PHOTOFACT* Folder

*TRADE MARK

GENERAL ELECTRIC MODELS 9T001, 9T002 ("T" Line)

DISASSEMBLY INSTRUCTIONS

CHASSIS & PICTURE TUBE REMOVAL

1. Remove 5 push-on type control knobs from the top.
2. Remove 8 chassis bolts from the bottom. (Three on each side, two at rear).
3. Remove chassis from the front of the cabinet.
4. Remove picture tube socket, Ion trap and centering device.
5. Loosen the yoke clamp by loosening the wing nut.
6. Remove the screw from the bottom mounting board retaining the cabinet front locking slide. This screw is located on the inside at the bottom left side of the front.
7. Move the slide to the left allowing the cabinet front mounting studs to drop through the holes in the front of the chassis mounting board.
8. The cabinet front and picture tube assembly may then be removed from the main chassis by passing the neck of the tube forward out of the yoke.
9. Remove the 4 springs from the tube clamping ring around the bell of the tube.
10. The tube is now free of the cabinet front and face glass for service or cleaning.

NOTE: Always use water and mild soap for cleaning the safety glass.

MODELS	CHASSIS
9T001, 9T002	"T" Line

CAUTION NOTE

ONE SIDE OF AC LINE CONNECTED TO CHASSIS

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 (located in a circle around the shaft) should be made in sequence from the highest to the lowest channel in the area. Channel 13 adjustment is located at 1 o'clock, proceed in a counter clockwise direction adjusting for best picture and sound.

PICTURE TUBE SAFETY GLASS CLEANING

To clean the picture tube and safety glass it is necessary to remove the chassis and the picture tube. (See disassembly instructions.)

FOCUS

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

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Set the horizontal hold to the center of its range. Adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate sound IF detector buzz, adjust the ratio detector secondary (A7) located on top of chassis.

FUSES

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

CENTERING

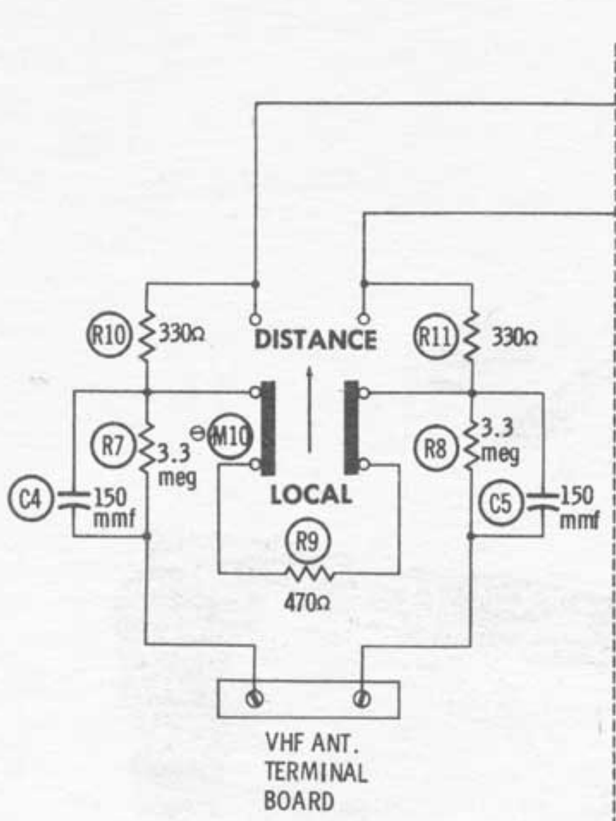
Centering is accomplished mechanically by adjusting two magnetic rings around the neck of the picture tube. Rotate the two rings around the neck of the tube until the picture is properly centered.

GENERAL ELECTRIC MODELS 9T001, 9T002 ("T" Line)

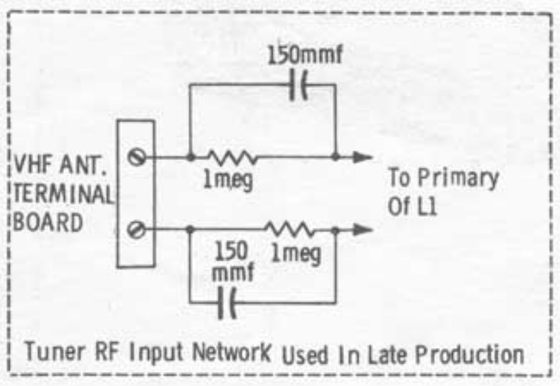
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

G869

DATE 6-57 SET 359 FOLDER 7

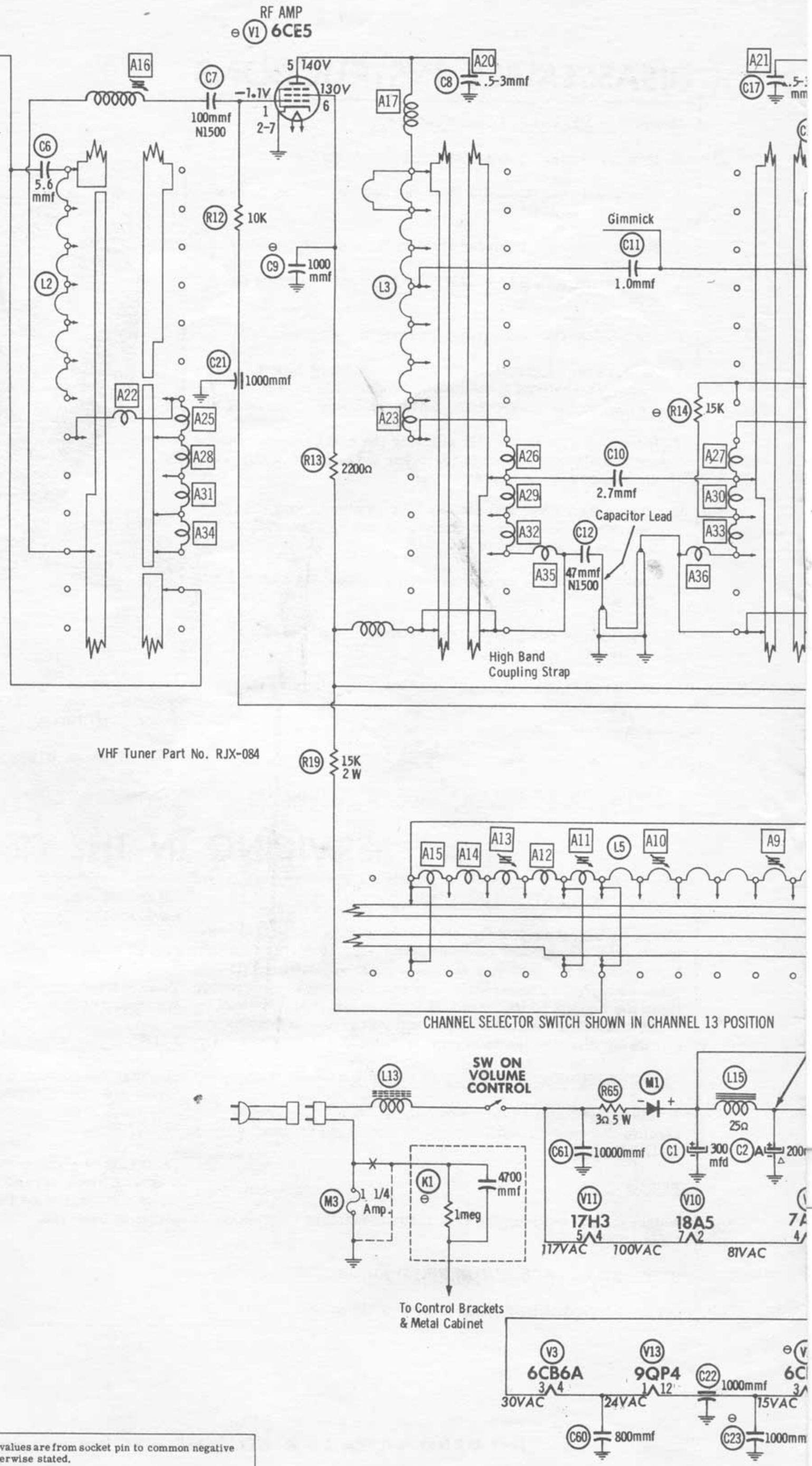


VHF ANT. TERMINAL BOARD



Tuner RF Input Network Used In Late Production

ALTERNATE TUNER SCHEMATICS LOCATED ON PAGES 11 & 14.



VHF Tuner Part No. RJX-084

⊖ 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)

WAVE FORMS TAKEN WITH CONTROLS SET TO PRODUCE 50 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltage measured at 1,000 ohms per volt.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation; no signal applied.

MIXER
V2 A 9U8
44.3mc.
A1
L6
C18
1000 mmf
C25
75 mmf N750
6
130V
115V
-.8V
2
3
7
A18
47mmf N1500
R16
15K
A19
R18
1000Ω
R17
4700Ω
C19
1000mmf
F
L4
R15
150K
A24
Gimmick
C15
.91mmf
C20
1000 mmf
140V

SOUND IF
V6 6AU6A
A6
4.5mc.
TOP
A7
M5
CATH
1N87G
2200Ω
C39
120 mmf
M6
2200Ω
CATH
1N87G
M9
C3
.4mfd
C40
5000 mmf
R39
22K
C
D
100K
100K
R1
VOLUME
500K
5
135V
2
135V
6
0V
1
7
1.4V
4.5mc.
A5
L12
1.8Ω
C36
20mmf NPO
C38
5000 mmf
R38
180Ω
C35
3mmf NPO
120Ω
K2
1
10000 mmf
4
22K
1000 mmf
4000 mmf
2
C37
2200 mmf
R37
470Ω
140V
E

1ST VIDEO IF
V3 6CB6A
44.3mc.
L7
A2
5
130V
7
130V
-.4V
1
6
2
.8V
R23
56Ω
45.3mc.
A3
R25
33K
L8
C27
680 mmf N220
R22
470Ω
140V
R21
3300Ω
C42
.1
R24
2.2meg
A

2ND VIDEO IF
V4 6CB6A
C28
2.4mmf NPO
5
130V
7
130V
0V
1
2
1V
R27
56Ω
43.3mc.
A4
C29
5mmf NPO
M4
1N87G
CATH
M8
R30
C30
750mmf
R26
470Ω
140V
R29
220K 5%

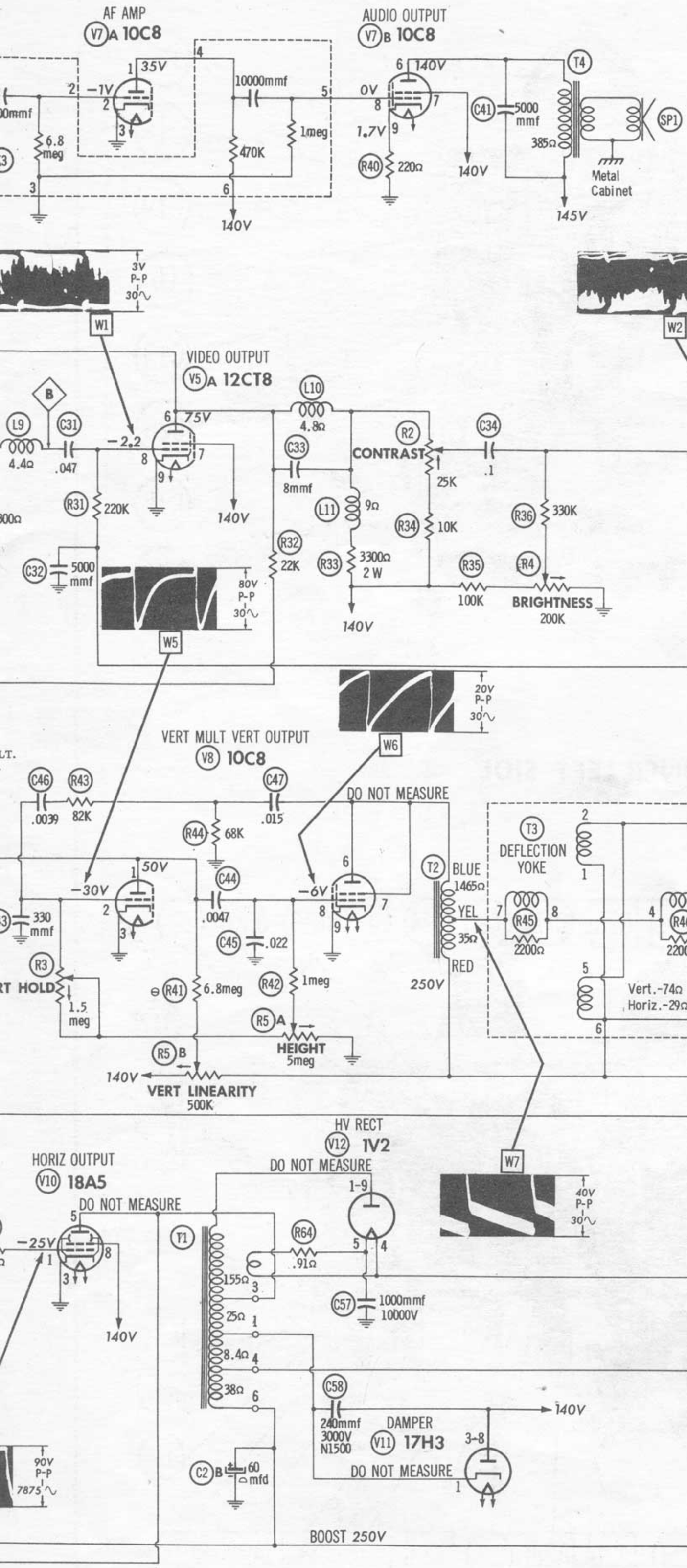
55V P-P 30
W3
IV P-P 30
TAKEN WITH PIN 2 OF VERT. MU
TUBE (V8) SHORTED TO GROUN
W4

SYNC SEP
V5 B 12CT8
K5
2
10000 mmf
470mmf
4
2.2meg
470K
1
-1V
2
3
50V
R28
22meg
800mmf
140V
K4
2
180 mmf
68K
800mmf
100K
130 mmf
47K
47K
800mmf
4
3
1
5
140V

OSC
V2 B 9U8
A8
1
55V
C14
12mmf N750
-4V
9
8
R20
10K
C13
5mmf N1500
FINE TUNING
.5V P-P 30
W12
145V SOURCE
140V SOURCE
DENOTES CHASSIS GROUND
10V P-P 7875
W8
35V P-P 7875
W10

HORIZ MULT
V9 7AU7
L
R48
560K
R49
1meg
C49
1200mmf
C50
5000 mmf
R50
82K 5%
C51
.1
6
90V
4V
7
8
7V
C52
910mmf
R53
12K 5%
R55
100K
1
110V
-10V
2
7V
3
C54
10000mmf
C55
620mmf
R59
12K
R61
820K
R60
82K 5%
R56
75K 5%
140V
M2
R47
680K
K
HORIZ FREQ
M
B1
L14
75Ω
C53
.0047
R58
1300Ω 5%
R54
820K
140V
N
R6
HORIZ HOLD
1meg
R57
270K 5%
W11
R52
4.7 meg 5%
C48
1200 mmf
R51
150K 5%
140V
W9
15V P-P 7875
C56
470mmf
R63
680K 1 W

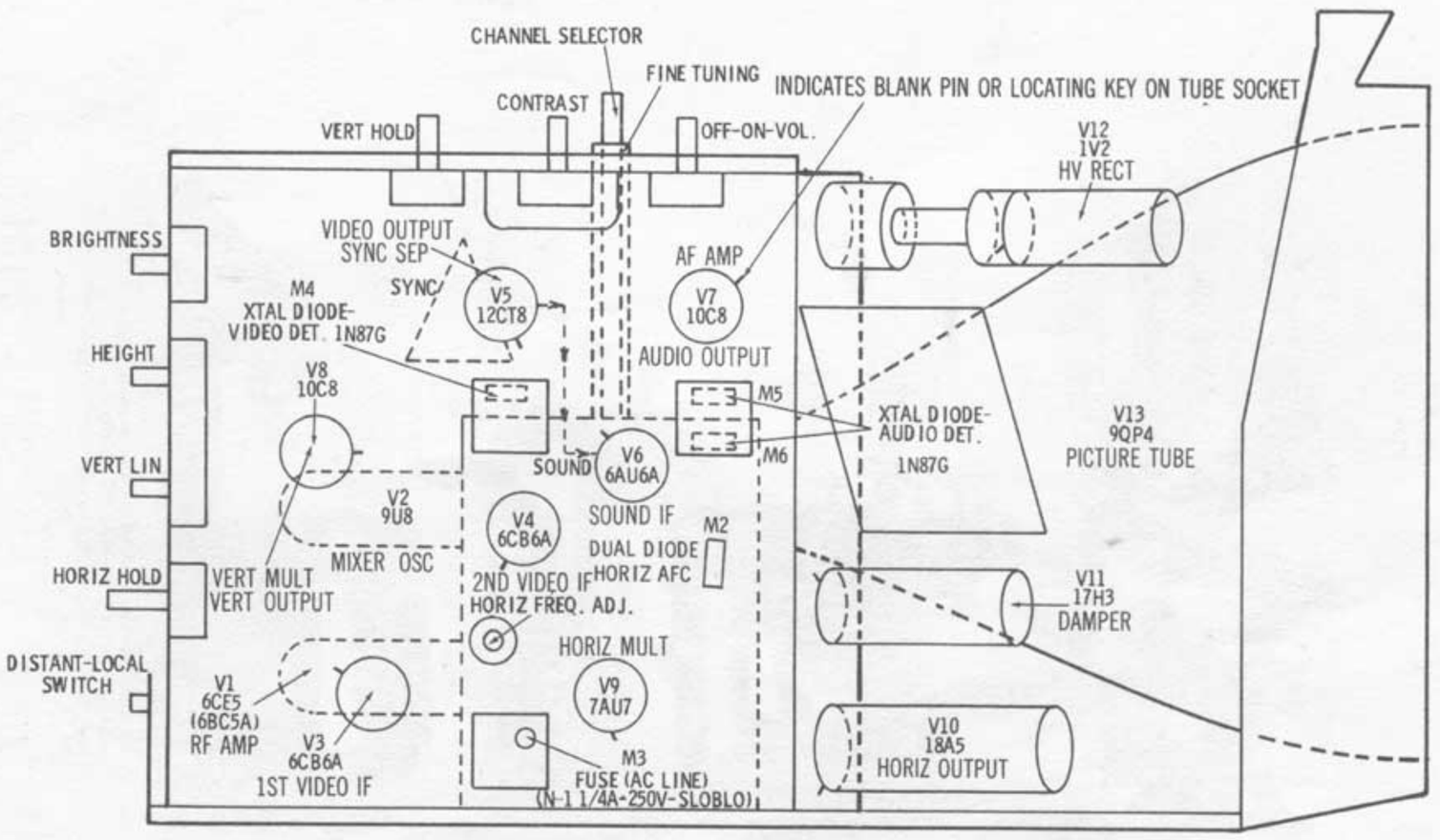
V9 7AU7 74VAC
V4 6CB6A 68VAC
V6 6AU6A 62VAC
V7 10C8 52VAC
V5 12CT8 40VAC
V8 10C8 40VAC
C59 800mmf
V2 9U8 9VAC
C24 1000mmf
C26 1000mmf



GENERAL ELECTRIC MODELS
9T001, 9T002 ("T" Line)

GENERAL ELECTRIC MODELS
9T001, 9T002 ("T" Line)

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.

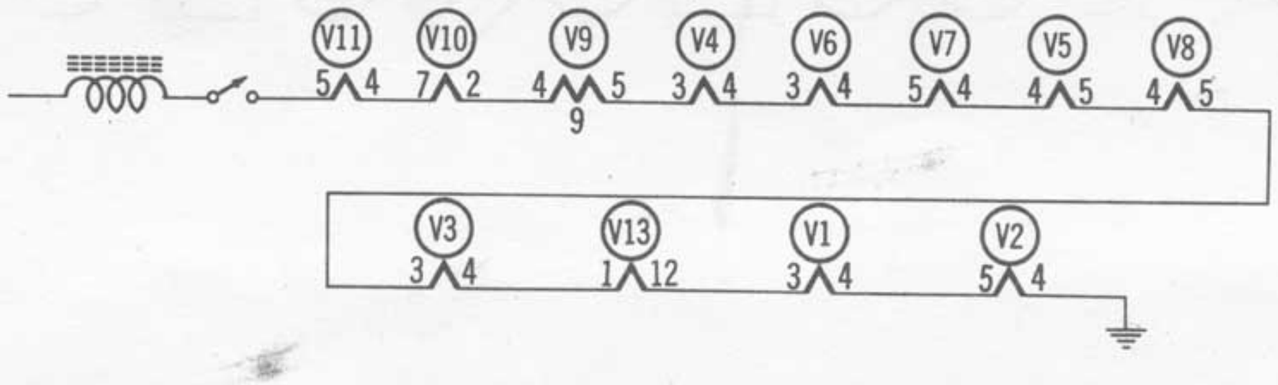
POWER SUPPLY FAILURE
No raster, no sound - Fuse (M3), Rectifier (M1)

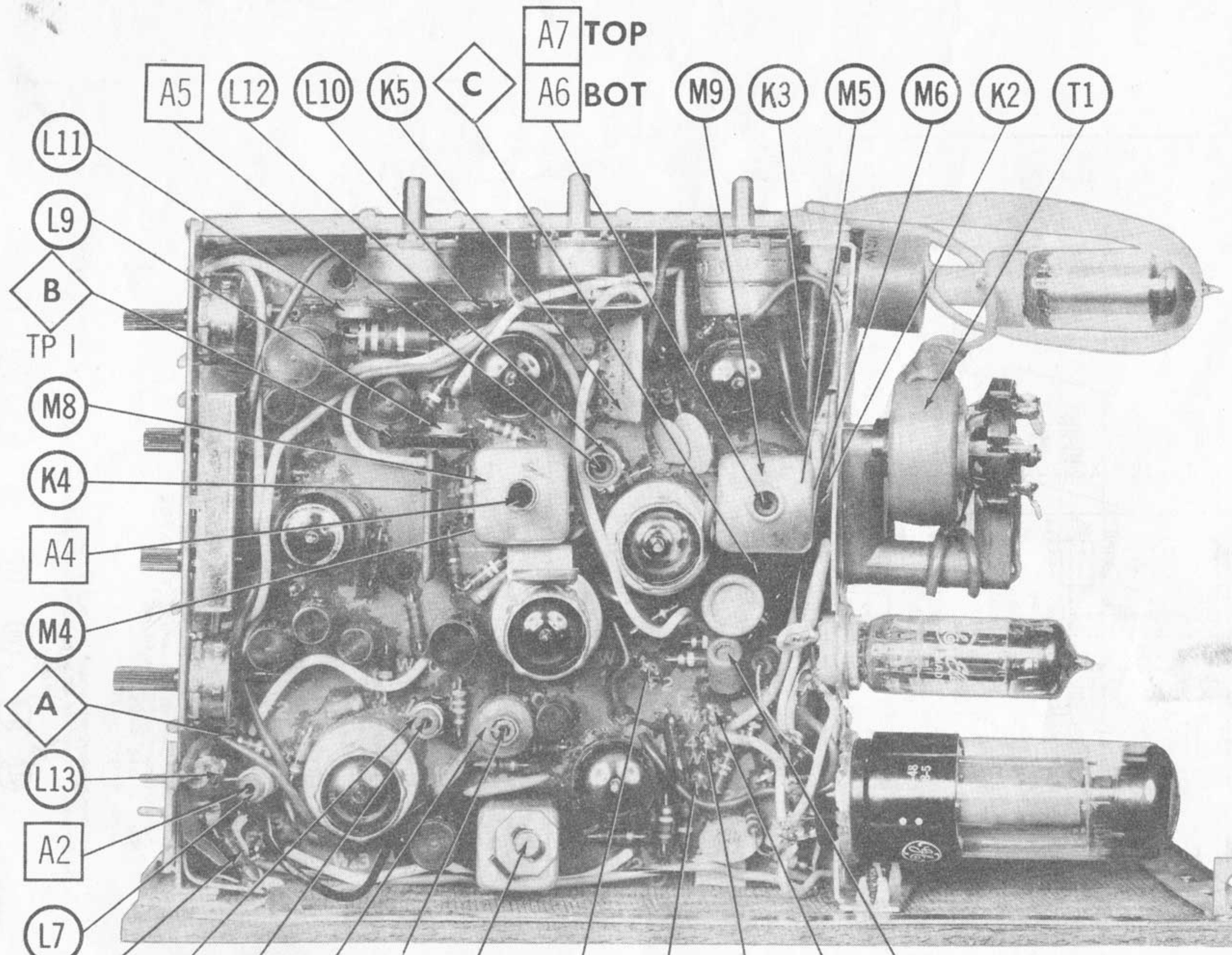
LOSS OF PICTURE OR SOUND
No pic, no sound, has raster - V3, V4, Diode (M4), V5
No pic, no sound, has snow - V1, V2
No pic, has sound, has raster - V5, V13
Has pic, no sound - V6, V7

SYNC FAILURE
No vert. sync - V5
No horiz. sync - V5, Diode (M2)
No vert. or horiz. sync - V5

SWEEP FAILURE
No raster, has sound - V9, V10, V11, V12, V13
No vertical deflection - V8
Poor vert. linearity or foldover - V8
Poor horiz. linearity or foldover - V9, V10, V11
Narrow picture - V9, V10, V11, M1
Vert. off freq. - V8
Horiz. off freq. - V9

This receiver employs tubes used in a series filament network, an open filament in any tube in the series will cause the set to be inoperative. (See circuit below.)

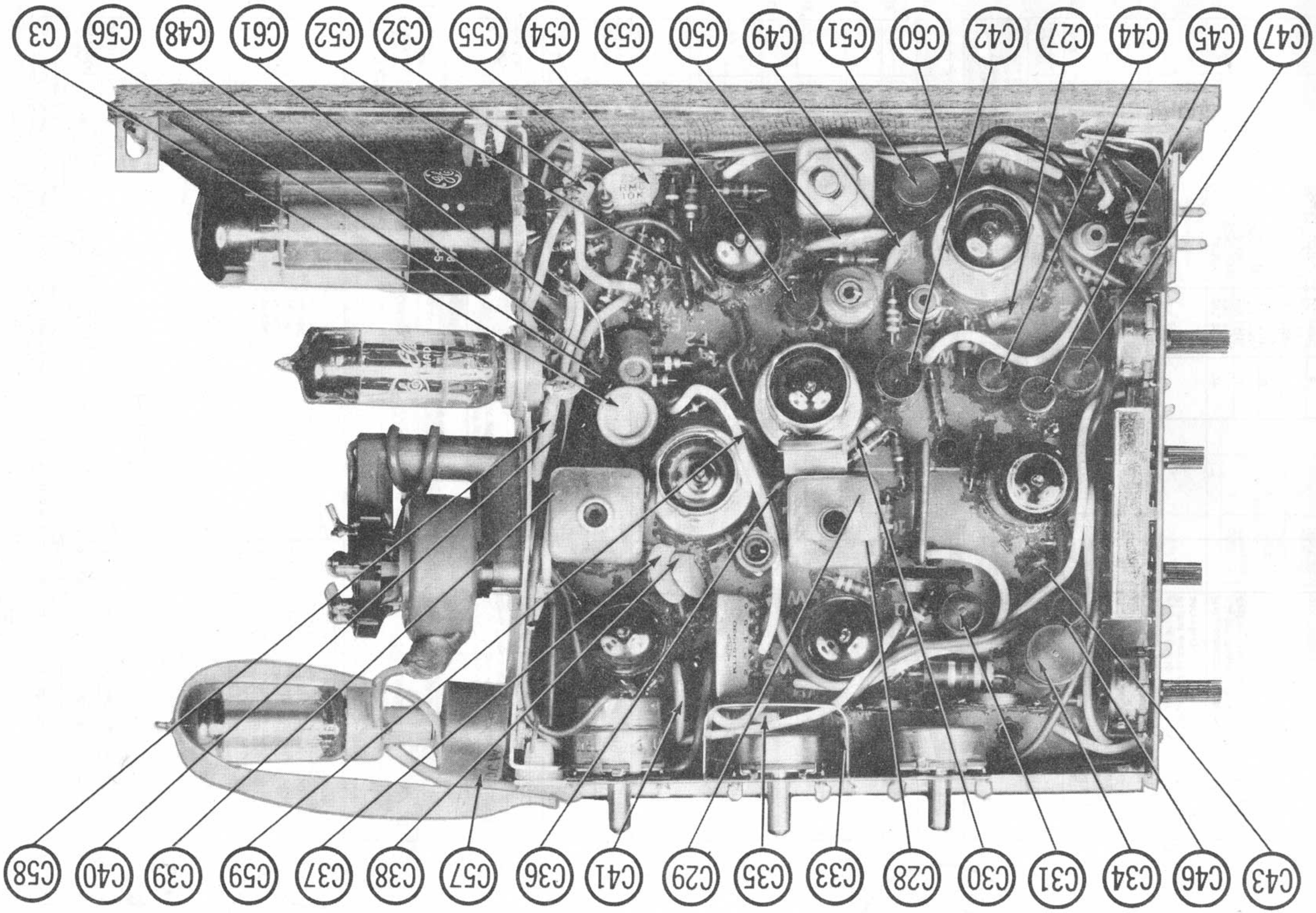




TP I - VIDEO AMP - 0V
TP 2 - HORIZ AFC - 3.6V
TP 3 - HORIZ SYNC - 4.5V
TP 4 - HORIZ OSC - 120V
TP 5 - HORIZ OSC - 140V

CHASSIS TOP VIEW

CAPACITOR IDENTIFICATION



ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT.
Allow a 20 minute warm-up period for the receiver and test equipment.

VIDEO IF ALIGNMENT

Turn volume control fully counter clockwise and contrast control fully clockwise. Turn fine tuning fully counter clockwise.
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.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Direct	High side to an ungrounded tube shield floating over mixer-osc. tube (V2). Low side to chassis. Use very short shielded leads.	Not used.	44.3MC (unmod)	11	USE VTVM DC probe to point (B) thru 10K. Common to chassis.	A1	Use only enough generator output to provide usable indication on VTVM.
2.	"	"	"	44.3MC	"	"	A2	"
3.	"	"	"	45.3MC	"	"	A3	"
4.	"	"	"	43.3MC	"	"	A4	"
5.	"	"	44.3MC (10MC Swp)	41.25MC 42.85MC 44.3MC 45.0MC 45.75MC	"	Vert. amp. thru 22K to point (B). Low side to chassis.	A1, A2, A3, A4	Adjust A1 and A2 simultaneously for maximum gain of response curve similar to Fig. 1. Adjust A4 to position 41.25MC and 42.85MC markers as in Fig. 1. Retouch A3 to place 45.75MC marker at 50% on curve. Retouch A1 and A2 to shape peak region of curve, if necessary.

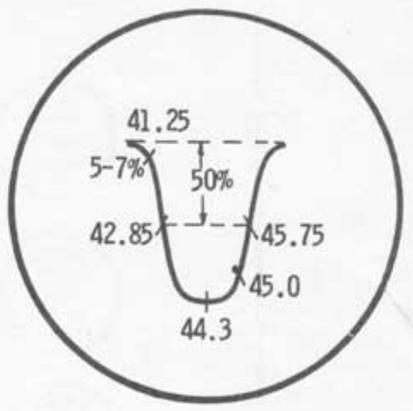


FIG. 1

SOUND IF ALIGNMENT

Connect two matched 100K (±1%) resistors in series from point (C) to chassis. The junction of these two resistors is alignment point (D) as shown on the schematic.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
6.	Direct	High side to point (B). Low side to chassis.	4.5MC (unmod)	Any non-interfering channel.	DC probe to point (C). Common to chassis.	A5, A6	Adjust for maximum deflection on VTVM.
7.	"	"	"	"	DC probe to point (D). Common to point (E).	A7	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting. Repeat steps 6 and 7.

If 4.5MC generator of crystal accuracy is not available, a station signal may be used.

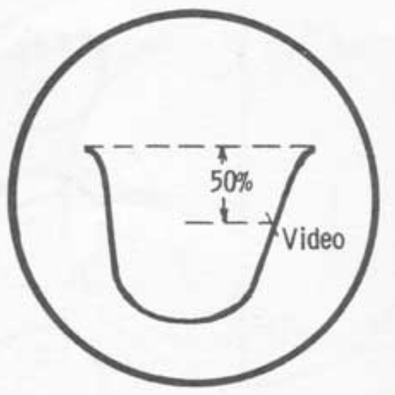


FIG. 3

VHF OSCILLATOR ALIGNMENT FOR TUNERS #RJX-084 AND #RJX-085

Connect bias as under "Video IF Alignment".
Set the fine tuning control 2/3 turn from fully counter clockwise.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8.	Fig. 2	Thru dummy antenna (Fig. 2) across primary of antenna matching transformer (L1).	213MC (10-15MC Swp)	211.25MC	13	Vert. amp. thru 10K to point (B). Low side to chassis.	A8	Adjust so that marker falls at 50% on response curve as in Fig. 3.
9.	"	"	201MC (10-15MC Swp)	199.25MC	11	"	A9	"
10.	"	"	183MC (10-15MC Swp)	181.25MC	8	"	A10	"
11.	"	"	85MC (10-15MC Swp)	83.25MC	6	"	A11	"
12.	"	"	79MC (10-15MC Swp)	77.25MC	5	"	A12	Adjust by means of expanding or compressing coil turns. Adjust so that marker falls at 50% as in Fig. 3.
13.	"	"	69MC (10-15MC Swp)	67.25MC	4	"	A13	Same as step 8.
14.	"	"	63MC (10-15MC Swp)	61.25MC	3	"	A14	Same as step 12.
15.	"	"	57MC (10-15MC Swp)	55.25MC	2	"	A15	"

FIG.

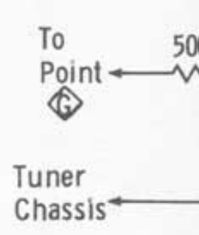


FIG.6

VHF RF AND MIXER ALIGNMENT FOR TUNERS #RJX-084 AND #RJX-085

Connect bias as under "Video IF Alignment".
When checking response, tuner shield must be in place.
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 usable pattern on scope.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
16.	Fig. 2	Thru dummy antenna (Fig. 2) across primary of antenna matching transformer (L1).	213MC (10MC Swp)	211.25MC 215.75MC	13	Vert. amp. thru 10K to point (F). Low side to chassis.	A16, A17, A18, A19	Adjust A16, A17 and A18 for maximum gain and symmetry with markers placed as in Fig. 4. Bandwidth is varied by changing position of C12 with respect to adjacent coil. If necessary, adjust A19 SLIGHTLY to reduce dip or tilt.
17.	"	"	177MC (10MC Swp)	175.25MC 179.75MC	7	"	A20, A21	Adjust for maximum gain and symmetry similar to Fig. 4 with markers as indicated. Repeat step 16 retouching A16, A17 & A18, if necessary.
18.	"	"	207MC (10MC Swp)	205.25MC 209.75MC	12	"		Make compromise adjustments of A20 and A21 for channels 13 thru 7, if necessary. Replace tuner shield when checking response.
			201MC (10MC Swp)	199.25MC 203.75MC	11			
			195MC (10MC Swp)	193.25MC 197.75MC	10			
			189MC (10MC Swp)	187.25MC 191.75MC	9			
			183MC (10MC Swp)	181.25MC 185.75MC	8			
19.	"	"	85MC (10MC Swp)	83.25MC 87.75MC	6	"	A22, A23, A24,	Adjust for curve similar to Fig. 5. Adjusted in numerical order, the bandwidth is first affected, then the sound side of the curve, then the video side. Replace tuner shield when checking response.

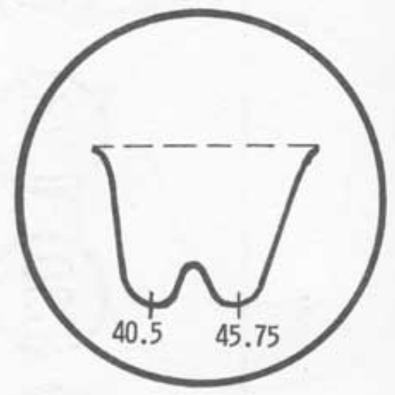
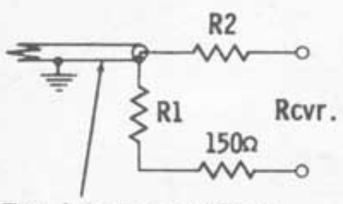


FIG. 7

NSTRUCTIONS



Zo	R1	R2
50Ω	56Ω	120Ω
75Ω	82Ω	110Ω

FIG. 2

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
20.	"	"	79MC (10MC Swp)	77.25MC 81.75MC	5	"	A25, A26, A27	"
21.	"	"	69MC (10MC Swp)	67.25MC 71.75MC	4	"	A28, A29, A30	"
22.	"	"	63MC (10MC Swp)	61.25MC 65.75MC	3	"	A31, A32, A33	"
23.	"	"	57MC (10MC Swp)	55.25MC 59.75MC	2	"	A34, A35 A36	"

40MC CHANNEL ALIGNMENT OF VHF TUNER #RJX-085

Connect bias as under "Video IF Alignment".
Remove IF link from L7 and terminate with 68Ω carbon resistor at open end.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
24.	Fig. 6	High side thru network (Fig. 6) to point Ⓖ. Low side to tuner chassis.	620MC (20MC Swp)	40.5MC 45.75MC	Between channels 38 & 39.	Vert. amp. thru 10K to point Ⓕ. Low side to chassis.	A37, A38, A39	Adjust A37 for maximum gain at 40.5MC marker and A38 for maximum gain at 45.75MC marker. Adjust A39 for maximum gain and MINIMUM tilt as in Fig. 7.

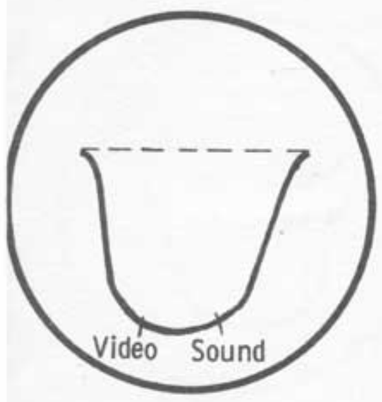
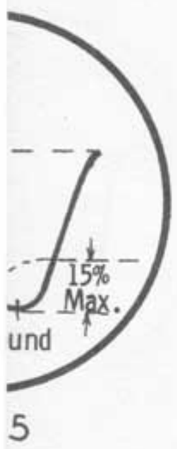
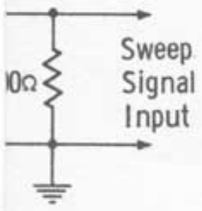


FIG. 4





VHF OSCILLATOR ALIGNMENT FOR TUNER #RJX-094

Connect bias as under "Video IF Alignment".
Set fine tuning 10-15 degrees from full clockwise. When checking response, the tuner shield must be in place.
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 usable pattern on scope.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
25.	Fig. 2	Thru dummy antenna (Fig. 2) across primary of antenna transformer.	213MC (10MC Swp)	211.25MC	13	Vert. amp. thru 47K to point Ⓑ. Low side to chassis.	A40	Adjust so that marker falls at 50% on curve as in Fig. 3. Adjust A41 thru A46 and A48 thru A51 by compressing or expanding coil turns.
			207MC (10MC Swp)	205.25MC	12		A41	
			201MC (10MC Swp)	199.25MC	11		A42	
			195MC (10MC Swp)	193.25MC	10		A43	
			189MC (10MC Swp)	187.25MC	9		A44	
			183MC (10MC Swp)	181.25MC	8		A45	
			177MC (10MC Swp)	175.25MC	7		A46	
			85MC (10MC Swp)	83.25MC	6		A47	
			79MC (10MC Swp)	77.25MC	5		A48	
			69MC (10MC Swp)	67.25MC	4		A49	
			63MC (10MC Swp)	61.25MC	3		A50	
			57MC (10MC Swp)	55.25MC	2		A51	

RF AND MIXER ALIGNMENT FOR TUNER #RJX-094

Connect the negative lead of a 3 volt bias supply to point Ⓐ. Positive to chassis.
When checking response, tuner shield must be in place.
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 usable pattern on scope.
Detune A1 by turning counter clockwise 3 turns. After completing alignment, readjust A1 as under "Video IF Alignment".
Disconnect link from tuner output leaving the ground wire connected. Connect a 100Ω resistor from tuner output link to chassis.
Adjustment of the gimmick of the 36MMF coupling capacitor will affect the bandwidth.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
26.	Fig. 2	Thru dummy antenna (Fig. 2) across primary of antenna matching transformer (L1).	213MC (10MC Swp)	211.25MC 215.75MC	13	Vert. amp. thru 10K to point Ⓙ. Low side to chassis.	A52, A53, A54, A55	Adjust by compressing or expanding coil turns for maximum gain and symmetry similar to Fig. 4. Adjust A52 for sound side of curve. Adjust A53 for video side of curve.
27.	"	"	207MC (10MC Swp)	205.25MC 209.75MC	12	"	A56, A57, A58	Adjust by compressing or expanding coil turns for curve similar to Fig. 4. Adjust in numerical order. The bandwidth is the first adjustment, then the sound side of curve and then the video side.
28.	"	"	201MC (10MC Swp)	199.25MC 203.75MC	11	"	A59, A60, A61	"
29.	"	"	195MC (10MC Swp)	193.25MC 197.75MC	10	"	A62, A63, A64	"
30.	"	"	189MC (10MC Swp)	187.25MC 191.75MC	9	"	A65, A66, A67	"
31.	"	"	183MC (10MC Swp)	181.25MC 185.75MC	8	"	A68, A69, A70	"
32.	"	"	177MC (10MC Swp)	175.25MC 179.75MC	7	"	A71, A72, A73	"
33.	"	"	85MC (10MC Swp)	83.25MC 87.75MC	6	"	A74, A75, A76	Adjust by compressing or expanding coil turns for curve similar to Fig. 5. Adjust in numerical order, the bandwidth is the first adjustment, then the sound side of curve and then the video side.
34.	"	"	79MC (10MC Swp)	77.25MC 81.75MC	5	"	A77, A78, A79	"
35.	"	"	69MC (10MC Swp)	67.25MC 71.75MC	4	"	A80, A81, A82	"
36.	"	"	63MC (10MC Swp)	61.25MC 65.75MC	3	"	A83, A84, A85	"
37.	"	"	57MC (10MC Swp)	55.25MC 59.75MC	2	"	A86, A87, A88	"

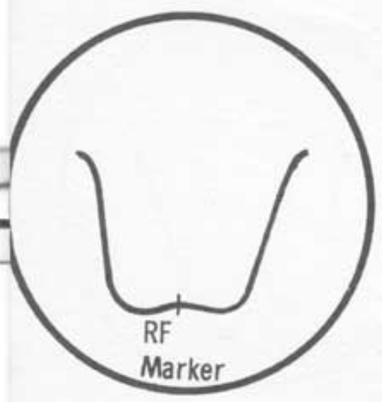


FIG. 8

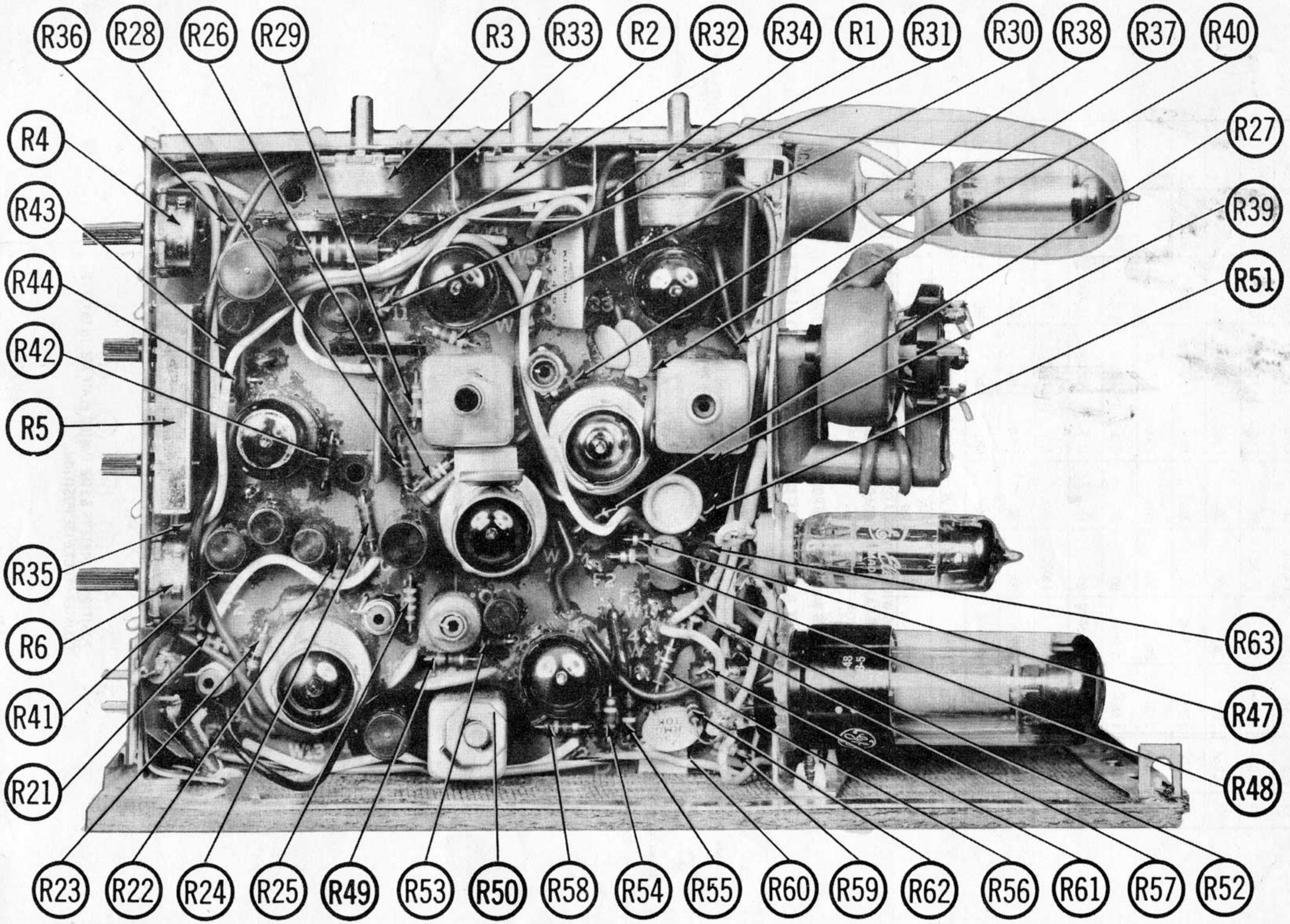
ALIGNMENT INSTRUCTIONS (cont)

UHF TUNER ALIGNMENT

If UHF tuner has to be removed from its mounting for alignment, extend cables and ground to main chassis.
For 43.5MC marker, connect a separate generator loosely to UHF IF input jack.
Connect bias as under "Video IF Alignment".
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
38.	Fig. 2	Across UHF antenna terminals thru antenna matching network (Fig. 2).	460MC (10MC Swp)	43.5MC 460MC	UHF Rotate UHF tuner shaft fully counter clockwise.	Vert. amp. thru 10K to point (F). Low side to chassis.	A89	Adjust A89 to make 460MC marker coincide with 43.5MC marker.
39.	"	"	910MC (10MC Swp)	43.5MC 910MC	Rotate UHF tuner shaft fully clockwise.	"	A90	Adjust A90 with a plastic crochet needle or similar device to make 910MC marker coincide with 43.5MC marker. Repeat steps 38 and 39 until marker coincidence is achieved on both ends of the band.
40.	"	"	530MC (10MC Swp)	43.5MC 530MC	Rotate UHF tuner shaft until 530MC marker coincides with 43.5MC marker.	"		Connect a short between the two feed thrus nearest the crystal diode mounting. (Do not short to chassis.)
41.	"	"	"	530MC	Leave as above.	Disconnect coaxial cable from VHF tuner and connect a 33Ω carbon resistor from inner conductor to shield. Connect vert. amp. across the 33Ω resistor thru an audio amplifier.	A91, A92	Use maximum gain on scope and amplifier and adjust sweep output to provide 2 inch peak to peak response curve on scope. Adjust A91 and A92 to obtain symmetrical response curve similar to Fig. 8. Remove the short from the feed-thrus. Remove the amplifier and 33Ω resistor and connect coaxial cable to VHF tuner.
42.	"	"	880MC (10MC Swp)	43.5MC 880MC	Rotate UHF tuner shaft to make 880MC marker coincide with 43.5MC marker.	Vert. amp. thru 10K to point (F). Low side to chassis.		
43.	"	"	"	880MC	Leave as above.	Same as step 41.	A93, A94	Use maximum gain on scope and amplifier and adjust sweep output to provide 2 inch peak to peak response curve on scope. Adjust A93 and A94 to give symmetrical response curve similar to Fig. 8. Remove the short from feed thrus. Remove amplifier and 33Ω resistor and connect coaxial cable to VHF tuner. Repeat steps 40 thru 43 until symmetrical response is obtained at both 530MC and 880MC.

Check the response curve over the entire UHF band and check for abnormally low gain points within the tuning range. This is usually caused by insufficient oscillator injection and is checked by measuring the crystal current. To do this, disconnect UHF output cable and connect a 0-5MA meter across output cable. The crystal current should be between .65MA and 3MA under normal conditions. If the reading is outside these limits, adjust the oscillator injection loop position (A95) with respect to the crystal clip terminal.



RESISTOR IDENTIFICATION

9T001, 9T002 ("T" Line)

GENERAL ELECTRIC MODELS

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6CE5	2.4Meg	0Ω	7Ω	4.5Ω	† 25Ω	† 2200Ω	0Ω		
V2	9U8	† 15K	160K	† 4700Ω	0Ω	4.5Ω	† 1000Ω	0Ω	0Ω	10K
V3	6CB6A	2.4Meg	56Ω	11.5Ω	9Ω	† 500Ω	† 500Ω	0Ω		
V4	6CB6A	.1Ω	56Ω	32Ω	30Ω	† 500Ω	† 500Ω	0Ω		
V5	12CT8	† 25K	2.7Meg	0Ω	22Ω	16Ω	† 3300Ω	† 25Ω	300K	0Ω
V6	6AU6A	1.8Ω	0Ω	30Ω	27Ω	† 500Ω	† 500Ω	180Ω		
V7	10C8	† 470K	6.8Meg	0Ω	22Ω	27Ω	† 385Ω	† 25Ω	1Meg	220Ω
V8	10C8	• † 8Meg	• 5.5Meg	0Ω	16Ω	11.5Ω	‡1500Ω	‡1500Ω	• 1.2Meg	0Ω
V9	7AU7	† 75K	80K	1300Ω	36Ω	32Ω	† 12K	1.7Meg	1300Ω	34Ω
V10	18A5	900K	36Ω	0Ω	NC	‡25Ω	NC	44Ω	† 25Ω	
V11	17H3	¶	NC	† 25Ω	44Ω	52Ω	NC	NC	† 25Ω	
V12	1V2	‡ 180Ω	PINS	2 THRU 8	HAVE	INF	RESISTANCE			‡180Ω
V13	9QP4	9Ω	0Ω	‡7.5Ω	PIN 6 INF	PIN 10 ‡7.5Ω	PIN 11 • 350K	PIN 12 7Ω		

¶ THIS READING WILL VARY GREATLY, (10K MINIMUM), DUE TO THE CONDITION OF THE ELECTROLYTIC CAPACITOR CONNECTED IN THE ASSOCIATED CIRCUIT.

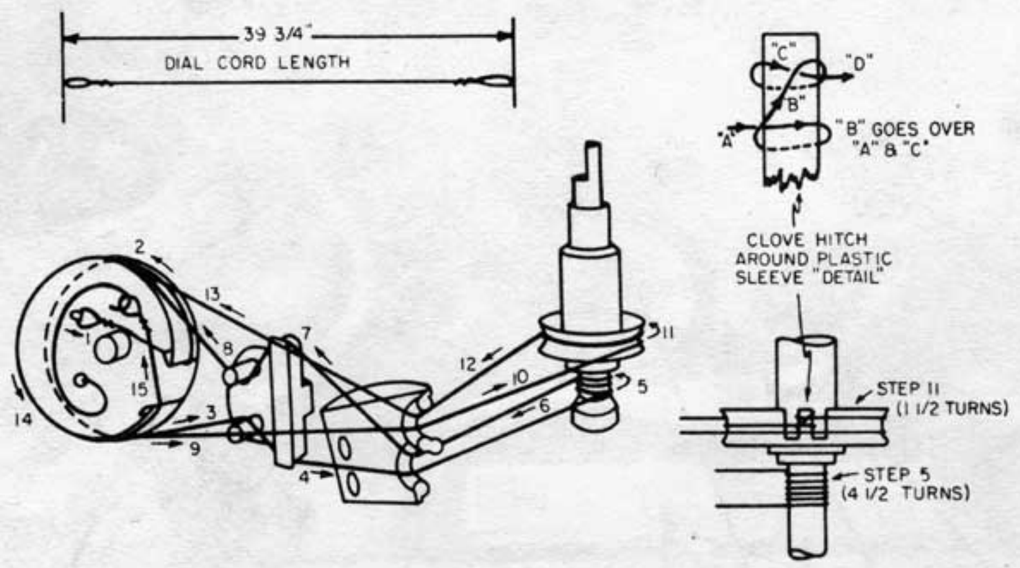
† MEASURED FROM OUTPUT OF M1.

‡ MEASURED FROM PIN 1 OF V11.

• THIS READING WILL VARY CONTROL SET FOR NORMAL OPERATION.

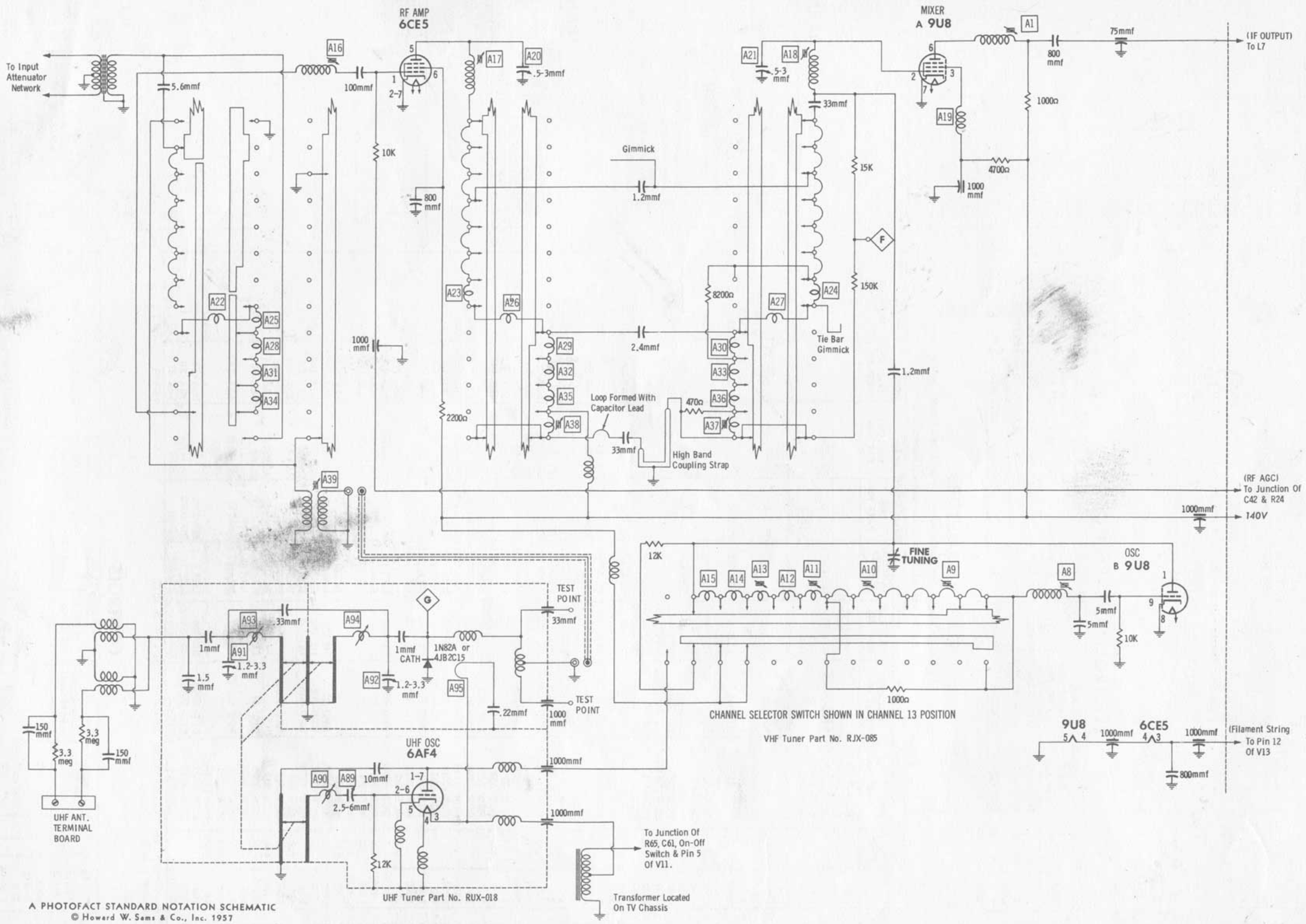
HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

1. Turn the set on and tune in a TV station preferably with a test pattern.
2. Connect lead from point (K) to point (L) .
3. Connect a 1000Ω resistor across horizontal freq. coil (L14) from point (M) to point (N) .
4. Adjust horizontal hold control so that the picture floats back and forth across the screen.
5. Remove the resistor from across L14 and adjust B1 (horiz. freq. slug) so that the picture again floats back and forth across the screen.
6. Remove clip lead from point (K) to point (L) . Readjust the horizontal hold control, if necessary.



POSITION OF PULLEYS & FINE TUNING PLATE ARE IN EXTREME COUNTER CLOCKWISE POSITION.

UHF DRIVE CORD STRINGING



A PHOTOFACT STANDARD NOTATION SCHEMATIC

ALTERNATE UHF-VHF TUNER SCHEMATIC

9T001, 9T002 ("T" Line)

GENERAL ELECTRIC MODELS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amp.	6CE5	Note 1
V2	Mixer-Osc.	9U8	
V3	1st Video IF Amp.	6CB6A	
V4	2nd Video IF Amp.	6CB6A	
V5	Video Output-Sync Sep.	12CT8	
V6	Sound IF Amp.	6AU6A	

ITEM No.	USE	TYPE	NOTES
V7	AF Amp. -Audio Output	10C8	
V8	Vert. Mult. -Vert. Output	10C8	
V9	Horiz. Mult.	7AU7	
V10	Horiz. Output	18A5	
V11	Damper	17H3	
V12	HV Rectifier	1V2	

Note 1: Some versions may use 6BC5A in this application.

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	G. E. PART No.	CBS PART No.	GENERAL ELECTRIC PART No.	SYLVANIA PART No.	
V13	9QP4		9QP4	9QP4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	G. E. PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	300	150	RCE-240	AFHS1-24-75	XA0263	FP119	TMS-27	S-115	TVL-1434
C2A	▲200	150	RCE-241	AFHS2- 35-50		FP118	TMS-26	S-110	R2354*
B	▬60	300				TE68	TD-60-350	MTD-4530	
C3	4	50	RCE-236	PRS150V4	BBR4-50	TC30	TD-4-50	MMT-0505	TVA-1303

* 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	G. E. PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	150		RCW-3289							
C5	150		RCW-3289							
C6	5.6		RCW-3296	BPD-00005	D6-050	C10V5C		ZT-555		
C7	100		RCW-3298		TCL-100					
C8	.5-3		RCY-080		829-3		3115-D	CT565A		N1500
C9	1000			BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	①
C10	2.7			NP0-SI 2.2						
C11	1.0			NP0-SI 1	TCZ-1		TCO-1		5TCCB-V1	
C12	47		RCW-3145		TCL-47					N1500
C13	5		RCW-3146							N1500
C14	12		RCW-3299	N750-SI 10	TCN-12	C10Q12U	TC7-12			N750
C15	.91				TCZ-1					
C16	47		RCW-3297		TCL-47					N1500
C17	.5-3		RCY-080		829-3		3115-D	CT565A		
C18	1000			BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	①
C19	1000		RCW-3117	EF-001	MFT-1000				503C-D1	
C20	1000		RCW-3117	EF-001	MFT-1000				503C-D1	
C21	1000		RCW-3117	EF-001	MFT-1000				503C-D1	
C22	1000		RCW-3117	EF-001	MFT-1000				503C-D1	
C23	1000			BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	①
C24	1000		RCW-3117	EF-001	MFT-1000				503C-D1	
C25	75		RCW-3288	N750-SI 75	TCZ-75	C10Q75U	TC7-75	NT-5475	5TCU-Q75	N750
C26	1000			BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	
C27	680		RCW-3051							N220
C28	2.4		RCW-3287	NP0-SI 2.2	TCZ-2R2	C10V22C				NP0
C29	5		RCW-3057	NP0-SI 5	TCZ-5	C10V5C	TCO-5	ZT-555		NP0
C30	750		RCW-3211	BPD-0008	DD-751	LT6T75	ED-750	UC-5375	5GA-T75	
C31	.047	200	RCB-015			BC2S475		ACE6147	2SE-S47	
C32	5000		RCW-3014	BPD-005	DD-502	BYA10D5	ED-005	DC525	5HK-D5	
C33	8		RCW-3293			L10V8			5GA-V8	
C34	.1	400	RCB-036			BC6P15		ACE-401	4SE-P10	
C35	3		RCW-3004	NP0-SI 3		C10V3C	TCO-3	ZT-553		
C36	20		RCW-3294	NP0-SI 20	TCZ-20	C10Q2C	TCO-20	ZT-542	5TCC-Q2	NP0 ②
C37	2200		RCW-3248	BPD-0022	DC-222	BYA10D22	ED-0022	UC-5222	5HK-D22	NP0
C38	5000		RCW-3014	BPD-005	DD-502	BYA10D5	ED-005	DC525	5HK-D5	
C39	120		RCG-003	1469-00012		22R5T12			MS-312	
C40	5000		RCW-3014	BPD-005	DD-502	BYA10D5	ED-005	DC525	5HK-D5	
C41	5000		RCW-3188	BPD-005	DD-502	BYA10D5	ED-005	DC525	5HK-D5	
C42	.1	200	RCB-017			BC2P1J		ACE-401	2SE-P10	
C43	330		RCW-3290	BPD-00033	DD-331	L10T33	ED-330	UC-5333	5GA-T33	
C44	.0047	400	RCB-002			BC6D47J		ACE-6247	4SE-D47	
C45	.022	200	RCB-014			BC2S22J		ACE-612	2SE-S15	
C46	.0039	400	RCB-011							
C47	.015	600	RCB-013			BC2S15J			6SE-S15	
C48	1200		RCW-3187	BPD-001	D6-122	L10D12	ED-1200	UC-5212	5GA-D12	
C49	1200		RCW-3187	BPD-001	D6-122	L10D12	ED-1200	UC-5212	5GA-D12	
C50	5000		RCW-3274	BPD-005	DD-502	BYA10D5	ED-005	DC525	5HK-D5	
C51	.1	200	RCB-017			BC2P1J		ACE401	2SE-P10	
C52	910		RCU-346	1464-00091		1R5T91			MS-391	
C53	.0047	400	RCB-002			BC6D47J		ACE6247	4SE-D47	
C54	10000		RCW-3186	BPD-01	DD-102	BYA6S1	ED-01	DC511	5HK-S1	
C55	620		RCW-3280			L10T62				
C56	470		RCW-3219	BPD-00047	DD-471	BYA10T47	ED-470	UC-5347	5GA-T47	
C57	1000	10000	RCW-3291							
C58	240	3000	RCW-3239							N1500
C59	800		RCW-3037	BPD-0008	DD-801	L10T8	ED-0008		5GA-T8	
C60	800		RCW-3037	BPD-0008	DD-801	L10T8	ED-0008		5GA-T8	
C61	10000		RCW-3186	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	

① Some versions use 800MMF in this application. (Part #RCW-3037)
② Not used in some versions.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	G. E. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	500K	½	RRC-399					Volume
B	Switch							
R2	25K	½	RRC-397					Contrast
R3	1.5Meg	½	RRC-402					Vertical Hold
R4	200K	½	RRC-398					Brightness
R5A	5Meg	½	RRC-400					Height
B	500K	½						Vert. Lin.
R6	1Meg	½	RRC-401					Horiz. Hold

PARTS LIST A

RESIS

All wattages 1/2 watt, or les

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	G. E. PART No.	IRC PART No.	
R7	3.3Meg			BTS-3.3Meg	
R8	3.3Meg			BTS-3.3Meg	
R9	470Ω			BTS-470	
R10	330Ω			BTS-330	
R11	330Ω			BTS-330	
R12	10K			BTS-10K	
R13	2200Ω			BTS-2200	
R14	15K			BTS-15K	Note 1
R15	150K			BTS-150K	
R16	15K			BTS-15K	
R17	4700Ω			BTS-4700	
R18	1000Ω			BTS-1000	
R19	15K	2		BTB-15K	
R20	10K			BTS-10K	
R21	3300Ω				
R22	470Ω			BTS-470	
R23	56Ω			BTS-56	
R24	2.2Meg				
R25	33K				
R26	470Ω			BTS-470	
R27	56Ω			BTS-56	
R28	22Meg			BTS-22Meg	
R29	220K 5%			BTS-220K 5%	
R30	3300Ω			BTS-3300	
R31	220K			BTS-220K	
R32	22K			BTS-22K	
R33	3300Ω	2		BTB-3300	
R34	10K			BTS-10K	
R35	100K			BTS-100K	
R36	330K			BTS-330K	

Note 1: Early versions u
Note 2: Later versions u
Note 3: A 1Meg resistor

TRANSFORMERS (

ITEM No.	USE	G. E. PART No.	Halldorson PART No.	Merit PART N
T1	Horiz. Output Trans.	RTO-196		
T2	Vert. Output Trans.	RTO-198	Z1804 ①	A-3037 (
T3A	Yoke(70°)Horiz(12MH)	RLD-075		MDF-87
B	Vert(40MH)	RHH-012 ②		
		RMC-058 ③		

① Drill new mounting hole(s).
② Yoke retaining ring.
③ Yoke clamp.
④ Connect jumper from yoke term #1 to yoke term #3.
⑤ Use original yoke retaining ring and yoke clamp.

TRANSFORMER (A

ITEM No.	IMPEDANCE		REPLACEMENT DA			
	PRI.	SEC.	G. E. PART No.	Halldorson PART No.	Merit PART No.	St PA
T4	7000Ω	3-4Ω	RTO-197	Z1113 ①	A-2998	A-

SPEA

ITEM No.	TYPE			REPLACEMENT DATA	
	SIZE	FIELD	V. C. IMP.	G. E. PART No.	QUAM PART No.
SP1	4"	PM	3-4Ω	ROP-035	4A07

COILS

ITEM No.	USE	G. E. PART No.	NOTES
L1	Ant. Trans.	RLA-047	
L2	Ant. Coils	RSX-084	Includes stator ass'y. complete with rotor.
L3	RF Coils	RSX-083	Includes stator ass'y. complete with rotor.

ITEM No.	USE	REPLACEM	
		G. E. PART No.	MEISSNER PART No.
L7	1st Video IF	RLI-361	
L8	2nd Video IF	RTL-195	
L9	Series Peaking Coil	RLI-207	19-3100
L10	Series Peaking Coil	RLI-205	19-3125
L11	Shunt Peaking Coil	RLI-194	19-3300
L12	1st Sound IF	RLI-394	
L13	Line Choke	RLI-393	

Note 1: Some versions use part #RLI-408 and delete C-36.

ND DESCRIPTIONS

TORS

, unless otherwise listed.

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	G. E. PART No.	IRC PART No.	
R37	470Ω			BTS-470	
R38	180Ω			BTS-180	
R39	22K			BTS-22K	
R40	220Ω			BTS-220	
R41	6.8Meg			BTS-6.8Meg	Note 2
R42	1Meg			BTS-1Meg	
R43	82K			BTS-82K	
R44	68K			BTS-68K	
R45	2200Ω				
R46	2200Ω				
R47	680K				
R48	560K				
R49	1Meg				
R50	82K 5%				
R51	150K 5%				
R52	4.7Meg 5%				
R53	12K 5%				
R54	820K				Note 3
R55	100K				
R56	75K 5%				
R57	270K 5%				
R58	1300Ω 5%				
R59	12K				
R60	82K 5%			BTS-82K 5%	
R61	820K			BTS-820K	
R62	330Ω			BTS-330	
R63	680K	1		BTA-680K	
R64	.91Ω		RRW-155	BW½-.91	
R65	3Ω	5	RRW-137	PW7-3	

se a 10K resistor.
se a 5.6Meg resistor.
is used in some versions.

SWEEP CIRCUITS)

REPLACEMENT DATA				
RCA TYPE No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
222T1 ①	V313 ①	A-8123 ①	26S72 ① Y-33 ④⑤	A-102X ①

AUDIO OUTPUT)

ATA			
ancor RT No.	Thordarson PART No.	Triad PART No.	NOTES
329	24S49	S-7X	① Drill one new mtg. hole.

KER

	NOTES

(RF-IF)

ITEM No.	USE	G. E. PART No.	NOTES
L4	Mixer Grid Coils	RSX-082	Includes stator ass'y. complete with rotor.
L5	Osc. Coils	RSX-081	Includes stator ass'y. complete with rotor.
L6	Conv. Plate Coil	RLI-402	

ENT DATA			
	MERIT PART No.	MILLER PART No.	NOTES
	TV-181	6112	100 Microhenries
		6178	120 Microhenries
	TV-190	6132	330 Microhenries
			Includes C36. Note 1
			32 Microhenries

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES.		REPLACEMENT DATA							NOTES
	PRI.	SEC.	G. E. PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	RCA TYPE No.	Ram PART No.	Thordarson PART No.	
L14	75Ω		RLI-380							

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ∿)	G. E. PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L15	.200A	25Ω	.8HY	RLF-076	C5040	C-2994	C-2327	26C41	C-24X

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	G. E. PART No.	REPLACEMENT DATA	
K1	Chassis Isolation	4700MMF, 1Meg	RCR-001*		
K2	Audio De-emphasis	1000MMF, 4000MMF, 10000MMF, 22K	REK-014	Aerovox Centralab Sprague	PA-425 PC-186 PB-3
K3	Audio	6800MMF, 10000MMF, 6.8Meg 1Meg, 470K	REK-017	Aerovox	PA-516
K4	Vert. Int.	800MMF, 800MMF, 180MMF, 130MMF, 68K, 100K, 47K, 47K	REK-016		
K5	Horiz. -Sync	470MMF, 800MMF, 10000MMF, 470K, 2.2Meg	REK-015	Aerovox	PA-525

* Early production used individual units of 1Meg and 5000MMF in this application.

RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA						
	CURRENT (Measured)	G. E. PART No.	FEDERAL PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.
M1 M2	.200A	RER-025 ① RER-023 ①	1090A ① 1215 ①③	1N1007 ②	RS300SL ① 1T1 ①③	6S300 ①	6Q4 ①	300 ①

① Selenium type.
② Germanium type.
③ 2 required.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			G. E. PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M3	N	1 1/4A 125V S/B	REF-029	RJW-006*	3331.25 (N-1 1/4A)	346011	N 1 1/4	HN 3/4 to 1 1/4

* Includes clip.

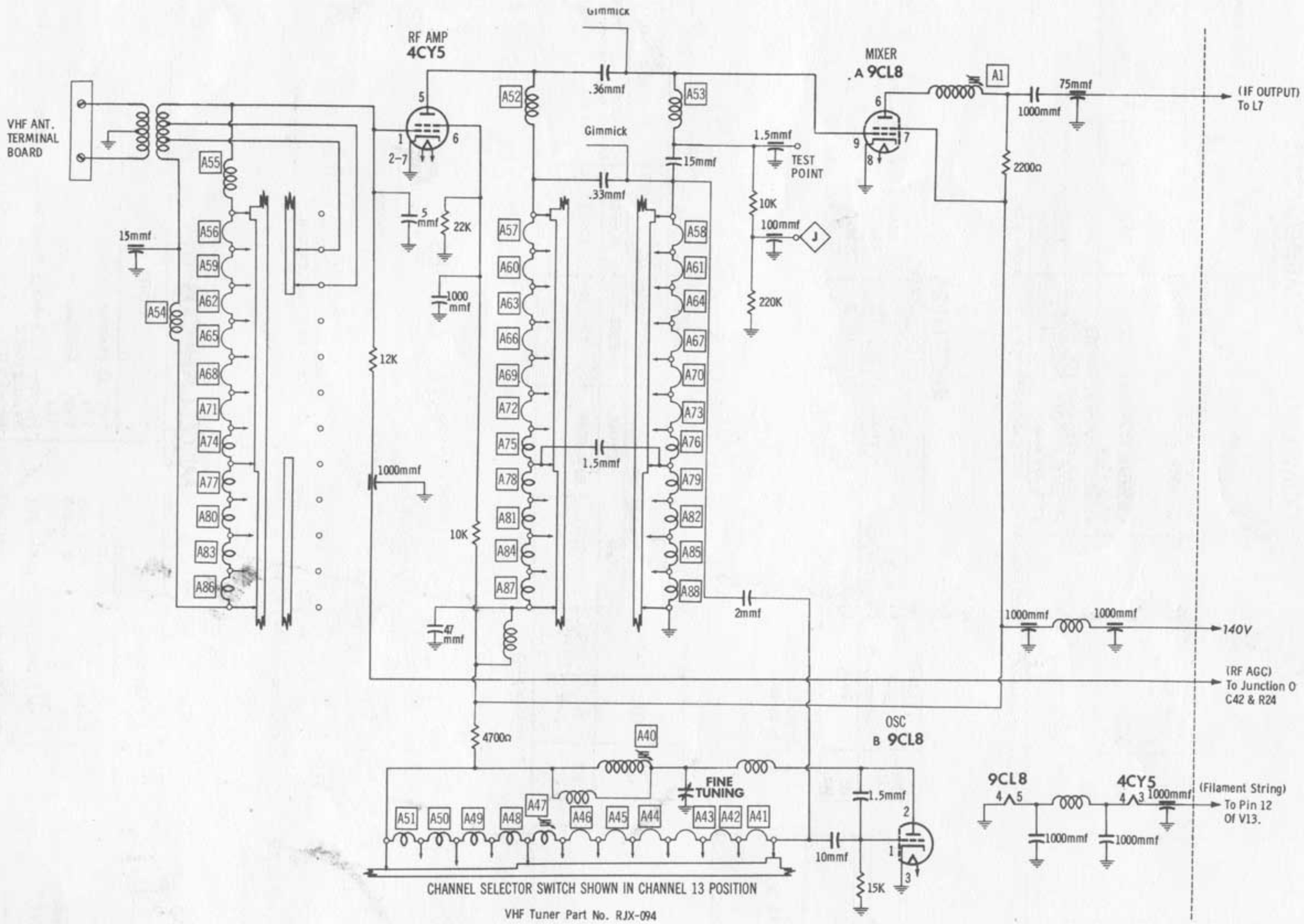
CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA		NOTES
		G. E. PART No.	SYLVANIA PART No.	
M4	1N87G*	RED-001	1N60	Video Detector (Pigtail)
M5	1N87G	RED-001	1N60	Ratio Detector (Pigtail)
M6	1N87G	RED-001	1N60	Ratio Detector (Pigtail)

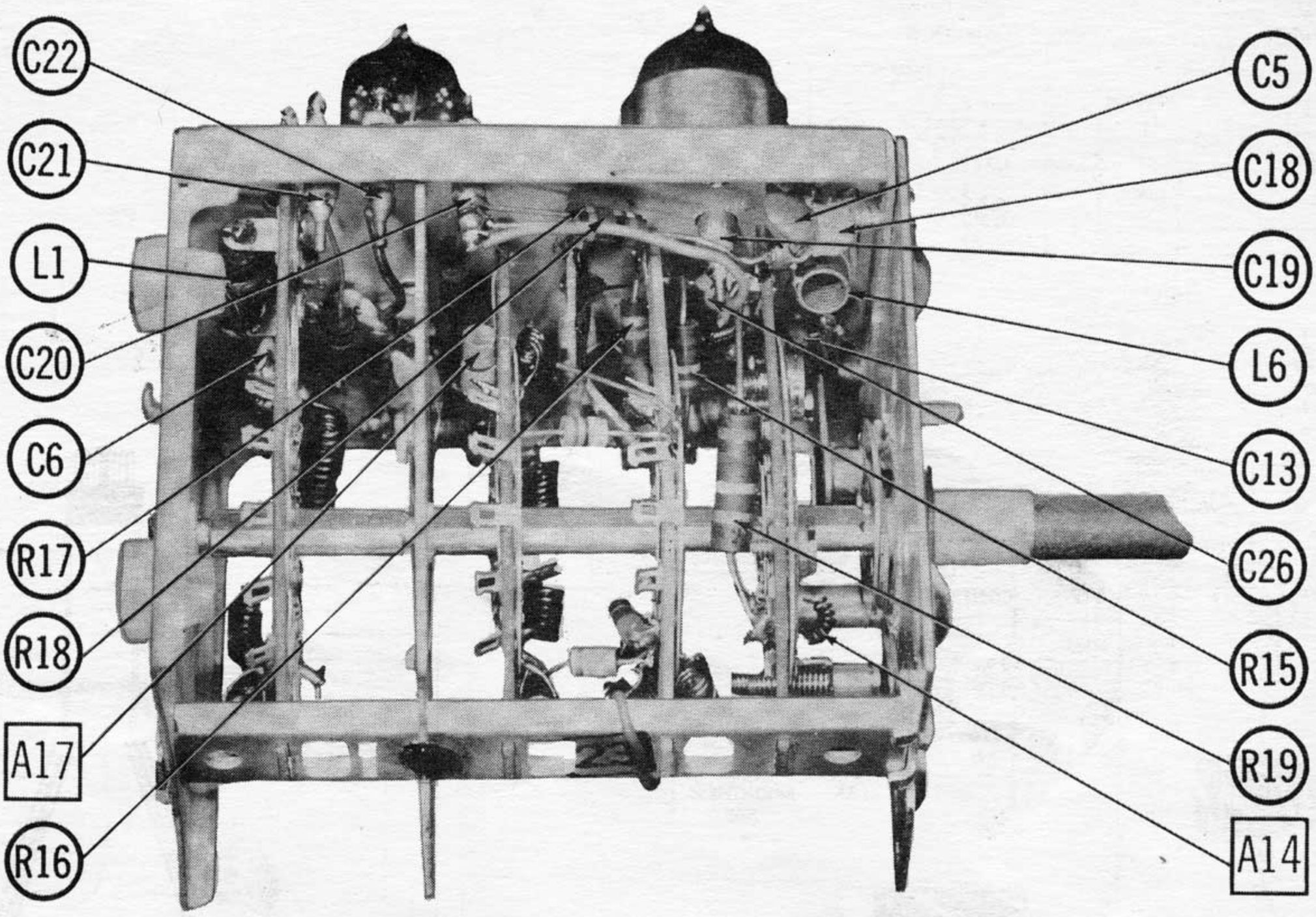
* A 1N64 may be used in some versions.

MISCELLANEOUS

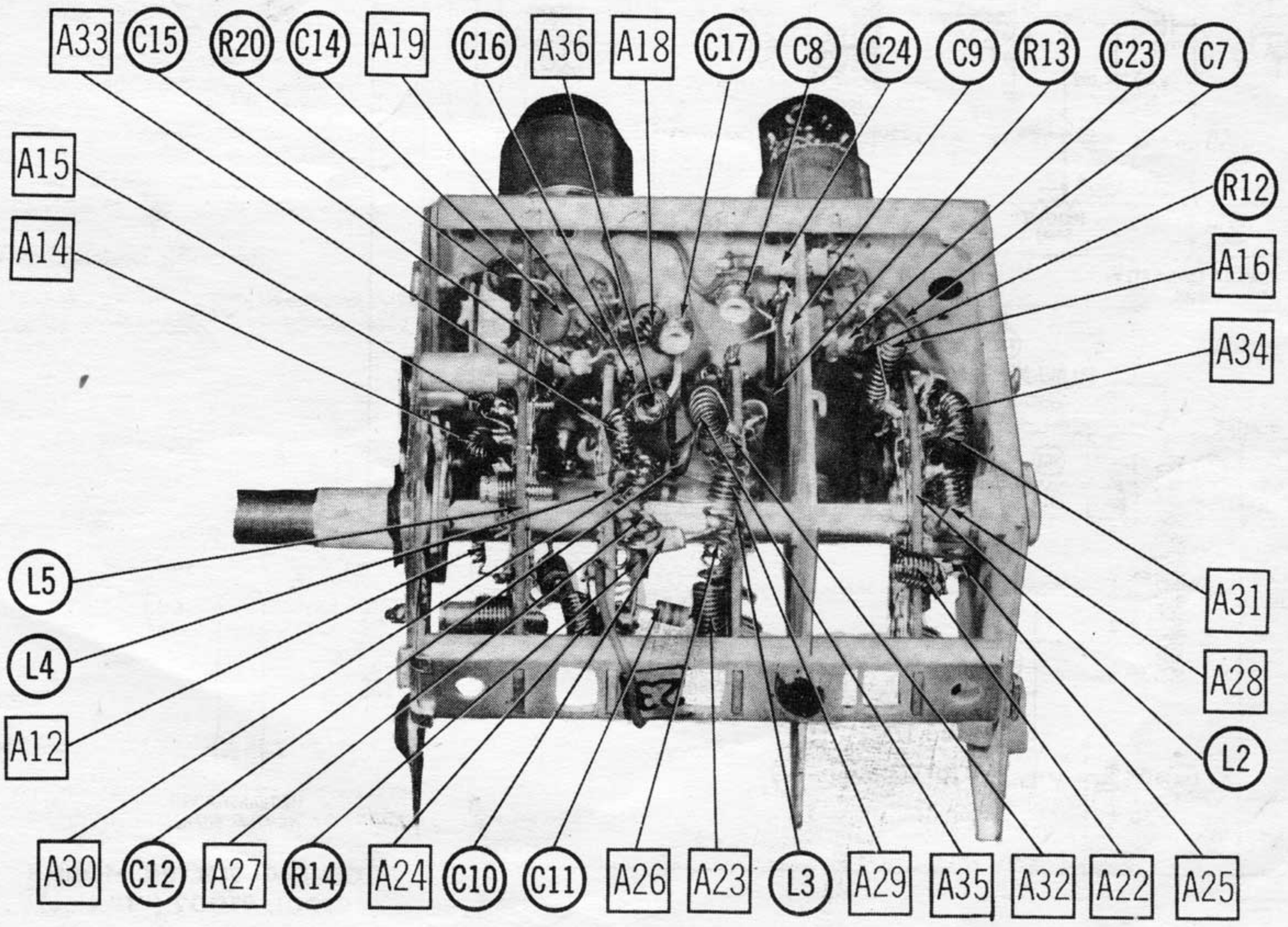
ITEM No.	PART NAME	G. E. PART No.	NOTES
M7	Tuner	RJX-084	VHF, 12 Position.
	Tuner	RJX-094	VHF,
	Tuner	RJX-085	VHF, 13 Position.
	Tuner	RUX-018	UHF
M8	Crystal Det. Ass'y.	RLI-392	Includes 3rd Video IF, Shunt Peaking Coil and Two Series Peaking Coils.
M9	Crystal Det. Ass'y.	RTD-027	Includes Ratio Det. and Resistors.
M10	Switch		Local-Distance, Slide Type (DPDT). Note: Not used in some versions.
M11	Centering Device	REA-014	
M12	Ion Trap	RET-015	
	Yoke Clamp	RMC-058	
	Printed Board	REU-002	Ant. Terminal Ass'y.
	Safety Glass	RDW-123	
	Handle	RHY-086	
	Knob	RDK-616	VHF Channel Selector, Model 9T001.
	Knob	RDK-620	VHF Channel Selector, Model 9T002.
	Knob	RDK-619	UHF Tuning, Model 9T001, Brown.
	Knob	RDK-621	UHF Tuning, Model 9T002, Turquoise.
	Knob	RDK-617	Fine Tuning
	Knob	RDK-618	On-Off Volume, Vertical Hold and Contrast (3 Used) Model 9T001.
	Knob	RDK-598	On-Off Volume, Vertical Hold and Contrast (3 Used) Model 9T002.
	Cabinet Front	RAC-208	Model 9T001.
	Cabinet Front	RAC-209	Model 9T002.
	Cabinet Body	RAV-1034	Model 9T001, Includes Back.
	Cabinet Body	RAV-1035	Model 9T002, Includes Back.



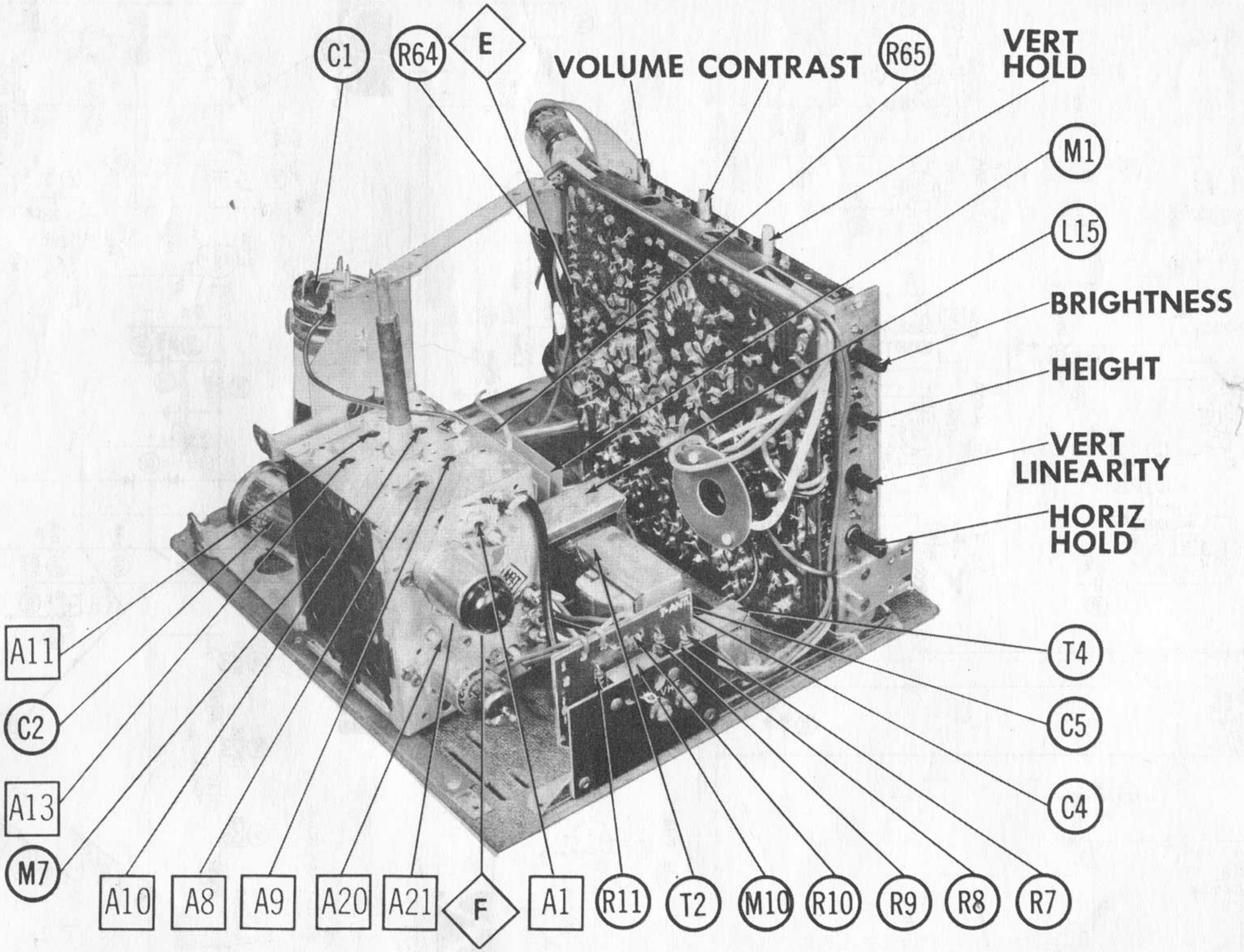
ALTERNATE VHF TUNER SCHEMATIC



RF TUNER-LEFT SIDE



RF TUNER-RIGHT SIDE



CHASSIS ASSEMBLED VIEW