

CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Models 1420, 1421, 1424, 1425, 1426, 1428.

1. Remove 8 push-on type knobs from the front.
2. Remove 6 metal screws from the rear cover. Remove the rear cover.
3. Remove the picture tube socket, yoke clamp, width sleeve, HV lead and speaker leads.
4. Loosen 2 metal screws holding the antenna terminal board.
5. Remove the metal screw holding the tuning support bracket to the left side of the cabinet and 5 metal screws holding the control panel to the front of the cabinet.
6. Remove 2 metal screws holding the top chassis brackets and 4 metal screws holding the bottom chassis brackets.
7. Remove the chassis and yoke.
Models 1404, 1405, 1418, 1419.
1. Remove push-on type knobs from the front.

2. Remove the screws holding the trim strips at the top edge of the safety glass.
3. Tilt the safety glass out at the top and lift to remove.
4. Remove 2 metal screws holding mask. Remove mask.
5. Remove the hex nut holding the on-off-volume control.
6. Remove 1 metal screw holding the front tuner bracket.
7. Remove the rear cover.
8. Remove the picture tube socket yoke clamp, width sleeve, HV lead, antenna terminal and speaker leads. (Phono and radio leads, if so equipped.)
9. Remove metal screws from rear tuner bracket and side control panel.
10. Remove screws from top and bottom chassis brackets.
11. Remove chassis.

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably with a test pattern.
Turn the Local-Distance control fully counter clockwise.
Connect a clip lead across Horizontal Frequency coil (L17). Connect a second clip lead from pin 7 (grid) of the Horizontal Mult tube (V11) to chassis.
Set the Horizontal Hold control to the center of its range.

Adjust the Horizontal Balance control until picture synchronizes horizontally although the picture may sway from side to side.
Remove the clip lead from L17 and adjust the Horizontal Frequency slug (B1) until the picture again synchronizes horizontally.
Remove the short from the tube grid. The Local-Distance control may now be adjusted for best reception on all available channels.

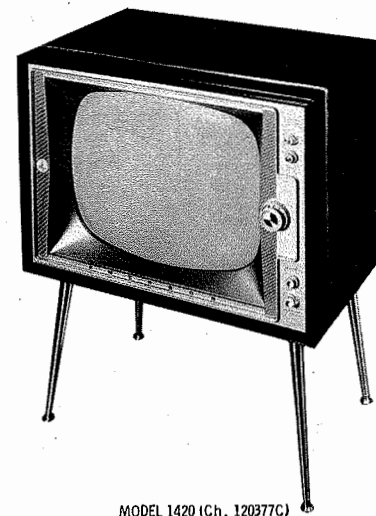
SET 400 FOLDER 2

EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 12400S, 120401U, 120403S, 120404U)

PHOTOFACT* Folder



EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 12400S, 120401U, 120403S, 120404U)



MODEL 1420 (Ch. 120377C)

TRADE NAME	Emerson	MODELS	CHASSIS
		1426, 1428	120369C
		1421, 1425	120370G
		1420, 1424	120377C
		1404	120400S
		1405	120401U
		1418	120403S
		1419	120404U
			Radio 120397B
MANUFACTURER	Emerson Radio & Phonograph Corp., 14th. & Coles Sts., Jersey City 2, N.J.		
TYPE SET	Television Receiver		
TUBES	Eighteen		
POWER SUPPLY	110-120 Volts, 60 Cycle		
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Inter-carrier)		
	RATING 185 Watts, 1.75 Amp. @ 117 Volts AC		

MODELS 1418 AND 1419 USE EMERSON RECORD CHANGER #819113 SIMILAR TO UNIT COVERED IN PHOTOFACT SET 353 - FOLDER 16.

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustment of the VHF oscillator is possible by removing the channel selector and fine tuning knobs. Set the fine tuning at the center of its range. One slug for HIGH band adjustment is located at 6 o'clock and should be adjusted first. Three LOW band adjustments are located in a partial circle around the tuner shaft. Channels 6 and 5 are the first adjustment clockwise from the high band adjustment, channels 4 and 3 the second and channel 2 the third. Adjust for best picture and sound in channel sequence beginning with the highest channel in the area and adjusting in descending order.

PICTURE TUBE SAFETY GLASS CLEANING

Models 1420, 1421, 1424, 1425, 1426, 1428.
Remove the channel selector and fine tuning knobs. Remove the trim strip at the right edge of the safety glass by pulling off. Remove 2 metal screws holding the safety glass clamps. Remove the safety glass.
Models 1404, 1405, 1418, 1419.
See steps 1, 2 and 3 of "Chassis Removal" for these models.

SPECIAL ADJUSTMENTS

A. Local-Distance
Observe the picture and advance the Local-Distance control to a point where the picture distorts or a buzz is heard in

the sound. Back off from this setting until the picture becomes stable with no noise in the sound.

B. Focus
No provision is made to vary the focus on this receiver.

C. Width
The width may be varied by means of a metallic sleeve located between the yoke and the picture tube neck. Adjust sleeve in or out of the yoke for a picture SLIGHTLY larger than necessary to fill the screen.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENTS

Set Horizontal Hold to center of its range. Adjust Horizontal Balance control until picture synchronizes horizontally.

FUSES

One fuse is used for LV power supply protection. (For location, see tube placement chart).

CENTERING

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

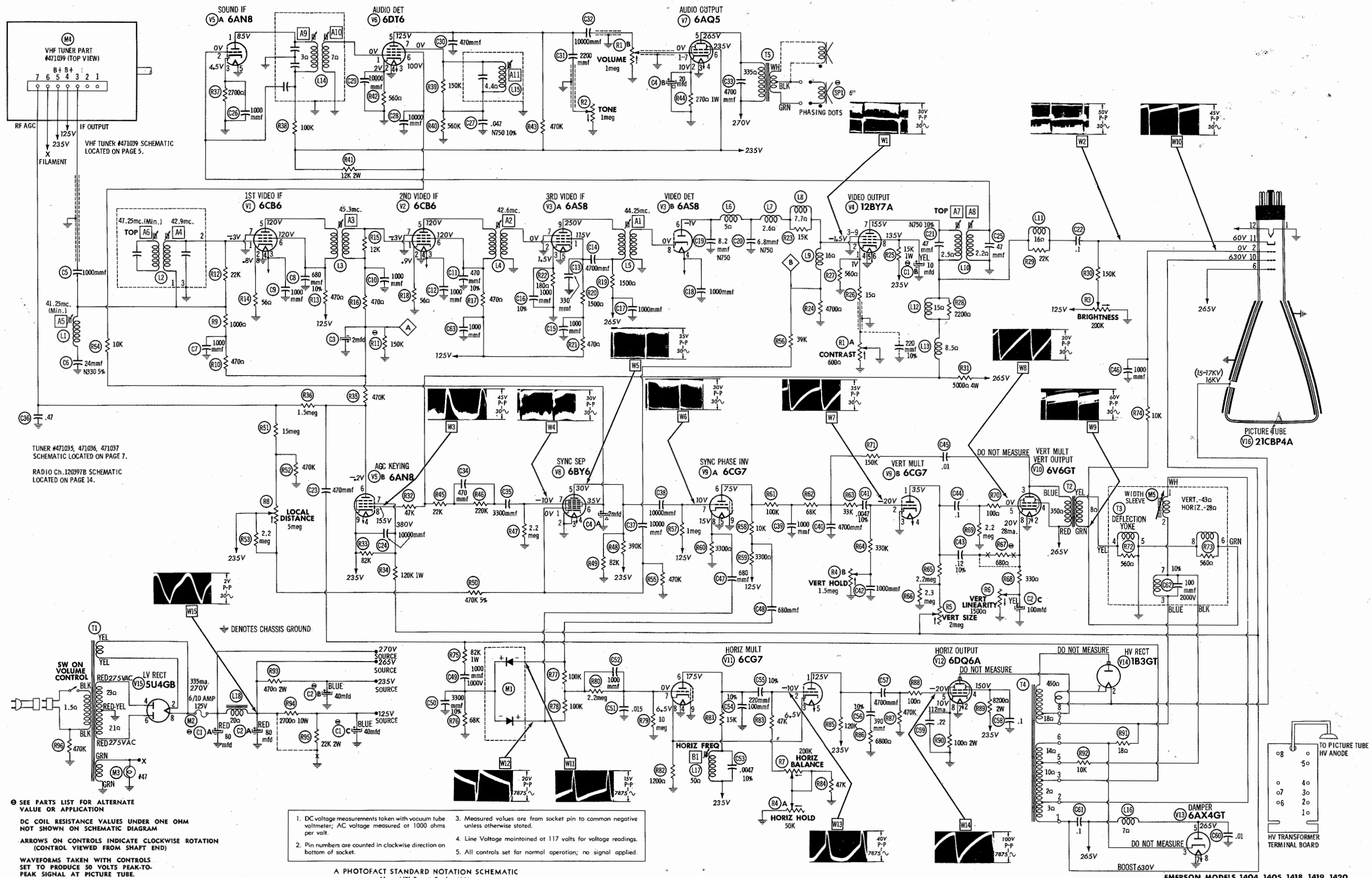
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of R491

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EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 12400S, 120401U, 120403S, 120404U)

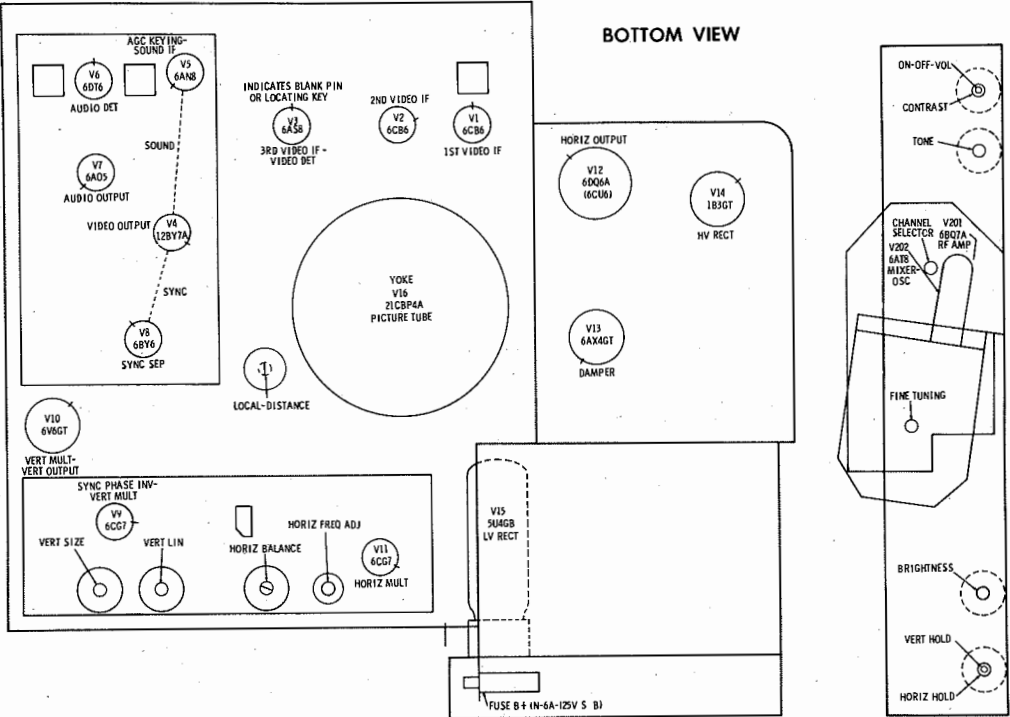
SET 400 FOLDER 2



RESISTANCE MEASUREMENTS

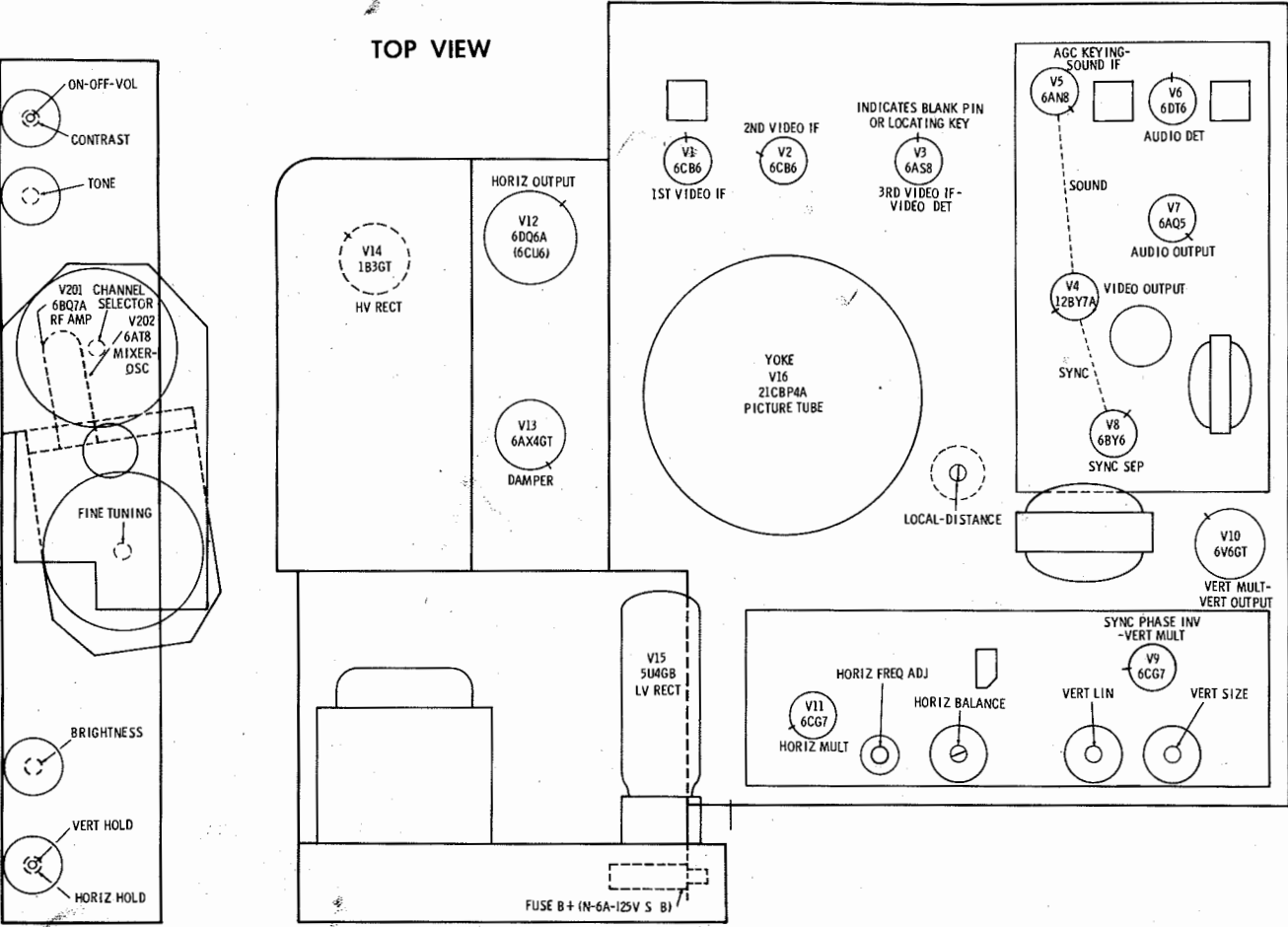
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6CB6	120K	56Ω	.1Ω	0Ω	†3200Ω	†3200Ω	0Ω		
V2	6CB6	120K	56Ω	.1Ω	0Ω	†3200Ω	†3200Ω	0Ω		
V3	6AS8	†4600Ω	.1Ω	180Ω	.1Ω	0Ω	4700Ω	0Ω	.1Ω	†1500Ω
V4	12BY7A	• 50Ω	4700Ω	0Ω	0Ω	0Ω	.1Ω	†5000Ω	†15K	0Ω
V5	6AN8	†100K	2.2Ω	2700Ω	.1Ω	0Ω	530K	†110K	†52K	†490Ω
V6	6DT6	7Ω	560Ω	.1Ω	0Ω	†470K	†12K	560K		
V7	6AQ5	0Ω	270Ω	0Ω	.1Ω	†335Ω	†490Ω	0Ω		
V8	6BY6	340K	0Ω	0Ω	.1Ω	†60K	†22K	2.2meg		
V9	6CG7	• †2.5meg	• 580K	0Ω	.1Ω	0Ω	†14K	†1meg	3300Ω	0Ω
V10	6V6GT	NC	.1Ω	†370Ω	†20Ω	2.2meg	TP	0Ω	• 580Ω	
V11	6CG7	†120K	• 120K	1200Ω	0Ω	.1Ω	†15K	1.6meg	1200Ω	0Ω
V12	6DQ6A	TP	.1Ω	NC	†8700Ω	470K	TP	0Ω	100Ω	TOP CAP †36Ω
V13	6AW4GT	NC	NC	†	NC	†27Ω	NC	0Ω	.1Ω	
V14	1B3GT		PINS 1 THRU 8	HAVE	INFINITE	RESISTANCE				TOP CAP †485Ω
V15	5U4GB	NC	†	NC	23Ω	NC	21Ω	NC	†	
V16	21CBP4A	0Ω	10K	PIN 6 †20Ω	PIN 10 †18Ω	PIN 11 • 180K	PIN 12 .1Ω			
V201	6BQ7A	†1500Ω	570K	INF	.1Ω	0Ω	INF	1.6meg	0Ω	0Ω
V202	6AT8	15K	†6500Ω	0Ω	0Ω	.1Ω	†4000Ω	†6500Ω	0Ω	130K

THIS READING CAN VARY GREATLY, (10K MINIMUM), DUE TO THE CONDITION OF THE ELECTROLYTIC CAPACITOR CONNECTED IN THE ASSOCIATED CIRCUIT.
THIS READING WILL VARY, CONTROL SET FOR NORMAL OPERATION.
† MEASURED FROM PIN 8 OF V15.
• MEASURED FROM PIN 3 OF V13.
NC NO CONNECTION.
TP TIE POINT.



TUBE PLACEMENT CHART

TUBE PLACEMENT CHART



TUBE FAILURE CHECK CHART

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

POWER SUPPLY FAILURE No raster, no sound Fuse (M2), V15	LOSS OF PICTURE OR SOUND No pic, no sound, has raster V1, V2, V3, V4 No pic, no sound, has snow V201, V202, V1 No pic, has sound, has raster V4, V16 Has pic, no sound V5, V6, V7 Overloaded picture V5
SWEEP FAILURE No raster, has sound M1, V11, V12, V13, V14, V16 No vertical deflection V9, V10 Poor vert. linearity or foldover V9, V10 Poor horiz. linearity or foldover V11, V12, V13 Narrow picture V11, V12, V13, V15 Vert. off freq. V9, V10 Horiz. off freq. V11	SYNC FAILURE No vert. sync V8, V9 No horiz. sync V8, V9, Rectifier (M1) No vert. or horiz. sync V8, V9

EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 124005, 120401U, 120403S, 120404U)

FOLDER 2

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.

VIDEO IF ALIGNMENT

Connect the negative lead of a 3 volt bias supply to point Δ . Positive to chassis.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
Use only enough generator output to provide a usable indication on VTVM.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Direct	Place a thin insulated metal strip between the mixer-osc. tube (V202), and tube shield. Connect the high side of sweep generator to the metal strip. Low side to chassis.	Not used	44.25MC	Any non-interfering channel	USE VTVM. DC probe to point Δ . Low side to chassis. (Across video det. load)	A1	Adjust for maximum deflection.
2. "	"	"	42.6MC	"	"	A2	"
3. "	"	"	45.3MC	"	"	A3	"
4. "	"	"	42.9MC	"	"	A4	"
5. "	"	"	45.3MC	"	"	Mixer Plate Coil	"
6. "	"	"	41.25MC	"	"	A5	Increase generator output and adjust for MINIMUM deflection.
7. "	"	"	47.25MC	"	"	A6	Increase generator output and adjust for MINIMUM deflection. Repeat steps 4 and 5.
8. "	"	44MC (10MC Swp)	41.25MC 42.9MC 45.75MC 47.25MC	"	Vert. Amp. to point Δ . Low side to chassis. (Across video det. load).		Use only enough sweep generator output to provide a usable pattern on scope. Check for response similar to Fig. 1. If necessary, retouch A1 to place 45.75MC marker in correct position. 42.9MC must not fall below 80%.

4.5MC TRAP ALIGNMENT

Tune in a strong station and adjust the fine tuning to the point where the 4.5MC beat interference just begins to appear in the picture. Adjust A7 for MINIMUM beat pattern in the picture.

SOUND IF ALIGNMENT

Tune in a strong station and adjust A8, A9 and A10 for loudest sound.
Adjust A11 for clearest and loudest sound. If two peaks occur, peak with slug nearest chassis.
Disconnect antenna and loosely couple to obtain weak signal and repeat adjustment of A8, A9 and A10 tuning for maximum sound with MINIMUM distortion.
Check the voltage drop across R40 (560K resistor). It should measure between -4 and -9 volts and should not vary more than two volts between a strong signal and a weak one.
Check sound on all available channels and repeat entire procedure, if necessary.

RADIO ALIGNMENT

Use isolation transformer, if available. If not, connect a .1mfd capacitor in series with low side of signal generator and B-.
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
9. .005mfd	High side to antenna stator lug on tuning gang. Low side to chassis.	455KC (400v Mod)	Radio	Tuning gang fully open.	Across voice coil	A12, A13, A14, A15	Adjust for maximum output.
10.	Loop	1620KC	"	"	"	A16	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
11.	"	1400KC	"	Tune to 1400KC signal.	"	A17	"

TUNER ALIGNMENT INSTRUCTIONS LOCATED ON PAGE 6.

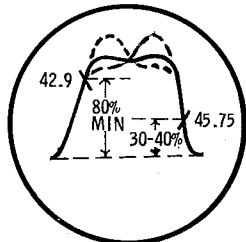
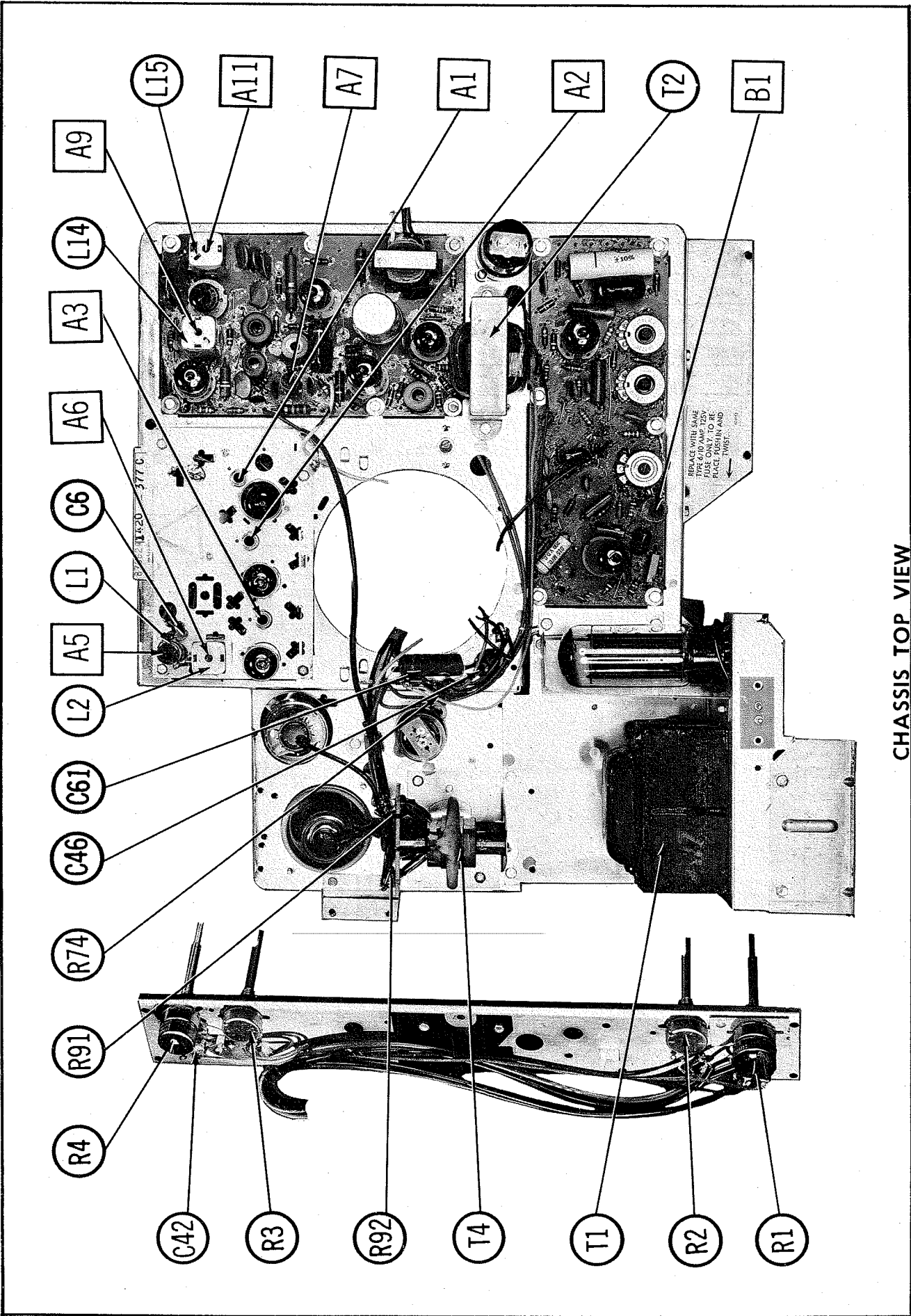
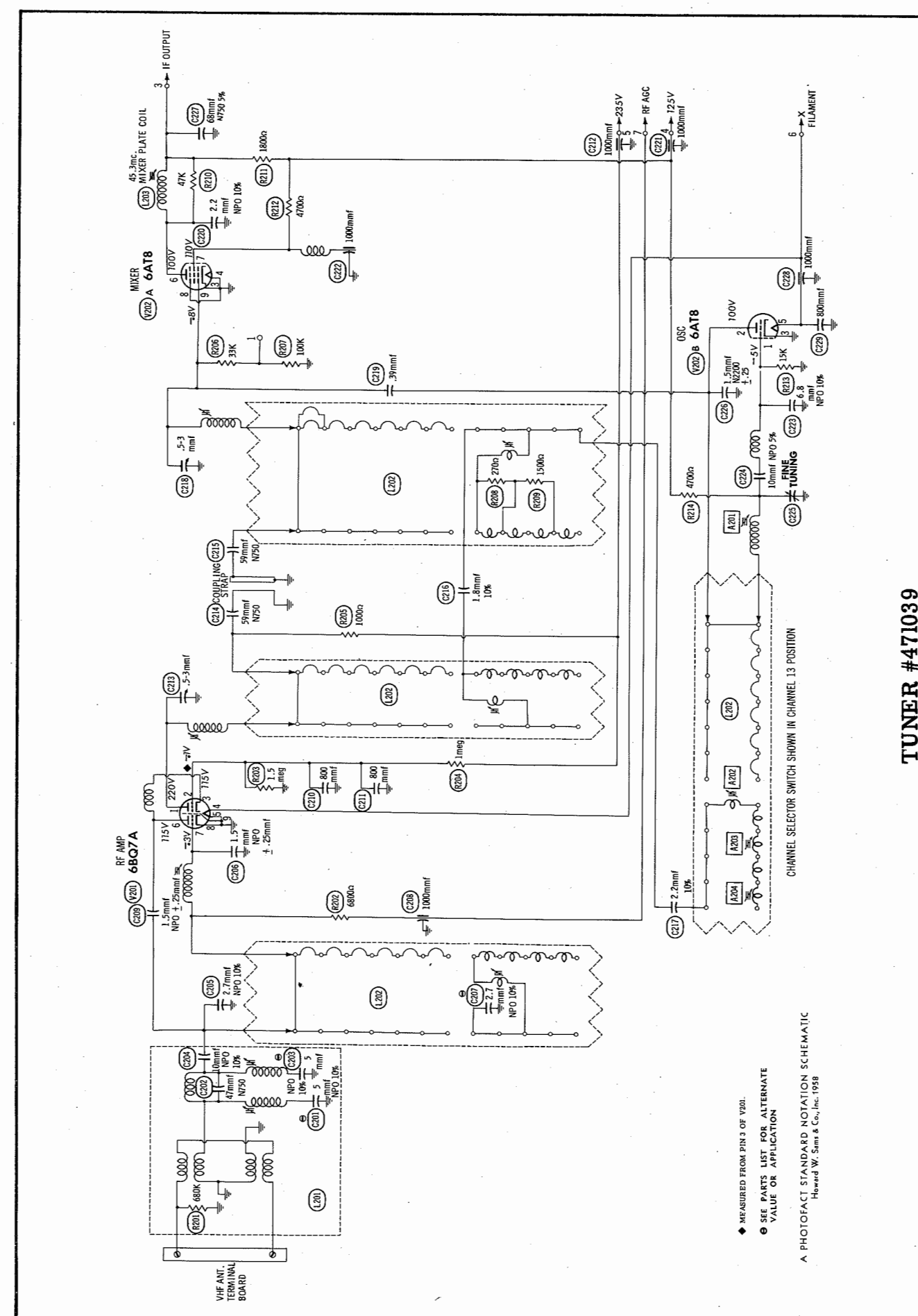
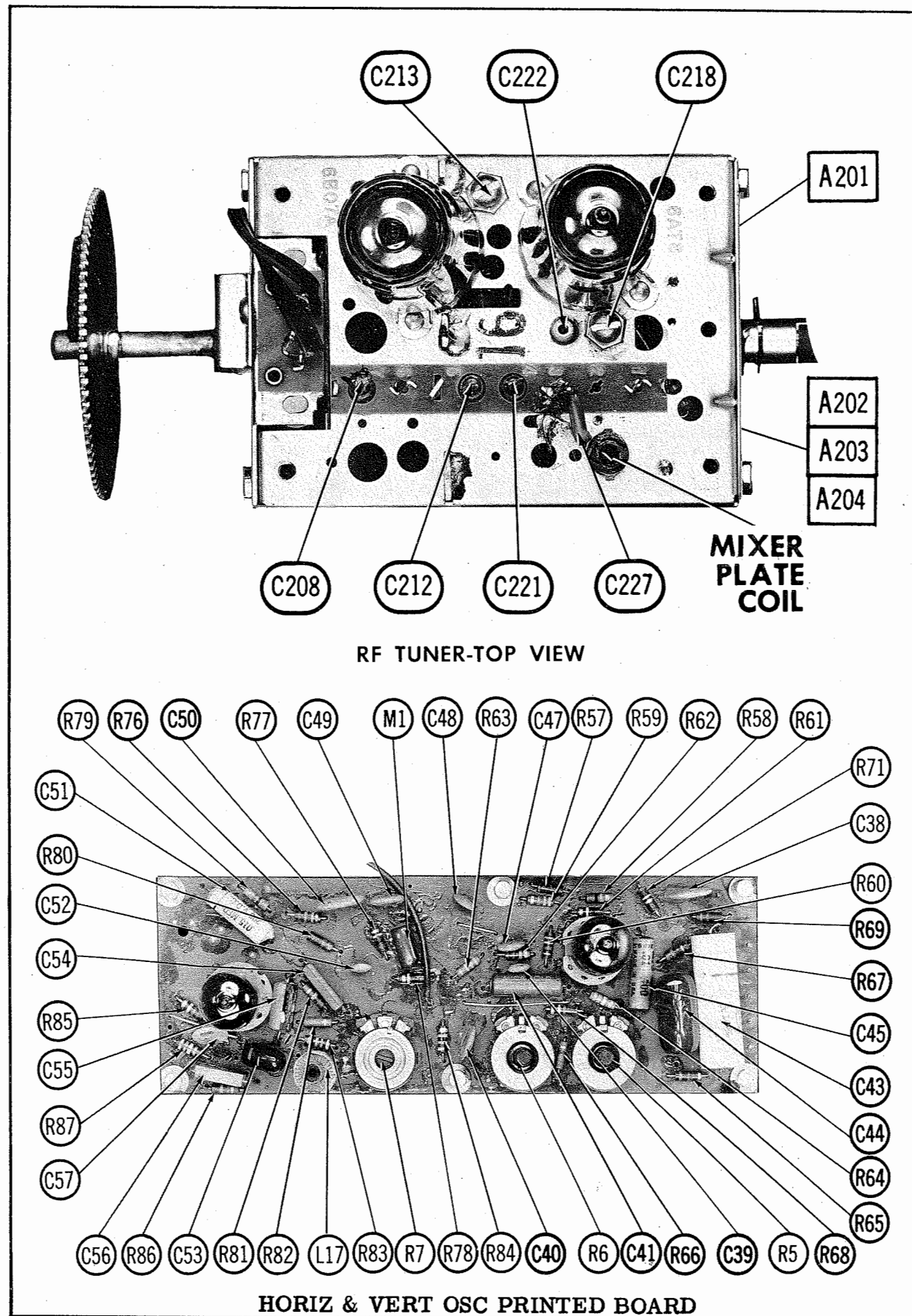


FIG. 1



EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 120400S, 120401U, 120403S, 120404U)

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EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 120400S, 120401U, 120403S, 120404U)

TUNER PARTS LIST AND DESCRIPTIONS
TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V201	RF Amp.	6BQ7A	
V202	Mixer-Osc.	6AT8	

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		EMERSON PART No.	AEROVOX PART No.	CENTRALAB PART No.	REPLACEMENT DATA				NOTES
	CAP.	VOLT				CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C201	5			NPO-DI 5	DTN-47	C10V5C	TCO-5	ZT-555	5TCU-Q47	NPO 10% ①
C202	47			N750-DI 47		C10Q47U	TC7-47	NT-5447		N750
C203	5			NPO-DI 5		C10V5C	TCO-5	ZT-555		NPO 10% ①
C204	10			NPO-DI 10	DTZ-10	C10Q1C	TCO-10	ZT-541	5TCC-Q1	NPO 10%
C205	2.7									NPO
C206	1.5									± .25mmf
C207	2.7									NPO 10% ②
C208	1000			EF-001	MFT-1000		TCO-1.5		503C-DI	NPO
C209	1.5									± .25mmf
C210	800									
C211	800									
C212	1000		961969	EF-001	DD-801	L10T8			5GA-T8	
C213	5-3		961970		DD-801	L10T8			5GA-T8	
C214	59				MFT-1000		3115-D	CT565A	503C-DI	
C215	59				829-3				503C-DI	
C216	1.8									
C217	2.2									
C218	5-3		961970		829-3		3115-D	CT565A		N750
C219	.39									N750
C220	2.2									10%
C221	1000		961969	EF-001	MFT-1000				503C-DI	10%
C222	1000			EF-001	MFT-1000				503C-DI	
C223	6.8			NPO-DI 6.8	DTZ-6R8	C10V68C	TCO-6.8	ZT-5568	5TCCB-V68	NPO 10%
C224	10			NPO-DI 10	DTZ-10		TCO-10			NPO 5%
C225			928878							
C226	1.5									N2200
C227	68				DTN-68		TC7-68			± .25mmf
C228	1000			EF-001	MFT-1000				503C-DI	N750 5%
C229	800				DD-801	L10T8			5GA-T8	

① Some versions may use 3mmf NPO 10% in this application.
② Some versions may use 2.2mmf NPO 10% in this application.

RESISTORS

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

ITEM No.	RATING		EMERSON PART No.	NOTES
	OHMS	WATT		
R201	680K			
R202	6800Ω			
R203	1.5meg			
R204	1meg			
R205	1000Ω			
R206	33K			
R207	100K			

ITEM No.	RATING		EMERSON PART No.	NOTES
	OHMS	WATT		
R208	270Ω			
R209	1500Ω			
R210	47K			
R211	1800Ω			
R212	4700Ω			
R213	15K			
R214	4700Ω			

COILS (RF-IF)

ITEM No.	USE	EMERSON PART No.	NOTES
L201	Ant. Matching Trans.	962168	Includes traps and assy.

ITEM No.	USE	EMERSON PART No.	NOTES
L202	Ant. RF, Mixer Grid & Osc. Coils	962169	
L203	Mixer Plate Coil	962170	Includes complete rotor assy.

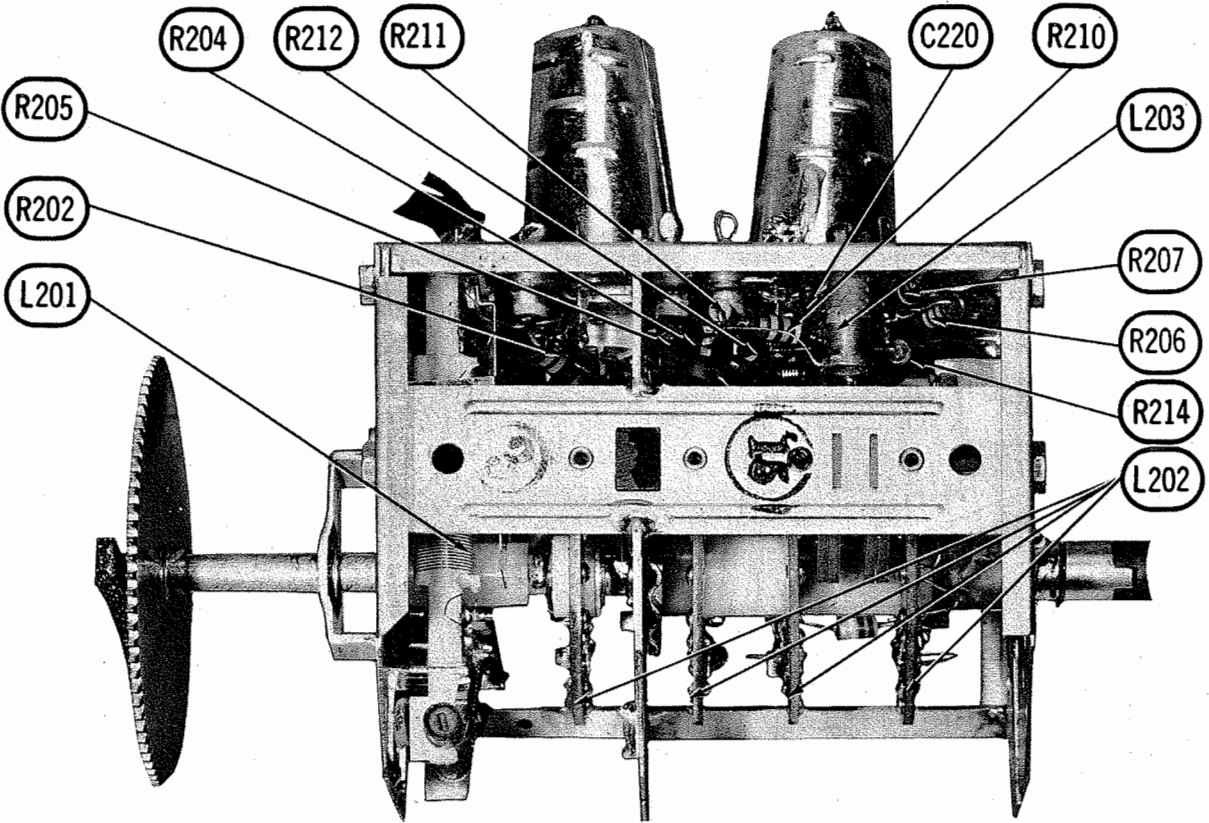
TUNER ALIGNMENT INSTRUCTIONS

OSCILLATOR ALIGNMENT FOR TUNER #471039

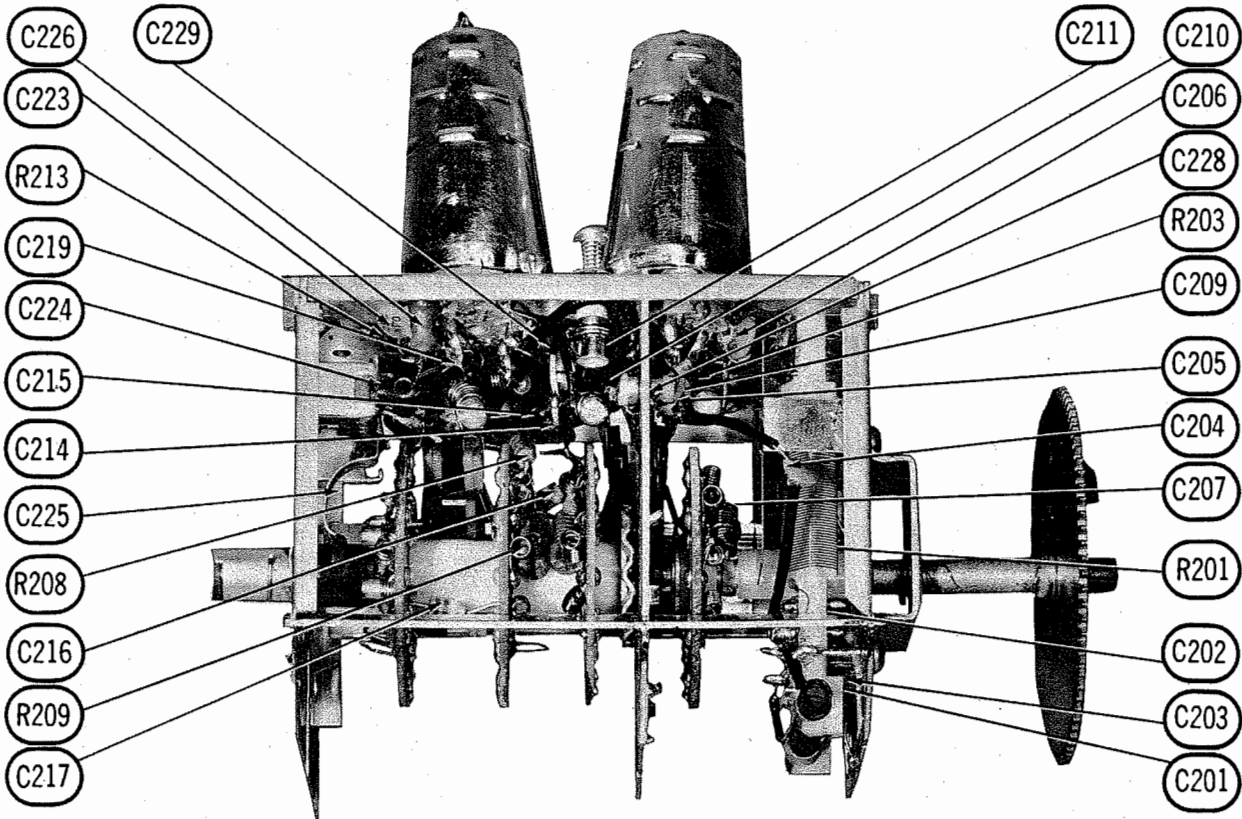
Channel 13 oscillator adjustment slug (A201) is also used for adjusting the other high band (12 thru 7) channels. Channel 6 oscillator adjustment slug (A202) is also adjusted for channel 5. Channel 4 oscillator adjustment (A203) is also adjusted for channel 3. Channel 2 oscillator slug (A204) is used only for channel 2.
Turn the set on and tune in the highest high band channel and adjust controls for normal operation. Set fine tuning to the center of its range. Adjust A201 for best picture and sound. Switch to next high band channel. If necessary to adjust, do so by bending coil loop appearing at the hole to left of tuner shaft for best picture and sound.
Switch channel selector to the highest low band channel (6 thru 2) operating in the area. Adjust proper slug for best picture and sound. If channel 5 or 3 needs adjusting, it will be necessary to switch to the next higher channel, adjust slug SLIGHTLY, then switch back to the channel needing adjustment and check picture. Repeat until proper results are obtained. Repeat procedure until all channels operating in the area have been properly adjusted.

RF AND MIXER ALIGNMENT

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



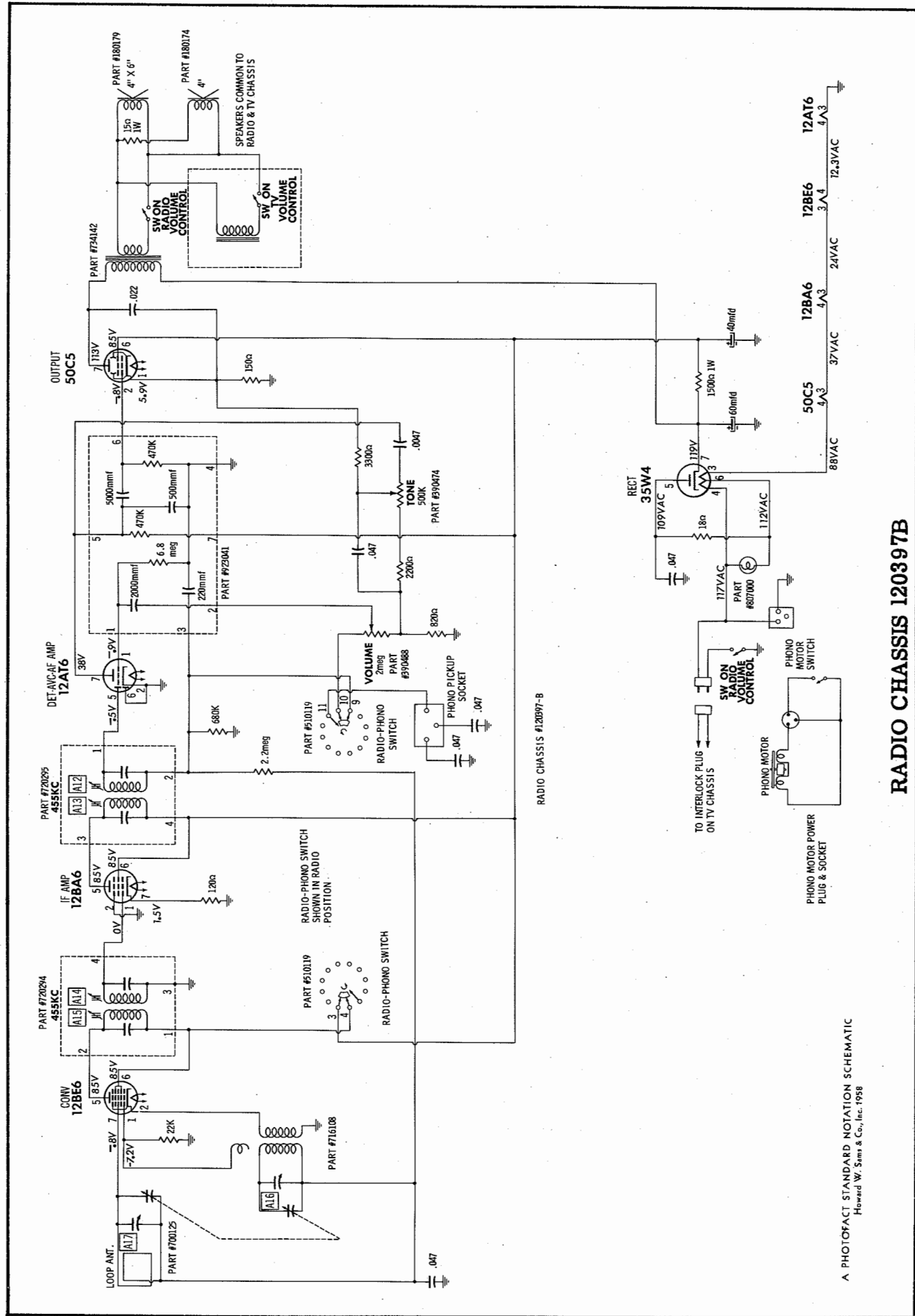
RF TUNER-LEFT SIDE



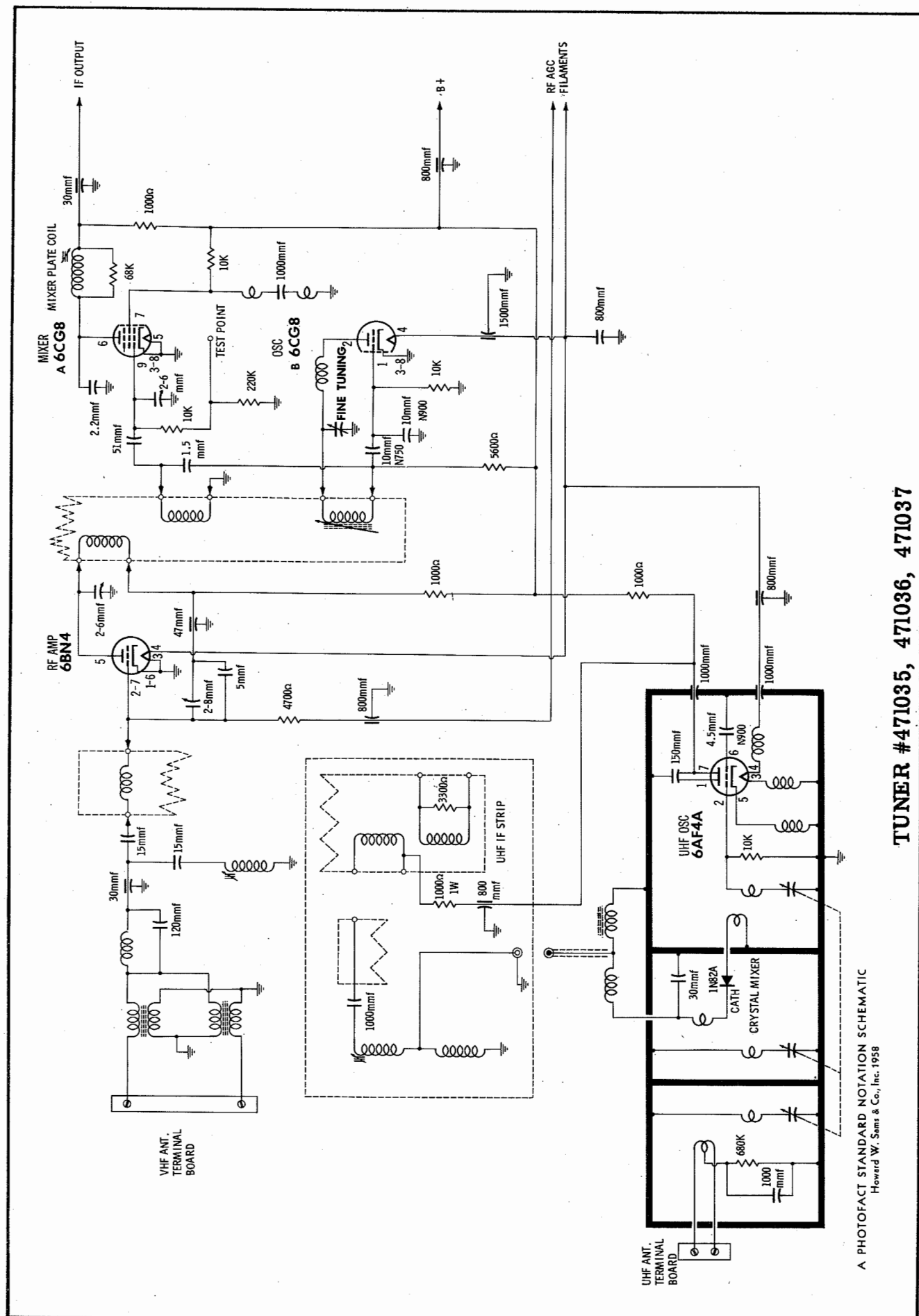
RF TUNER-RIGHT SIDE

EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 120400S, 120401U, 120403S, 120404U)

FOLDER 2

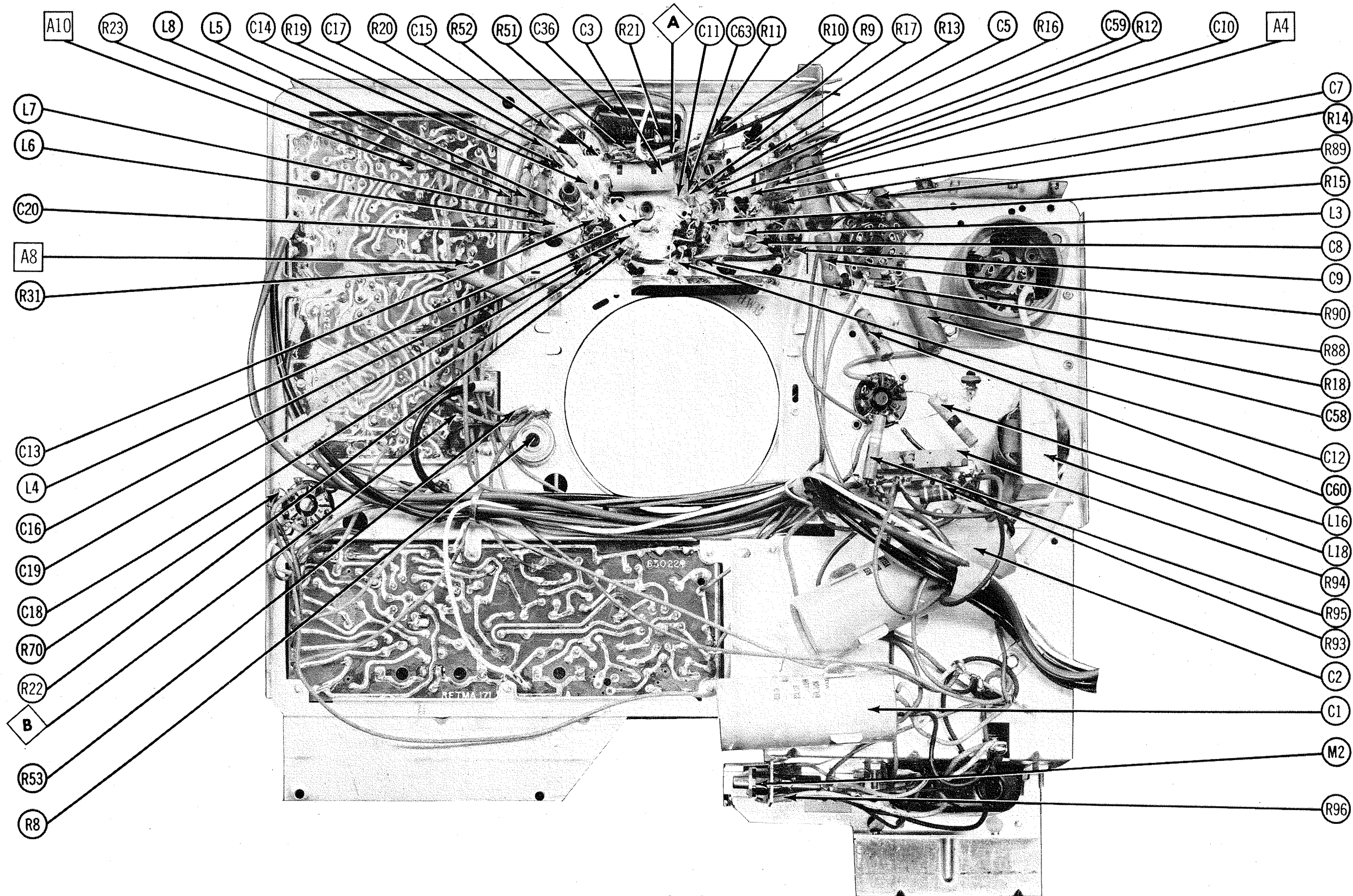


RADIO CHASSIS 120397B



TUNER #471035, 471036, 471037

EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 120400S, 120401U, 120403S, 120404U)



CHASSIS BOTTOM VIEW

EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421,
1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C,
120400S, 120401U, 120403S, 120404U)

FOLDER 2

PARTS LIST AND DESCRIPTIONS (Continued)

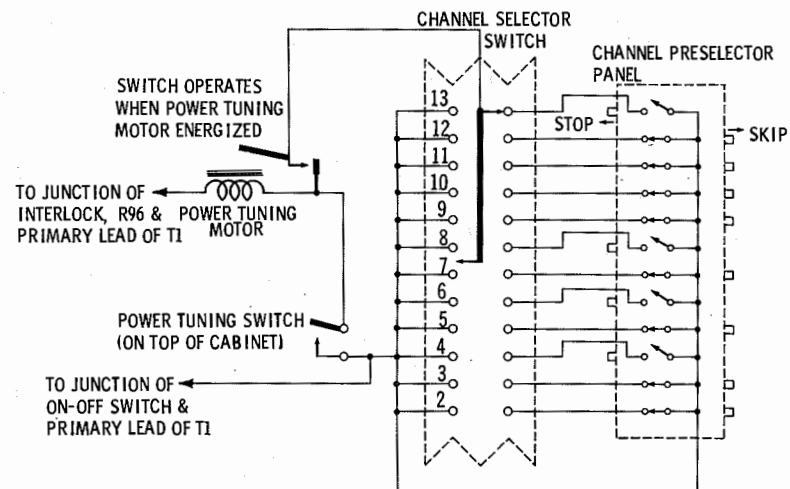
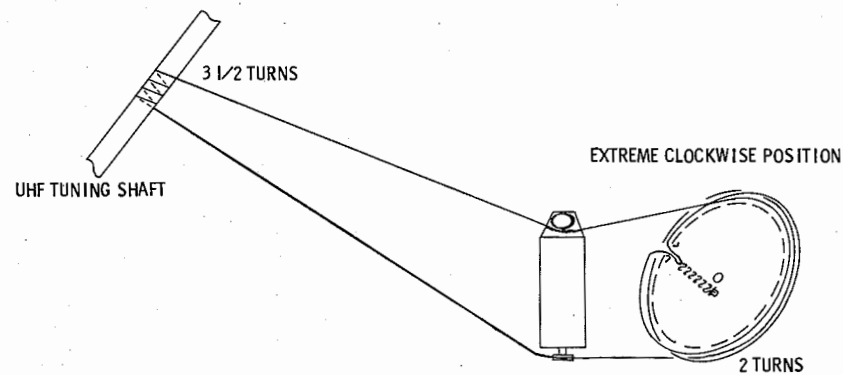
CABINETS & CABINET PARTS (cont)

NAME	PART NO.	DESCRIPTION
Cabinet	140867	Mahogany - Models 1420, 1428
Cabinet	140867A	Blond - Models 1420, 1428
Cabinet	140867B	Ebony - Models 1420, 1428
Cabinet	140885	Mahogany - Model 1421
Cabinet	140885A	Blond - Model 1421
Cabinet	140885B	Ebony - Model 1421
Cabinet	140883	Mahogany - Models 1424, 1426
Cabinet	140883A	Blond - Models 1424, 1426
Cabinet	140883B	Walnut - Models 1424, 1426
Cabinet	140886	Mahogany - Model 1425
Cabinet	140886A	Blond - Model 1425
Cabinet	140886B	Walnut - Model 1425

WIRING DATA

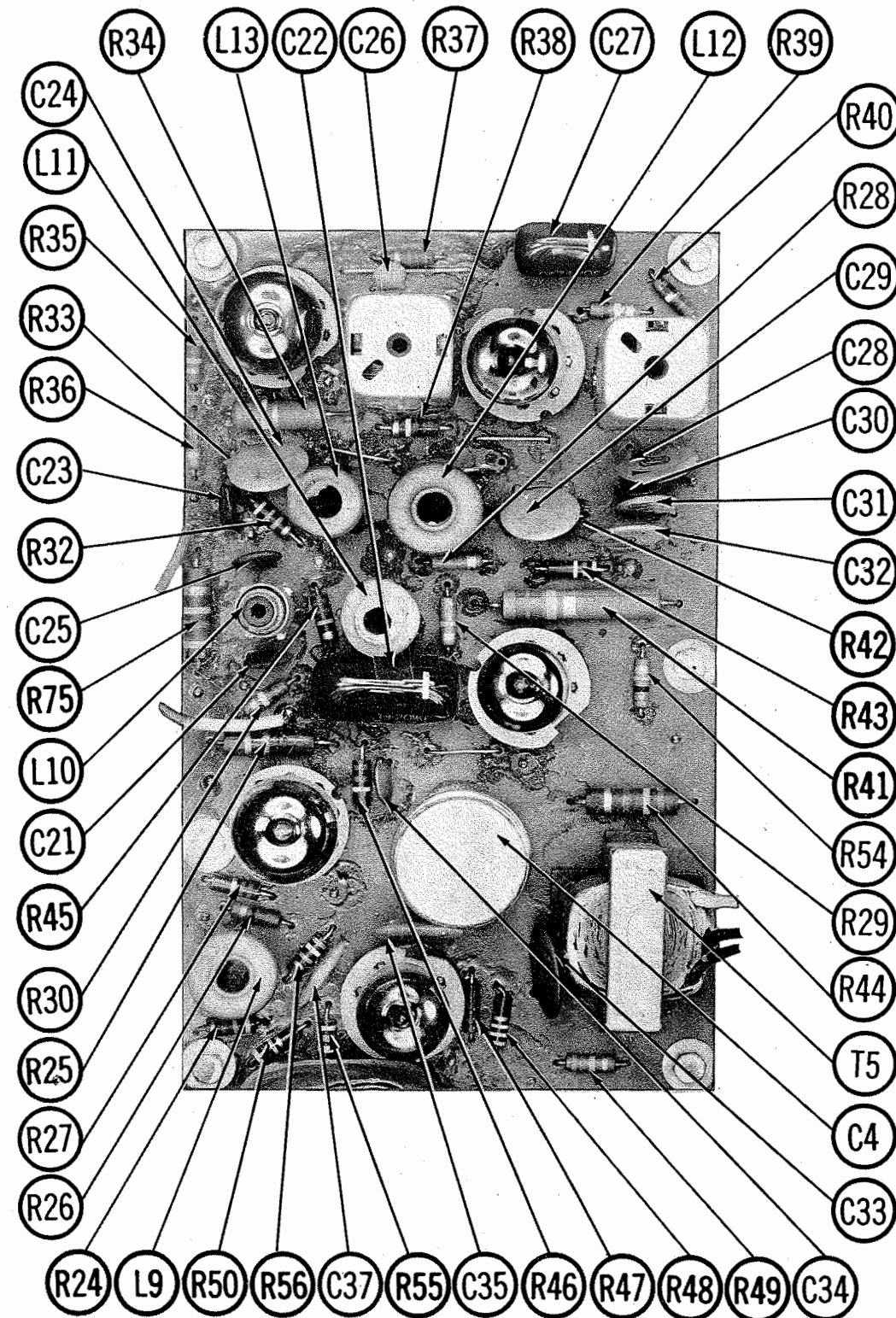
High Voltage Lead	Use BELDEN No.	8869
Shielded Hook-up Wire	Use BELDEN No.	8885 (Single Conductor)
		8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No.	8530 (Solid) Available in Ten Colors
		8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type)	Use BELDEN No.	8874
300Ω 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

UHF DIAL CORD STRINGING



**MOTORIZED TUNING ASSEMBLY
(USED ON CHASSIS
120369-C ONLY)**

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



VIDEO, AGC, SYNC & SOUND PRINTED BOARD

SET 400 FOLDER 3

EMERSON MODELS 1404, 1405, 1418, 1419, 1420, 1421, 1424, 1425, 1426, 1428 (Ch. 120369C, 120370G, 120377C, 120400S, 120401U, 120403S, 120404U)

FOLDER 2

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES	ITEM No.	USE	TYPE	NOTES
V1	1st. Video IF Amp.	6CB6		V8	Sync Sep.	6BY8	
V2	2nd. Video IF Amp.	6CB6		V9	Syn Phase Inv. - Vert. Mult.	6CG7	
V3	3rd. Video IF Amp. - Video Det.	6AS8		V10	Vert. Mult. - Vert. Output	6V6GT	
V4	Video Output	12BY7A		V11	Horiz. Mult.	6CG7	
V5	AGC Keying-Sound IF Amp.	6AN8		V12	Horiz. Output	6DQ6A	*6CU6
V6	Audio Det.	6DT6		V13	Damper	6AX4GT	
V7	Audio Output	6AQ5		V14	HV Rect.	1B3GT	
				V15	LV Rect.	5U4GB	

* Alternate
PICTURE TUBE

ITEM No.	REPLACEMENT DATA	NOTES
V16	2ICBP4A	2ICBP4-A ① 2ICBP4A ② ① "Silverama" ③ ② "Silver Screen 85"

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	EMERSON PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	80 300	925427 ①	PR4-800	BBRQ954	WQ650	TMQ-8	Q-237	TVA-4659
C1B	10 300							
C1C	40 250							
C2A	80 300	925405	PR4-700	BBRQ805	WQ650	TMT-109	T-552	TVA-4659
C2B	40 300							
C2C	100 50							
C3	2 25	925293	PR550V2	BBR2-50	TC302	TD-2-25	MT-0502	TVA-1201
C4A	2 300	925428	AFH2-81-95				MMT-0220	R2650 *
C4B	2 25						MMT-3003	

* Non-catalog item.

① Some versions may use 80-40-10mfd ③ 300-300-300V in this application (Part #925423).

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	EMERSON PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C5	1000	928919	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C6	24	928960						
C7	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C8	680	928909						
C9	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C10	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C11	470	928907						
C12	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C13	330	928905	BPD-00033	DD-331	LIOT33	UC-5333	5GA-T33	
C14	4700	928923	BPD-0047	DD-472	BYA10D47	ED-0047	UC-5247	5GA-D47
C15	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C16	1000	928911						
C17	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C18	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C19	8.2	928887						
C20	6.8	928886						
C21	47	928895	N750-DI 6.8	DTN-6R8	C10V88U	TC7-6.8	5TCU-Q47	
C22	47	928895	N750-DI 47	DTN-47	C10Q47U	TC7-47	5TCU-Q47	
C23	470	928915	P488N-1	DF-104	CUB4PI	ED-1000	DC521	5HK-DI
C24	10000	928924	BPD-00047	DD-471	BYA10T47	ED-470	UC-5347	5GA-T47
C25	47	928895	BPD-01	DD-103	BYA6SI	ED-01	DC511	5HK-SI
C26	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C27	.047	921354	P288N-047	DF-503	CUB2S47	ED-01	DC511	5HK-SI
C28	10000	928924	BPD-01	DD-103	BYA6SI	ED-01	DC511	5HK-SI
C29	10000	928924	BPD-01	DD-103	BYA6SI	ED-01	DC511	5HK-SI
C30	470	928916	BPD-00047	DD-471	BYA10T47	ED-470	UC-5347	5GA-T47
C31	2200	928921	BPD-0022	DD-222	BYA10D22	ED-0022	UC-5222	5GA-D22
C32	10000	928924	BPD-01	DD-103	BYA6SI	ED-01	DC511	5HK-SI
C33	4700	928954	BPD-0047	DD-472	BYA10D47	ED-0047	UC-5247	5GA-D47
C34	470	928916	BPD-00047	DD-471	BYA10T47	ED-470	UC-5347	5GA-T47
C35	3300	928958	BPD-0033	DD-0033	BYA10D33	ED-0033	UC-5233	5GA-D33
C36	.47	924355	P288N-47	DF-503	CUB2P47	ED-01	GEM-2047	2TM-P47
C37	10000	928924	BPD-01	DD-103	BYA6SI	ED-01	DC511	5HK-SI
C38	10000	928924	BPD-01	DD-103	BYA6SI	ED-01	DC511	5HK-SI
C39	1000	928919	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C40	4700	928922	BPD-0047	DD-472	BYA10D47	ED-0047	UC-5247	5GA-D47
C41	.0047	924453						
C42	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C43	.12	924418						
C44	.1	924515						
C45	.01	924514	P488N-1	DF-104	CUB4PI	ED-1000	DC521	5HK-DI
C46	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C47	680	928917	BPD-00068	D6-681	BYA10T68	ED-680	UC-5368	5GA-T68
C48	680	928917	BPD-00068	D6-681	BYA10T68	ED-680	UC-5368	5GA-T68
C49	1000	928959	DAC-2	DD16-102	BYA10D1	ED15-1000	DC3021	5GA-D1
C50	3300	928958						
C51	.015	924320	P288N-015	DD16-153	CUB4S15	ED-015	GEM-4115	4TM-S15
C52	1000	928919	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI
C53	.0047	921453						
C54	100	911161	1469-0001	D6-101	SR5T1	ED-100	MCB231	MS-31
C55	220	911165	1469-00022	D6-221	SR5T22	ED-220	MS-322	
C56	390	911168	1469-00039	D6-391	SR5T39	ED-390	MS-339	
C57	4700	928922	BPD-0047	DD-472	BYA10D47	ED-0047	UC-5247	5GA-D47
C58	.1	924515	P488N-1	DF-104	CUB4PI	ED-1000	GEM-401	4TM-P1
C59	.22	924325	P288N-22	D6-103	CUB4S22	ED-01	GEM-2022	2TM-P22
C60	.01	924314	P488N-01	D6-103	CUB4S1	GP-10000	GEM-411	4TM-S1
C61	.1	924515	P488N-1	DF-104	CUB4PI	ED-1000	GEM-401	4TM-P1
C62	100	928932						
C63	1000	928933	BPD-001	DD-102	BYA6DI	ED-1000	DC521	5HK-DI

CONTROLS

ITEM No.	RATING	EMERSON PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	600Ω	390499				UE1198	Contrast
R1B	1meg					Not Req.	Volume
R1C	Switch					Not Req.	
R2A	1meg	390534	B-70	A47-1meg-Z	Q13-137	Not Req.	Tone
R2B	Shaft		Not Req.	A47-200K-S	Q11-129	Not Req.	
R3A	200K	390436	B-46	A47-200K-S	Q11-129	Not Req.	Brightness
R3B	Shaft		Not Req.	FS-3	Not Req.	Not Req.	

PARTS LIST AND DESCRIPTIONS
CONTROLS(cont)

ITEM No.	RATING	EMERSON PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R4A	50K	390533	FL-29			UE1198	Horiz. Hold
R4B	1.5meg		R2-84			UE3809	Vert. Hold
R5	2meg	390403					Vert. Size
R6	1500Ω	390481					Vert. Lim.
R7	200K	390475					Horiz. Balance
R8A	5meg	390497	AB-87	A47-5meg-S	B11-141	PTA56L	Local-Distance
R8B	Shaft		AK-1	FES-1/4	SK3	Not Req.	

* "Concentrikrit" Equivalent: K-4 Kit, Base Elements & Shafts B11-123 (Panel)
B11-138 (Rear)

* Not available as a factory assembled control.

** "STA-LOC" Equivalent: FD54L, OF2187, RU155L, IS2937.

RESISTORS

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

ITEM No.	RATING	EMERSON PART No.	NOTES	ITEM No.	RATING	EMERSON PART No.	NOTES
R9	1000Ω	340492		R53	2.2meg	351292	
R10	470Ω	350412		R54	10K	350732	
R11	150K	341012		R55	470K	341132	
R12	22K	340812		R56	39K	340872	
R13	470Ω	350412		R57	1meg	351212	
R14	56Ω	340192		R58	10K	340732	
R15	12K	340752		R59	3300Ω	340612	
R16	470Ω	350412		R60	3300Ω	340612	
R17	470Ω	350412		R61	100K	340972	
R18	56Ω	340192		R62	68K	340932	
R19	1500Ω	350412		R63	33K	340852	
R20	1500Ω	350532		R64	330K	341092	
R21	470Ω	350412		R65	2.2meg	341292	
R22	180Ω	340312		R66	2.2meg	341292	
R23	15K	340772		R67	680Ω	340452	
R24	4700Ω	340052		R68	330Ω	350372	
R25	15K	340772		R69	2.2meg	351292	
R26	15Ω	340052		R70	100Ω	350252	
R27	560Ω	340432		R71	150K	341012	
R28	2200Ω	340572		R72	560Ω	340432	
R29	22K	340812		R73	560Ω	340432	
R30	150K	341012		R74	10K	340732	
R31	5000Ω	397112		R75	82K	370952	
R32	47K	340892		R76	68K	340932	
R33	82K	340952		R77	100K	340972	
R34	120K	370992		R78	100K	340972	
R35	470K	341132		R79	10meg	351452	
R36	1.5meg	341252		R80	2.2meg	351292	
R37	2700Ω	340592		R81	15K	340772	
R38	100K	340972		R82	1200Ω	340512	
R39	150K	341012		R83	47K	340892	
R40	560K	341152		R84	47K	340892	
R41	12K	780755		R85	120K	340992	
R42	560Ω	340432		R86	6800Ω	340692	
R43	470K	351132		R87	470K	341132	
R44	270Ω	370352		R88	100Ω	350252	
R45	22K	340812		R89	8200Ω	780712	
R46	220Ω	351052		R90	100Ω	780252	
R47	2.2meg	351292		R91	180	340072	
R48	390K	341112		R92	10K	340732	
R49	82K	340952		R93	470Ω	780412	
R50	470K 5%	341132		R94	2700Ω	10 394200	
R51	15meg	351492		R95	22K	2 780812	
R52	470K	341132		R96	470K	351132	

Note 1. Some versions use 100K in this application (Part #340972).

Note 2. Not used in Ch. 120377C, 120400S, 120401U, 120403S, 120404U.

TRANSFORMER (POWER)

ITEM No.	RATING	EMERSON PART No.	Holddorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC ① 1.7A	540VCT ② 280A ③ 3A	730074					
	SEC. 3	SEC. 4	SEC. 5					
	6.3VAC ② 8.2A							

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA							NOTES
		EMERSON PART No.	Holddorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	Vert. Output	738147	Z1900 ①		V307	A-8144			
T3A	Yoke-Horiz. (20MH)	708332	DF607	MDF-92	Y90F19/43	DY-16A			
B	(90°)-Vert. (38MH)		② ③	②③	②③	②③④	Y-16		
M6	Rear Cover & Centering Device	708333					②③	A-108X	
T4	Horiz. Output	738149						Y-4 & NW5 ②	