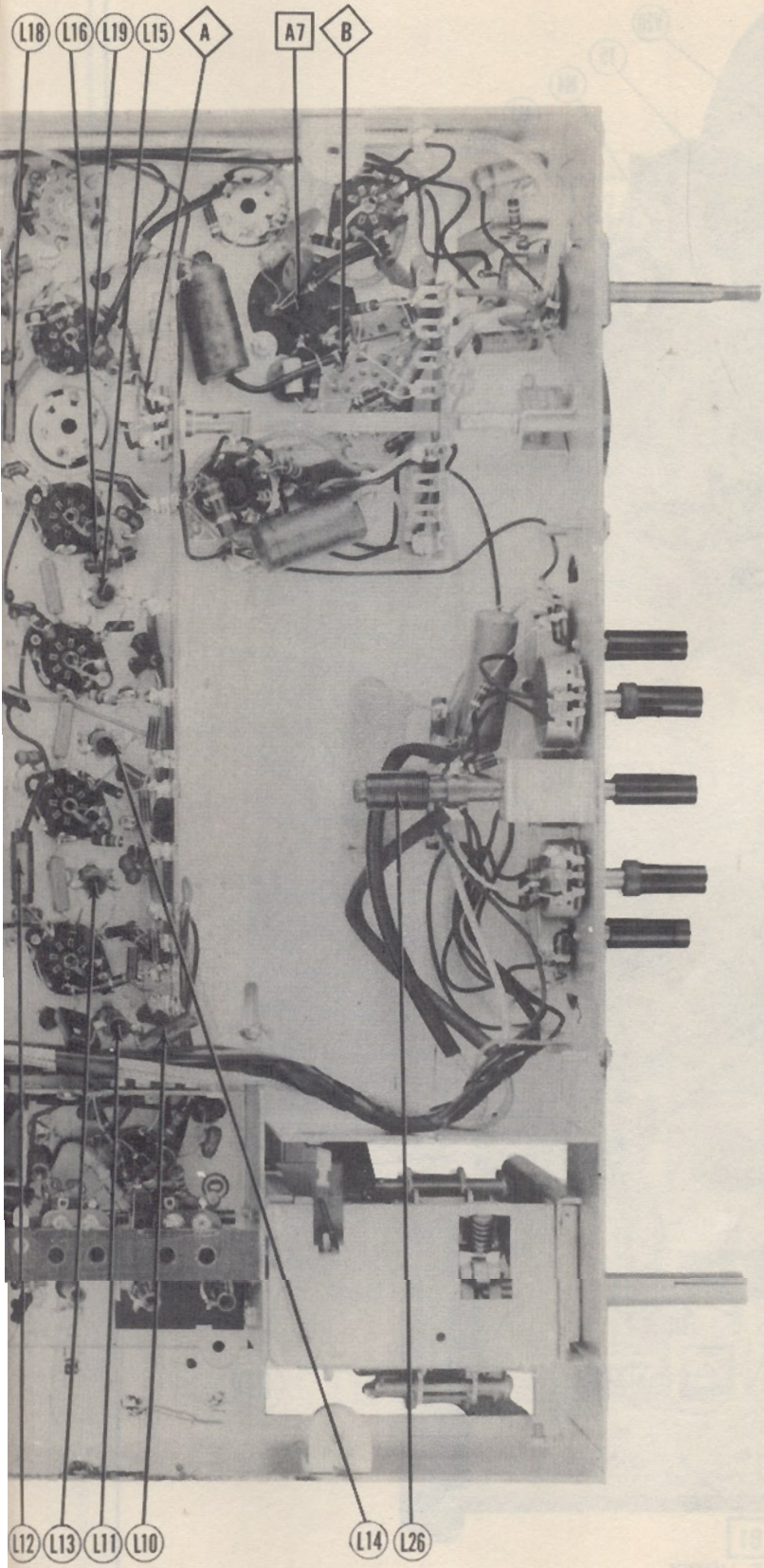




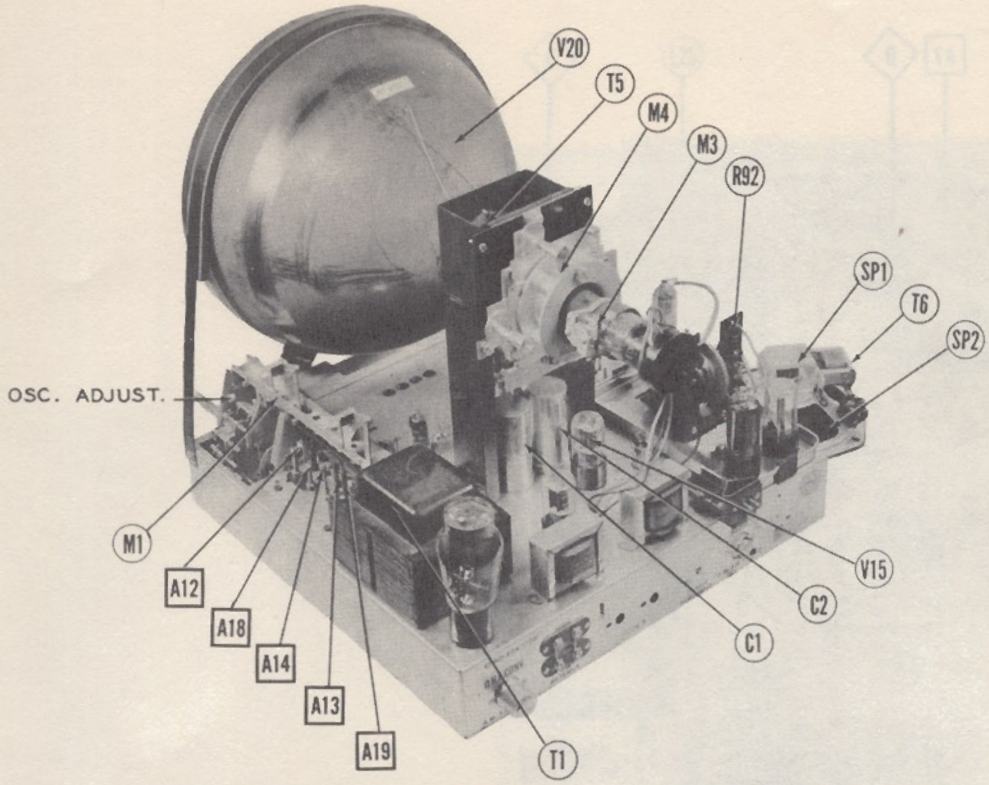
CHASSIS TOP VIEW



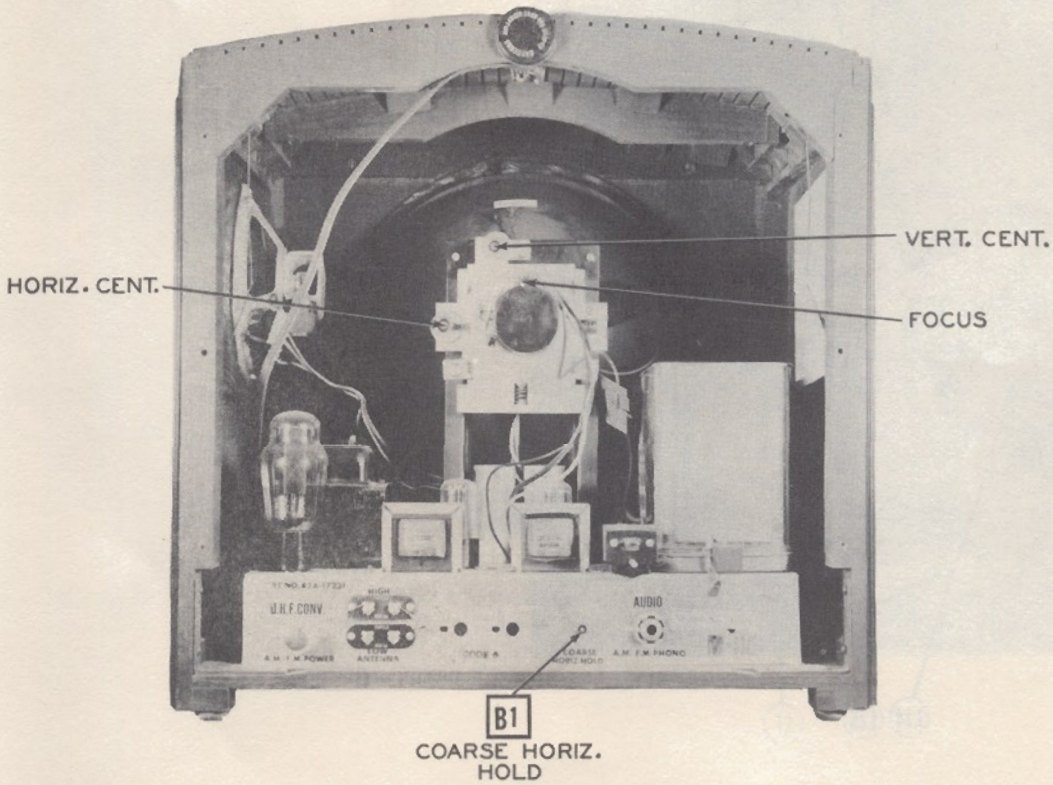
CHASSIS BOTTOM VIEW-TRANS., INDUC



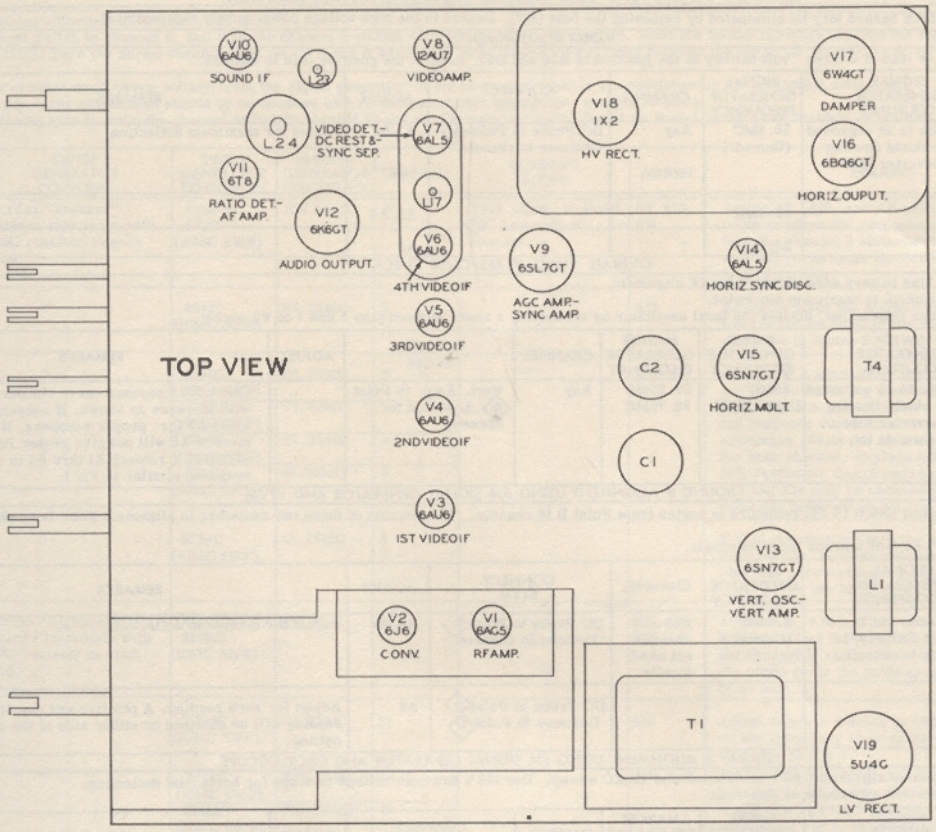
CTOR AND ALIGNMENT IDENTIFICATION

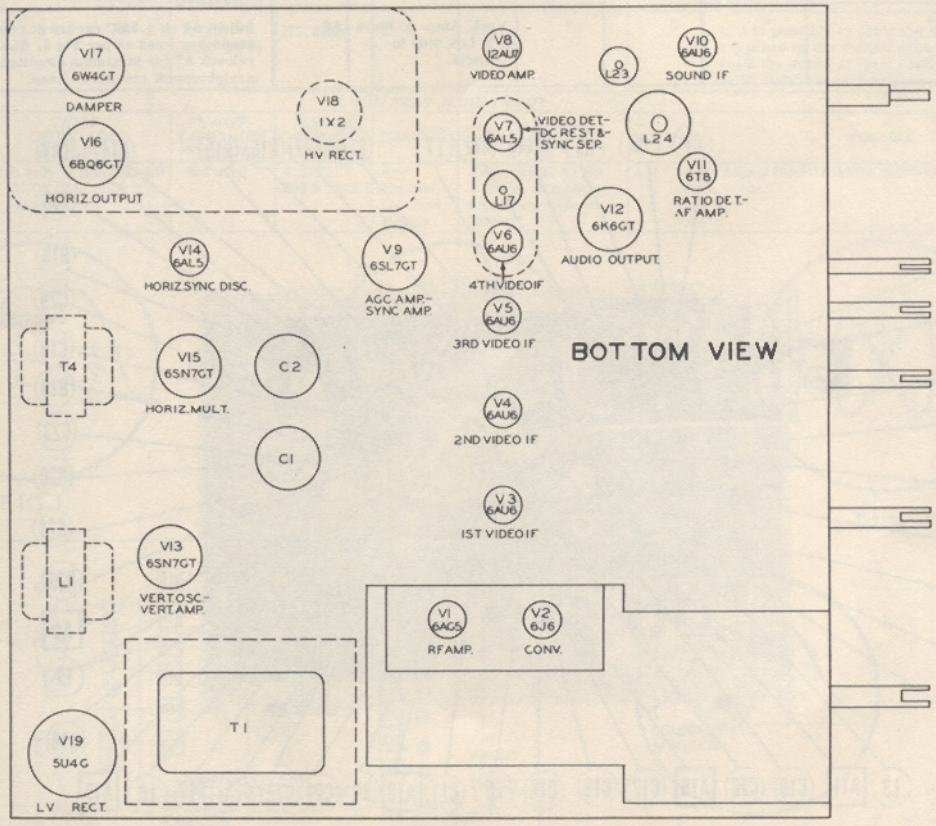


CHASSIS-TOP VIEW



CABINET-REAR VIEW





TUBE PLACEMENT CHART

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The high voltage shock hazard may be eliminated by removing the fuse (M2), located in the high voltage power supply compartment.

VIDEO IF ALIGNMENT

Connect the negative lead of a three volt battery to the junction of R50 and C53, connect the positive lead to chassis.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	Direct	High side to an ungrounded tube shield floating over converter tube (V2).	26.3MC (Unmod.)	Any	DC Probe to Point A. Common to chassis.	A1, A2	Adjust for maximum deflection.
2.	Direct	"	23.4MC	"	"	A3, A4	"
3.	Direct	"	25.5MC	"	"	A5	"

OVERALL VIDEO IF RESPONSE CHECK

Remove the 3 volt bias battery used during video IF alignment.
Turn the contrast control to maximum clockwise.
To prevent erroneous indications, disable the local oscillator by connecting a short between pins 5 and 7 of V2 socket.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
4.	Direct	High side to an ungrounded tube shield floating over converter tube (V2). Low side to chassis.	25MC (10MC SWP)	22.25MC 26.75MC	Any	Vert. Amp. to Point A. Low side to chassis.		Check for response curve similar to Fig 1 with markers as shown. If necessary retouch A5 for proper response. If adjustment of A5 will not give proper results SLIGHTLY retouch A1 thru A4 to obtain response similar to Fig 1.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

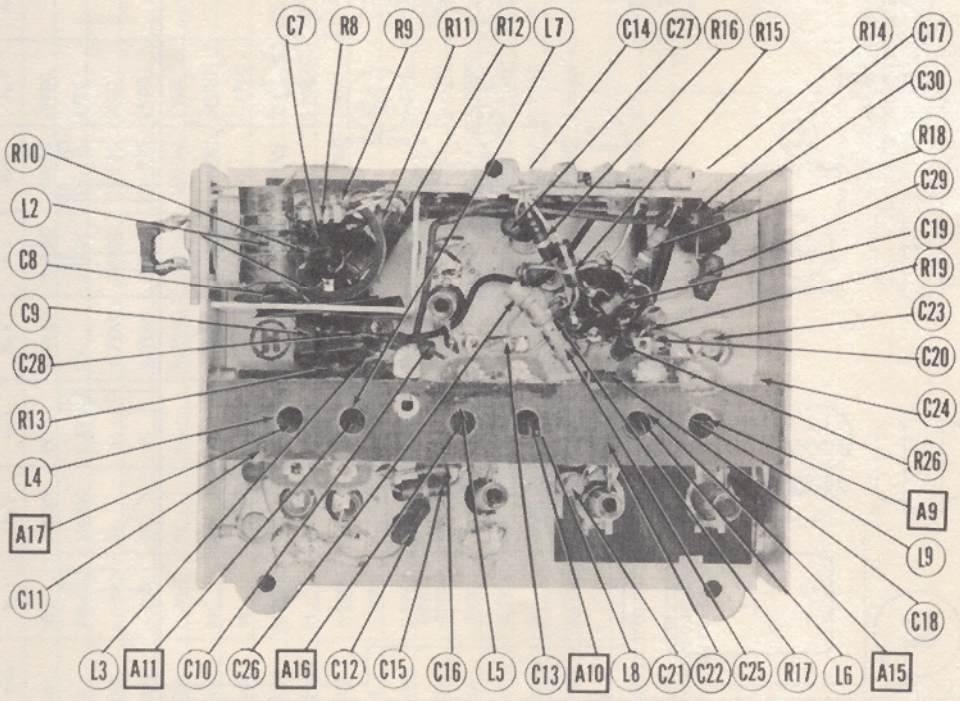
Connect two matched 100KΩ (± 1%) resistors in series from Point B to chassis. The junction of these two resistors is alignment Point D as shown on the schematic.
Short circuit the receiver antenna input terminals.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
5.	.01MFD	High side to pin 7 (plate) of 6AL5 (V7). Low side to chassis.	4.5MC (Unmod.)	Any channel not used locally	DC Probe to Point B. Common to chassis.	A6, A7	Adjust for maximum deflection.
6.	.01MFD	"	"	"	DC Probe to Point C. Common to Point D.	A8	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60 ∿ modulation and 450KC sweep. Use 120 ∿ sawtooth voltage in scope for horizontal deflection.
Short circuit the receiver antenna input terminals.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
5.	.01MFD	High side to pin 7 (plate) of 6AL5 (V7). Low side to chassis.	4.5MC (450KC SWP)	4.5MC	Any channel not used locally	Vert. Amp. to Point B. Low side to chassis.	A6, A7	Disconnect stabilizer capacitor (C3). Adjust for maximum amplitude and symmetry as per Fig 2. Reconnect capacitor C3.
6.	.01MFD	"	"	"	"	Vert. Amp. to Point C. Low side to chassis.	A8	Adjust A8 so 4.5MC occurs at center of crossover lines as per Fig 3. SLIGHTLY retouch A7 for maximum amplitude and straightness of crossover lines.



RF TUNER-BOTTOM VIEW

ALIGNMENT INSTRUCTIONS (CONT.)

TUNER ALIGNMENT

Pre-set the tuning adjustments as shown in figure 4.
Turn the channel switch to channel 6, and turn the channel 6 station selector screw in (clockwise), until the turner carriage reaches the top of its travel. CAUTION: Turn the screw carefully and do not force it beyond the point where the carriage reaches the top of its travel; to do so will damage the tuner.

Connect the synchronized sweep voltage from the signal 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.

Before beginning step 11, turn the channel switch to channel 13 and set the carriage to the top of its travel in the same manner as outlined above for channel 6.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
7.	Two 150Ω carbon res.	Across "lowband" antenna terminals with 150Ω resistor in each lead.	Approx. 85MC (10MC SWP)	Not used	6	Vert. Amp. to Point A. Low side to chassis.	A9, A10, A11	Adjust A9, A10, and A11 until they just begin to effect the response curve, then turn the channel 6 station selector screw until all cores enter the coils an additional 3/16 of an inch.
8.	"	"	85MC (10MC SWP)	83.25MC	6	"	A12	Adjust to place the marker at 50% on the low frequency slope of the response curve as shown in figure 5.
9.	"	"	85MC (10MC SWP)	83.25MC	6	"	A13, A14	Adjust for a reasonably flat topped response curve similar to Fig 5 with the marker at 50% response. Check all low band channels for response curve similar to Fig 5. If necessary adjust the channel selector screw, for each channel, to place the marker at 50% response. Compromise adjustment of A13 and A14 may be necessary to obtain optimum response on all low band channels.
			79MC (10MC SWP)	77.25MC	5			
			69MC (10MC SWP)	67.25MC	4			
			63MC (10MC SWP)	61.25MC	3			
10.	"	"	57MC (10MC SWP)	55.25MC	2	"		If it is possible to place the marker at 50% response by the station selector screw (with the screw at least 2 turns from fully "out") the low band is properly aligned.
11.	"	Across "highband" antenna terminals with 150Ω resistor in each lead.	Approx. 213MC (10MC SWP)	Not used	13	"	A15, A16, A17	Adjust A15, A16 and A17 until they just begin to effect the response curve, then turn the channel 13 station selector screw until the cores enter the coils an additional 1/8 of an inch.
12.	"	"	213MC (10MC SWP)	211.25MC	13	"	A18	Adjust to place marker at 50% response on low frequency slope of response curve as shown in Fig 5.
13.	"	"	207MC (10MC SWP)	205.25MC	12	"	A19, A20	Adjust for reasonably flat topped response similar to Fig 5 with the marker at 50%. Check all high band channels for response similar to Fig 5. If necessary adjust the channel selector, for each channel, to place the marker at 50% response. Compromise adjustment of A19 and A20 may be required for optimum response on all high aband channels.
			201MC (10MC SWP)	199.25MC	11			
			195MC (10MC SWP)	193.25MC	10			
			189MC (10MC SWP)	187.25MC	9			
			183MC (10MC SWP)	181.25MC	8			
14.	"	"	177MC (10MC SWP)	175.25MC	7	"		If it is possible to place the marker at 50% response by the station selector screw (with the screw at least 1 full turn from fully "out") the high band is properly aligned.

4.5MC TRAP ADJUSTMENT

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
15.	.01MFD	High side to pin 2 (Grid) of 12AU7 (V8). Low side to chassis.	Not used	4.5MC (400 ∿ Mod.)	Any channel not used locally	Vert. Amp. to pin 2 (Grid) of picture tube. Low side to chassis.	A21	Adjust for MINIMUM 400 ∿ response on scope.

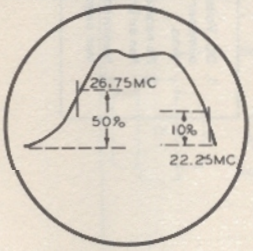


FIG.1

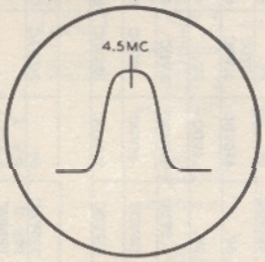


FIG. 2

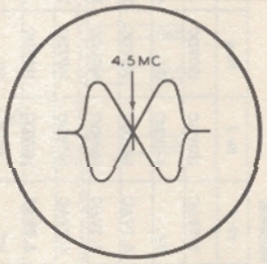


FIG. 3

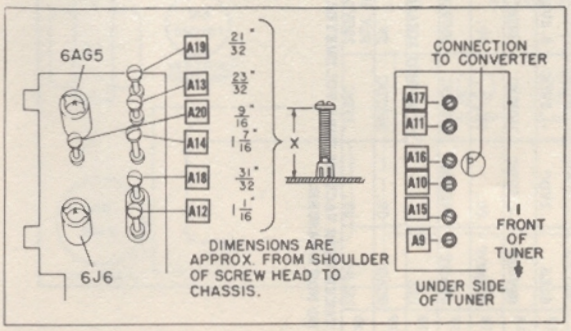


FIG. 4. **Tuner Adjustment**

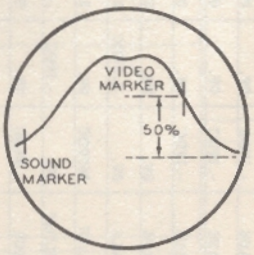


FIG. 5

RAYTHEON MODELS C-1102, C-1104, (Ch. 12AX22), M-701, (Ch. 10AX22), M-1101, M-1103, M-1105, (Ch. 12AX22)

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AG5	0V.	.9VDC	0V.	6.3VAC	150VDC	150VDC	.9VDC		
V 2	6J6	200VDC	140VDC	6.3VAC	0V.	§-1VDC	0V.	4VDC		
V 3	6AU6	-.1VDC	0V.	0V.	6.3VAC	140VDC	140VDC	1VDC		
V 4	6AU6	-.1VDC	0V.	0V.	6.3VAC	140VDC	140VDC	1 VDC		
V 5	6AU6	-.1VDC	0V.	0V.	6.3VAC	140VDC	140VDC	1 VDC		
V 6	6AU6	0V.	0V.	0V.	6.3VAC	140VDC	140VDC	.8VDC		
V 7	6AL5	0V.	-1.3VDC	6.3VAC	0V.	.3VDC	0V.	-.4VDC		
V 8	12AU7	200VDC	0V.	5.7VDC	6.3VAC	6.3VAC	120VDC	0V.	0V.	0V.
V 9	6SL7GT	0V.	-.1VDC	.4VDC	-1VDC	75VDC	0V.	6.3VAC	0V.	
V 10	6AU6	-.8VDC	0V.	0V.	6.3VAC	245VDC	120VDC	.7VDC		
V 11	6T8	-.3VDC	-.9VDC	-.7VDC	0V.	6.3VAC	0V.	0V.	-.3VDC	90VDC
V 12	6K6GT	6.3VAC	0V.	270VDC	290VDC	0V.	0V.	6.3VAC	20VDC	
V 13	6SN7GT	-20VDC -25VDC	150VDC	0V.	0V.	490VDC	10VDC 31VDC	6.3VAC	0V.	
V 14	6AL5	.2VDC	-1.5VDC	6.3VAC	0V.	.4VDC	0V.	-1.5VDC		
V 15	6SN7GT	-1.7VDC	140VDC	11VDC	-.2VDC	330VDC	11VDC	6.3VAC	0V.	
V 16	6BQ6GT	0V.	0V.	0V.	125VDC	-16VDC	-16VDC	6.3VAC	0V.	TOP CAP *
V 17	6W4GT	365VDC	510VDC	500VDC	510VDC	380VDC	530VDC	6.3VAC.	0V.	
V 18	1X2	* DO NOT MEASURE.								
V 19	5U4G	0V.	380VDC	0V.	340VAC	0V.	340VAC	0V.	380VDC	
V 20	12LP4	0V.	.1VDC	PIN 10 380VDC	PIN 11 150VDC	PIN 12 6.3VAC				

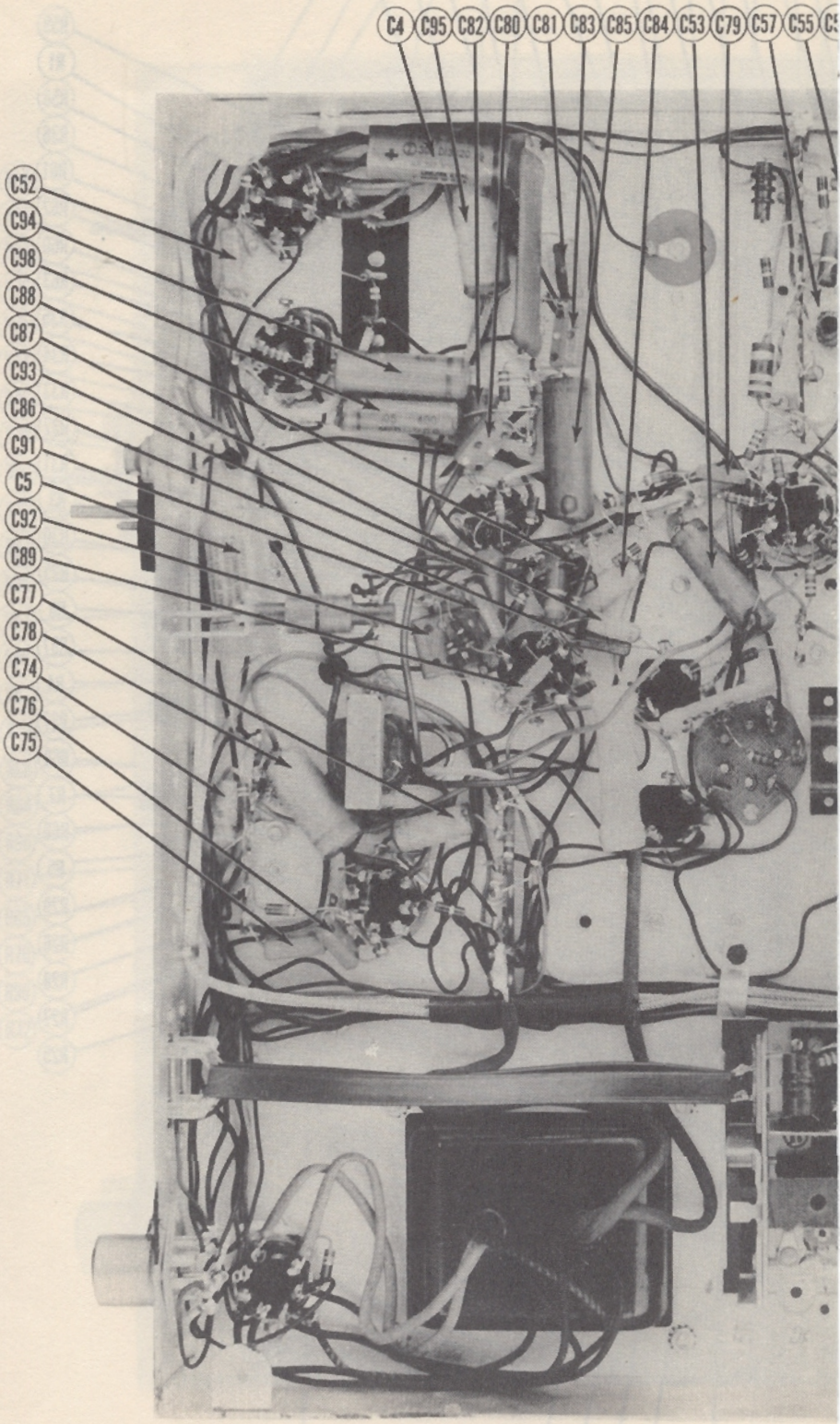
§ TAKEN WITH VACUUM TUBE VOLTMETER.
* DO NOT MEASURE.

RESISTANCE READINGS

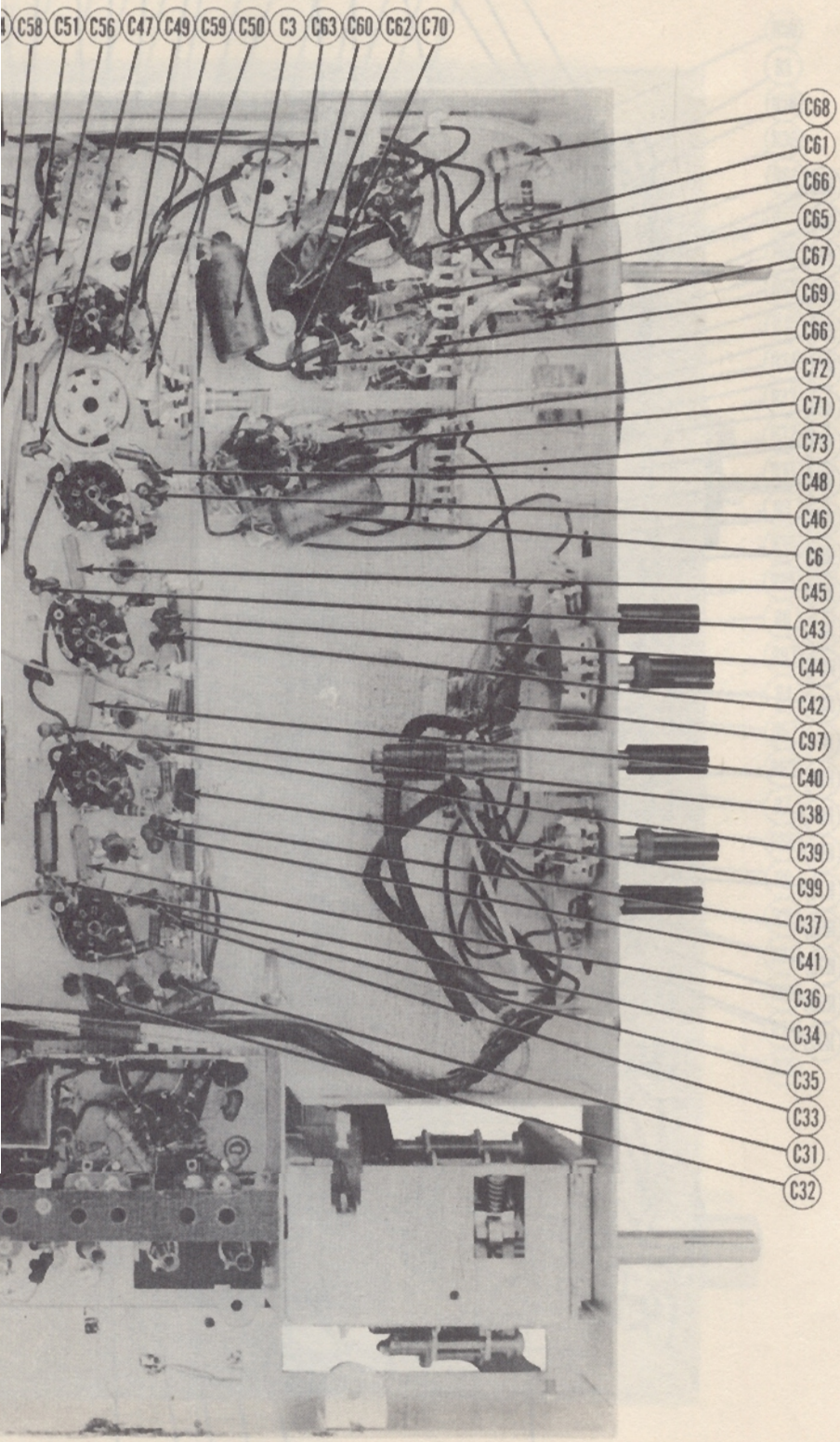
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AG5	370KΩ	68Ω	.1Ω	0Ω	†2.2KΩ	†3.2KΩ	68Ω		
V 2	6J6	†3.2KΩ	†7.8KΩ	0Ω	.1Ω	10KΩ	10KΩ	220Ω		
V 3	6AU6	270KΩ	0Ω	0Ω	.1Ω	†3.2KΩ	†3.2KΩ	82Ω		
V 4	6AU6	270KΩ	0Ω	0Ω	.1Ω	†3.2KΩ	†3.2KΩ	82Ω		
V 5	6AU6	270KΩ	0Ω	0Ω	.1Ω	†3.2KΩ	†3.2KΩ	82Ω		
V 6	6AU6	2.5Ω	0Ω	0Ω	.1Ω	†3.2KΩ	†3.2KΩ	68Ω		
V 7	6AL5	.7Ω	47KΩ	.1Ω	0Ω	1 Meg.	0Ω	8KΩ		
V 8	12AU7	†6KΩ	2.2 Meg.	560Ω	.1Ω	.1Ω	†4.5KΩ	7Ω	0Ω	0Ω
V 9	6SL7GT	0Ω	220KΩ	†3.3 Meg.	47KΩ	†270KΩ	0Ω	.1Ω	0Ω	
V 10	6AU6	730KΩ	0Ω	0Ω	.1Ω	†6KΩ	†23KΩ	68Ω		
V 11	6T8	Inf.	22KΩ	Inf.	0Ω	.1Ω	0Ω	0Ω	10 Meg.	†220KΩ
V 12	6K6GT	Inf.	0Ω	†3.6KΩ	†3KΩ	470KΩ	Inf.	.1Ω	680Ω	
V 13	6SN7GT	2.4 Meg. 2.3 Meg.	¶1.5 Meg.	0Ω	1 Meg.	¶1.4KΩ	6KΩ 1000Ω	.1Ω	0Ω	
V 14	6AL5	150KΩ	2.2 Meg.	.1Ω	0Ω	4.5 Meg.	0Ω	2.2 Meg.		
V 15	6SN7GT	150KΩ 100KΩ	†220KΩ	1.5KΩ	4.6 Meg.	†5.6KΩ	1.5KΩ	.1Ω	0Ω	
V 16	6BQ6GT	Inf.	0Ω	220KΩ	†22KΩ	470KΩ	470KΩ	.1Ω	0Ω	TOP CAP ¶48Ω
V 17	6W4GT	¶220KΩ	2 Meg.	750KΩ	3 Meg.	†38Ω	1 Meg.	.1Ω	0Ω	
V 18	1X2	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP ¶340Ω
V 19	5U4G	Inf.	40KΩ	470KΩ	24Ω	470KΩ	26Ω	Inf.	40KΩ	
V 20	12LP4	0Ω	2 Meg.	PIN 10 †100KΩ	PIN 11 35KΩ 7KΩ	PIN 12 .1Ω				

† MEASURED FROM PIN 8 OF V19.
¶ MEASURED FROM PIN 3 OF V17.

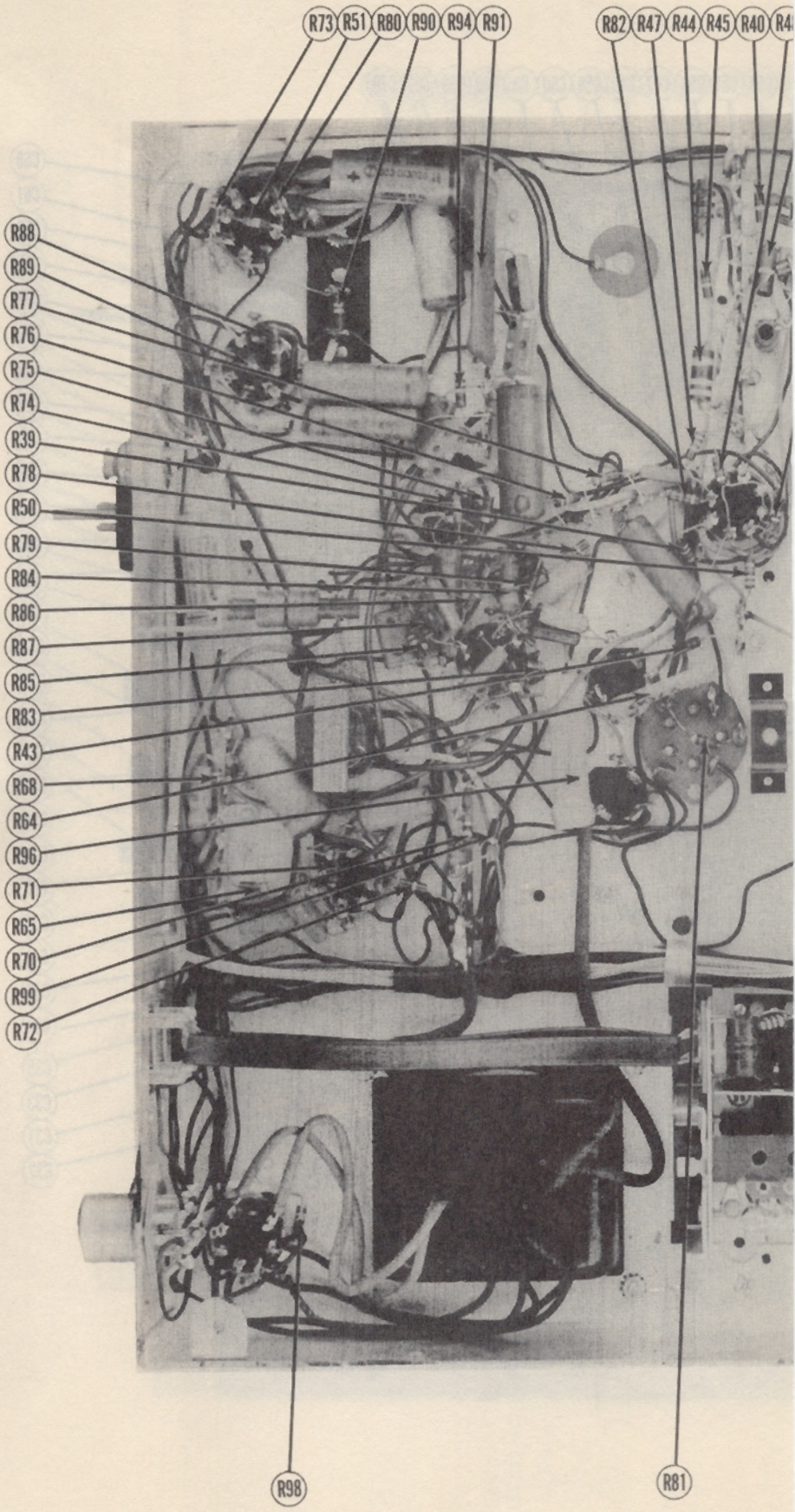
1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. Front panels controls set at minimum.
6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.



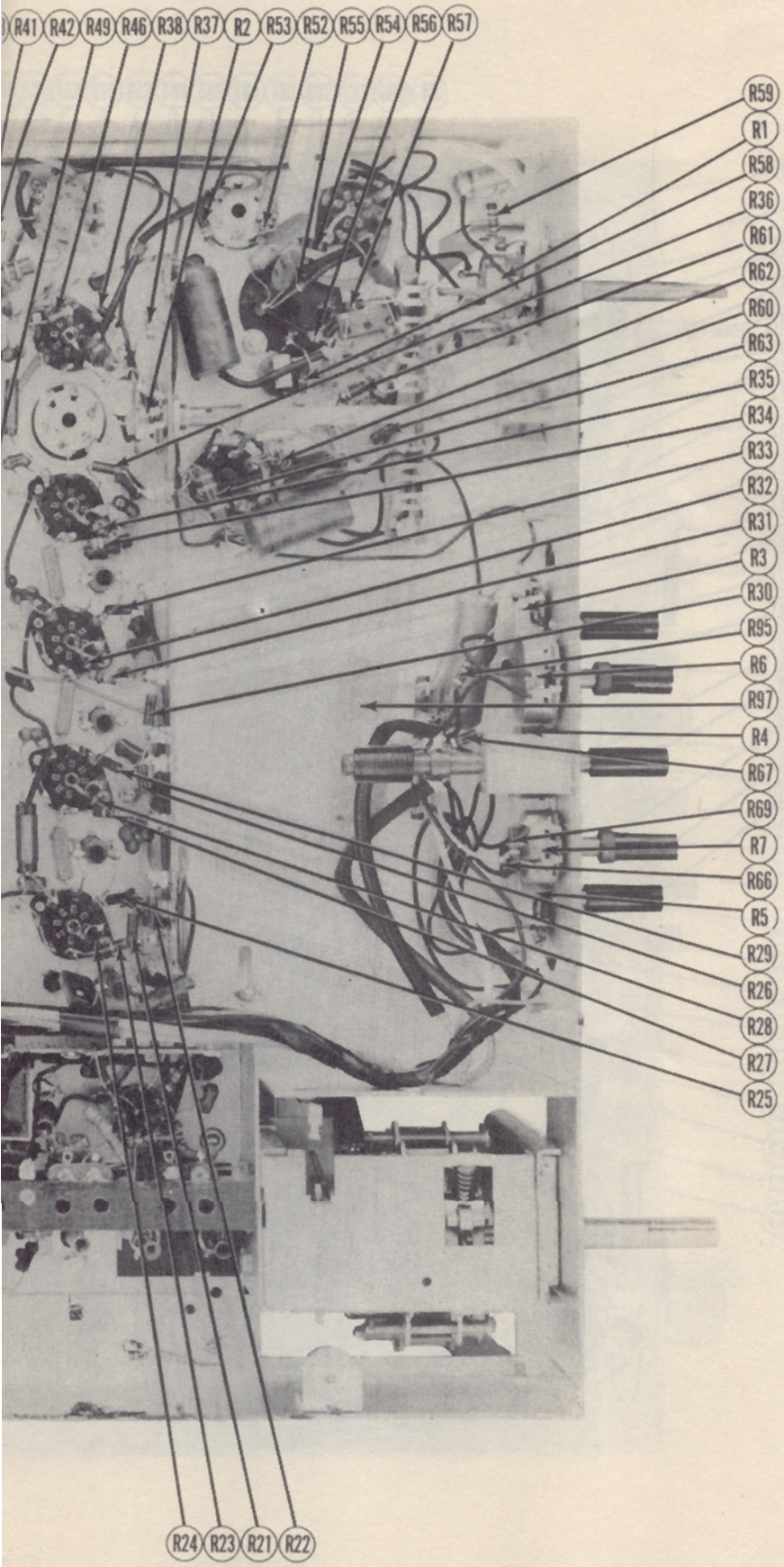
CHASSIS BOTTOM VIEW-CA



PACITOR IDENTIFICATION



CHASSIS BOTTOM VIEW-RES



SISTOR IDENTIFICATION

PRODUCTION CHANGES

C1102, M1101

CODE 1: Same as schematic diagram.

CODE 2: R86 disconnected from junction of R96 and R97 and connected to pin 4 of accessory power plug.
C92 changed from 680MMF to 1000MMF.

CODE 3: C90 not used.

CODE 4: C96 connected to ground instead of terminal 1 of T3.

CODE 5: C92 changed from 1000MMF to 680MMF and trimmer (80 - 480MMF) (Part No. A-8E-18508) connected in parallel with C92.

CODE 6: Gimmick capacitor (.2MMF - Part No. A-50-18517) added from pin 3 of V9A to pin 5 of V17.

CODE 7: R94, terminal 3 of T3, negative side of C4, and C95 connect to pin 6 instead of pin 4 of accessory power socket.
Horizontal output transformer (T3) changes to Part No. C-12M-18285.

CODE 8: 1000MMF capacitor added from pin 6 of accessory power socket to ground.

CODE 9: R66 changed in value from 100KΩ to 68KΩ.

CODE 10: 5600Ω 2 Watt resitor added from pin 4 of accessory power socket to positive side of C20 at speaker socket.
R66 changed from 68KΩ to 18KΩ (Part No. C-9B1-77).
R67 changed from 1 Meg. to 560KΩ (Part No. C-9B1-95).
R90 and M2 (fuse) removed from pin 8 of V16. Pin 8 of V16 connected to ground.
M2 (fuse) connected between pins 6 and 1 of accessory power socket, ground connection removed from pin 1. Positive side of C1B removed from pin 6 and connected to pin 1 with pin 1 being connected to R94, terminal 3 of T3, negative side of C4 and C95. The jumper plug for the accessory power socket was rewired as follows: Pin 4 disconnected from pin 5 and connected to pin 1.
R64 changed from 2700Ω 5 Watt to 5600Ω 2 Watt (Part No. C-9B4-74).
R93 (470KΩ resistor) removed from high voltage lead.
100KΩ resistor (Part No. C-9B1-86) added between arm of brightness control (R3) and Pin 11 of V20.
R95 removed, one side of brightness control (R3) grounded and a 68KΩ ½ Watt resistor (Part No. C-9B1-84) added from other side of brightness control to junction of R96 and R97 through switch added on rear of volume - contrast control.

CODE 11: 3900Ω 2 Watt resistor (Part No. C-9B4-69) added in Parallel with C4.
Horizontal output transformer (T3) changed to Part No. C-201-18530.

CODE 12: 7MMF capacitor (Part No. C-8G-11790) added in parallel with L10.

— M701 —

M701 same as C1102, M1101 except for picture tube and does not have the accessory power sockets and plugs.

CODE 1: Same as Code 3 of C1102, M1101.

CODE 2: Same as Code 4 of C1102, M1101.

CODE 3: Same as Code 5 of C1102, M1101.

CODE 4: Same as Code 6 of C1102, M1101.

CODE 5: Same as Code 7 of C1102, M1101.

CODE 6: Same as Code 8 of C1102, M1101.

CODE 7: Same as Code 9 of C1102, M1101.

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern.

Synchronize the picture vertically with the vertical hold control.

Set the horizontal hold "fine" control to the center of its range.

Adjust the horizontal hold "coarse" slug (B1) to the center of the range over which the picture synchronizes horizontally.

Adjust the horizontal size slug (B2) until the picture is of proper width.

DISASSEMBLY INSTRUCTIONS

1. Remove two push-on type control knobs.
2. Remove four phillips head screws holding rear cover. Remove cover.
3. Remove speaker plug.
4. Loosen two antenna terminal screw. Remove built-in antenna leads if connected.
5. Remove five screws holding chassis. Remove chassis.
6. Remove four phillips head screws holding speaker. Remove speaker.

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
			RAYTHEON PART No.	JENSEN PART No.	QUAM PART No.	
	FIELD	V. C. IMP.		ST-108 ④		④ Remount output transformer
SP1A	PM	3.5Ω	C-18A-18022 ⑤	MOD. P6-X	6A1 ④	⑤ Used in model M-1101.
B	PM		C-18A-18157 ⑥	ST-119 ⑦ MOD. P10-T	10A31 ④	⑥ Used in model C-1102. ⑦ Replace output transformer to match
C	PM		C-18A-18176 ⑧	ST-107 ④ MOD. P5-V	5A07 ④	6-8Ω voice coil. ⑧ Used in model M-701.
	CONE DIA.	V. C. DIA.				
SP2A	6"	9/16"	⑤			
B			⑥			
C			⑧			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ~)	RAYTHEON PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.240A	35Ω	1.4 Henries	B-16A-17959	C-2326 ①	C-2991 ①	TR-3300 ①	① Drill one new mounting hole.

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	RAYTHEON PART No.	MEISSNER PART No.	
L2A	Ant. Coil	0Ω				High-Band } Includes two 5-20MMF trimmer and
B	Ant. Coil	0Ω		B-201-17143		Low-Band } two 470KΩ resistors.
L3	RF Choke	1Ω		A-16A-17128		
L4	RF Coil Pri.	0Ω		B-13E-17140		High-Band
L5	RF Coil Sec.	0Ω		B-13E-17140		High-Band
L6	Osc. Coil	0Ω		B-13E-17140		High-Band
L7	RF Coil Pri.	0Ω		B-13E-12046		Low-Band
L8	RF Coil Sec.	0Ω		B-13E-12046		Low-Band
L9	Osc. Coil	0Ω		B-13D-12155		Low-Band
L10	RF Choke	10Ω		A-16A-18025		
L11	1st Video IF	.5Ω		A-13M-18026		
L12	Fil. Choke	.2Ω		A-201-15609		
L13	2nd Video IF	.2Ω		B-201-15612		
L14	3rd Video IF	.2Ω		B-201-15612		
L15	4th Video IF	.2Ω		B-201-15612		
L16	RF Choke	2.5Ω		A-201-15608		
L17	5th Video IF	.5Ω	.7Ω	B-13B-17956		
L18	Fil. Choke	1.2Ω		A-16A-17937		
L19	Peaking	11Ω		A-16A-17048		
L20	Peaking	15Ω		A-16A-17961		
L21	Peaking	15Ω		A-16A-17961		
L22	4.5 MC Trap	2.6Ω		A-201-17962		
L23	Sound Take-Off	2Ω				
L24	Ratio Det. Trans.	4.5Ω		B-13M-17273		
L25	Horiz. Hold	65Ω		A-13D-16943		Coarse control
L26	Width Cont.	.2Ω		A-18M-18233		

MISCELLANEOUS

ITEM No.	PART NAME	RAYTHEON PART No.	NOTES
M1	RF Tuner		
M2	Fuse	A-55F-18033	.25A, 250V
M3	Ion Trap	B-16M-17982	Permanent Magnet
M4A	Focus Magnet	B-55P-18185	Permanent Magnet
B	Focus Magnet	B-55P-18282	Permanent Magnet
	Iron Core	A-51A-15715	L7
	Iron Core	A-51A-17162	L6
	Iron Core	A-51A-17161	L8
	Iron Core	A-51A-17513	L4, L6, L9
	Iron Core	A-51A-17966	L13, L14, L15, L22
	Iron Core	A-51A-16945	L25, L26
	Cabinet	R-24D-18050	M-1101
	Cabinet	R-24D-18066	C-1102
	Cabinet	R-24D-18206	M-701
	Safety Glass	B-30M-17729	
	Knob	B-5B 17763-68	Tuning
	Knob	B-5B-17761-68	On-Off Volume
	Knob	B-5B-17762-68	Contrast

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: RAYTHEON PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	NOTES
V1	RF Amp.	6AG5	6AG5	7BD	
V2	Converter	6J6	6J6	7BF	
V3	1st Video IF	6AU6	6AU6	7BK	
V4	2nd Video IF	6AU6	6AU6	7BK	
V5	3rd Video IF	6AU6	6AU6	7BK	
V6	4th Video IF	6AU6	6AU6	7BK	
V7	Video Det.-DC Restorer-Sync. Sep.	6AL5	6AL5	6BT	
V8	Video Amp.	12AU7	12AU7	9A	
V9	AGC Amp.-Sync. Amp.	6SL7GT	6SL7GT	8BD	
V10	Sound IF Amp.	6AU6	6AU6	7BK	
V11	Ratio Det.-AF Amp.	6T8	6T8	9E	
V12	Audio Output	6K6GT	6K6GT	7S	
V13	Vert. Osc.-Vert. Amp.	6SN7GT	6SN7GT	8BD	
V14	Hor. Sync. Disc.	6AL5	6AL5	6BT	
V15	Hor. Multivib.	6SN7GT	6SN7GT	8BD	
V16	Hor. Output	6BQ6	6BQ6	6AM	
V17	Damper	6W4GT	6W4GT	4CG	
V18	HV Rectifier	1X2	1X2	7CB	
V19	LV Rectifier	5U4G	5U4G	5T	
V20A	Picture Tube	12LP4	12LP4	12D	Used in models C1102, M1101
B	Picture Tube	10BP4	10BP4	12D	Used in model M701

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: RAYTHEON PART No.	AEROVOX PART No.	CENTRALAB PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	30	450	A-8C-17845	AF61J2J			D13051	▰ Filter
B	60	450						■ Filter
C	10	450						▲ Filter
C2A	30	450	A-8C-17844	AF66J2525A			D13050	▰ Filter
B	125	25						■ Vert. Output Cath. Bypass
C	125	25						▲ Video Amp. Cath. Bypass
D	30	450						Output Decoupling
C3	10	50	A-8C-17183	PRS50/10			TVA-14	Stabilizing Cap.
C4	10	150	A-8C-11495	PRS150/12			UT-101	Decoupling
C5	8	450	A-8C-13453	PRS450/8			TVA-21	Vert. Osc. Decoupling
C6	10	50	A-8C-17183	PRS50/10			TVA-14	Output Cathode Bypass
C7	220		C-8G-16045	GP220M	D6-221	GP2K-220		RF Coupling
C8	5000		A-8G-13962	BPD-5	D6-502	811-005	29C1	RF Cathode Bypass
C9	1000		C-8G-13201	GP1000M	D6-102	GP2L-001		RF Screen Bypass
C10	.5		A-8G-12495-7		D2-.5			RF Coupling
C11	12		C-8G-17305	C112JNPO	D2-12	NPOK-12		Fixed Trimmer
C12	1000		C-8G-13201	GP1000M	D6-102	GP2L-001		Fixed Trimmer
C13	4		C-8G- 11893	C14CNPO		NPOK-4		Fixed Trimmer
C14	1000		C-8G-13201	GP1000M	D6-102	GP2L-001		Fixed Trimmer
C15	.5		A-8G-12495-7		D2-.5			RF Coupling
C16	1.5		A-8G-12495-3	C11.5CNPO	D2-1.5	NPOK-1.5		RF Coupling
C17	1000		C-8G-13201	GP1000M	D6-102	GP2L-001		RF Bypass
C18	2.2		A-8G-12495-4		D2-2.2			Osc. Coupling
C19	2.2		A-8G-12495-4		D2-2.2			Osc. Coupling
C20	51		C-8G-11891	GP51K	D6-500	GP1K-50		Osc. Feedback
C21	7		C-8G-15224	C17DN750		N750K-7		Fixed Trimmer
C22	51		C-8G-11891	GP51K	D6-500	GP1K-50		Osc. Grid Cap.
C23	7		C-8G-15224	C17DN750		N750K-7		Fixed Trimmer
C24	51		C-8G-11891	CN51JN750	DN-51	N750L-51		Fixed Padder
C25	2.5		C-8G-15737					Osc. Feedback
C26	51		C-8G-11891	GP51M	D6-500	GP1K-50		Conv. Cathode Bypass
C27	1000		C-8G-13201	GP1000M	D6-102	GP2L-001		RF Bypass
C28	220		C-8G-16045	GP220M	D6-221	GP2K-220		RF Filament Bypass
C29	220		C-8G-16045	GP220M	D6-221	GP2K-220		Osc. Filament Bypass
C30	220		C-8G 16045	GP220M	D6-221	GP2K-220		Osc. Filament Bypass
C31	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	Conv. Plate Decoupling
C32	100	500	C-8F3-8	1468-0001	D6-101	GP1K-100	1FM-31	IF Coupling
C33	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	AGC Filter
C34	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	1st Video IF Filament Bypass
C35	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	1st Video IF Decoupling
C36	47	500	C-8F3-109	1468-00005	D6-470	GP1K-47	1FM-45	IF Coupling
C37	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	AGC Filter
C38	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	2nd Video IF Filament Bypass
C39	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	2nd Video IF Decoupling
C40	47	500	C-8F3-109	1468-00005	D6-470	GP1K-47	1FM-45	IF Coupling
C41	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	AGC Filter
C42	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	AGC Filter
C43	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	3rd Video IF Filament Bypass
C44	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	3rd Video IF Decoupling
C45	47	500	C-8F3-109	1468-00005	D6-470	GP1K-47	1FM-45	IF Coupling
C46	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	4th Video IF Cathode Bypass
C47	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	4th Video IF Filament Bypass
C48	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	4th Video IF Decoupling
C49	5		C-8G-12166	GP5K	D2-4.7	NPOK-5	MS-55	Video Diode Filter
C50	22		C-8G-13909	GP22K	D6-220	GP1K-22	MS-425	Peaking
C51	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	Video Det.-DC Rest. Fil. Bypass
C52	1000	500	C-8G-13201	1468-001	D6-102	GP2L-001	1FM-21	Horiz. Sweep Coupling
C53	.1	200	C-8D-10771	P288-1			TM-1	AGC Filter
C54	.02	400	C-8D-17607	P488-02			TM-12	Video Coupling
C55	1000		C-8G-13201	GP1000M	D6-102	GP2L-001	1FM-21	Video Output Cathode Bypass
C56	.01	400	C-8D-17270	P488-01	D6-103	821-01	TM-11	Video Coupling
C57	22			GP22K	D6-220	GP1K-22		Fixed Trimmer
C58	.01	400	C-8D-17270	P488-01	D6-103	821-01	TM-11	Video Coupling
C59	3.3		A-8G-12495-5	C13.3CNPO	D2-3.3	NPOK-3.3		Sound IF Coupling
C60	5000		A-8G-13962	BPD-5	D6-502	811-005	29C1	AGC Filter
C61	5000		A-8G-13962	BPD-5	D6-502	811-005	29C1	Sound IF Cathode Bypass
C62	5000		A-8G-13962	BPD-5	D6-502	811-005	29C1	Sound IF Screen Bypass

CAPACITORS

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: RAYTHEON PART No.	AEROVOX PART No.	CENTRALAB PART No.
C63	.004	400	C-8D-17958	P688-004	D6-472
C64	470	500	C-8F3-12	1468-0005	D6-471
C65	470	500	C-8F3-12	1468-0005	D6-471
C66	4.7		C-8G-13877	CN4.7DNPO	D2-4.7
C67	.01	200	C-8D-17258	P488-01	D6-103
C68	.02	200	C-8D-17607	P488-02	
C69	.01	200	C-8D-17258	P488-01	D6-103
C70	5000		A-8G-13962	BPD-5	D6-502
C71	220	500	C-8F3-10	1468-00025	D6-221
C72	.01	400	C-8D-17270	P488-01	D6-103
C73	.01	400	C-8D-17270	P488-01	D6-103
C74	.01	400	C-8D-17270	P488-01	D6-103
C75	6800	500	C-8F9-19	1467-007	D6-682
C76	220	500	C-8F3-117	1468-00025	D6-221
C77	.05	400	C-8D-14461	P488-05	
C78	.25	400	C-8D-17784	P488-25	
C79	75	500	C-8F3-222	1469-000075	D2-75
C80	220	500	C-8F3-117	1468-00025	D6-221
C81	220	500	C-8F3-117	1468-00025	D6-221
C82	680	500	C-8F3-123		D6-681
C83	680	500	C-8F3-123		D6-681
C84	.1	200	C-8D-17259	P288-1	
C85	.25	200	C-8D-10775	P488-25	
C86	100	500	C-8F3-113	1468-0001	D6-101
C87	.005	200	C-8D-17785	P688-005	D6-502
C88	3900	500	C-8F11-132		
C89	220	500	C-8F3-117	1468-00025	D6-221
C90	47	500	C-8F3-109	1468-00005	D6-470
C91	220	500	C-8F3-117	1468-00025	D6-221
C92	1000	500	C-8F3-123	1467-001	D6-102
C93	.001	600	C-8D-10787	P688-001	D6-102
C94	.1	400	C-8D-10760	P488-1	
C95	.5	200	C-8D-17260	P288-5	
C96	500	15K	A-8C-17179		
C97	.1	400	C-8D-10760	P488-1	
C98	.05	400	C-8D-10813	P488 05	
C99	5000		A-8G-13962	BPD-5	D6-502

* Not used in all models.
† Some models use 680MMF in this application.

CONTRO

ITEM No.	RATING: RESIST-ANCE	RATING: WATTS	REPLACEMENT DATA: RAYTHEON PART No.	IRC PART No.	CLAROSTAT PART No.
R1	1 Meg.	1/2	A-10A-17215		
R2	8000Ω	1/2	A-10B-17316		
R3A	50KΩ	1/2	A-10B-17764	Q11-123	AM-44 S
B	Shaft		Not Req.	Not Req.	KSS-3
R4	100KΩ	1/2	A-10B-17275	Q11-128	15/16-49-S
R5	50KΩ	1/2	A-10B-17764	Q11-123	15/16-44-S
R6	5000Ω	1/2	A-10B-17766	Q11-114	M-19-S
R7	2 Meg.	1/2	A-10B-17318	Q11-139	M-83-S

Note 1. Some models use 750KΩ control. Part No. A-10B-182

RESIST

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: RAYTHEON PART No.	IRC PART No.
R8	470KΩ 5%	1/2		
R9	470KΩ 5%	1/2		
R10	680Ω	1/2	C-9B1-60	
R11	100KΩ	1/2	C-9B1-86	BTS-100K
R12	68Ω	1/2	C-9B1-48	
R13	1000Ω 20%	1/2	C-9B1-13	BTS-1000
R14	5600Ω	1/2	C-9B1-71	BTS-5600
R15	10KΩ	1/2	C-9B1-74	
R16	220Ω	1/2	C-9B1-54	
R17	10KΩ	1/2	C-9B1-74	
R18	5600Ω	1/2	C-9B1-71	BTS-5600
R19	10Ω	1/2	C-9B1-38	
R20	10Ω	1/2	C-9B1-38	
R21	1000Ω 20%	1/2	C-9B1-62	BTS-1000
R22	1000Ω 20%	1/2	C-9B1-62	BTS-1000
R23	8200Ω	1/2	C-9B1-73	
R24	82Ω	1/2	C-9B1 49	
R25	1000Ω 20%	1/2	C-9B1-62	BTS-1000
R26	1000Ω 20%	1/2	C-9B1-62	BTS-1000
R27	4700Ω	1/2	C-9B1-70	
R28	82Ω	1/2	C-9B1-49	
R29	1000Ω 20%	1/2	C-9B1-62	BTS-1000
R30	1000Ω 20%	1/2	C-9B1 62	BTS-1000
R31	8200Ω	1/2	C-9B1-73	BTS-8200
R32	82Ω	1/2	C-9B1-49	
R33	1000Ω 20%	1/2	C-9B1-62	BTS-1000
R34	4700Ω	1/2	C-9B1-70	
R35	68Ω	1/2	C-9B1-48	
R36	1000Ω 20%	1/2	C-9B1-62	BTS-1000
R37	47KΩ	1/2	C-9B1-82	BTS-47K
R38	1 Meg.	1/2	C-9B1-98	BTS-1 Meg.
R39	47KΩ	1/2	C-9B1-82	BTS-47K
R40	1000Ω	1/2	C-9B1-13	BTS-1000
R41	2200Ω	1	C-9B2-66	BTA-2200
R42	2.2 Meg.	1/2	C-9B1-102	BTS-2.2 Meg.
R43	560Ω	1/2	C-9B1-59	BTS-560
R44	4700Ω	2	C-9B4-70	BT-2-4700
R45	10KΩ	1/2	C-9B4-74	BTS-10K
R46	1 Meg.	1/2	C-9B4-98	BTS-1 Meg.
R47	270KΩ	1/2	C-9B4-91	BTS-270K

DESCRIPTIONS

(CONT.)

ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
11-005	TM-24	Sound IF Decoupling
P2K-470	1FM-35	Diode Load Cap.
P2K-470	1FM-35	De-emphasis
POK-4.7	MS-55	Balancing
21-01	TM-11	Audio Coupling
	TM-12	Tone Compensation
21-01	TM-11	Audio Coupling
11-005	29C1	RF Bypass
P2K-220	1FM-325	AF Plate Bypass
21-01	TM-11	Audio Coupling
21-01	TM-11	Output Plate Bypass
21-01	TM-11	Integrator Network
P2-334-0068	1FM-27	Vert. Osc. Grid Cap.
P2K-220	1FM-325	Vert. Osc. Grid Bypass
	TM-15	Vert. Discharge
	TC-2	Vert. Sweep Coupling
P1K-75	1FM-475	Horiz. Sync. Coupling
P2K-220	1FM-325	Horiz. Sweep Feedback
P2K-220	1FM-325	Horiz. Sweep Feedback
P2K-680	1FM-37	Voltage Divider
P2K-680	1FM-37	Voltage Divider
	TM-1	AFC Filter
	TC-2	AFC Filter
P1K-100	1FM-31	RF Bypass
11-005	TM-25	Horiz. MV Grid Cap.
		Fixed Trimmer
P2K-220	1FM-325	Horiz. MV Feedback
P1K-47	1FM-45	Horiz. MV Grid Cap. *
P2K-220	1FM-325	Horiz. Discharge
P2L-001	1FM-21	Horiz. Discharge †
P2L-001	TM-21	Horiz. Sweep Coupling
	TM-1	Horiz. Output Screen Bypass
	TC-5	Horiz. Sweep Coupling
		HV Filter
	TM-1	Picture Tube Cathode Decoupling
	TM-15	Acc. Anode Bypass
11-005	29C1	RF Bypass

LS

CENTRALAB PART No.	INSTALLATION NOTES
	Volume control & switch, tapped ⓐ 100KΩ
	Contrast control
N-227	Brightness control
K-185	Attach to R3A per instructions
B-40	Vert. hold control
B-31	Horiz. hold control
B-10	Vert. linearity control
B-75	Vert. size control-See note 1

1.

ORS

IDENTIFICATION CODES

L RESISTORS ARE ± 10% UNLESS OTHERWISE STATED.

t. Isolation
t. Isolation
t. Transformer Shunt
Grid
Cathode
Screen Decoupling
nv. Grid Coil Shunt
nv. Grid
nv. Cathode
c. Grid
c. Plate
rasitic Supp.
rasitic Supp.
nv. Plate Decoupling
C Network
Video IF Grid
Video IF Cathode
Video IF Decoupling
C Network
Video IF Grid
Video IF Cathode
Video IF Decoupling
C Network
Video IF Grid
Video IF Cathode
Video IF Decoupling
Video IF Coil Shunt
Video IF Cathode
Video IF Decoupling
C Network
Rest. Load-See Note 2
c. Amp. Grid
aking Coil Shunt
deo Amp. Plate
deo Amp. Grid
deo Amp. Cathode
deo Amp. Plate
lation
cture Tube Grid
c. Amp. Plate

RESISTORS (CONT.)

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA RAYTHEON PART No.	REPLACEMENT DATA IRC PART No.	IDENTIFICATION CODES
R48	3.3 Meg.	½	C-9B1-34	BTS-3.3 Meg.	Voltage Divider
R49	220KΩ	½	C-9B1-90	BTS-220K	AGC Amp. Plate Load
R50	47KΩ	½	C-9B1-82	BTS-47K	AGC Network
R51	560KΩ	½	C-9B1-95	BTS-560K	Feedback
R52	470KΩ 20%	½	C-9B1-94	BTS-470K	AGC Network
R53	220KΩ	½	C 9B1-90		Sound IF Transformer Shunt
R54	68Ω	½	C-9B1-48		Sound IF Cathode
R55	22KΩ	½	C-9B1-78		Sound IF Screen
R56	4700Ω	½	C-9B1-70		Sound IF Decoupling
R57	10KΩ	½	C-9B1-74	BTS-10K	De-emphasis
R58	22KΩ	½	C-9B1-78	BTS-22K	Ratio Det. Diode Load
R59	47KΩ	½	C-9B1-82	BTS-47K	Tone Compensation
R60	10 Meg. 20%	½	C-9B1-37	BTS-10 Meg.	AF Grid
R61	220KΩ	½	C-9B1-90	BTS-220K	AF Plate
R62	470KΩ 20%	½	C-9B1-94	BTS-470K	Output Grid
R63	680Ω	1		BTA-680	Output Cathode-See Note 3
R64	2700Ω	5	C-9C12-1104		Output Decoupling-Wire Wound
R65	2.2 Meg.	½	C-9B1-102	BTS-2.2 Meg.	Vert. Osc. Grid
R66	100KΩ	½	C-9B1-86	BTS-100K	Voltage Divider
R67	1 Meg.	½	C-9B1-98	BTS-1 Meg.	Voltage Divider
R68	220KΩ	½	C-9B1-90	BTS-220K	Vert. Osc. Plate
R69	1 Meg.	½	C-9B1-98	BTS-1 Meg.	Vert. Size Control Shunt-See Note 4
R70	3900Ω	½	C-9B1 69	BTS-3900	Vert. Peaking
R71	1 Meg.	½	C-9B1-98	BTS-1 Meg.	Vert. Amp. Grid
R72	1000Ω	½	C-9B1-13	BTS-1000	Vert. Amp. Cathode
R73	220KΩ	½	C 9B1-90	BTS-220K	Voltage Divider
R74	150KΩ	½	C-9B1-88	BTS-150K	Horiz. Sync. Disc. Load
R75	2.2 Meg.	½	C-9B1-102	BTS-2.2 Meg.	Horiz. Sync. Disc. Load
R76	150KΩ	½	C-9B1-88	BTS-150K	Horiz. Sync. Disc. Load
R77	2.2 Meg.	½	C-9B1-102	BTS-2.2 Meg.	Horiz. AFC Filter Network
R78	33KΩ	½	C-9B1-80	BTS-33K	Horiz. AFC Filter Network
R79	220KΩ	½	C-9B1-90	BTS-220K	Horiz. MV Grid
R80	1 Meg.	½	C-9B1-98	BTS-1 Meg.	Feedback
R81	1.5 Meg.	½	C-9B1-32	BTS-1.5 Meg.	Feedback
R82	56KΩ	½	C-9B1-83	BTS-56K	Integrator
R83	1500Ω	½	C-9B1-64	BTS-1500	Horiz. MV Cathode
R84	5600Ω	1	C-9B2-71	BTA-5600	Horiz. MV Plate
R85	100KΩ	½	C-9B1-86	BTS-100K	Horiz. MV Grid
R86	220KΩ	½	C-9B1-90	BTS-220K	Horiz. MV Plate-See Note 5
R87	4700Ω	½	C-9B1-70	BTS-4700	Horiz. Peaking-See Note 2
R88	220Ω	½	C-9B1-54		Parasitic Supp.
R89	470KΩ	½	C-9B1-94	BTS-470K	Horiz. Output Grid
R90	100KΩ	½	C-9B1-86	BTS-100K	Horiz. Output Cathode
R91	22KΩ	5	C-9C12-1115	AB-22, 500	Horiz. Output Screen-Wire Wound
R92	1 Meg.	1	C-9B2-98	BTA-1 Meg.	Feedback
R93	470KΩ	½	C-9B1-94		HV Filter
R94	100KΩ	½	C-9B1-86	BTS-100K	Acc. Anode Decoupling
R95	6800Ω	½	C-9B1-72	BTS-6800	Voltage Divider
R96	1000Ω	10	C-9C14-1099	AB-1000	Filter-Wire Wound
R97	1000Ω	10	C-9C14-1099	AB-1000	Filter-Wire Wound
R98	470KΩ	½	C-9B1-94	BTS-470K	Line Filter
R99	2200Ω	½	C-9B1-66	BTS-2200	Vert. Output Transformer Shunt

Note 2. Some models use 10KΩ resistor in this application.
Note 3. Some models use 560Ω, 1 watt resistor in this application.
Note 4. Not used in all models.
Note 5. Some models use 270KΩ resistor in this application.

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	REPLACEMENT DATA RAYTHEON PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC ⓐ 1.9A	700VCT .240ADC	5VAC ⓐ 2A	6.3VAC ⓐ 8.7A	C-12A-17822	P-8153 ① and P-5014 ②	P-3059	TP-355

① Drill new mounting holes.
② Mount filament transformer above chassis.

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING DC RESISTANCE PRI.	RATING DC RESISTANCE SEC.	REPLACEMENT DATA RAYTHEON PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	NOTES
T2	170Ω	1000Ω	B-12M-18241	A-8111③	A-3000 ③	TBO-1 ③	Vert. Block Osc, Trans.
T3	355Ω	3.1Ω Tap	C-2M-17967				Hor. Output Trans.
	Tap ⓐ 47Ω	ⓐ .2Ω					
		SEC. 2 0Ω					
T4	1400Ω	8Ω	B-12C-17303	A-8112	A-3036	TSO-5	Vert. Output Trans.
T5A	13.5Ω		B-13M-13590	DY-1	MD-1		Hor. Deflection Coil
B	62Ω						Vert. Deflection Coil

③ Drill one new mounting hole.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING IMPEDANCE PRI.	RATING IMPEDANCE SEC.	RATING DC RES. PRI.	RATING DC RES. SEC.	REPLACEMENT DATA RAYTHEON PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	INSTALLATION NOTES
T6	7.5KΩ	3.5Ω	450Ω	.4Ω	Part of SPKR	A-8114	A-2931	RO-13	