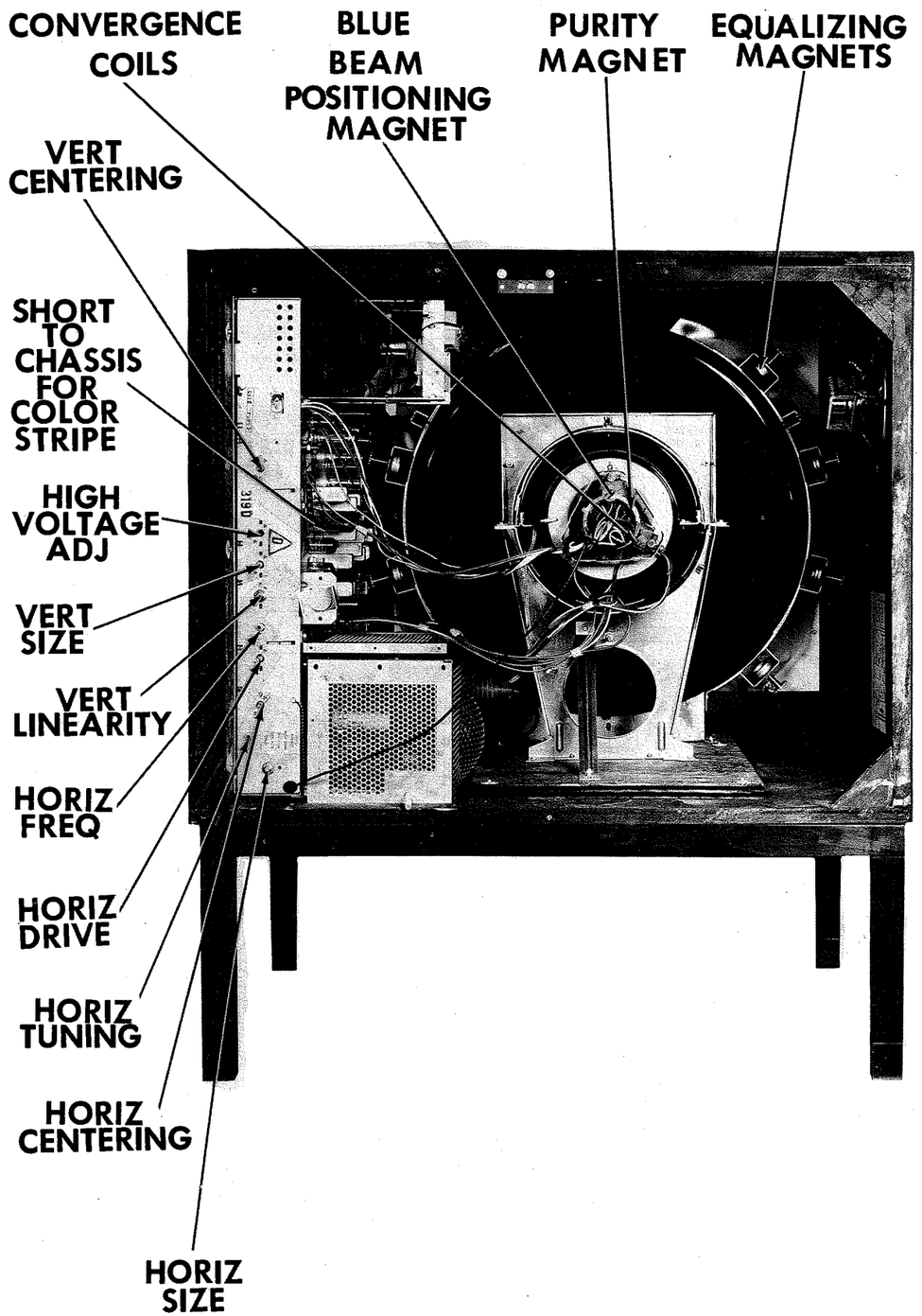


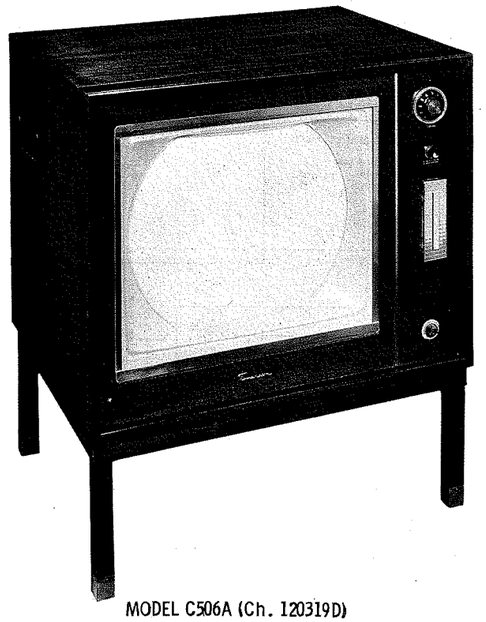
CABINET-REAR VIEW

PHOTOFACT* Folder

*TRADE MARK

EIA MEMBER ELECTRONIC INDUSTRIES ASSOCIATION

EMERSON MODELS C502C, C503C, C504A, C505A, C506A, C507A (Ch. 120296D, 120297A, 120319D, 120320A)



MODEL C506A (Ch. 120319D)

TRADE NAME	Emerson	MODELS	CHASSIS
		C502C, C504A	120296D
		C503C, C505A	120297A
		C506A	120319D
		C507A	120320A
MANUFACTURER	Emerson Radio & Phonograph Corp., 14th & Coles Sts., Jersey City 2, N.J.		
TYPE SET	Color Television Receiver		
TUBES	Twenty-seven		
POWER SUPPLY	110-120 Volts AC, 60 Cycle	RATING 320 Watts, 3 Amp. @ 117 Volts AC	
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF; Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)		

DISASSEMBLY INSTRUCTIONS

CONTROL PANEL REMOVAL

1. Remove the On-Off-Volume and Brightness knobs from the front. Remove 3 push-on type knobs from behind the control panel door.
2. Remove 2 panel bolts behind the panel door.
3. Remove the control panel.

SAFETY GLASS REMOVAL

1. Remove 11 wood screws holding the rear cover. Remove the rear cover.
2. Remove 2 wing nuts, located inside the cabinet, holding the top metal trim strip.
3. Remove the trim strip. Tilt glass out at the top and lift up to remove.

CHASSIS REMOVAL

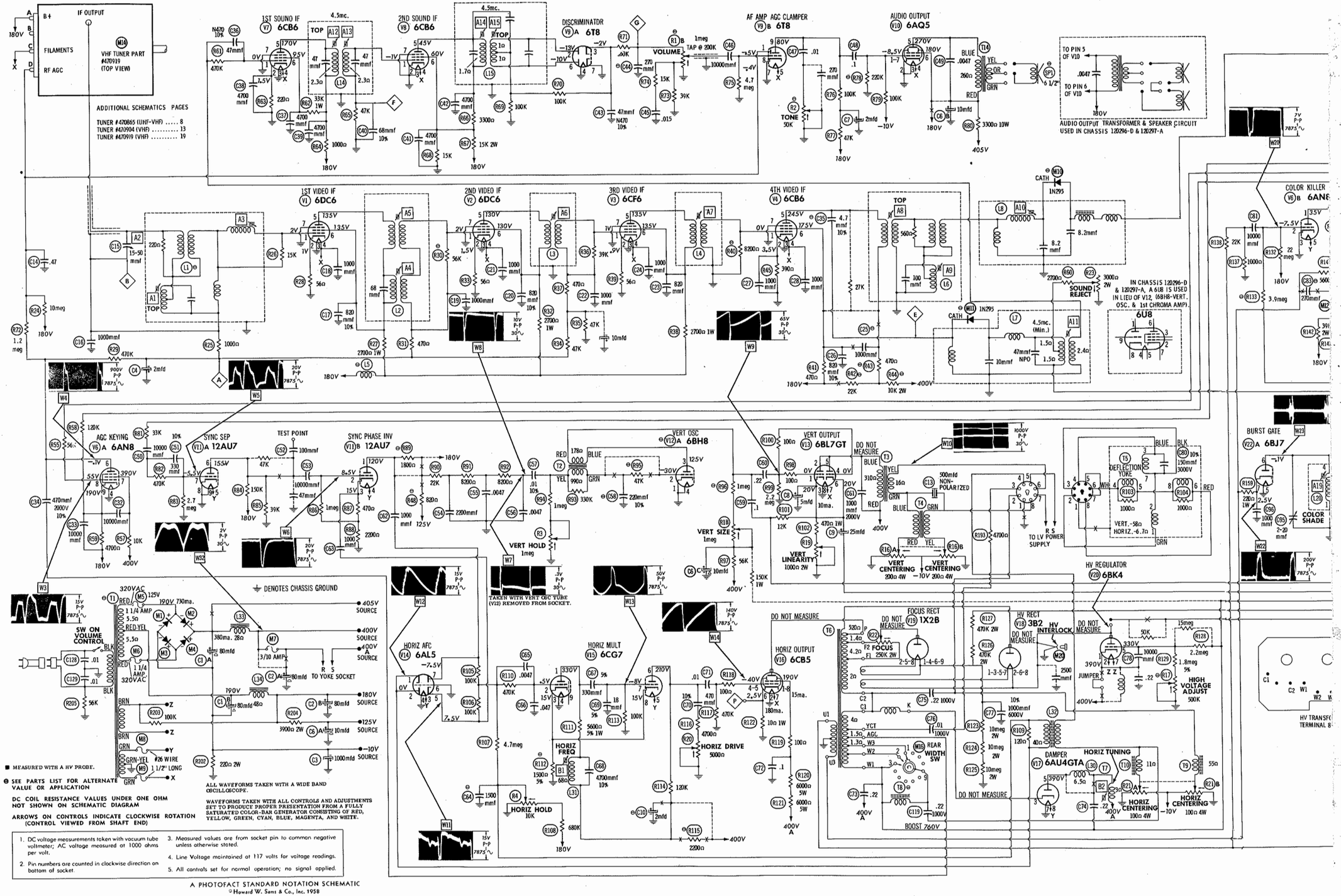
1. Remove 7 push-on type knobs from the front. (3 behind the control panel door.)
2. Remove 11 wood screws holding the rear cover. Remove the rear cover.
3. Remove 2 wood screws holding antenna terminal board.
4. Remove the picture tube socket, HV lead, yoke plug, convergence yoke plug and speaker leads.
5. Remove wood screws along the back of the chassis mounting board.
6. Remove the chassis.

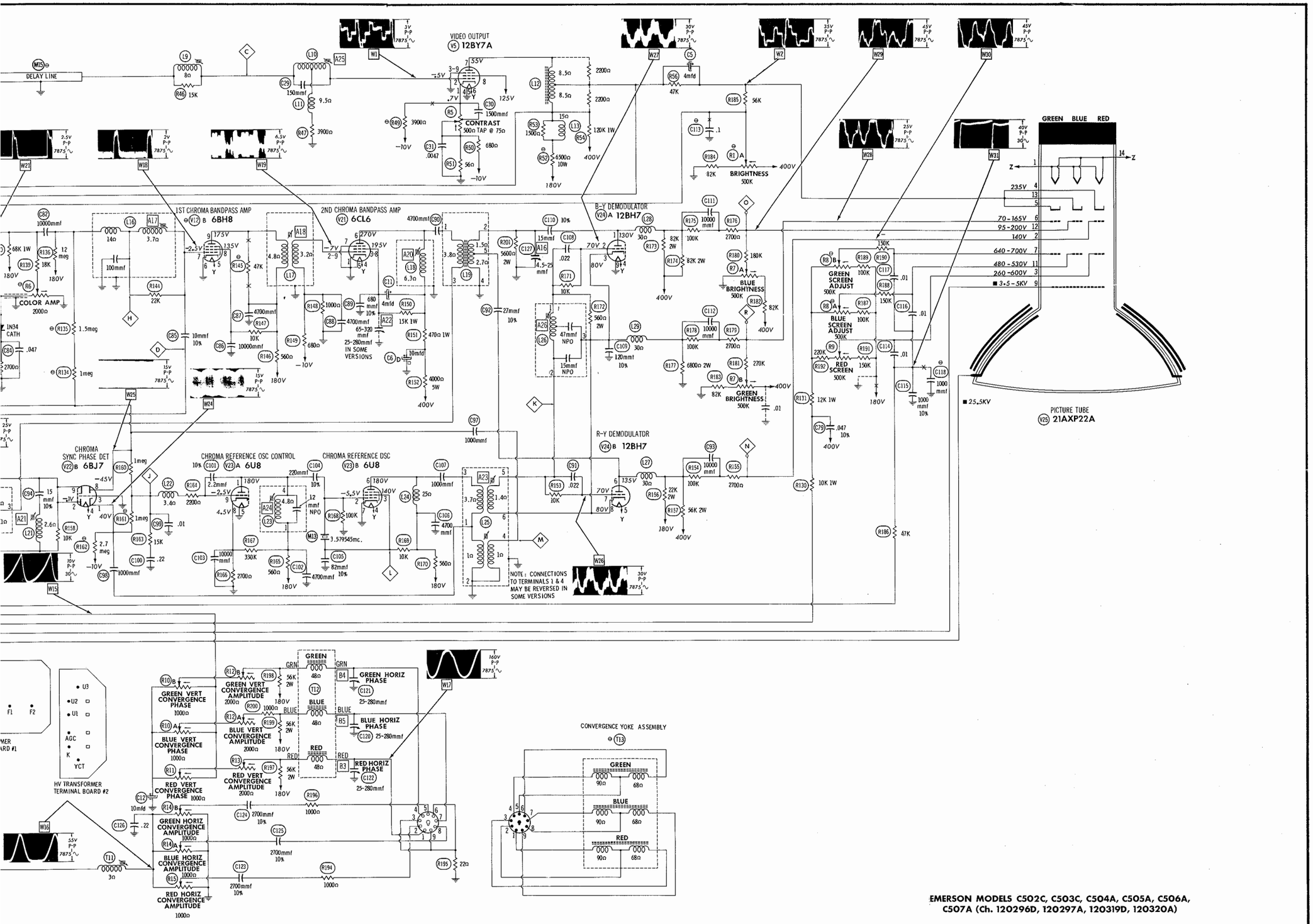
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H658

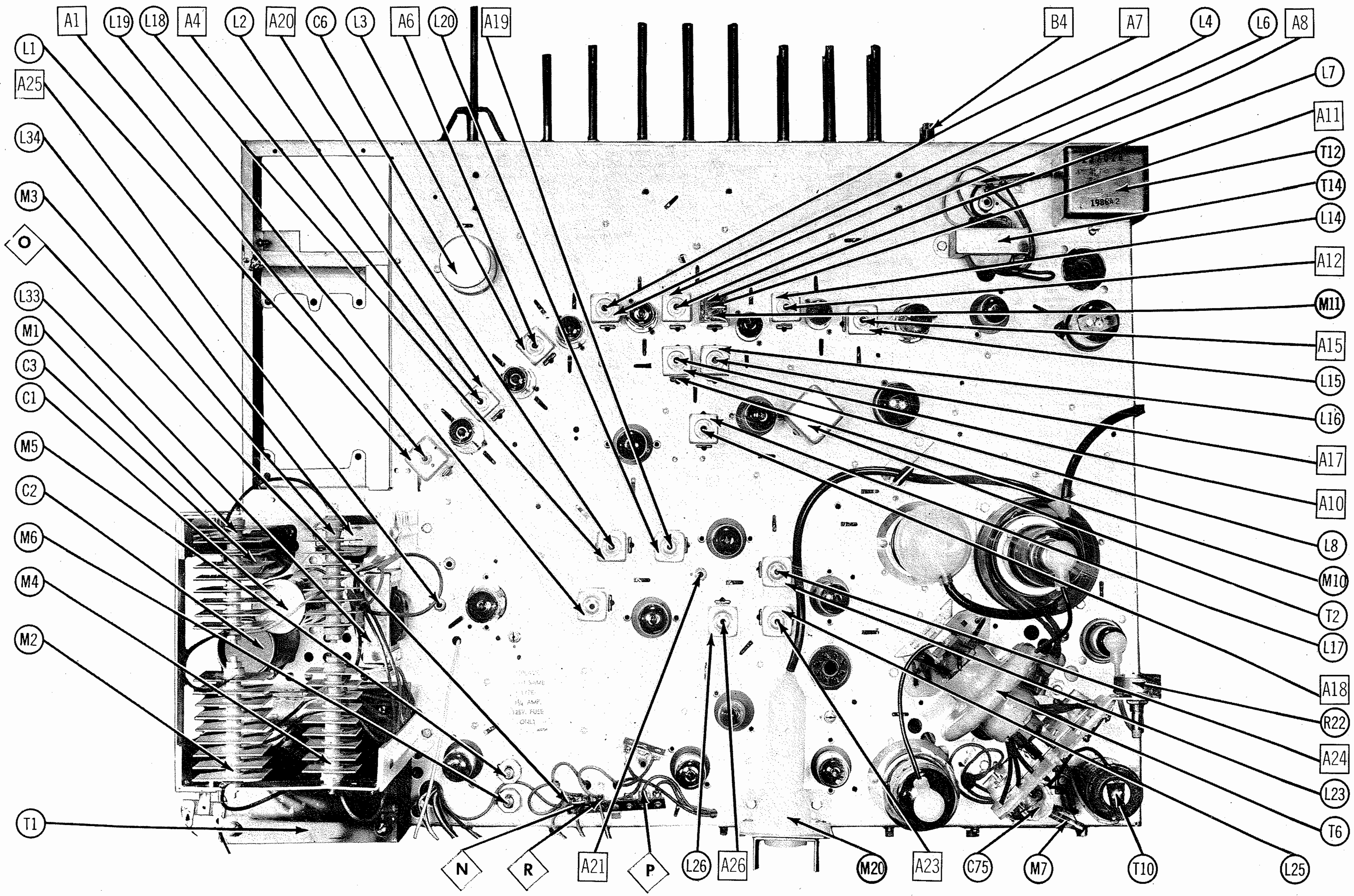
EMERSON MODELS C502C, C503C, C504A, C505A, C506A, C507A (Ch. 120296D, 120297A, 120319D, 120320A)

SET 412 FOLDER 1


IF OUTPUT
B+
FILAMENTS
RF AGC
VHF TUNER PART #470919 (TOP VIEW)
ADDITIONAL SCHEMATICS PAGES
TUNER #470865 (UHF-VHF) 8
TUNER #470904 (VHF) 13
TUNER #470919 (VHF) 19
1ST SOUND IF V7 6CB6
2ND SOUND IF V8 6CB6
DISCRIMINATOR V9 A 6T8
AF AMP AGC CLAMPER V9 B 6T8
AUDIO OUTPUT V10 6AQ5
VOLUME
TONE
AUDIO OUTPUT TRANSFORMER & SPEAKER CIRCUIT USED IN CHASSIS 120296-D & 120297-A
1ST VIDEO IF V1 6DC6
2ND VIDEO IF V2 6DC6
3RD VIDEO IF V3 6CF6
4TH VIDEO IF V4 6CB6
IN CHASSIS 120296-D & 120297-A, A 6U8 IS USED IN LIEU OF V12, (6BH8-VERT. OSC. & 1st CHROMA AMP).
SOUND REJECT
COLOR KILLER V6 B 6AN8
AGC KEYING V6 A 6AN8
SYNC SEP V11 A 12AU7
SYNC PHASE INV V11 B 12AU7
TEST POINT
VERT OSC V12 A 6BH8
VERT OUTPUT V13 6BL7GT
DO NOT MEASURE
VERT SIZE
VERT HOLD
VERT LINEARITY
VERT CENTERING
DEFLECTION YOKE
COLOR SHADE
BURST GATE V22 A 6BJ7
HV REGULATOR V20 6BK4
FOCUS RECT V19 1X2B
HV RECT V18 3B2
HV INTERLOCK
HIGH VOLTAGE ADJUST 500K
DAMPER V17 6AU4GTA
HORIZ TUNING
HORIZ CENTERING
HORIZ CENTERING
HORIZ AFC V14 6AL5
HORIZ MULT V15 6CG7
HORIZ OUTPUT V16 6CB5
HORIZ FREQ
HORIZ HOLD 10K
HORIZ DRIVE 5000Ω
REAR WIDTH SW
BOOST 760V
TAKEN WITH VERT OSC TUBE (V12) REMOVED FROM SOCKET.
SW ON VOLUME CONTROL
320VAC
190V 730ma.
1 1/4 AMP 5.5Ω
1 1/4 AMP. 320VAC
380ma. 28Ω
3/10 AMP
TO YOKE SOCKET
405V SOURCE
400V SOURCE
400V A SOURCE
180V SOURCE
125V SOURCE
-10V SOURCE
#26 WIRE 1 1/2" LONG
DENOTES CHASSIS GROUND
■ MEASURED WITH A HV PROBE.
⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM
ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)
ALL WAVEFORMS TAKEN WITH A WIDE BAND OSCILLOSCOPE.
WAVEFORMS TAKEN WITH ALL CONTROLS AND ADJUSTMENTS SET TO PRODUCE PROPER PRESENTATION FROM A FULLY SATURATED COLOR-BAR GENERATOR CONSISTING OF RED, YELLOW, GREEN, CYAN, BLUE, MAGENTA, AND WHITE.
1. DC voltage measurements taken with vacuum tube voltmeter; AC voltage measured at 1000 ohms per volt.
2. Pin numbers are counted in 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. All controls set for normal operation; no signal applied.
A PHOTOFACT STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1958



EMERSON MODELS C502C, C503C, C504A, C505A, C506A, C507A (Ch. 120296D, 120297A, 120319D, 120320A)

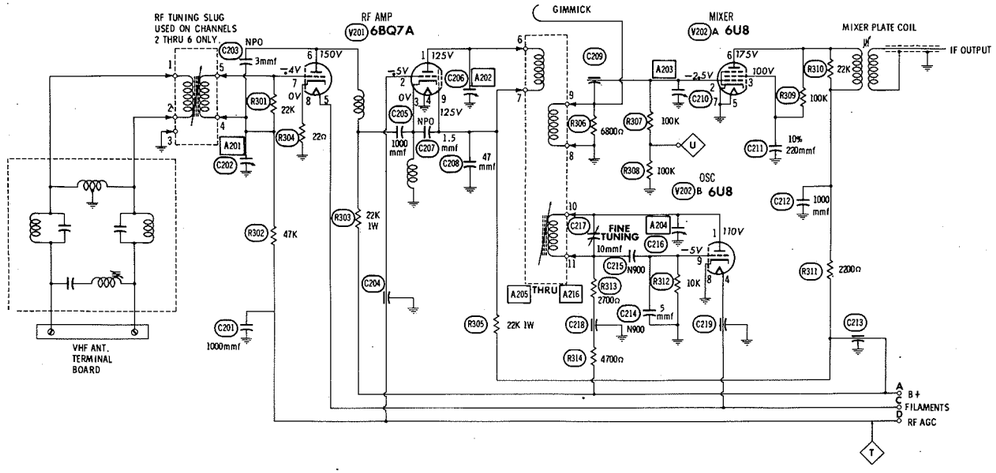


CHASSIS TOP VIEW

RESISTANCE MEASUREMENTS

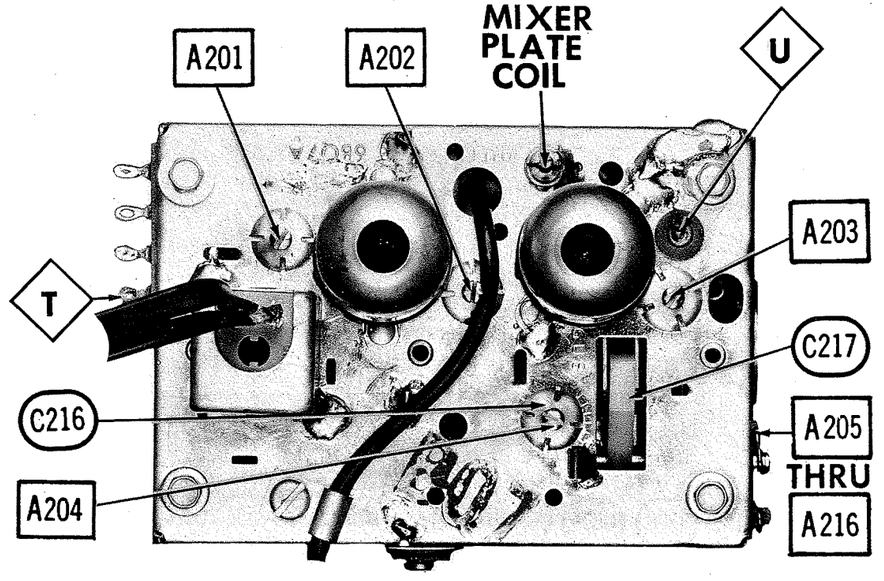
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6DC6	95K	56Ω	0Ω	.1Ω	†2700Ω	†2700Ω	0Ω		
V2	6DC6	95K	56Ω	0Ω	.1Ω	†2700Ω	†2700Ω	0Ω		
V3	6CF6	47K	56Ω	0Ω	.1Ω	†2700Ω	†2700Ω	0Ω		
V4	6CB6	.1Ω	390Ω	0Ω	.1Ω	††10K	†820Ω	0Ω		
V5	12BY7A	• 85Ω	3900Ω	0Ω	0Ω	0Ω	.1Ω	†5800Ω	†3900Ω	0Ω
V6	6AN8	†17K	†7meg	0Ω	0Ω	.1Ω	550K	††10K	†60K	†4700Ω
V7	6CB6	470K	220Ω	0Ω	.1Ω	†1000Ω	†34K	0Ω		
V8	6CB6	47K	0Ω	0Ω	.1Ω	†18K	†15K	0Ω		
V9	6T8	1.4meg	90K	160K	0Ω	.1Ω	90K	0Ω	4.7meg	†145K
V10	6AQ5	60K	0Ω	0Ω	.1Ω	††3600Ω	†0Ω	60K		
V11	12AU7	†6000Ω	1meg	2700Ω	.1Ω	.1Ω	†35K	2.7meg	0Ω	0Ω
V12	6BH8	0Ω	• 1.7meg	• ††1.2meg	0Ω	.1Ω	0Ω	†4meg	†10K	†560Ω
V13	6BL7GT	2.2meg	††340Ω	• 650Ω	2.2meg	††340Ω	• 650Ω	.1Ω	0Ω	
V14	6AL5	• 170Ω	• 170Ω	.1Ω	0Ω	4.8meg	0Ω	4.8meg		
V15	6CG7	††7900Ω	5.2meg	1500Ω	0Ω	.1Ω	††120K	100K	1500Ω	NC
V16	6CB5	††12K	0Ω	0Ω	470K	470K	10Ω	.1Ω	††12K	TOP CAP ‡7.6Ω
V17	6AU4GTA	NC	NC	¶240K	NC	†38Ω	NC	0Ω	.1Ω	
V18	3B2	PINS 1 THRU 8 HAVE INFINITE RESISTANCE								TOP CAP ‡525Ω
V19	1X2B	30meg	30meg	NC	30meg	30meg	30meg	NC	30meg	30meg
V20	6BK4	†28Ω	†100K	NC	NC	1.2meg	NC	†100K	NC	TOP CAP INF
V21	6CL6	0Ω	430Ω	††20K	.1Ω	0Ω	††4500Ω	0Ω	††20K	430Ω
V22	6BJ7	2.2meg	2Ω	0Ω	.1Ω	0Ω	2Ω	220Ω	3meg	2Ω
V23	6U8	†560Ω	100K	†10K	.1Ω	0Ω	†580Ω	0Ω	2700Ω	2.5meg
V24	12BH7	††40K	17K	6800Ω	.1Ω	.1Ω	†17K	17K	6800Ω	0Ω
V25	21AXP22A	†100K	†120K	• †320K	††30K	††30K	• ††85K	• †350K	NC	30meg
		Pin 10 NC	Pin 11 • †360K	Pin 12 ††100K	Pin 13 ††30K	Pin 14 †100K				
V201	6BQ7A	†3500Ω	1.4meg	.2Ω	0Ω	.1Ω	†3500Ω	1.5meg	22Ω	†3500Ω
V202	6U8	†7400Ω	200K	†100K	.1Ω	0Ω	†2200Ω	0Ω	0Ω	10K
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC CAPACITOR CONNECTED IN THE ASSOCIATED CIRCUIT.
• THIS READING WILL VARY. CONTROL SET FOR NORMAL CONDITION.
† MEASURED FROM 180V SOURCE.
†† MEASURED FROM 405V SOURCE.
‡ MEASURED FROM PIN 3 OF V17.
NC NO CONNECTION.



A PHOTOFACT STANDARD NOTATION SCHEMATIC

VHF TUNER #470919



RF TUNER-TOP VIEW

SET 412 FOLDER 1

TUNER PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V201	RF Amp.	6BQ7A	

ITEM No.	USE	TYPE	NOTES
V202	Mixer-Osc.	6U8	

FIXED CAPACITORS

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

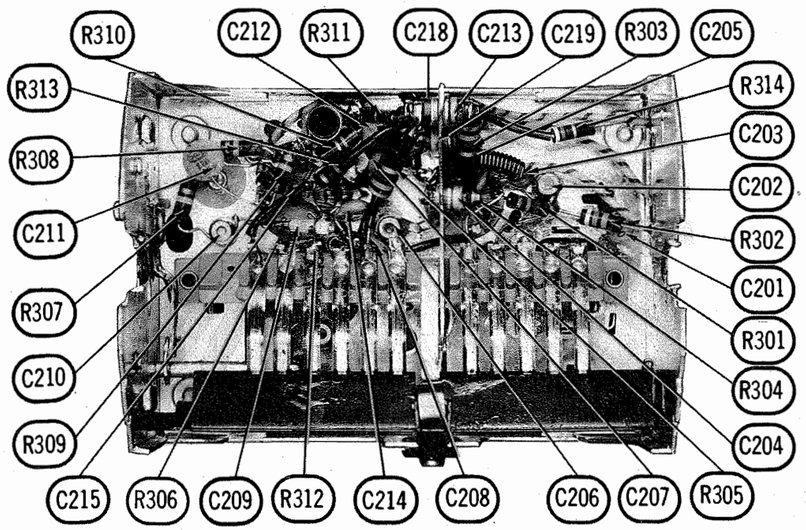
ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA EMERSON PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C201	1000			BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C202									
C203	3								NPO
C204									
C205	1000			BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C206									
C207	1.5			NPO-DI 1.5	DTZ-1R5	C10V15C	ZT-5515	5TCCB-V15	NPO
C208	47			DI -000047	DD-470	L10Q47	UC-5447	5GA-Q47	
C209									
C210									
C211	220				D6-221	L10T22		MS-322	10%
C212	1000			BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C213									
C214	5								N900
C215	10								N900
C216									
C217									
C218									
C219									

RESISTORS

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

ITEM No.	RATING OHMS	RATING WATT	EMERSON PART No.	NOTES
R301	22K			
R302	47K			
R303	22K	1		
R304	22Ω			
R305	22K	1		
R306	6800Ω			
R307	100K			

ITEM No.	RATING OHMS	RATING WATT	EMERSON PART No.	NOTES
R308	100K			
R309	100K			
R310	22K			
R311	2200Ω			
R312	10K			
R313	2700Ω			
R314	4700Ω			



RF TUNER— BOTTOM VIEW

TUNER ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.

RF AND MIXER ALIGNMENT

Connect the negative lead of a 3 volt bias supply to point ⑦. 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.
Use 10MC sweep unless otherwise noted.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	207MC	205.25MC 209.75MC	12	Vert. Amp. thru 10K to point ⑪. Low side to chassis.	A201, A202, A203	Adjust for response curve similar to Fig. 201 with markers above 90%.
2.	"	"	213MC	211.25MC 215.75MC	13	"		Check for response similar to Fig. 201. If markers fall below 70% on any channel, make compromise adjustments of A201, A202, and A203 with channel switch set to that channel. Check all other channels to see that they have not been seriously affected.
			201MC	199.25MC 203.75MC	11			
			195MC	193.25MC 197.75MC	10			
			189MC	187.25MC 191.75MC	9			
			183MC	181.25MC 185.75MC	8			
			177MC	175.25MC 179.75MC	7			
			85MC	83.25MC 87.75MC	6			
			79MC	77.25MC 81.75MC	5			
			69MC	67.25MC 71.75MC	4			
			63MC	61.25MC 65.75MC	3			
			57MC	55.25MC 59.75MC	2			

OSCILLATOR ALIGNMENT

For tuners #479904 and #470919 adjust the overall oscillator adjustment screw (A204), so that the screw head is approximately 5/16" above the mounting plate (8-9 full turns counterclockwise from full clockwise.)
Leave bias connected as for RF and Mixer 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 to the center of its range.
Use only enough sweep generator output to provide a usable pattern on scope.
Use 10MC sweep unless otherwise noted.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
3.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Amp. thru 47K across Video Detector load.	A205	Adjust to place sound marker in trap notch as in Fig. 202. Video marker should fall at 50%.
			207MC	205.25MC 209.75MC	12		A206	
			201MC	199.25MC 203.75MC	11		A207	
			195MC	193.25MC 197.75MC	10		A208	
			189MC	187.25MC 191.75MC	9		A209	
			183MC	181.25MC 185.75MC	8		A210	
			177MC	175.25MC 179.75MC	7		A211	
			85MC	83.25MC 87.75MC	6		A212	
			79MC	77.25MC 81.75MC	5		A213	
			69MC	67.25MC 71.75MC	4		A214	
			63MC	61.25MC 65.75MC	3		A215	
			57MC	55.25MC 59.75MC	2		A216	

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.

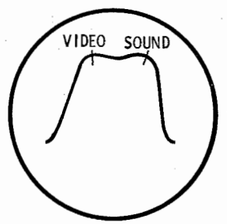


FIG. 201

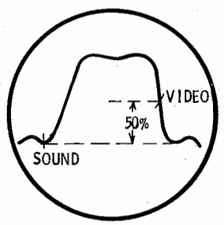
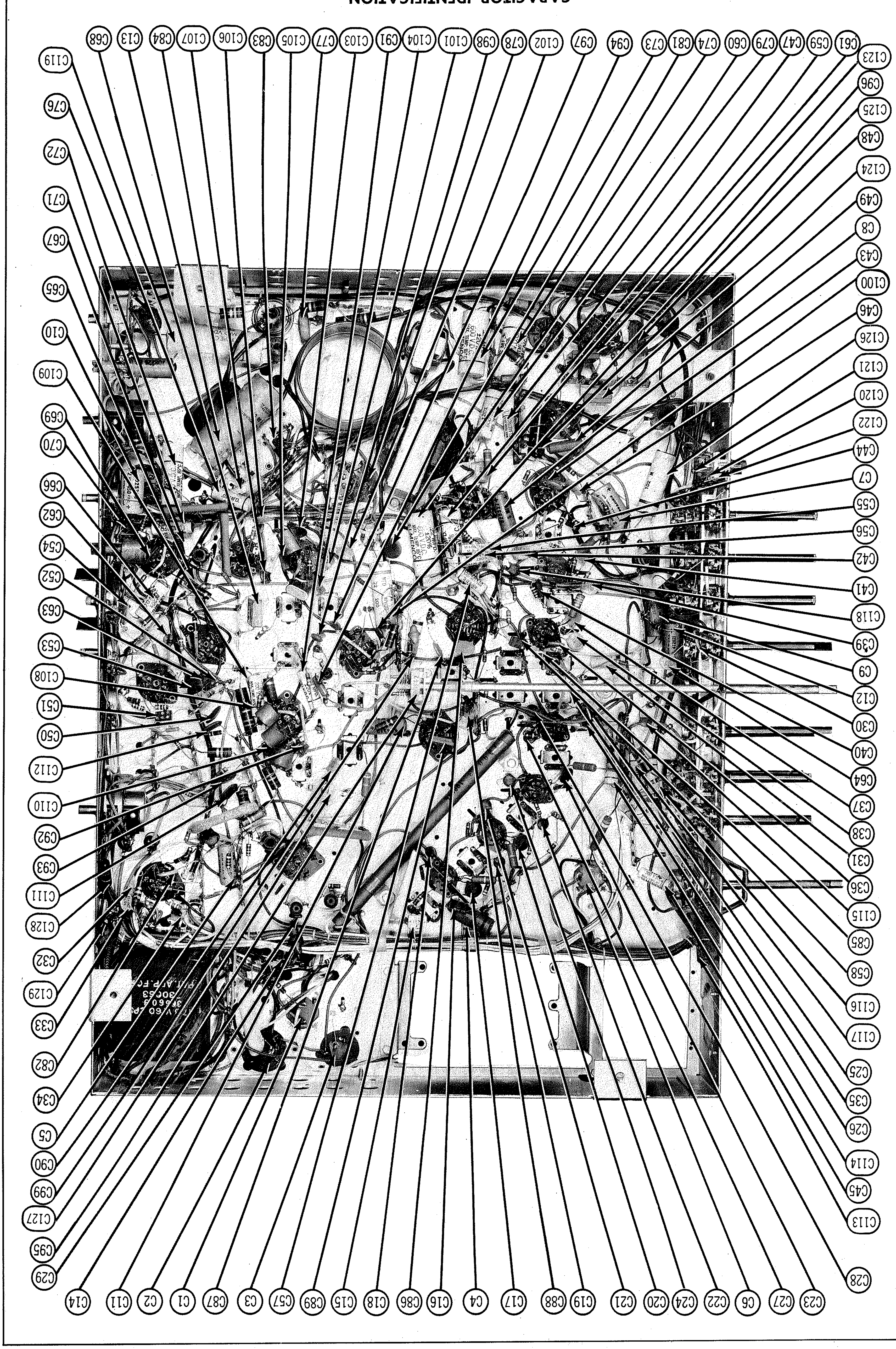


FIG. 202

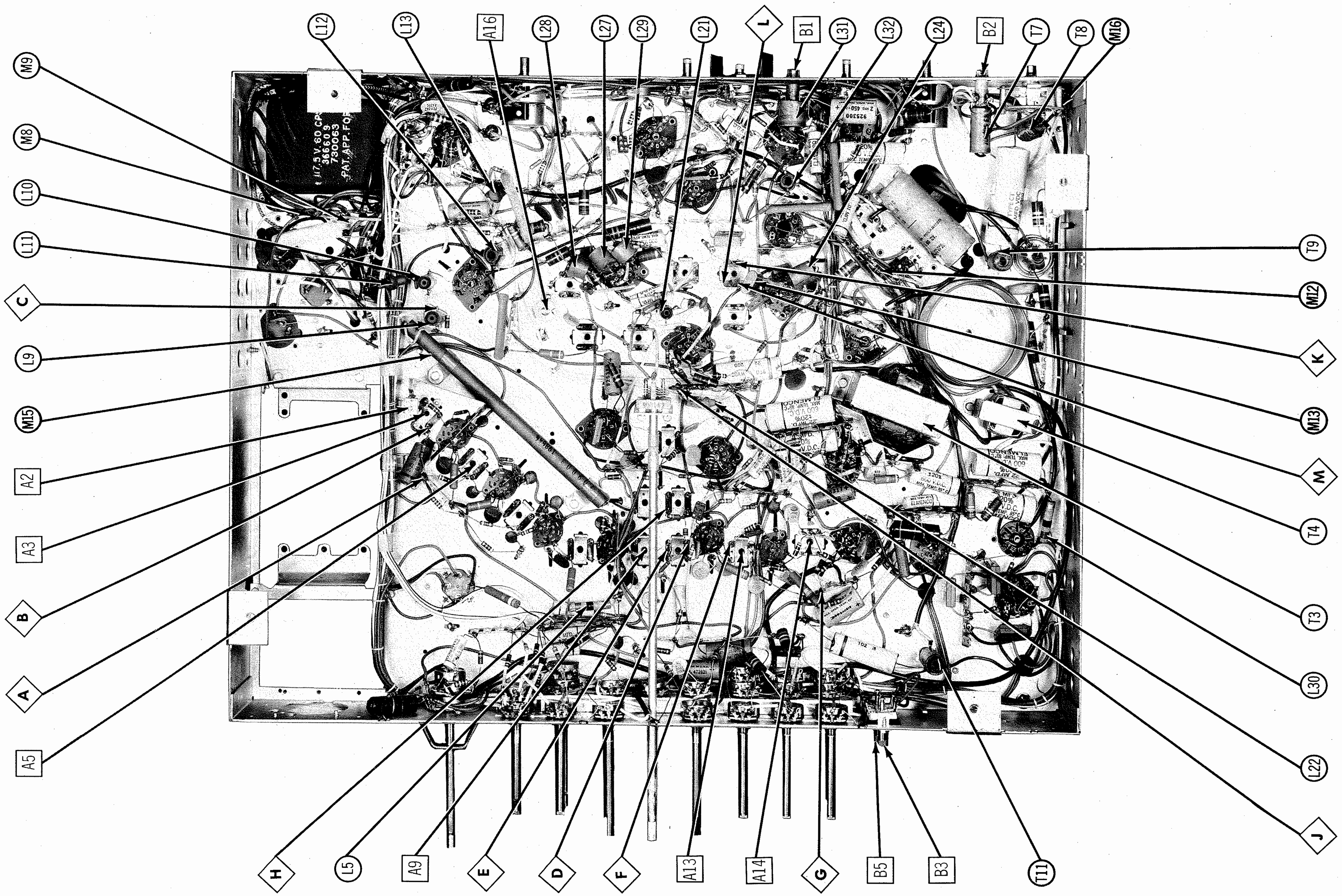
EMERSON MODELS C502C, C503C, C504A, C505A, C506A, C507A (Ch. 120296D, 120297A, 120319D, 120320A)

CAPACITOR IDENTIFICATION

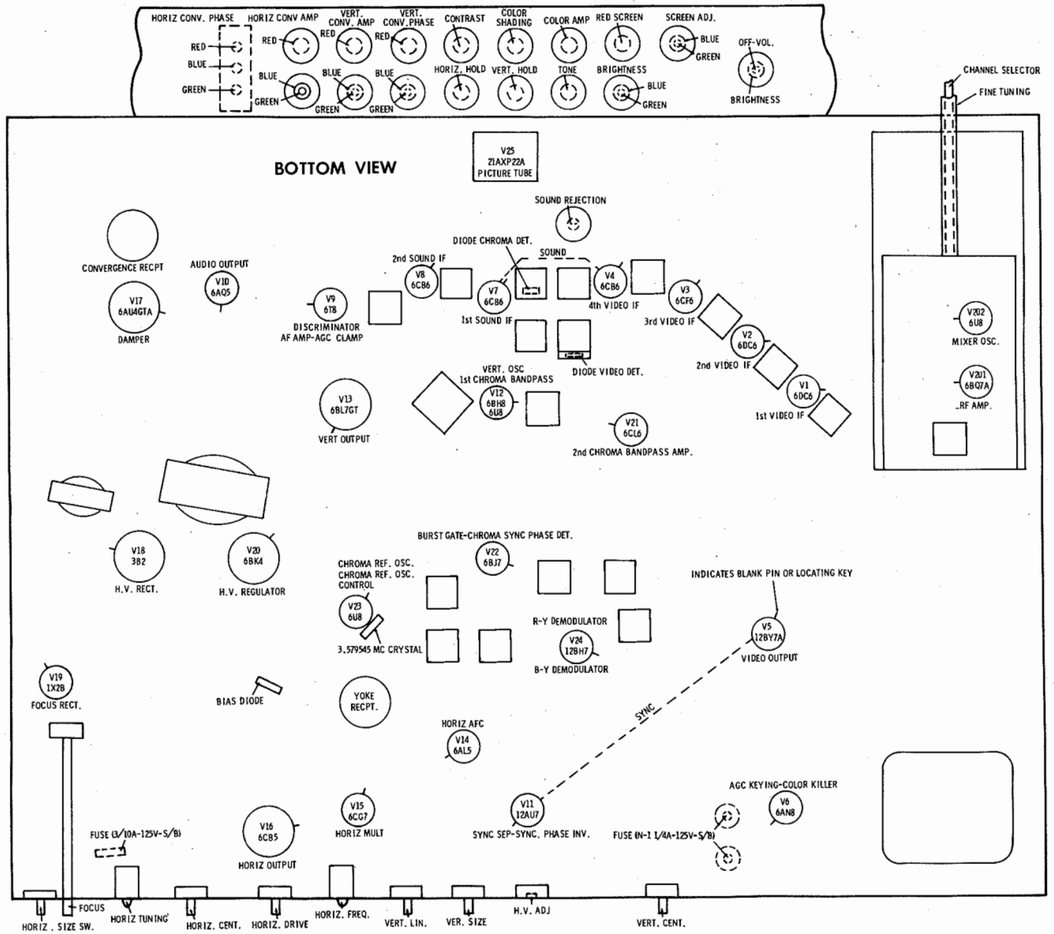


EMERSON MODELS C502C, C503C, C504A, C505A, C506A, C507A (Ch. 120296D, 120297A, 120319D, 120320A)

TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION

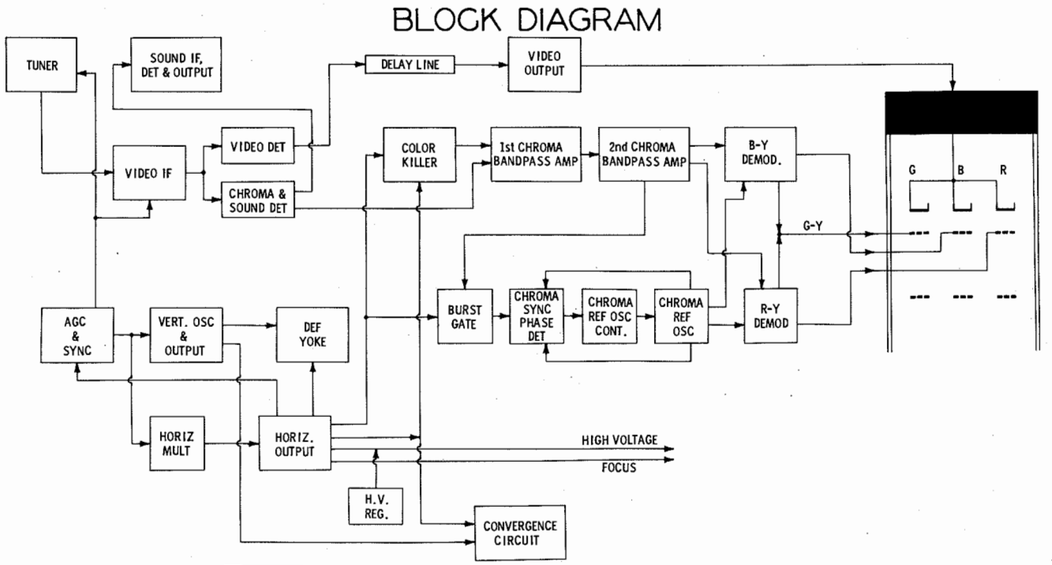


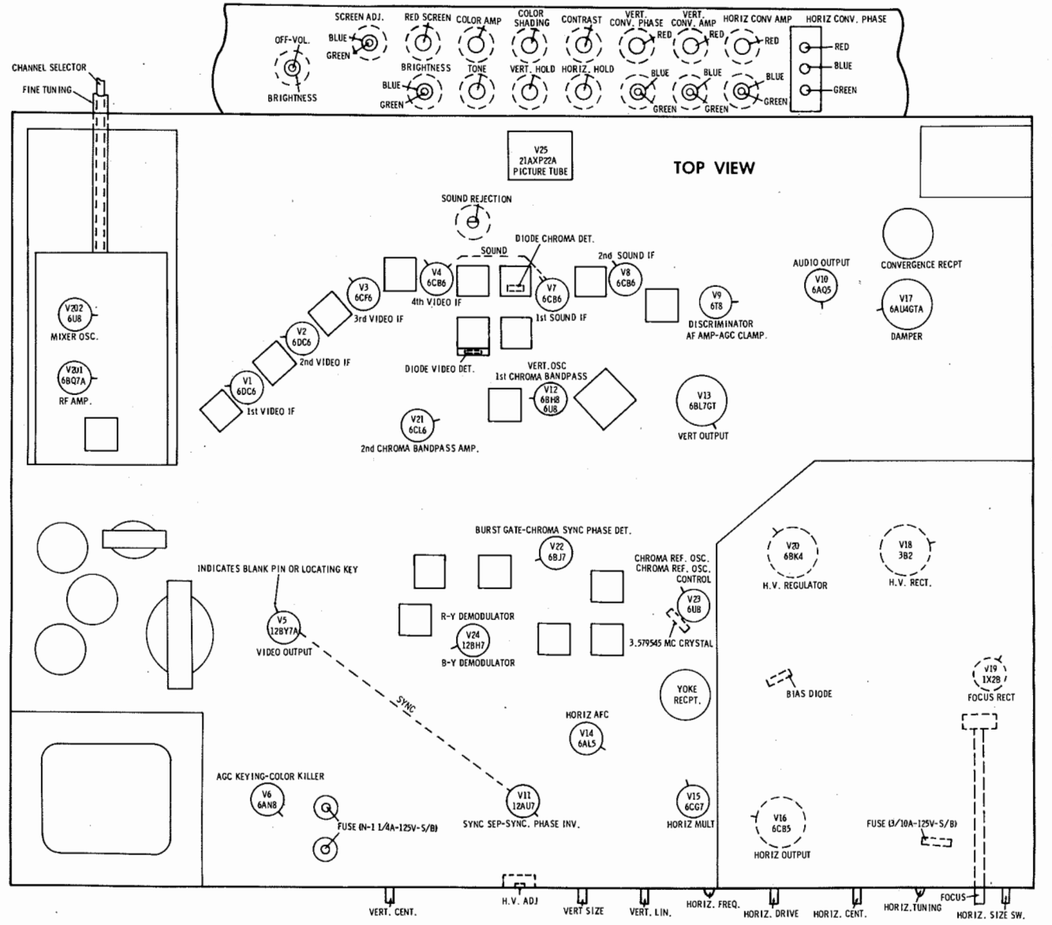
FOLDER 1



TUBE PLACEMENT CHART

BLOCK DIAGRAM



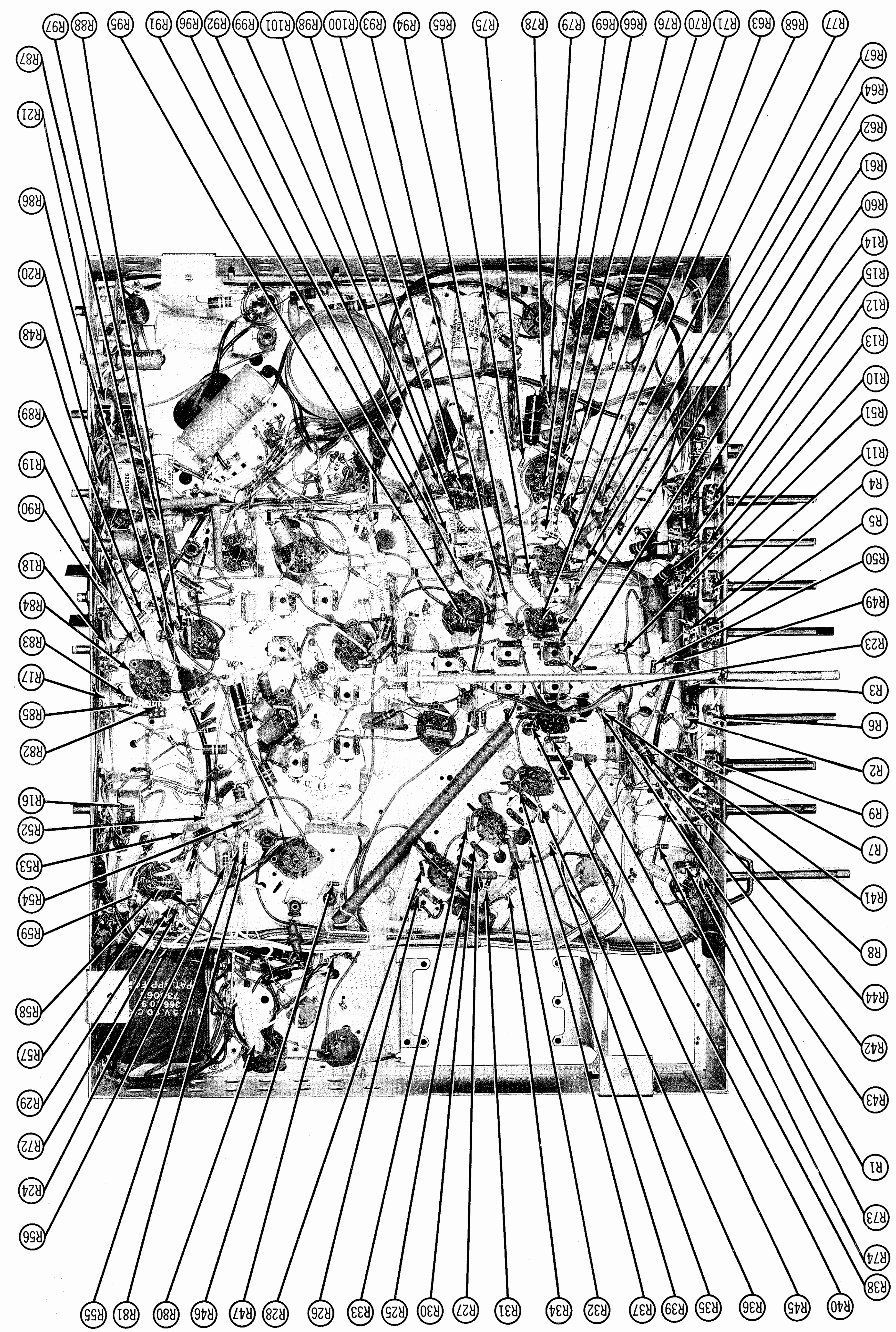


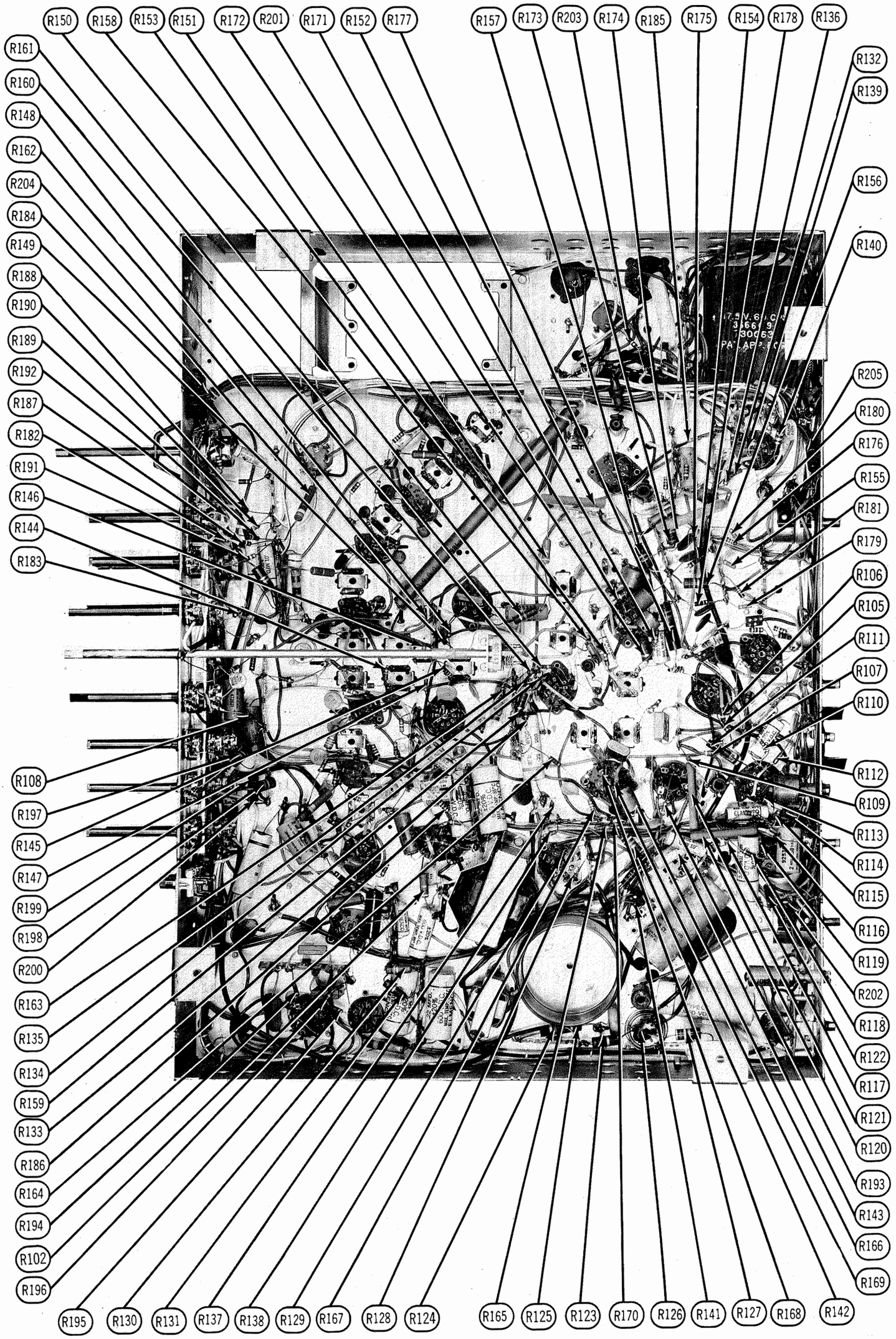
TUBE PLACEMENT CHART

SET 412 FOLDER 1

EMERSON MODELS C502C, C503C, C504A, C505A, C506A, C507A (Ch. 120296D, 120297A, 120319D, 120320A)

RESISTOR IDENTIFICATION (R1 THRU R101)





RESISTOR IDENTIFICATION (R102 THRU R205)

EMERSON MODELS C502C, C503C, C504A, C505A, C506A, C507A (Ch. 120296D, 120297A, 120319D, 120320A)

ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

Allow a 20 minute warm-up period for the receiver and test equipment.

VIDEO IF ALIGNMENT

Connect a clip lead across R30 (56K, grid of 2nd. Video IF Amplifier).
Short out AGC by connecting a clip lead from point (A) 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.
Preset A1 and A3 for maximum core separation. Preset A2 for MINIMUM capacity.

	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-Osc. tube (V202). Low side to chassis. If separate marker generator is used, connect high side to point (B). Low side to chassis.	44.0MC (10MC Swp)	41.25MC	Any non-interfering channel	Vert. Amp. to output of detector probe (Fig. 1). Red lead of detector probe to pin 5 (plate) of 1st. Video IF Amp. (V1). Black lead to pin 6 (screen) of V1. Common to chassis. Calibrate scope for 5 volts peak to peak.	A1	Adjust A1 to place 41.25MC marker in trap notch as in Fig. 2. Disconnect high side of marker generator and clip to insulation of sweep generator ground lead.
2.	"	"	"	45.0MC	"	"	Mixer Plate Coil	Adjust for maximum gain at 45.0MC marker.
3.	"	"	"	41.25MC 41.75MC 42.5MC 45.0MC 47.25MC	"	"	A2, A3,	Adjust A2 to flatten response at 41.75MC. Adjust A3 for desired response with maximum gain. Set sweep output to provide .5 volt peak to peak.
4.	"	"	"	"	"	Move red lead of detector probe to pin 5 (plate) of 3rd. Video IF Amp. (V3), and black lead to pin 6 (screen) of V3. Leave scope connected to detector probe output.	A4, A5, A6	Remove clip lead from R30. Remove clip lead from point (A) and chassis. Connect the negative lead of a 3 volt bias supply to point (A). Positive to chassis. Preset A4 and A5 for maximum core separation. Preset A8 fully counterclockwise. Adjust A6 for maximum rejection at 47.25MC marker. Increase sweep output, if necessary, to observe trap setting. Adjust A5 for maximum gain at 45.0MC marker. Adjust A6 so that 41.75MC marker is 10% higher than the 45.0MC marker as in Fig. 3. Retouch A4, if necessary, so that 45.0MC maker is centered on peak.
5.	"	"	"	"	"	Move red lead of detector probe to pin 5 (plate) of 4th. Video IF Amp. (V4) and black lead to pin 6 (screen) of V4.	A7	Adjust to flatten response similar to Fig. 4. Set sweep to provide 1 volt peak to peak on scope.
6.	1500mmf Ceramic Capacitor	High side to pin 1 (grid) of 4th. Video IF Amp. (V4). Low side to chassis.	"	41.25MC 43.0MC 45.0MC	"	Vert. Amp. thru 10K to point (C). Low side to chassis. (Across Video Det. load)	A8, A9, A10	Adjust for maximum gain and symmetry of response similar to Fig. 5 with markers as shown. Set sweep output to maximum in trap notch. A9 controls 45.0MC marker and A10 controls 43.0MC marker.
7.	"	"	"	42.15MC 45.0MC	"	Vert. Amp. thru 10K to point (D). Low side to chassis.		Retouch A10, if necessary for a smooth transition between 42.15MC and 45.0MC markers on response curve similar to Fig. 6. If tilt between peaks is excessive, retouch A9. NOTE. The peak to peak amplitude at point (D) should be larger than that found at point (C) in step 6 with the same signal input level. Recheck step 6 to make certain not more than 15% tilt was introduced by retouching A9 and A10.
8.	Direct	High side to ungrounded tube shield floating over Mixer-Osc. tube (V202). Low side to chassis.	"	"	"	Vert. Amp. thru 10K to point (C). Low side to chassis. Calibrate scope for 5 volts peak to peak.		Check for response similar to Fig. 7 with markers as indicated. If tilt is greater than 10%, but less than 20%, retouch A7 for desired response. If 45.75MC marker is no more than 5% outside limits shown, retouch A4 and A5. Errors greater than these require a recheck of alignment. Recheck step 7.

4.5MC TRAP ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
9.	.01mfd	High side to point (E). Low side to chassis.	4.5MC (Unmod)	Any non-interfering channel	DC probe thru detector probe to pin 7 (grid) of 1st. Chroma Amp. (V12). Common to chassis.	All	Adjust for MINIMUM deflection. (Use maximum signal input).

ALIGNMENT INSTRUCTIONS (cont)

SOUND IF ALIGNMENT USING SIGNAL GENERATOR AND VTVM

Use only enough generator output to provide a usalbe indication on VTVM.
If necessary to eliminate external interference which may be coming thru the Video IF stages, connect the negative lead of a 22 volt bias supply to point (A). Positive side to chassis.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
10.	.01mfd	High side to pin 1 (grid) of 1st. Sound IF Amp. (V7). Low side to chassis	4.5MC (Unmod)	Any non-interfering channel	DC probe to point (E). Common to chassis. (Use negative scale)	A12, A13	Adjust for maximum deflection.
11.	"	"	"	"	DC probe thru 10K to point (G). Common to chassis. (Use negative scale)	A14	Detune A15 for maximum deflection. Adjust A14 for maximum deflection.
12.	"	"	"	"	"	A15	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

ALTERNATE SOUND IF ALIGNMENT USING AIR SIGNAL AND VTVM

The same procedure outlined in steps 10, 11 and 12 can be followed by substituting an air signal for the signal generator and removing the bias.
Connect the antenna and tune in a good TV signal.
Adjust the Fine Tuning for the best picture.
Adjust the antenna coupling for a moderate signal level so that sharp meter indications are obtained when making adjustments.
Meter readings will fluctuate with signal strength. DO NOT confuse these with peak adjustments.

CHROMA CHANNEL ALIGNMENT

Connect the negative lead of a 3 volt bias supply to point (B). Positive to chassis.
Connect a clip lead from pin 2 (grid) of the Chroma Reference Oscillator (V23) to chassis.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13.	.01mfd	High side to point D Low side to chassis.	3.58MC (Unmod)	Any non-interfering channel	Connect low capacity probe from Vert. Amp. to insulation of wire running to pin 6 (plate) of 2nd. Chroma Amp. (V21). Low side to chassis.	A16	Adjust for maximum deflection. Set generator to maintain .5 volt peak to peak on scope.
14.	"	"	4.1MC	"	"	A17	"
15.	"	"	3.1MC	"	"	A18	"

16. Set the scope for external negative sync. External sync is obtained by clipping on to the insulation of wire running from terminal "U3" of Horizontal Output Transformer. Connect the output of the color bar generator to the antenna terminals of the receiver and tune both to an unused channel. Set the generator for a bar pattern and turn off the sound carrier modulation, if any. Connect the vertical amplifier of the scope to point (D). Adjust the Fine Tuning for maximum 3.58MC signal within the step pattern as shown in Fig. 8.

17. Disconnect the bias. Clip the vertical amplifier lead of the scope to the insulation of the wire connected to pin 6 (plate) of the Burst Amplifier Gate (V22). Adjust A19 for maximum burst as in Fig. 8. If the burst does not come in correctly turn the Horizontal Hold Control fully clockwise and adjust the Horizontal Frequency slug (B1) until the burst rides on the edge of the horizontal pulse as shown in Fig. 8.

18. Set the Color Amplitude counterclockwise. Adjust A20 for MINIMUM response of the 3.58MC side products as shown in Fig. 9. Adjust A21 for symmetrical burst waveform above and below the zero axis.

19. Remove the clip lead from pin 2 of V23 to restore the Chroma Reference Oscillator to operation. Adjust A22 to MINIMIZE the 3.58MC oscillator feedback. (A22 not in some versions.)

20. Short out Chroma Sync Phase Detector by connecting a jumper from point (J) to chassis. The Color Amplitude should be set at fully counterclockwise. Connect the vertical amplifier of the scope to point (K). Low side to chassis. With no external bias, adjust A23 for maximum 3.58MC indication on scope. (The 3.58MC color signal will not be synchronized because the Chroma Sync Phase Detector is shorted out. However, the waveform will be synchronized at the horizontal rate.)

21. Check the amplitude of the 3.58MC at point (L) and (M) using the scope. The amplitudes should be equal (within 5%).

22. Connect the vertical amplifier of the scope to (N) and low side to chassis. With the Color Amplitude set fully clockwise, adjust A24 until the signal from the bar generator comes in. (The signal will be out of sync because the AFC is shorted out.) Remove the clip lead from point (J).

23. Reduce the output of the bar generator until the signal is just noticeable above the noise (on the scope). Switch off channel and back again. If the bar pattern is out of sync, readjust A24.

24. Increase the RF signal from the bar generator to obtain a large amplitude bar signal. Disconnect the scope from point (N) and connect to pin 7 (plate) of the Video Output (V5). Adjust A25 for MINIMUM 3.58MC within the bar signal. (See Fig. 9).

25. Set the Color Amplitude near full clockwise. Set the Contrast fully counterclockwise. Set the Horizontal Hold fully clockwise. Set up scope sync and bar generator as in step 16. No external bias.

26. Clip the scope probe to the insulation of wire connected to pin 6 (plate) of the Burst Gate (V22). Adjust B1 until the burst disappears. Then turn back slowly until burst just appears. Burst should be near right edge as in Fig. 8. If necessary, adjust B1 for desired results. Turn the Horizontal Hold counterclockwise and note that the burst moves to the left but remains within the dotted lines.

27. Reconnect scope to point (N). Turn the Color Amplitude fully counterclockwise, then clockwise until an overload occurs as indicated by the change in waveshape of the observed pattern. Back off the control just below this overload point. Leave the Color Amplitude at this setting for the following adjustments.

28. With the scope connected to point (N), set the Color Shading to half-mesh. Set the bar generator for color bar pattern. Adjust A16 for proper R-Y waveform similar to that shown in Fig. 10.

29. Move scope connection to point (O) and adjust A26 for proper B-Y waveform similar to that shown in Fig. 10. Repeat steps 28 and 29 until optimum results are obtained. Remove all equipment connections.

MISCELLANEOUS ADJUSTMENTS

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

1. Set the Horizontal Hold to the center of its range.
2. Tune in a known good station signal.
3. If the picture is out of sync, adjust the Horizontal Frequency (B1) until the picture synchronizes horizontally.
4. Switch from channel to channel and check for sync in on each channel. If necessary, retouch B1 until picture locks in when switching channels.
5. Turn the receiver off and disconnect the high voltage lead from the high voltage receptacle.
6. Connect the high voltage probe of the VTVM to the high voltage lead. Common to chassis.
7. Turn the set on and allow at least one minute for the set to warm-up. If the line voltage is exactly 117 volts, the High Voltage Adjust (R17) is adjusted for 25KV on VTVM. If line voltage is other than 117 volts use following chart.

Line Voltage AC	125V	122V	110V	105V
High Voltage Adjusted To	27KV	26KV	23.5KV	22.25KV

8. Turn the set off and disconnect the high voltage probe. Reconnect high voltage lead.
9. Turn Red, Blue and Green Screen controls to center of their ranges. Turn the Brightness control until a raster is obtained (may be any color).
10. Connect any signal source to the antenna terminals.
11. Advance the Contrast until the signal is visible on the screen. Adjust Horizontal and Vertical Holds until the picture is in sync.
12. Adjust Horizontal Size (switch), Vertical Size, Linearity and Centering to fill the picture mask with an overscan of approximately 1/2 inch.
13. Adjust the Horizontal Drive (R20) until a white vertical drive line appears on the raster and then back off until the line just disappears.
14. Connect the DC probe of the VTVM to point Ⓟ. Common to chassis. Adjust the Horizontal Tuning (B2) for MINIMUM deflection on VTVM.
15. Recheck picture for proper size and linearity. Readjust if necessary, but leave the B2 set for MINIMUM voltage between point Ⓟ and chassis.
16. Adjust Focus (R22) for best focus.

PRELIMINARY CONVERGENCE ADJUSTMENTS

Connect a dot generator to the antenna terminals of the receiver and tune both receiver and generator to an unused channel. Synchronize dot pattern following instructions for your particular generator.
Set the Red, Green and Blue Horizontal and Vertical Convergence Amplitude Controls fully counterclockwise. Set the Red, Green and Blue Vertical Convergence Phase controls to the center of their range.
Adjust Brightness and Contrast so that the dots stand out on a dark background.
Adjust Red, Green and Blue Screen controls so that the dots of each color are approximately the same size.
Adjust Red and Green Static Convergence Magnets so that the red and green dots in the center of the screen coincide to form a single yellow dot. Adjust the Blue Static Convergence Magnet to move the blue dot either up or down until it is in line with the yellow dot.
Move the blue dot horizontally with the Blue Beam Lateral Positioning Magnet until the blue dot coincides with the yellow dot to form a white dot in the center of the screen.
Examine the outside rows of dots on all sides of the screen to make certain that one color field is not displaced one line. If it is, it will be necessary to correct it with the proper Static Convergence adjustment. This may require readjustment of the other Static Convergence adjustments to produce a white dot in the center of the screen.

PURITY ADJUSTMENTS

STEP	ADJUST	REMARKS
1.	Set the Contrast fully counterclockwise. Set Brightness fully clockwise.	
2.	Short Blue and Green guns to ground by connecting a clip lead from chassis to points Ⓠ and Ⓡ. (CAUTION: Be sure to connect clip lead to chassis first as the grids are at a potential of approximately 150 volts DC.)	
3.	Preset all Field Equalizing Magnets out from the picture tube as far as possible. (CAUTION: Keep hands away from the Picture Tube to avoid electrical shock.	
4.	Purity Magnet	Adjust to place red tabs together.
5.	Deflection Yoke	Adjust to best location for best overall red purity of raster. DO NOT tilt yoke.
6.	Purity Magnet	Rotate either or both red tabs on the purity magnet until the center of the raster has good purity with any contamination located near the edges only. If necessary, repeat steps 5 and 6.
7.	Field Equalizing Magnets	Adjust to get an overall perfect red raster. If it is impossible to obtain good purity, degaussing may be necessary.
8.	Check Green screen for purity by moving clip lead from point Ⓡ to point Ⓝ. Check Blue screen by moving clip lead from point Ⓠ to point Ⓡ. Retouch Field Equalizing Magnets, if necessary, to compromise for best purity on all three color fields. Remove clip leads.	

DYNAMIC CONVERGENCE ADJUSTMENTS

STEP	ADJUST	REMARKS
1.	Short out the Blue grid by connecting a clip lead from chassis to point Ⓠ.	
2.	Red Vertical Convergence Amplitude And Vertical Phase	Adjust to produce a straight line of red dots equally spaced from each other. (Center row of vertical dots.)
3.	Green Vertical Convergence Amplitude And Vertical Phase	Adjust to obtain a straight line of green dots equally spaced from each other. (Center row of vertical dots). Repeat steps 2 and 3 until the two columns of dots are uniform with respect to each other. (They do not have to be on the same horizontal plane.)
4.	Red Horizontal Convergence Amplitude Control And Horizontal Phase (B3)	Adjust to produce a straight horizontal line of red dots equally spaced from each other. (Center row of horizontal dots.)
5.	Green Horizontal Convergence Amplitude Control And Horizontal Phase (B4)	Adjust for a straight row of green dots equally spaced from each other. (Center row of horizontal dots.)
6.	Blue Vertical Convergence Amplitude And Vertical Phase	Remove the clip lead from point Ⓠ. Adjust to obtain a straight vertical line of blue dots in the center of the screen equally spaced from each other.
7.	Blue Horizontal Convergence Amplitude And Horizontal Phase (B5)	Adjust for a straight horizontal line of blue dots in the center of the screen equally spaced from each other. The blue dots should also be uniformly spaced from the red and green dots.
8.	Reconnect clip lead from chassis to point Ⓠ.	
9.	Green And Red Static Convergence Magnets	Adjust until yellow dots are formed throughout the raster.
10.	Blue Static Convergence Magnet And Blue Lateral Beam Positioning Magnet	Remove clip lead from point Ⓠ. Adjust to obtain white dots.
11.	A careful examination of all the dots may disclose some that have color fringing. Examine the center vertical row first. If red appears as a fringe color, readjust the Red Vertical Convergence Amplitude and Vertical Convergence Phase to space the red equally with respect to the other two. This adjustment is similar to step 2, except that it is done over a narrow range. The red dot may partially cover the other dots on this fine adjustment.	
12.	Repeat step 11 for green and blue until the vertical center column is made up of uniformly positioned dot trios. Remember that the dots may touch or overlap each other.	
13.	Repeat step 11 for a horizontal center row. Adjust Red Horizontal Convergence Amplitude and Horizontal Convergence Phase (if necessary) to space red dots equally with respect to the other two.	
14.	Repeat step 13 for the green and blue until symmetry is obtained for the horizontal line of dots in the center of the raster.	
15.	Adjust the Static Convergence Magnets and the Blue Lateral Beam Positioning Magnet (if necessary) to converge the color dots.	

GRAY SCALE ADJUSTMENT

1. Turn the Contrast and Color Amplitude controls fully counterclockwise.
2. Turn the Brightness fully clockwise.
3. Set Green and Blue Brightness controls to the mechanical center of their range.
4. Adjust Red, Blue and Green Screen controls to obtain a bright gray raster.
5. Increase Contrast setting to obtain a high contrast picture, but avoid blooming by turning down the Brightness, if necessary.
6. If the low brightness portions of the picture change from gray to some color, adjust Blue and Green Brightness controls for color balance in the low brightness areas of the picture.
7. If the high brightness portions of the screen change to some color, SLIGHTLY readjust Red, Green and Blue Screen controls to restore proper gray scale.
8. Repeat steps 6 and 7, if necessary to obtain proper grey scale with variations in Brightness control settings.

ALIGNMENT INSTRUCTIONS (cont)

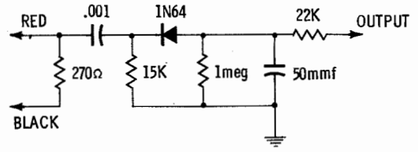


FIG. 1

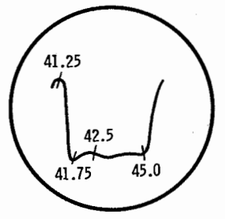


FIG. 2

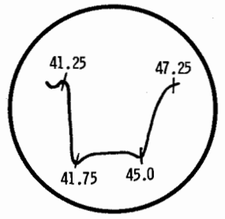


FIG. 3

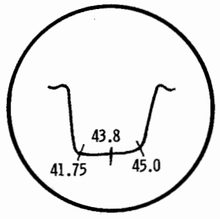


FIG. 4

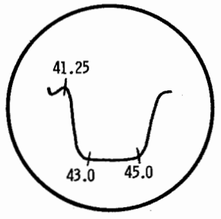


FIG. 5

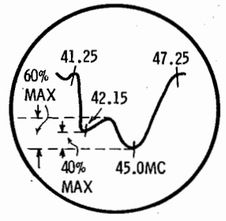


FIG. 6

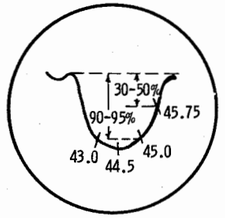


FIG. 7

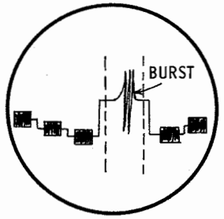


FIG. 8

FIG. 9

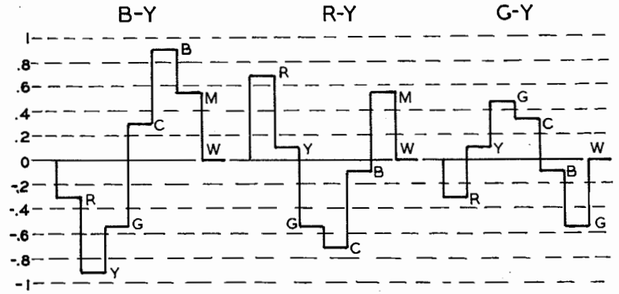
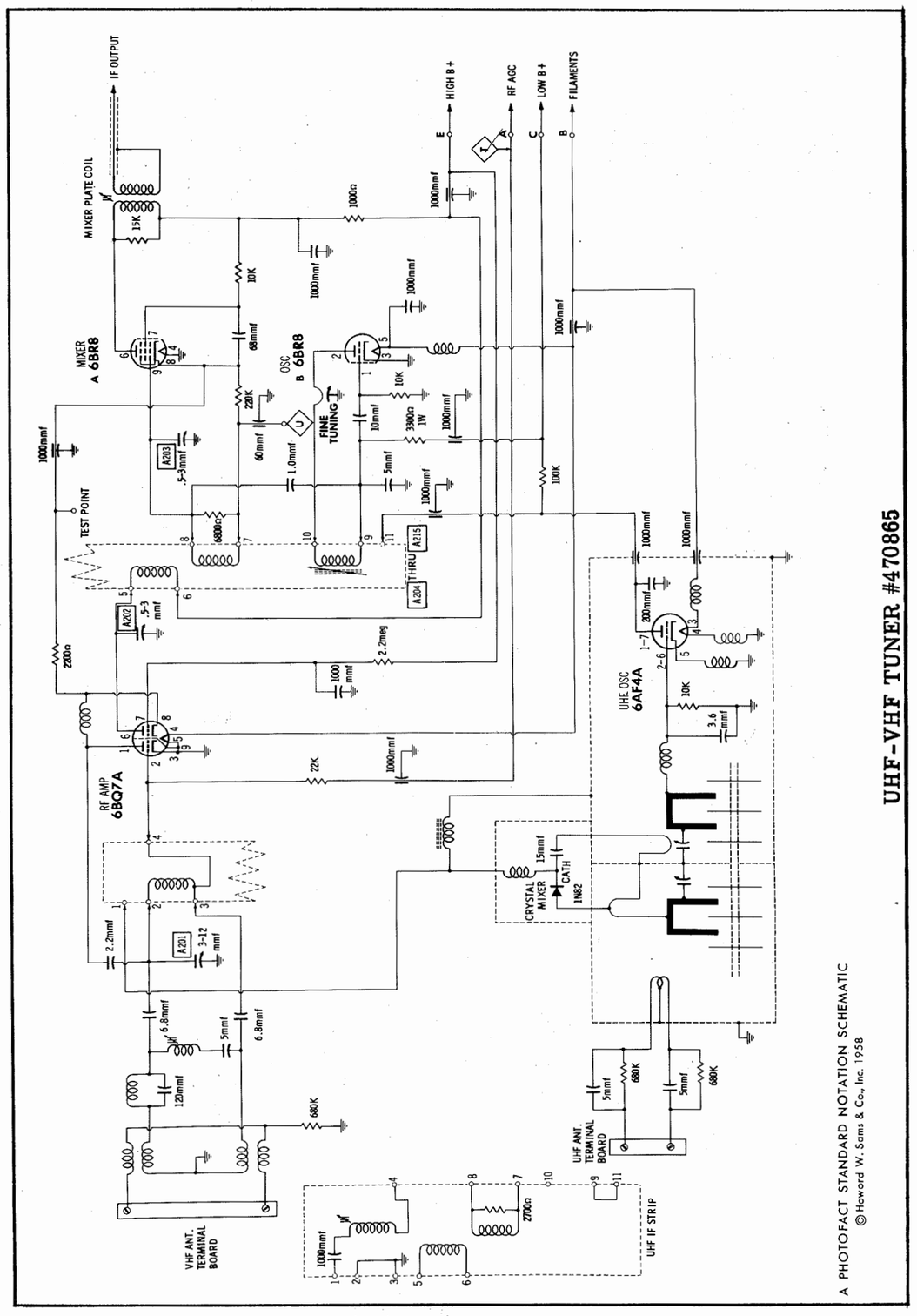


FIG. 10



UHF-VHF TUNER #470865

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PARTS LIST AND DESCRIPTIONS (Continued)

MISCELLANEOUS

ITEM No.	PART NAME	EMERSON PART No.	NOTES
M13	Crystal	817036	3.579545MC
M14	Tuner	470919	VHF Ch. 120319D
	Tuner	470904	VHF Ch. 120296D
	Tuner	470931	UHF-VHF Ch. 120320A
	Tuner	470865	UHF-VHF Ch. 120297A
M15	Delay Line	709004	
	Delay Line	709003 *	
M16	Switch	510114	Horiz. Size, Rotary, Wafer Type
M17	Magnet	708225	Purity
M18	Magnet	412400	Field Equalizer Assy.
M19	Magnet	708230	Blue Beam Positioning
M20	Interlock	585169	High Voltage

* Alternate.

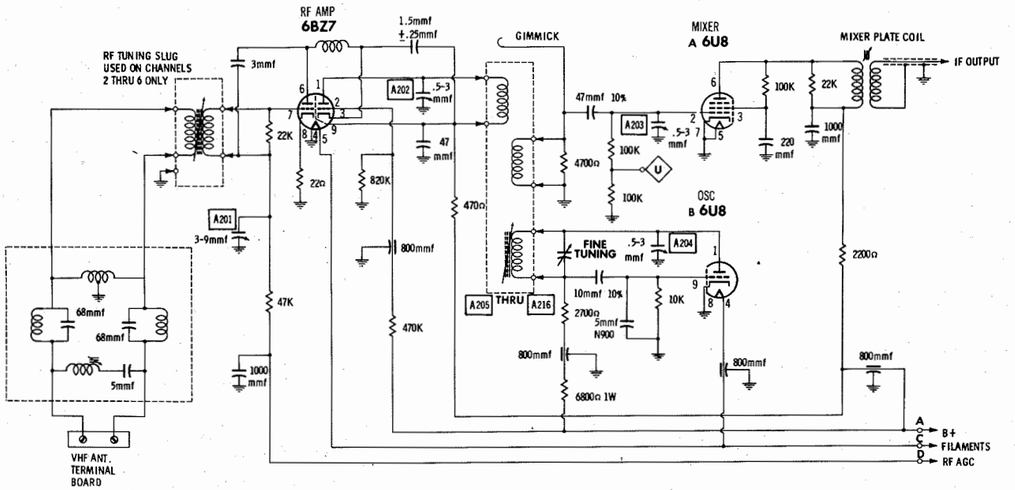
CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Safety Glass	520245	Models C506A, C507A
Safety Glass	520244	Models C502C, C503C, C504A, C505A
Mask	460760A	Models C506A, C507A
Mask	460686C	Models C502C, C503C, C504A, C505A
Knob	460672B	Fine Tuning, Model C506A
Knob	460692	Fine Tuning, Model C507A
Knob	460672A	Fine Tuning, Models C502C, C503C, C504A, C505A
Knob	460690	VHF Selector, Models C507A, C502C, C503C, C504A, C505A
Knob	460691	UHF Selector, Models C507A, C502C, C503C, C504A, C505A
Knob	450236A	Selector Shank, Model C506A
Knob	460670A	Selector Flange, Model C506A
Knob	450233A	On-Off-Volume, Models C506A, C507A
Knob	460693	Volume, Models C503C, C505A
Knob	450235A	On-Off-Volume Shank, Models C502C, C504A
Knob	460669A	On-Off-Volume Flange, Models C502C, C504A
Knob	450229	Brightness, Models C506A, C507A
Knob	460671A	Contrast, Models C502C, C504A
Knobs	450225	Secondary Controls
Knob	460694	Tone, Models C503C, C505A
Leg	620265	Mahogany Cabinet, Models C504A, C505A
Leg	620265A	Blond Cabinet, Models C504A, C505A
Cabinet	140746	Mahogany, Models C502C, C503C
Cabinet	140746A	Blond, Models C502C, C503C
Cabinet	140756	Includes legs, Mahogany, Models C504A, C505A
Cabinet	140756A	Includes legs, Mahogany, Models C504A, C505A

WIRING DATA

High Voltage Lead	Use BELDEN No.	8869
Shielded Hook-up Wire	Use BELDEN No.	8885 (Single Conductor)
		8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No.	8530 (Solid) Available in Ten Colors
		8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type)	Use BELDEN No.	8874
300Ω Tuner Input Lead	Use BELDEN No.	8225
300Ω Antenna Lead-in	Use BELDEN No.	8230 or 8275
Antenna Rotor Cable	Use BELDEN No.	8464 (Flat) or 8484 (Round) - 4 Conductor
		8485 (Round) - 5 Conductor
		8488 (Round) - 8 Conductor



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VHF TUNER #470904

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA							NOTES
		EMERSON PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	Vert. Osc.	738090	B6701	A-4003	V402	A-8122	26A04	A-97Y	
T3	Vert. Output	738124	Z1900 ①			A-8142	26S72	A-108X	
T4	Vert. Isolation	738125							
T5 A	Yoke-Horiz. (11.7MH)	708256							
B	Vert. (110MH)								
T6	Horiz. Output	738123							
T7	Horiz. Tuning Coil (.5-2MH)	708226			201R13A			WLC-23	
T8	Width Choke (.5MH)	708268 ②							
T9	Horiz. Isolation Choke	708227							
T10	Horiz. Isolation Choke (16MH)	708228		MWC-11③	201R16 ③	WC-11 ③	WC-18③④	WLC-12 ③	
T11	Horiz. Convergence Shaping Coil (.4-1.9 MH)	708249	RF804 ⑤	MWC-18	201R5A ⑤	WC-7A	WC-23	WLC-23	
T12	Convergence Inductor Pack	737026							
T13	Convergence Yoke Assy.	708281 ⑥							
A	Green Coil								
B	Blue Coil								
C	Red Coil								

① Use 8 to 1 turns ratio.
② Used in Ch. 120319D, 120320A. Ch. 120296D, 120297A use Part #708258.
③ Set at maximum.
④ Enlarge mounting hole.
⑤ Drill new mounting hole.
⑥ Used in Ch. 120319D, 120320A. Ch. 120296D, 120297A use Part #708259.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	EMERSON PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T14	5000Ω	8Ω tap④ 3-4Ω	734126	Z1002	A-2302	AU-600	A-3823	24S64	S-53X	

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	EMERSON PART No.	QUAM PART No.	
SP1	6½"	PM	3-4Ω	180145 ①	6A15	① Models C502C, C503C, C504A, C505A use 2 speakers of this part number.

RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA					NOTES
	CURRENT (Measured)	EMERSON PART No.	FEDERAL PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL PART No.	SARKES TARZIAN PART No.	
M1	.500A	817042 ①	1440A ②		6RS250 ②	359A	① Selenium Type.
M2	.500A	817042 ①	1440A ②		6RS250 ②	359A	② Connect 2 in series.
M3	.380A	817043 ①	1384A ②		6RS150 ②	209A	
M4	.380A	817043 ①	1384A ②		6RS150 ②	209A	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			EMERSON PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M5	N	1 1/4A 125V S/B	808013		3331.25 (1 1/4A-125V-S/B)	34601I	N 1 1/4	HN 3/4 to 1 1/4
M6	N	1 1/4A 125V S/B	808013		3331.25 (1 1/4A-125V-S/B)	34601I	N 1 1/4	HN 3/4 to 1 1/4
M7	3AG	3/10A 125V S/B	808217 ①		315.300 (3/10A-125V-S/B)		MDV 3/10	
M8	#26 Wire 1 1/2" Long							
M9	#26 Wire 1 1/2" Long							

① Some versions may use .45A S/B in this application (Part #808017).

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		EMERSON PART No.	CBS PART No.	SYLVANIA PART No.	
M10	1N295 *	817044	1N64	1N295	Video Detector (Clip-in)
M11	1N295 *	817044	1N64	1N295	Chroma & Sound Detector (Clip-in)
M12	1N34	817032	1N34A	1N34A	Color Killer Clamp (Pigtail)
					*Some versions may use CK706AP in this application.

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	1st. Video IF Amp.	6DC8	
V2	2nd. Video IF Amp.	6DC8	
V3	3rd. Video IF Amp.	6CF6	
V4	4th. Video IF Amp.	6CB6	
V5	Video Output	12BY7A	
V6	AGC Keying-Color Killer	6AN8	
V7	1st. Sound IF Amp.	6CB6	
V8	2nd. Sound IF Amp.	6CB6	
V9	Discriminator - AF Amp. - AGC Clamper	6T8	
V10	Audio Output	6AQ5	
V11	Sync Sep.-Sync Phase Inv.	12AU7	
V12	Vert. Osc.-1st.Chroma Bandpass Amp.	6BH8	6U8 *

ITEM No.	USE	TYPE	NOTES
V13	Vert. Output	6BL7GT	
V14	Horiz. AFC	6AL5	
V15	Horiz. Mult.	6CG7	
V16	Horiz. Output	6CB5	
V17	Damper	6AU4GTA	
V18	HV Rectifier	3B2	
V19	Focus Rectifier	1X2B	
V20	HV Regulator	6BK4	
V21	2nd. Chroma Bandpass Amp.	6CL6	
V22	Burst Gate-Chroma Sync Phase Det.	6BJ7	
V23	Chroma Ref. Osc. Control-Chroma Ref. Osc.	6U8	
V24	R-Y Demodulator-B-Y Demodulator	12BH7	

* Used in Ch. 120296D, 120297A.

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	EMERSON PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V25	21AXP22A	21AXP22A	21AXP22-A	21AXP22A	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA							
	CAP.	VOLT.	EMERSON PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.	
C1A	▲80	475	925330	AFHS2-99-90	C1262	FP264.5	TMD-93	T-197	R1013 *	
B	▲80	250				TC58	TD-30-250	MT-25100		
C2A	▲80	475	925321	AFHS2-99-90	C1262	FP264.5	TMD-93	T-197	R1013 *	
B	▲80	250				TC58	TD-30-250	MT-25100		
C3	1000	15	925320	AFH1-02	A0060	WP039	TMS-4	S-020	TVL-1165	
C4	2	25	925293	PRS50V2	BBR2-50	TC302	TD-2-25	MT-0502	TVA-1201	
C5	4	150	925313	PRSI50V4	BBR4-150	TC40	TD-4-150	MT-1504	TVA-1402	
C6A	▲10	450	925319	AFH4-10	D0090	FP434	TMQ-10	Q-030	TVL-4760	
B	10	450								
C	▲10	450								
D	■10	450								
C7	2	450	925300	PRS450V2	BR245		TD-2-450	MT-4502	TVA-1701	
C8	5	50	925317	PRS50V5	BBR5-50	TC30	TD-5-50	MT-0504	TVA-1303	
C9	25	50	925315	PRS50V25	BBR25-50	TC36	TD-25-50	MT-0525	TVA-1306	
C10	2	450	925300 ①	PRS450V2	BR245		TD-2-450	MT-4502	TVA-1701	
C11	4	150	925313	PRSI50V4	BBR4-150	TC40	TD-4-150	MT-1504	TVA-1402	
C12	10	25	925316	PRS25V10	BBR10-25	TC22	TD-10-25	MT-0210	TVA-1204	
C13	500	15NP	925318	NP-PRSI5V500	BR10001 † BR10001 †	TC1501 † TC1501 †	TD-1000-15 TD-1000-15		R2698 *	

* Non-catalog item. ① Not used in some versions. † Connect negative leads together.

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	EMERSON PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C14	.47	200	924355	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C15	15-50		900134						
C16	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C17	820		928910			1R5T82		MS-382	10%
C18	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C19	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C20	820		928910			1R5T82		MS-382	10%
C21	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C22	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C23	820					BYA10T82		MS-382	
C24	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C25	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	③
C26	820		928910			1R5T82		MS-382	10%
C27	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C28	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C29	150			1468-00015	D6-151	5W5T15		1FM-315	
C30	1500		928920	BPD-0015	DD-152	BYA10D15	DC5215	5HK-D15	
C31	.0047	400	924553	P488N-0047	D6-472	CUB6D47	GEM-6247	6TM-D47	
C32	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C33	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C34	470	2000	928242						10%
C35	4.7		928212	NPO-SI 4.7	TCZ-4R7	CTA6V47C	ZT-5547	5TCCB-V47	10% ①
C36	47		928339						N470 10%
C37	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C38	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C39	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C40	68		911064	NPO-DI 68	DD-680	L10Q68		MS-468	10%
C41	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C42	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C43	47		928339						N470 10%
C44	270			1468-00027	D6-271	5W5T27	UC-5327	1FM-327	②
C45	.015	200	924320	P288N-015	DDI6-153	CUB6S15	GEM-4115	4TM-S15	
C46	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C47	.01	400	924514	P488N-01	D6-103	CUB6S1	GEM-411	4TM-S1	
C48	.1	400	924515	P488N-1	DF-104	CUB4P1	GEM-401	4TM-P1	
C49	.0047	600	924753	P688N-0047	D6-472	CUB6D47	GEM-6247	6TM-D47	
C50	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C51	330		911072	1469-00033	DD-331	5R5T33		MS-333	10%
C52	100			1468-0001	DD-101	5W5T1	MC235	1FM-31	
C53	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C54	2200		928921	BPD-0022	DD-222	BYA10D22	UC-5222	5GA-D22	
C55	.0047	400	924553	P488N-0047	D6-472	CUB6D47	GEM-6247	6TM-D47	
C56	.0047	400	924553	P488N-0047	D6-472	CUB6D47	GEM-6247	6TM-D47	
C57	.01	400	922414				GEM-1611		10%
C58	220		928750	1469-00022	D6-221	22R5T22		MS-322	10%
C59	.1	600	924715	P688N-1	DF-104	CUB6P1	GEM-601	6TM-P1	

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA EMERSON PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C60	.22	600	924725	P688N-22		CUB6P22	GEM-6022	6TM-P22	
C61	1000	2000	928146	HVD-30-1000	DD30-102	HVB20D1	DC3021	20GA-D1	
C62	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C63	1000		928933	BPD-001	DD-102	BYA8D1	DC521	5HK-D1	
C64	1500			BPD-0015	DD-152	BYA10D15	DC5215	5HK-D15	③
C65	.0047	400	924553	P488N-0047	D6-472	CUB6D47	GEM-6247	6TM-D47	
C66	.047	200	924354	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C67	330		911044	1469-00033		5R5T33		MS-333	5%
C68	4700		911337	1464-0047		1R5D47		MS-247	10%
C69	18		911014	1469-000018		22R5Q18		MS-418	5%
C70	470		911169		D6-471	5R5T47		MS-347	10%
C71	.01	600	924714	P688N-01	D6-103	CUB6S1	GEM-611	6TM-S1	
C72	.1	600	924715	P688N-1	DF-104	CUB6P1	GEM-601	6TM-P1	
C73	.22	600	924725	P688N-22		CUB6P22	GEM-6022	6TM-P22	
C74	.22	600	924725	P688N-22		CUB6P22	GEM-6022	6TM-P22	
C75	.22	1000	924925	P1088N-22		CUB10P22			
C76	.01	1000	924914	P1088N-01	DD16-103	CUB10S1	GEM-1011	10TM-S1	
C77	1000	6000	928755						10%
C78	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C79	.047	600	924754	P688N-047	DF-503	CUB6S47	GEM-6147	6TM-S47	
C80	150	3000	928148						10%
C81	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C82	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C83	270			1468-00027	DD-271	5W5T27		1FM-327	④
C84	.047	200	924354	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C85	10		928216	NPO-S1 10	TCZ-10	CTA6QIC	ZT-541	5TCC-Q1	10%
C86	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C87	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C88	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C89	680		911171	1464-00068	D6-681	1R5T68		MS-368	10%
C90	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C91	.022	200	924324	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C92	27		911059	1469-000027	D6-270	22R5Q27		MS-427	10%
C93	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C94	15		911151	1469-000015	DD-150	22R5Q15		MS-415	10%
C95	2-20								
C96	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C97	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C98	1000		928933	BPD-001	DD-102	BYA8D1	DC521	5HK-D1	
C99	.01	200	924314	P288N-01	D6-103	CUB2S1	GEM-411	4TM-S1	
C100	.22	200	924325	P288N-22		CUB2P22	GEM-2022	2TM-P22	
C101	2.2		928208	NPO-S1 2.2	TCZ-2R2	CTA6V22C		5TCCB-V22	10%
C102	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C103	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C104	220		911070	1469-00022	D6-221	22R5T22		MS-322	10%
C105	82		911065	1469-000082	D6-820	22R5Q82		MS-482	10%
C106	4700		928923	BPD-0047	DD-472	BYA10D47	UC-5247	5GA-D47	
C107	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C108	.022	200	924324	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C109	120		911162	1469-00012	D6-121	22R5T12		MS-212	10%
C110	15		911151	1469-000015	D6-150	22R5Q15		MS-415	10%
C111	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C112	10000		928924	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C113	.1	400	924515	P488N-1	DF-104	CUB4P1	GEM-401	4TM-P1	
C114	.01	600	924714	P688N-01	D6-103	CUB6S1	GEM-611	6TM-S1	
C115	1000		928933			1R5D1	MCB255	MS-21	10%
C116	.01	600	924714	P688N-01	D6-103	CUB6S1	GEM-611	6TM-S1	
C117	.01	600	924714	P688N-01	D6-103	CUB6S1	GEM-611	6TM-S1	
C118	1000		928933	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	④
C119	.22	1000	924925	P1088N-22		CUB10P22			
C120	25-280								
C121	25-280		900132						
C122	25-280								
C123	2700		911334	1464-0027		1R5D27		MS-227	10%
C124	2700		911334	1464-0027		1R5D27		MS-227	10%
C125	2700		911334	1464-0027		1R5D27		MS-227	10%
C126	.22	200	924325	P288N-22		CUB2P22	GEM-2022	2TM-P22	
C127	4.5-25		900145						
C128	.01	400	922201	P488N-01	D6-103	CUB4S1	GEM-411	4TM-S1	
C129	.01	400	922201	P488N-01	D6-103	CUB4S1	GEM-411	4TM-S1	

① Some versions may use 3.3mmf in this application.
② Some versions may use .001mfd ③ 400V 10% in this application (Part #924413).
③ Some versions may use 4700mmf in this application (Part #928923).
④ Not used in some versions.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA EMERSON PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	500K	½	390438				** UE3848S	Brightness, ①
B	1meg	½						Volume, Tap ③ 200K ①
C	Switch							
R2A	50K	½	390433					Tone ②
B	Shaft							
R3A	1meg	½	390394					Vert. Hold
B	Shaft							
R4A	10K	½	390391					Horiz. Hold
B	Shaft							
R5A	500Ω	½	390362					Contrast, Tap ⑥ 75Ω
B	Shaft							
R6A	2000Ω	½	390363	B-6	A47-2000-S	Q11-110	U6	Color Amp. ③
B	Shaft			Not Req.	FS-3	Not Req.	DS-36 †	
R7A	500K	½	390368				▲ UE3844	Brightness, Blue
B	500K	½						Brightness, Green
R8A	500K	½	390369	F1-40			■ UE3845	Screen Adj., Blue ④
B	500K	½		R2-40				Screen Adj., Green ④
R9A	500K	½	390389	B-59	A47-500K-S	Q11-133	U50	Red Screen
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R10A	1000Ω	½	390386				■■ UE3847	Vert. Conv. Phase, Blue
B	1000Ω	½						Vert. Conv. Phase, Green
R11A	1000Ω	½	390392	B-5	A47-1000-S	Q11-108	U4	Vert. Conv. Phase, Red
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R12A	2000Ω	½	390367				▲ UE3846	Vert. Conv. Ampl., Blue
B	2000Ω	½						Vert. Conv. Ampl., Green
R13A	2000Ω	½	390393	B-6	A47-2000-S	Q11-110	U6	Vert. Conv. Ampl., Red
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R14A	1000Ω	½	390366				■■ UE3847	Horiz. Conv. Ampl., Blue
B	1000Ω	½						Horiz. Conv. Ampl., Green
R15A	1000Ω	½	390392	B-5	A47-1000-S	Q11-108	U4	Horiz. Conv. Ampl., Red
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R16A	200Ω	4	390396				UE96W	Vert. Cent.
B	200Ω	4					Not Req.	Vert. Cent.

CONTROLS (cont)

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA EMERSON PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R17A	500K	½	390432	AB-59	A47-500K-S	Bil-133	PTA55L	High Volt. Adj. ⑤
B	Shaft			AK-1	FKS-1/4	SK2	Not Req.	
R18A	1meg	½	390388	AB-69	A47-1meg-S	Bil-137	TA16L	Vert. Size
B	Shaft			AK-1	FKS-1/4	SK2	Not Req.	
R19A	1000Ω	2	390395	WN-102	A43-1000	WPS1000	R1000L	Vert. Lin.
B	Shaft			Not Req.	FKS-1/4	Not Req.	Not Req.	
R20A	5000Ω	½	390376	AB-10	A47-5000-S	Bil-114	TA53L	Horiz. Drive
B	Shaft			AK-1	FKS-1/4	SK2	Not Req.	
R21A	100Ω	4	390397				UE97W	Horiz. Cent.
B	100Ω	4					Not Req.	Horiz. Cent.
R22	250K	2	390413				R250L	Focus
R23	3000Ω	2	390401		39-3000		FL-4K -	Sound Reject

① Ch. 120296D and 120297A use part #390365.
② Ch. 120296D and 120297A use 250K in this application (Part #390412).
③ Ch. 120296D and 120297A use 5000Ω control with adjustable stop in this application (Part #390449).
④ Ch. 120296D and 120297A use part #390368.
⑤ Ch. 120296D and 120297A use 2.5meg in this application (Part #390390).
** "STA-LOC" Equivalent FD55L, OF3500, RU16T25, IS3937, US-41.
† Special extension shaft.
▲ "STA-LOC" Equivalent FF55L, OK2937, RU55L, 1K3250.
■■ "STA-LOC" Equivalent FF13L, OK2937, RU13L, 1K3250.
† "STA-LOC" Equivalent FF23L, OK2937, RU23L, 1K3250.

RESISTORS

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

ITEM No.	RATING OHMS	RATING WATT	EMERSON PART No.	NOTES
R24	10meg		341452	
R25	1000Ω		340492	
R26	15K		340772	
R27	2700Ω	1	370592	
R28	56Ω		340192	
R29	470K		341132	
R30	56K		340912	Note 1
R31	470Ω		340412	
R32	2700Ω	1	370592	
R33	56Ω		340192	
R34	47K		340892	
R35	47K		340892	
R36	39K		340872	
R37	470Ω		340412	
R38	2700Ω	1	370592	
R39	56Ω		340192	
R40	8200Ω			Note 2
R41	470Ω		340412	
R42	22K		340812	Note 11
R43	470Ω		340412	Note 11
R44	10K	2	780732	Note 11
R45	390Ω		340392	
R46	15K		340772	
R47	3900Ω		340632	
R48	820Ω		340472	Note 11
R49	3900Ω		340632	
R50	680Ω		340452	
R51	56Ω		340192	
R52	6500Ω	10	397109	Note 3
R53	1500Ω		340532	
R54	120K	1	370992	
R55	58K		34012	
R56	47K		340892	
R57	10K		340732	
R58	120K		340992	
R59	4700Ω		340852	
R60	2700Ω		340592	
R61	470K		341132	
R62	33K	1	370852	
R63	220Ω		340332	
R64	1000Ω		340492	
R65	47K		340892	
R66	3300Ω		340612	
R67	15K	2	780772	
R68	15K		340772	
R69	100K		340972	
R70	100K		340972	
R71	100K		340972	
R72	1.2meg		341232	
R73	39K		340872	
R74	15K		340772	
R75	4.7meg		341372	
R76	100K		340972	
R77	47K		340892	
R78	220K			Note 4
R79	100K		340972	
R80	3300Ω	10	394188	
R81	33K		340852	
R82	470K		341132	
R83	2.7meg		341312	
R84	150K		341012	
R85	39K		340872	
R86	1meg		341212	
R87	470Ω		340412	
R88	2200Ω		340572	
R89	1800Ω			Note 5
R90	22K		340812	
R91	8200Ω		340712	
R92	8200Ω		340712	
R93	330K		341092	
R94	1meg			
R95	47K			
R96	1meg			Note 6
R97	56K		340912	
R98	100Ω		340252	
R99	2.2meg		341292	
R100	100Ω		340252	
R101	12K		340752	
R102	470Ω	1	370412	
R103	1000Ω		340492	
R104	1000Ω		340492	
R105	100K		340972	

ITEM No.	RATING OHMS	RATING WATT	EMERSON PART No.	NOTES
R106	100K		340972	
R107	4.7meg		341372	
R108	680K		341172	
R109	120Ω			
R110	470K		341132	
R111	56000Ω 5%	1	360672	
R112	1500Ω 5%		340532	Note 7
R113	100K		340972	
R114	120K		330992	
R115	2200Ω			Note 8
R116	4700Ω		340852	
R117	470K		341132	
R118	100Ω		340252	
R119	100Ω		340252	
R120	6000Ω	5	394057	
R121	6000Ω	5	394057	
R122	10Ω	1	370012	
R123	10meg	2	781454	
R124	10meg	2	781454	
R125	10meg	2	781454	
R126	470K	2	781134	
R127	470K	2	781134	
R128	2.2meg		331292	
R129	1.8meg 5%			
R130	10K	1	370732	
R131	12K	1	370752	
R132	22meg		341532	
R133	3.9meg			Note 9
R134	1meg		341212	Note 10
R135	1.5meg		341252	Note 10
R136	12meg		341472	
R137	1000Ω		340492	
R138	22K		340812	
R139	18K		340792	
R140	68K	1	370932	
R141	5600Ω		340672	
R142	39K	2	780872	
R143	2700Ω		340592	
R144	22K		340812	
R145	47K		340892	Note 11
R148	560Ω		340432	
R147	10K		340732	
R148	1000Ω		340492	
R149	680Ω		340452	
R150	15K	1	370712	
R151	470Ω	1	370412	
R152	4000Ω	5	394016	
R153	10K		340732	
R154	100K		340972	
R155	2700Ω		340592	
R156	22K	2	780812	
R157	56K	2	780912	
R158	10K		340732	
R159	220Ω	1	370332	
R160	1meg		397096	Note 12
R161	1meg		397096	Note 12
R162	2.7meg		341312	
R163	15K		340772	
R164	2200Ω		340572	
R165	560Ω		340432	
R166	2700Ω		340592	
R167	330K		341092	
R168	100K		340972	
R169	10K		340732	
R170	560Ω		340432	
R171	10K		340732	
R172	560Ω	2	780432	
R173	82K	2	780952	
R174	82K	2	780952	
R175	100K		340972	
R176	2700Ω		340592	
R177	6800Ω	2	780692	
R178	100K		340972	
R179	2700Ω		340592	
R180	180K		341032	
R181	270K		341072	
R182	82K		340952	
R183	82K		340952	
R184	82K		340952	
R185	56K		340912	
R186	47K		340892	
R187	100K		340972	

RESISTORS (cont)

ITEM No.	RATING OHMS	RATING WATT	EMERSON PART No.	NOTES
R188	150K		341012	
R189	100K		340972	
R190	150K		341012	
R191	150K		341012	
R192	220K		341052	
R193	4700Ω		340652	
R194	1000Ω		340492	
R195	22Ω		340092	
R196	1000Ω		340492	

ITEM No.	RATING OHMS	RATING WATT	EMERSON PART No.	NOTES
R197	56K	2	780912	
R198	56K	2	780912	
R199	56K	2	780912	
R200	1000Ω		340492	
R201	5600Ω	2	780672	
R202	220Ω	2	780332	
R203	100K		340972	
R204	3900Ω	2	780632	
R205	56K		340912	

Note 1. Some versions may use 39K in this application (Part #340872).
Note 2. Some versions may use 4700Ω in this application (Part #340652).
Note 3. Some versions may use 7800Ω 10% 10W in this application.
Note 4. Some versions may use 330K in this application (Part #341092).
Note 5. Some versions may use 2700Ω in this application (Part #340592).
Note 6. Some versions may use 330K, 560K or 820K in this application.
Note 7. Some versions may use 1800Ω 5% in this application.
Note 8. Some versions may use 470Ω in this application or omit this resistor.
Note 9. Some versions may use 1.8meg in this application. (Part #341272).
Note 10. Some versions may have R134 and R135 reversed.
Note 11. Not used in some versions.
Note 12. R160 and R161 are a matched pair 2% tolerance.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA EMERSON PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1A	1st. Video IF	720272					Includes Assy. ①
B	41.25MC Trap						
L2A	2nd. Video IF	720225					
B	47.25MC Trap						
L3	3rd. Video IF	720155	17-5004	TV-126	6234		
L4	4th. Video IF	720155	17-5004	TV-126	6234		
L5	RF Choke	705021	19-1005	BC-566	4612		10 Microhenries ②
L6A	5th. Video IF	720218					Includes Assy.
B	41.25MC Trap						
L7A	4.5MC Trap	720221					Includes Det. Assy.
B	1st. Sound IF						
L8	6th. Video IF	720219					Includes Det. Assy.
L9	Series Peaking Coil	708250	19-1922				270 Microhenries, (Variable)
L10	3.58MC Trap	708251					
L11	Shunt Peaking Coil	708109	19-3250	TV-185		VP-6	225 Microhenries
L12	Dual Peaking Coil	708266					
L13	Shunt Peaking Coil	708243	19-3500	TV-203	6174	VP-8	500 Microhenries
L14	2nd. Sound IF	720182	17-3495	TV-113	6203	SF-2	
L15	Discriminator	708175	17-3496	TV-114	6204	SD-3	
L16A	1st. Chroma Amp. Grid Coil	720222					Includes cap.
B	RF Choke						1 Millihenry
L17	1st. Chroma Amp. Plate Trans.	720229					
L18	2nd. Chroma Amp. Plate Coil	708280					
L19	Demodulator Driver Trans.	708267					Sec. Tapped ⑥ 2.7Ω
L20	Burst Gate Plate Coil	708265					
L21	7.2MC Trap	708263					
L22	1Series Peaking Coil	708248	19-3036	TV-180	6176	VP-1	40 Microhenries
L23	Chroma Ref. Osc. Control Plate Coil	708241					
L24	Shunt Peaking Coil	708247	19-4950	TV-208	6157		1 Millihenry
L25	Chroma Ref. Osc. Output Trans.	708262					
L26	Demodulator Input Coil	708264					Includes Caps.
L27	Series Peaking Coil	708247	19-4950	TV-208	6157		1 Millihenry
L28	Series Peaking Coil	708247	19-4950	TV-208	6157		1 Millihenry
L29	Series Peaking Coil	708247	19-4950	TV-208	6157		1 Millihenry
L30	RF Choke	705021	19-1005	BC-566	4612		10 Microhenries ②

① Alternate Part #720224. ② IRC Part #CL-1.

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA EMERSON PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	Thordorson PART No.	NOTES
L31	68Ω		708255	19-1576	TV-163	6210	H-102	HS-5	Horiz. Freq.
L32	40Ω		708257						Horiz. AFC

FILTER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	RATINGS DC RES.	RATINGS INDUCTANCE (@ CURRENT 1000 C/L)	REPLACEMENT DATA EMERSON PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.
L33	.300A	28Ω	.8 Hy.	737028			F-801			C-27X ①
L34	.160A	48Ω	.7 Hy.	737027		C-2974 ①	F-803 ①	C-2327 ①	26C43 ①	C-24X ①

① Drill new mounting hole.

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	REPLACEMENT DATA EMERSON PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.
T1	117VAC @3A	320VCT @.500A	6.4VAC @1.8A	730063 ①						
	SEC. 3	SEC. 4	SEC. 5							
	12.6VCT @13.5A									

① Used in Ch. 120319D, 120320A. Ch. 120296D, 120297A use part #730056.