

CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS FOR CHASSIS #120351-E AND 120352-G

Turn the set on and tune in a TV station, preferably with a test pattern. Connect a short jumper across terminals of the horizontal phase coil (L18).

Set the horizontal hold control fully clockwise. Adjust horizontal frequency slug (B1) until the picture synchronizes horizontally. Remove the jumper from L18. Connect the vertical amplifier of the scope thru a low capacity probe to point \odot . Low side to chassis. Adjust the horizontal phase slug (B2) for a waveform similar to Fig. 2 with the broad and narrow peaks of equal amplitudes.

If necessary during the adjustment of B2, keep the picture in sync with the horizontal hold control or B1. Remove the scope and retouch B1 for the following conditions.

1. At full clockwise position of the horizontal hold control, a blanking bar or horizontal jitter should be evident.
2. At full counter clockwise position of the horizontal hold control, the picture should lose sync with 4 1/2 to 5 diagonal bars slanting down to the left. If the picture remains in sync at either extreme setting of the

horizontal hold control, switch off channel and back again so that the picture will fall out of sync.

HORIZONTAL SWEEP CIRCUIT ADJUSTMENT FOR CHASSIS #120353-E, 120354-G, 120360-E AND 120361-G

Turn the set on and tune in a TV station, preferably with a test pattern. Turn the "Local-Distant" control fully counter clockwise. Turn the "Picture Stabilizer" control fully clockwise.

Connect a clip lead across the horizontal frequency coil. Connect a clip lead from the grid of the horizontal mult. tube to chassis.

Set the horizontal hold control to the center of its range. Adjust the horizontal balance control until the picture synchronizes horizontally.

Remove the short from the horizontal frequency coil and adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.

Remove the short from the horizontal mult. grid. If the area permits, readjust the "Local-Distant" control to distant position.

ADJUST FOR EQUAL PEAKS

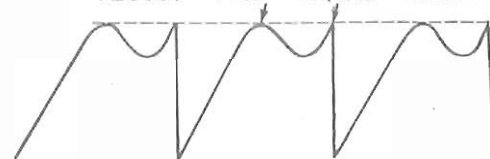
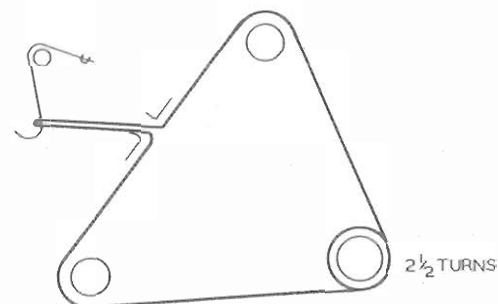


FIG. 2



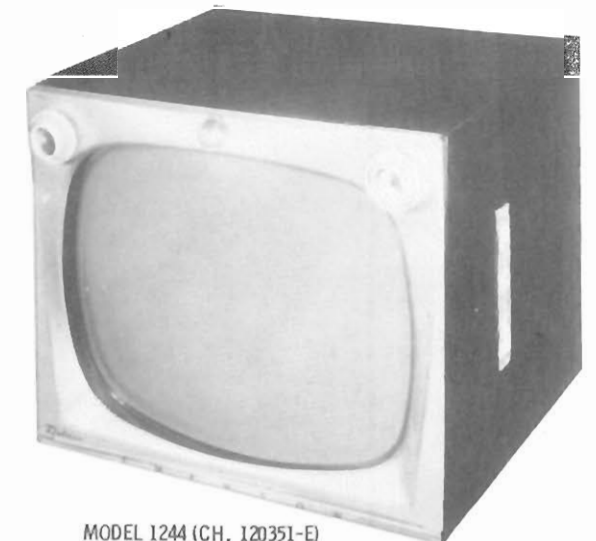
UHF DRIVE CORD STRINGING



DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove 4 push-on type knobs from the front.
2. Remove 8 metal screws holding the rear cover. Remove the rear cover.
3. Remove the hex nut holding the volume control.
4. Remove 2 metal screws holding the antenna terminal.
5. Remove 2 metal screws inside the cabinet holding the side control panel.
6. Remove the speaker leads, picture tube socket, ion trap, yoke clamp, width sleeve and HV lead.
7. Remove 2 metal screws from the rear tuner support bracket.
8. Remove 2 metal screws from the upper chassis support brackets.
9. Remove 2 metal screws holding the chassis at the bottom.
10. Remove the chassis and yoke.



MODEL 1244 (CH. 120351-E)

TRADE NAME	Emerson	MODELS	CHASSIS
		1212, 1228, 1238, 1244, 1246, 1272, 1274	120351-E
		1213, 1229, 1239, 1245, 1247, 1273, 1275	120352-G
		1212, 1228, 1238, 1244, 1246, 1272, 1274	120353-E
		1213, 1229, 1239, 1245, 1247, 1273, 1275	120354-G
		1280	120360-E
		1281	120361-G
MANUFACTURER	Emerson Radio & Phonograph Corp., 14th. & Coles Sts., Jersey City 2, N.J.		
TYPE SET	Television Receiver		
TUBES	Seventeen		
POWER SUPPLY	110-120 Volts AC, 60 Cycle		
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC. Sound IF 41.25MC (Intercarrier)		
	RATING 180 Watts, 1.7 Amp. @ 117 Volts AC		

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

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

PICTURE TUBE SAFETY GLASS CLEANING

Remove 4 push-on type knobs. Pull mask out and up to remove. Remove 8 metal screws holding 4 clamps at the sides of glass. Loosen 8 metal screws holding top and bottom glass retaining brackets and slide glass out the side.

SPECIAL ADJUSTMENTS

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

B. 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

For adjustment of the horizontal oscillator, it is necessary to remove the rear cover and supply power to set. Set the horizontal hold at the center of its range and adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally. (For location, see tube placement chart).

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate sound IF detector buzz, adjust the discriminator secondary (A10) located on top of chassis.

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

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EMERSON MODELS 1212, 1213, 1228, 1229, 1238, 1239, 1244, 1245, 1246, 1247, 1272, 1273, 1274, 1275, 1280, 1281 (Ch. 120351-E, 120352-G, 120353-E, 120354-G, 120360-E, 120361-G)

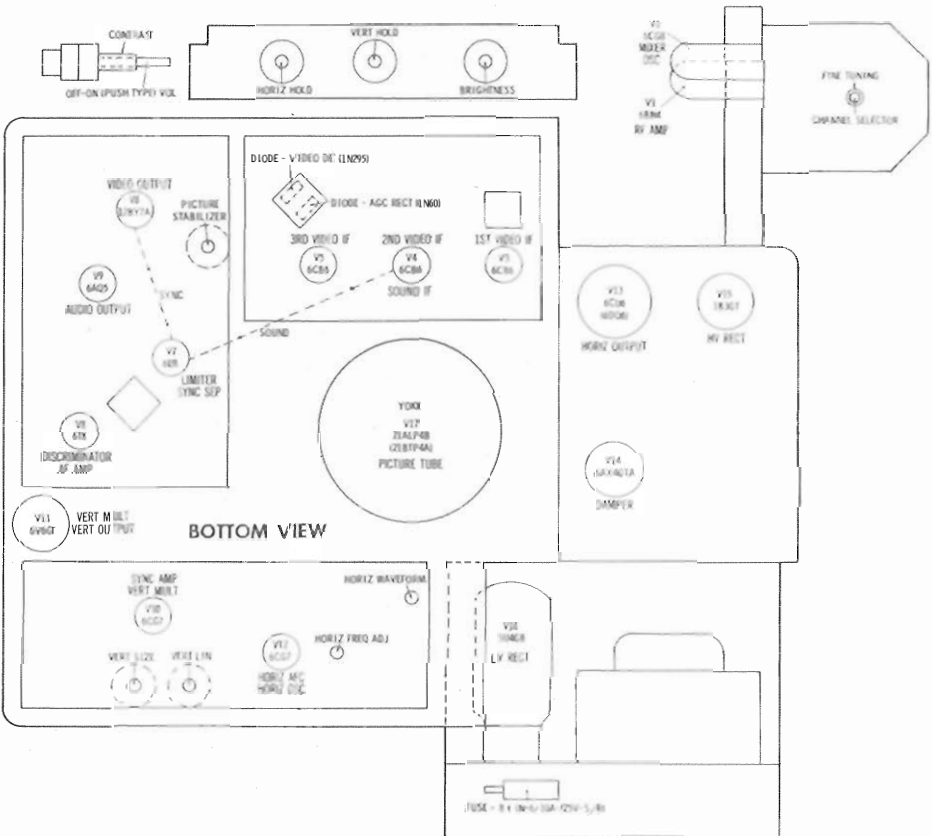


PAGE 2

RESISTANCE MEASUREMENTS

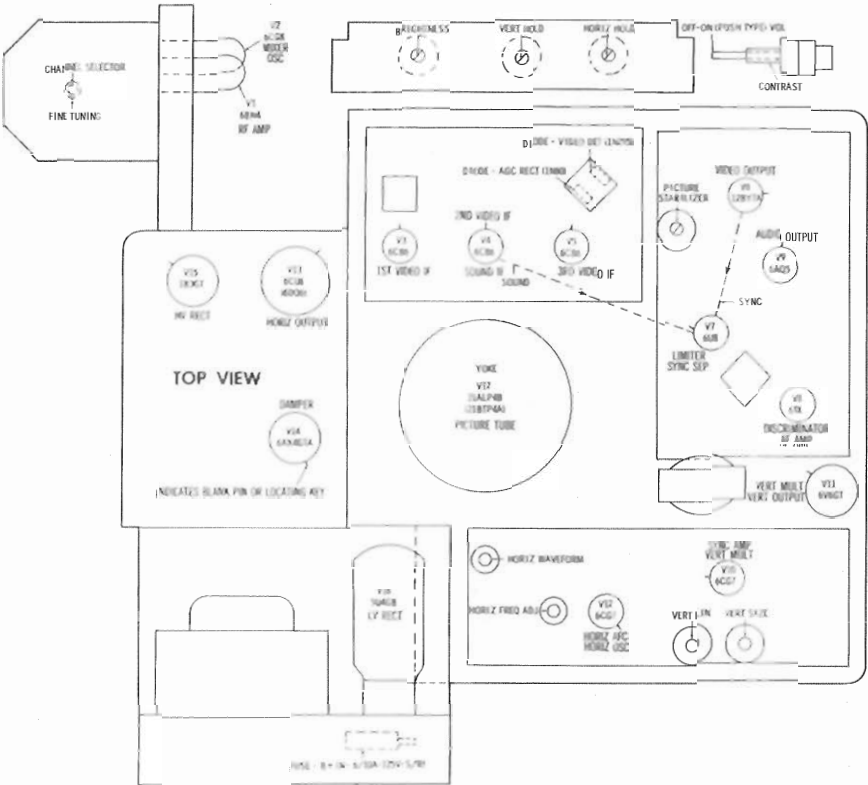
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BN4	0Ω	1.5Meg	0Ω	.1Ω	†3000Ω	0Ω	1.5Meg		
V2	6CG8	10K	†8800Ω	0Ω	0Ω	.1Ω	†3000Ω	†12K	0Ω	224K
V3	6CB6	750K	56Ω	.1Ω	0Ω	†2500Ω	†2500Ω	0Ω		
V4	6CB6	1.4Ω	220Ω	0Ω	.1Ω	†2500Ω	†2500Ω	0Ω		
V5	6CB6	2200Ω	270Ω	.1Ω	0Ω	†2700Ω	†40K	0Ω		
V6	12BY7A	•50Ω	525K	0Ω	0Ω	0Ω	.1Ω	†5000Ω	†10K	0Ω
V7	6U8	†16K	27K	†13K	0Ω	.1Ω	†2500Ω	0Ω	0Ω	2.7Meg
V8	6T8	100K	100K	170K	.1Ω	0Ω	0Ω	0Ω	2.2Meg	†220K
V9	6AQ5	470K	270Ω	.1Ω	0Ω	†1300Ω	†1000Ω	470K		
V10	6CG7	•†1.7Meg	•670K	0Ω	.1Ω	0Ω	†15K	†1Meg	0Ω	0Ω
V11	6V6GT	NC	.1Ω	†375Ω	†0Ω	2.2Meg	TP	0Ω	•450Ω	
V12	6CG7	•†23K	900K	410K	.1Ω	0Ω	†47K	480K	0Ω	0Ω
V13	6CU6	NC	.1Ω	TP	†8700Ω	450K	TP	0Ω	100Ω	TOP CAP †36Ω
V14	6AX4GT	NC	NC	INF	NC	†28.5Ω	NC	.1Ω	0Ω	
V15	183GT	PINS 1 THRU 8 HAVE INFINITE RESISTANCE								TOP CAP †496Ω
V16	5U4G8	NC	†	NC	28Ω	NC	25Ω	NC	†	
V17	21ALP4B	0Ω	10K	PIN 6 †22Ω	PIN 10 †17Ω	PIN 11 •170K	PIN 12 .1Ω			

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 255V SOURCE.
‡ MEASURED FROM PIN 3 OF V14.
TP TIE POINT
NC NO CONNECTION



TUBE PLACEMENT CHART

TUBE PLACEMENT CHART



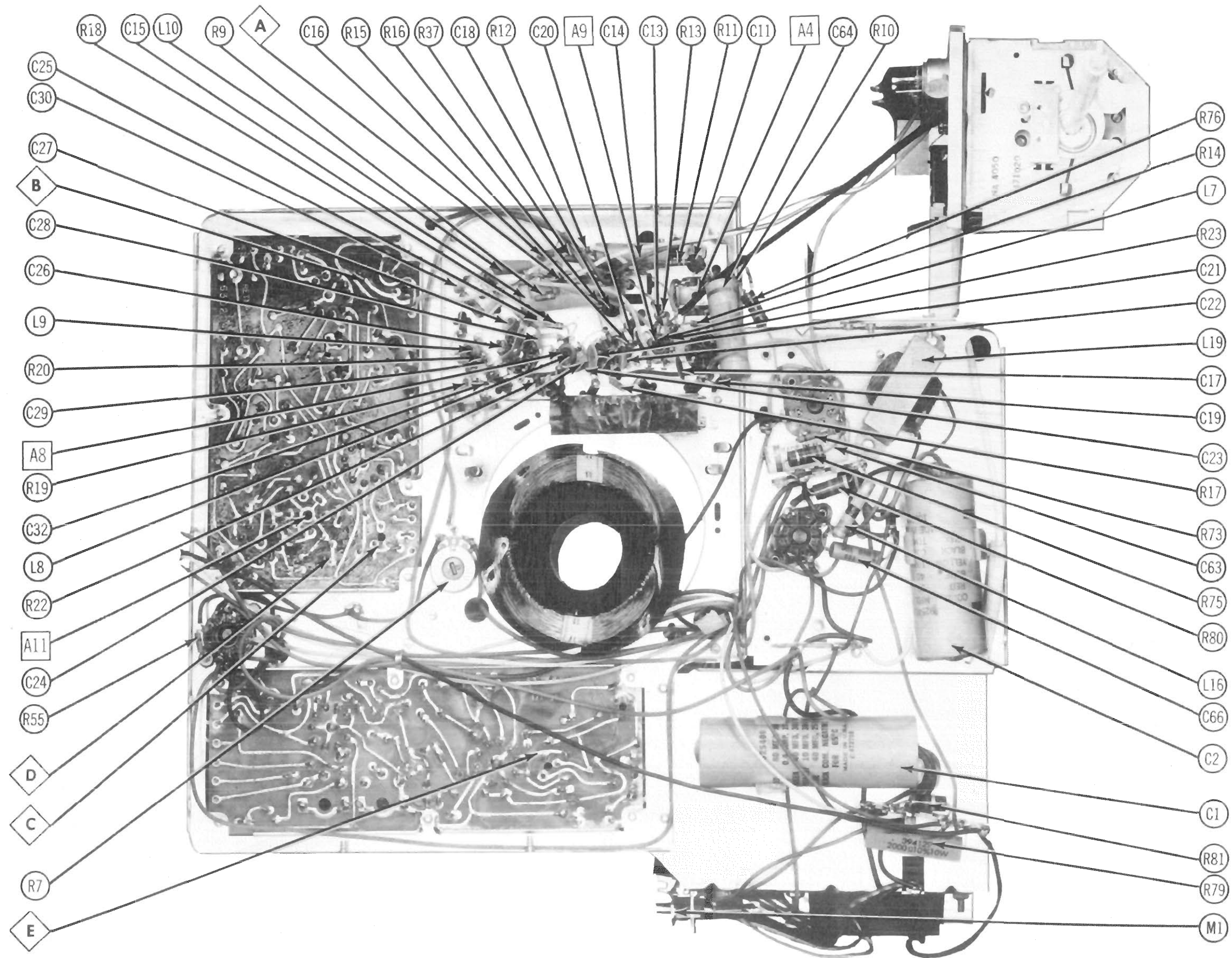
TUBE FAILURE CHECK CHART

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

- POWER SUPPLY FAILURE**
No raster, no sound - Fuse (M4, V16)
- LOSS OF PICTURE OR SOUND**
No pic, no sound, has raster - V3, V4, V5, Diode (M2)
No pic, no sound, has snow - V1, V2, V3
No pic, has sound, has raster - V6, V17
Has pic, no sound - V7, V8, V9
Overloaded picture - Diode (M3)
- SYNC FAILURE**
No vert. sync - V7, V10
No horiz. sync - V7, V10, V12 (Horiz. AFC Diode, some versions)
No vert. or horiz. sync - V7, V10
- SWEEP FAILURE**
No raster, has sound - V12, V13, V14, V15, V17
No vertical deflection - V10, V11
Poor vert. linearity or foldover - V10, V11
Poor horiz. linearity or foldover - V12, V13, V14
Narrow picture - V12, V13, V14, V16
Vert. off freq. - V10, V11
Horiz. off freq. - V12

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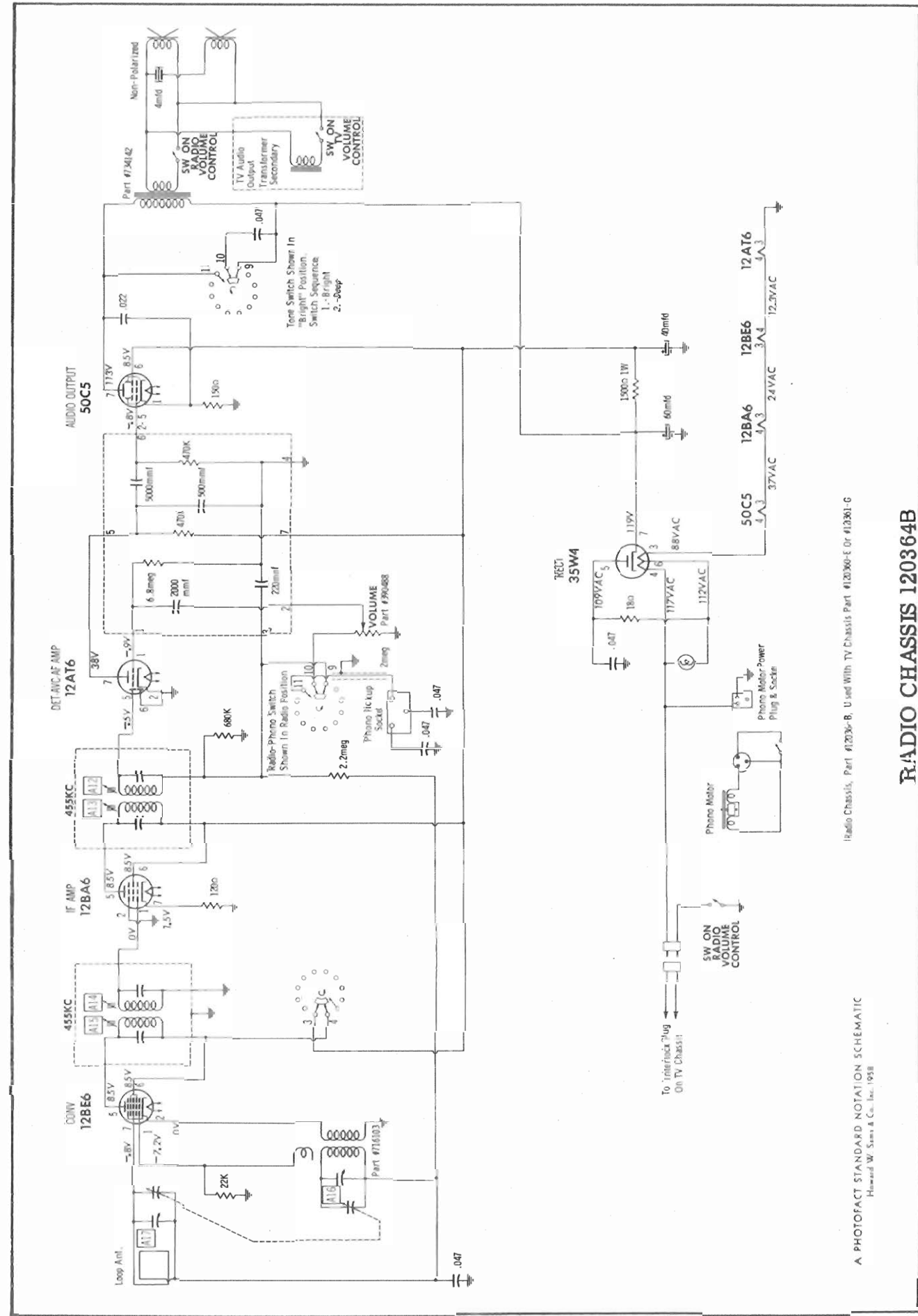
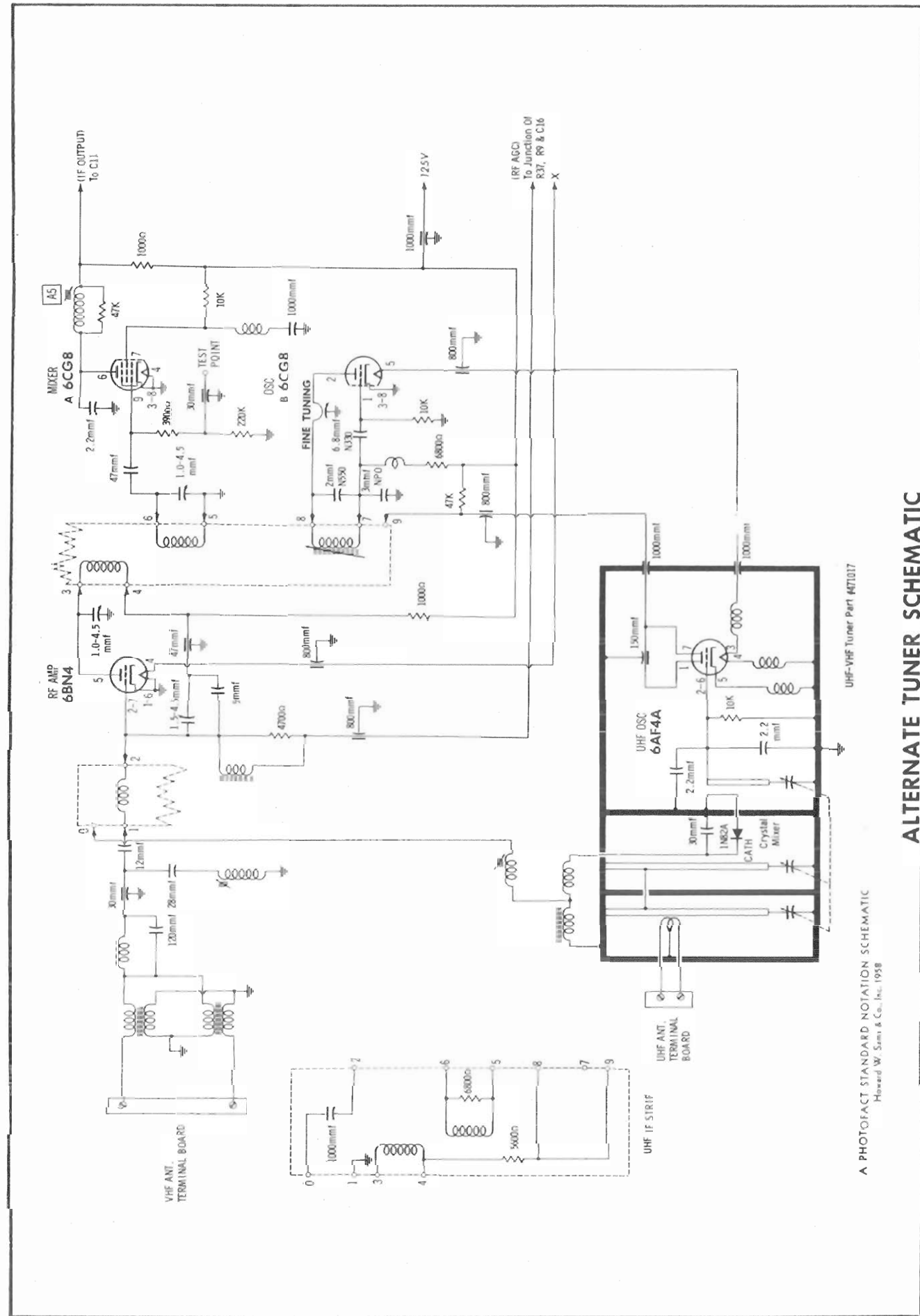
FOLDER 2



CHASSIS BOTTOM VIEW

EMERSON MODELS 1212, 1213, 1228, 1229, 1238, 1239, 1244, 1245, 1246, 1247, 1272, 1273, 1274, 1275, 1280, 1281 (Ch. 120351E, G, 120352G, 120353E, 120354G, 120360E, 120361G)

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 A. Positive to chassis.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough sweep generator output to provide a usable pattern on scope.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Direct	Place a thin insulated metal strip between the mixer-osc. tube (V2) and tube shield. Connect the high side of sweep generator to the metal strip. Low side to chassis.	Not used	44.25MC (Unmod)	Any non-interfering channel	USE VTVM. DC probe to point B. Common to chassis.	A1	Adjust for maximum deflection. Use only enough generator output to provide no more than 2 volts DC on VTVM.
2. "	"	"	45.3MC	"	"	A2	"
3. "	"	"	42.6MC	"	"	A3	"
4. "	"	"	42.9MC	"	"	A4	"
5. "	"	"	45.3MC	"	"	A5	"
6. "	"	"	41.25MC	"	"	A6	Increase generator output and adjust for MINIMUM deflection.
7. "	"	"	47.25MC	"	"	A7	Increase generator output and adjust for MINIMUM deflection. Repeat steps 4 & 5
8. "	"	44.0MC	41.25MC 42.9MC 45.75MC 47.25MC	"	Vert. Amp. thru 20K to point D. Low side to chassis.		Check for response similar to Fig. 1 with markers as shown. If necessary, retouch A1 to correctly position 45.75MC marker at 30 to 40%.

SOUND IF ALIGNMENT

Use a weak TV signal for the Sound IF Alignment.
Use negative scale on VTVM.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
9. Not used	Not used	Not used	Weak TV Signal	DC probe to point C. Common to chassis.	A8, A9	Adjust for maximum deflection.
10. "	"	"	"	DC probe to point D. Common to chassis.	A10, A11	Adjust for maximum deflection.
11. "	"	"	"	"	A10	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

VHF OSCILLATOR ALIGNMENT

Set the fine tuning at the center of its range. The adjustments are accessible, one at a time, as the channel selector is rotated. Adjust for best picture and sound.

VHF RF AND MIXER ALIGNMENT

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

UHF 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.

RADIO ALIGNMENT

Use isolation transformer, if available. If not, connect a .1MFD capacitor in series with low side of signal generator and B-.
Set volume control fully clockwise.
Use only enough generator output to provide a usable indication on VTVM.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
2. .005MFD	High side to pin 7 (grid) of 12BE6. Low side to B-.	455KC	Radio	Tuning gang fully open	Across voice coil	A12, A13 A14, A15	Adjust for maximum output.
13. "	Loop	1620KC	"	"	"	A16	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
14. "	"	1400KC	"	Tune for maximum output.	"	A17	"

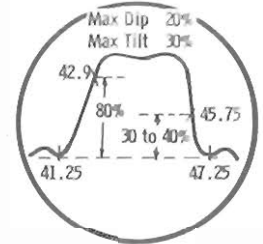
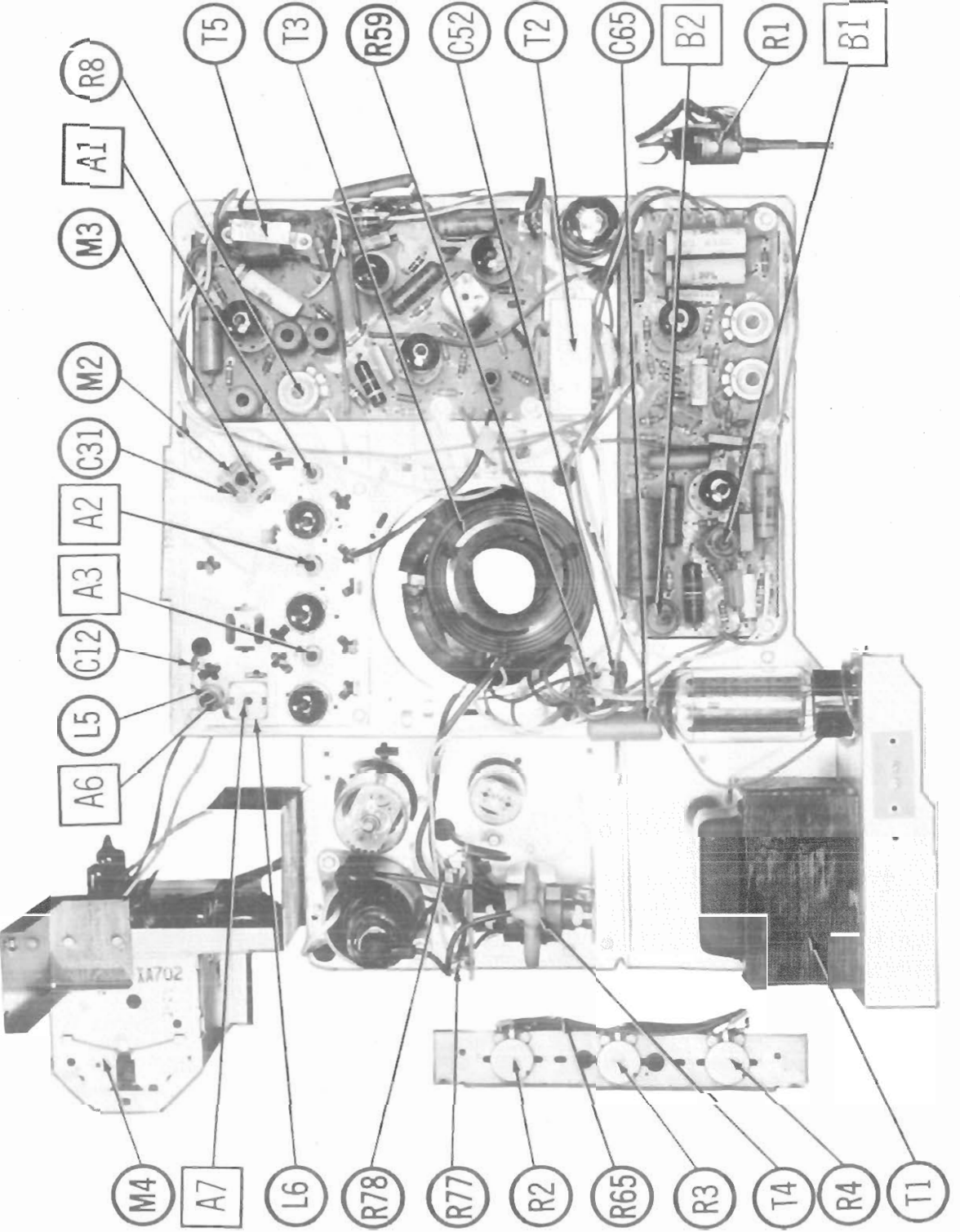


FIG. 1



EMERSON MODELS 1212, 1213, 1228, 1229, 1238, 1239, 1244, 1245, 1246, 1247, 1272, 1273, 1274, 1275, 1280, 1281 (Ch. 120351E, G, 120352G, 120353E, 120354G, 120360E, 120361G)

MAIN DO1 SISVHD

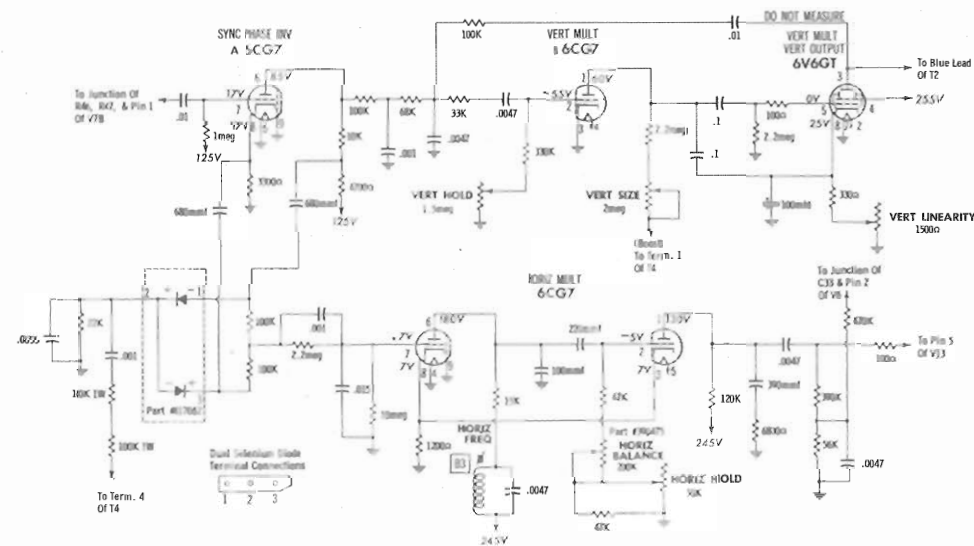
FOLDER 2

MISCELLANEOUS

ITEM No.	PART NAME	EMERSON PART No.	NOTES
M4	Tuner	471020	VHF - Ch. 120353-E, 120351-E, 120360-E
	Tuner	471017	UHF-VHF Ch. 120352-G, 120354-G, 120361-G
M5	Width Sleeve	412302	
M6	Centering Device		Includes yoke rear cover
M7	Ion Trap	706235	Alternate part #708325
	Printed Board	471021	Complete sweep assy., less tubes - Ch. 120351-E, 120352-G
	Printed Board	471025	Complete sweep assy., less tubes - Ch. 120353-E, 120360-E, 120364-G, 120361-G
	Printed Board	471022	Complete video assy., less tubes

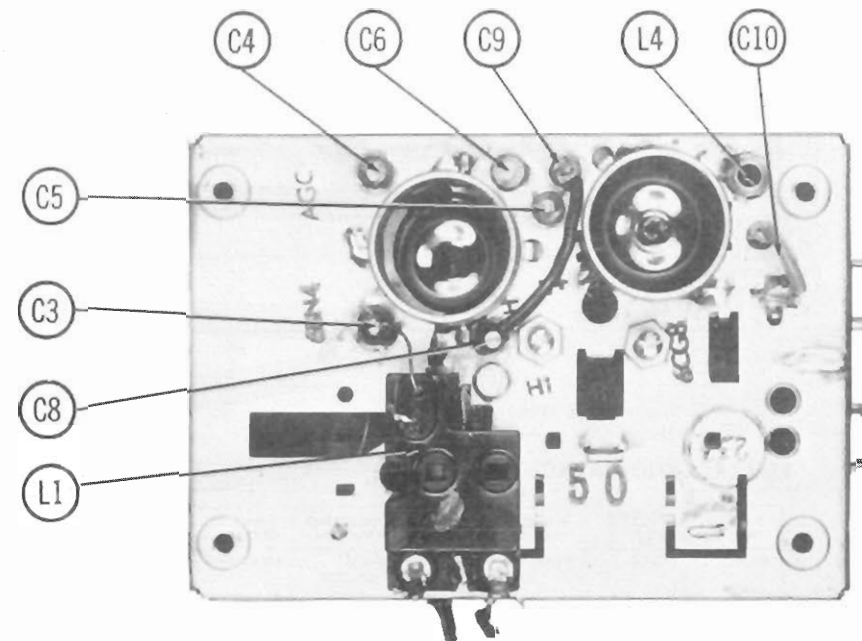
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Safety Glass	520243	
Mask	460697	
Knob	450248	Channel Selector - Ch. 120351-E, 120353-E
Knob	460690D	VHF Channel Selector - Ch. 120352-G, 120354-G
Knob	450248A	Channel Selector - Ch. 120360-E
Knob	460690	VHF Channel Selector - Ch. 120361-G
Knob	450252	Fine Tuning - Ch. 120351-E, 120353-E
Knob	460692	Fine Tuning - Ch. 120352-G, 120354-G, 120361-G
Knob	450252A	Fine Tuning - Ch. 120360-E
Knob	460871	UHF Channel Selector - Ch. 120352-G, 120354-G
Knob	460871A	UHF Channel Selector - Ch. 120361-G
Knob	450249	On-off-volume - Ch. 120351-E, 120353-E
Knob	460852	On-off-volume - Ch. 120352-G, 120354-G
Knob	450249A	On-off-volume - Ch. 120360-E
Knob	460905	On-off-volume - Ch. 120361-G
Knob	450251	Contrast - Ch. 120351-E, 120353-E
Knob	460853	Contrast - Ch. 120352-E, 120354-G
Knob	450251A	Contrast - Ch. 120360-E
Knob	460694	Contrast - Ch. 120361-G
Knob	460713C	Brightness, vert. hold, horiz. hold
Knob	460834	Radio Control
Knob	460835	Radio-Phone
Knob	460832	Radio tuning
Cabinet	460633	Models 1212, 1213
Cabinet	460835	Models 1226, 1229, 1238, 1239
Cabinet	460829	Models 1244, 1245, 1246, 1247
Cabinet	460651	Models 1272, 1273
Cabinet	460652	Models 1274, 1275
Cabinet	460661	Models 1260, 1281
Leg	412546	Models 1244, 1245, 1246, 1247
Leg	520301	Models 1260, 1281

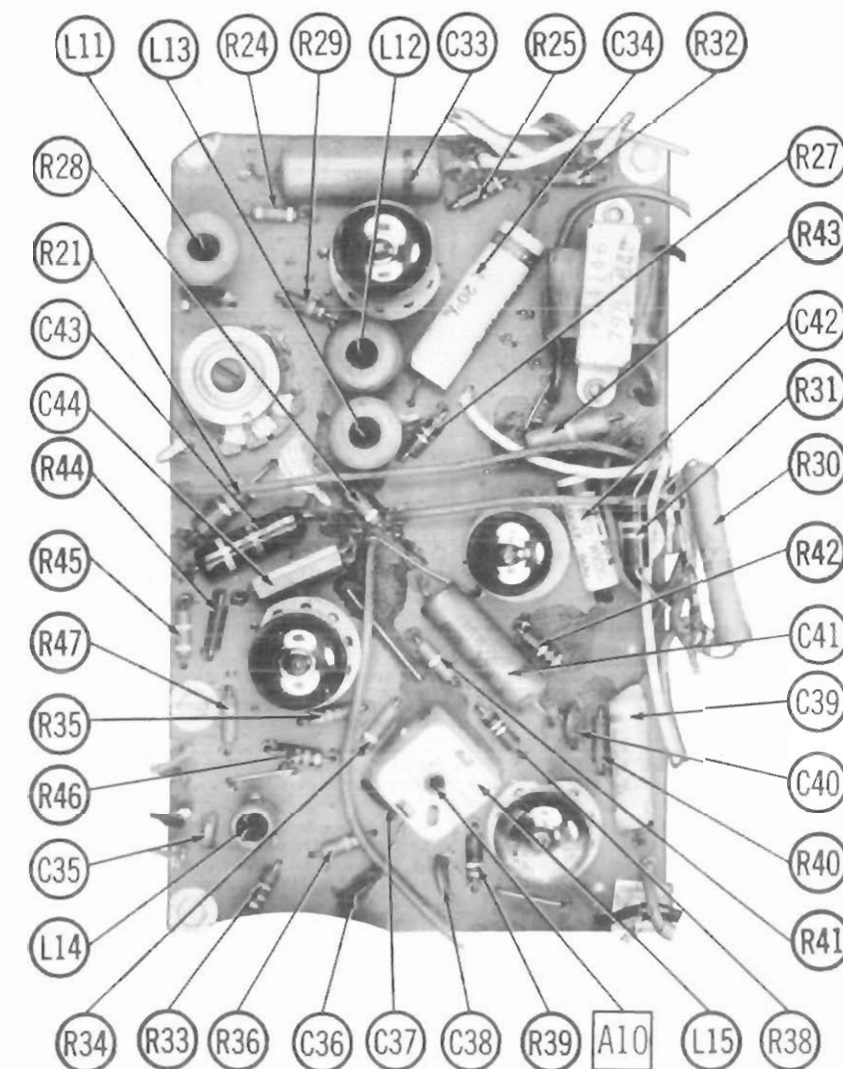


A PHOTO-ACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958

ALTERNATE SWEEP CIRCUIT



RF TUNER TOP VIEW



VIDEO & SOUND PRINTED BOARD

SET 384 FOLDER 2

EMERSON MODELS 1212, 1213, 1228, 1229, 1238, 1239, 1244, 1245, 1246, 1247, 1272, 1273, 1274, 1275, 1280, 1281 (Ch. 120351E, G, 120352G, 120353E, 120354G, 120360E, 120361G)

FOLDER 2

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	6BN4	
V2	Mixer-Osc.	6CG8	
V3	1st. Video IF Amp.	6CB6	
V4	2nd. Video IF Amp. - Sound IF Amp.	6CB6	
V5	3rd. Video IF Amp.	6CB6	
V6	Video Output	12BY7A	
V7	Limiter-Sync Sep.	6U8	
V8	Discriminator-AF Amp.	6T8	

Note 1. A 6DQ6 or 6DQ6A may be used in some versions.

PICTURE TUBE

ITEM No.	REPLACEMENT DATA	NOTES
EMERSON PART No.	GENERAL ELECTRIC PART No.	SYLVANIA PART No.
V17 21ALP4B	21ALP4B/21ALP4A	21ALP4A/21ALP4B
21BTP4A	21BTP4A	21BTP4A

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA	NOTES
CAP.	VOLT.	EMERSON PART No.	AEROVOX PART No.
C1A	80 300	925406	PR4-450
B	40 300		
C	40 250		
D	10 300		
C2A	80 300	925405	PR4-700
B	40 300		
C	100 50		

* Non-catalog item.

FIXED CAPACITORS

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

ITEM No.	RATING	REPLACEMENT DATA	NOTES
CAP.	VOLT.	EMERSON PART No.	AEROVOX PART No.
C3	30	961960	
C4	800	961959	
C5	1000	961959	
C6	30	961960	
C7	47	961961	
C8	800	961959	
C9	800	961959	
C10	100	928979	
C11	1000	928979	
C12	24	928960	
C13	1000	928933	
C14	.1	923315	
C15	.22	923325	
C16	1000	928933	
C17	820	928910	
C18	1000	928933	
C19	1000	928933	
C20	1000	928933	
C21	820	928910	
C22	1000	928910	
C23	1000	928933	
C24	47	928966	
C25	390	928906	
C26	1.2	928205	
C27	68	928996	
C28	680	928909	
C29	1000	928933	
C30	6.8	928986	
C31	680		
C32	1000	928933	
C33	.047	923554	
C34	.047	923554	
C35	150	928603	
C36	4700	928923	
C37	4700	928923	
C38	1000	928919	
C39	.0047	923553	
C40	2200	928923	
C41	.022	923524	
C42	.0047	924753	
C43	.01	924514	
C44	220	911184	
C45	.01	923514	
C46	1000	928919	
C47	1000	928919	
C48	.0047	924453	
C49	.1	924516	
C50	.1	924516	
C51	.01	924514	
C52	1000	928933	
C53	82	911160	
C54	82	911160	
C55	.047	923554	
C56	.047	924514	
C57	.022	923524	
C58	.47	923355	
C59	330	911167	
C60	.01	924614	
C61	820	911328	
C62	.001	924513	
C63	.1	924515	
C64	.22	923325	
C65	.1	924515	
C66	.01	923514	
C67	100	928933	

Note 1. Not used in some versions.

Note 2. In some versions a 12MFD 10% (Part #924416) may be used in this application.

In other versions, a .022MFD (Part #924524) may be connected in parallel with C50.

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA	INSTALLATION NOTES
RESISTANCE	WATTS	EMERSON PART No.	CENTRALAB PART No.
R1A	600Ω	390467	
B	1Meg		
C	50K	390410	
R2A	50K		
B	1.5Meg	390472	
B	Shaft		
R4A	200K	390408	
B	Shaft		
R5	1500Ω	390461	
R6	2Meg	390403	
R7A	100K	390287	
B	Shaft		
R8	100K	390404	

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA	NOTES
OHMS	WATT	EMERSON PART No.	
R9	1.5Meg	341252	
R10	22K	340612	
R11	4700Ω	340652	
R12	470K	341132	
R13	470Ω	350412	
R14	56Ω	340192	
R15	10K	340732	
R16	470Ω	350412	
R17	220Ω	340332	
R18	2200Ω	340572	
R19	2200Ω	340572	
R20	4700Ω	340652	
R21	47K	370692	
R22	270Ω	340352	
R23	4700Ω	340652	
R24	4700Ω	340652	
R25	470K	351132	
R26	56K	340912	
R27	10K	340732	
R28	4700Ω	340652	
R29	15K	340772	
R30	5000Ω		
R31	10K	780732	
R32	150K	341012	
R33	27K	340652	
R34	470Ω	350412	
R35	18K	340792	
R36	22K	340812	
R37	15Meg	351492	
R38	100K	340972	
R39	100K	340732	
R40	2.2Meg	351292	
R41	220K	351052	
R42	470K	351132	
R43	270Ω	370352	
R44	2.2Meg	351292	
R45	470K	351132	

Note 1. Some versions may use two 10K, 2W (Part #780732) in parallel in this application.

Note 2. Not used in some versions.

Note 3. UHF-VHF Chassis 120354-G uses a 6800Ω, 2W (Part #780692) in this application.

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA	NOTES
PRI.	SEC. 1	SEC. 2	SEC. 3
T1	117VAC	840VCT	5V 8.3V
	1.7A	2.80A	3A 8.2A

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA	NOTES
EMERSON PART No.	Holladson PART No.	Merit PART No.	Stancor PART No.
T2	Vert. Output	738139	219001
T3A	Yoke-Horiz. (16-4MH)	708313	219001
T4	Horiz. Output	738142	219001

1. Use 8 to 1 turns ratio.

2. Drill new mounting hole(s).

3. Use original horizontal damping network, if necessary.

4. Cut and form a piece of .010 gauge fish paper inside the yoke itself and support with an acetate cement, to provide an insulation between the width sleeve and the yoke proper.

5. Connect same as original. Use original rear cover, centering device and width sleeve.

* HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

Use Original Width Coil Unless Replacement Type Is Listed

	ORIGINAL TERMINAL CONNECTIONS	Holladson Replacement Connections	Merit Replacement Connections	Rom Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
	8	9	4	2	9	9	9
	7	5	8	1	5	5	5
	6	5	7	6	5	5	5
	4	NC See Note ⑤	NC See Note ⑤	4	NC See Note ⑤	NC See Note ⑤	NC See Note ⑤
	2	1	5	7	1	1	1
	1	1	1	8	1	1	1
Special Notes →		⑤ ⑥	⑤ ⑦		⑤ ⑥	⑤ ⑦	⑤ ⑧

5. Install new damping network, consisting of approx. 56MMF @ 2KV and 1000Ω, 1/2 W connected in series across horizontal yoke terminals #3 and #7.

6. If insufficient width, add capacity (approx. 50-100MMF @ 4KV) across horizontal yoke terminals #3 and #1.

7. Remove one turn from filament winding.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA	NOTES
PRI.	SEC.	EMERSON PART No.	Holladson PART No.
T5	4800Ω 3-4Ω	734146	211101

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA	NOTES
SIZE	FIELD	V. C. IMP.	EMERSON PART No.
SP1	4"	PM	3-4Ω
	6"	PM	3-4Ω
	6"	PM	3-4Ω
	5" x 7"	PM	3-4Ω
	4"	PM	3-4Ω

COILS (RF-IF)

ITEM No.	USE	EMERSON PART No.	NOTES
L1	Ant. Trans.	961944	
L2	IF Trap Coil	961945	
L3	IF Trap Coil	961946	

* Drill new mounting hole.

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES.	REPLACEMENT DATA	NOTES
PRI.	SEC.	EMERSON PART No.	Meissner PART No.
L17	117Ω	716102	
L18	31Ω	708275	

FILTER CHOKE

ITEM No.	RATINGS	REPLACEMENT DATA	NOTES
TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (1000 μH)	EMERSON PART No.
L19	240A	22Ω	737019

1. Drill new mounting hole.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA	NOTES
EMERSON PART No.	LITTELFUSE PART No.	FUSE	HOLDER	FUSE
M1	N	6/10A 125V S/B	808015	346010

CRYSTAL DIODES

ITEM No.	ORG. TYPE	REPLACEMENT DATA	NOTES
EMERSON PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N295	817038	
M3	1N295	817064	

1. Alternate part #817061 may be used in some versions.

EMERSON MODELS 1212, 1213, 1228, 1229, 1238, 1239, 1244, 1245, 1246, 1247, 1272, 1273, 1274, 1275, 1280, 1281 (Ch. 120351E, 120352E, 120353E, 120354E, 120360E, 120361E)

FOLDER 2