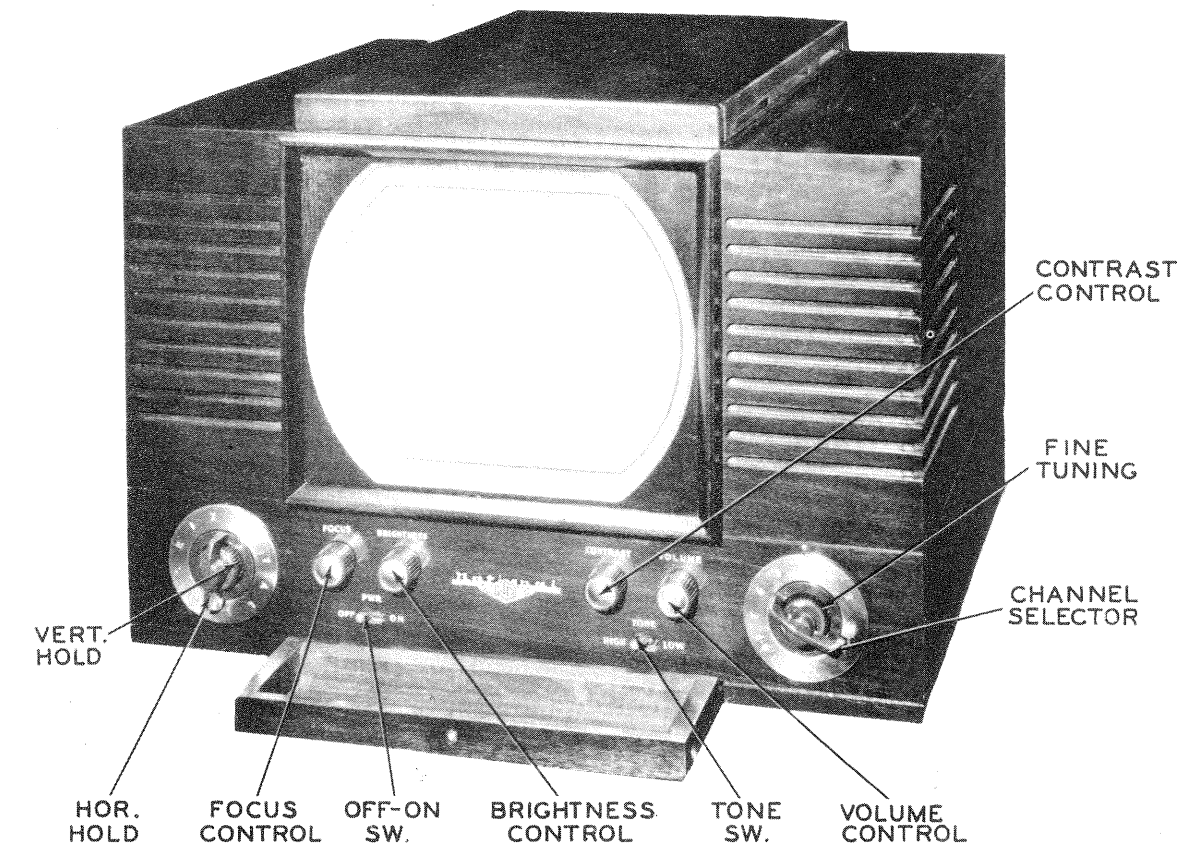


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NATIONAL MODELS NC-TV-10C,T,W, NC-TV-12C,W  
NC-TV-1001, NC-TV-1025, NC-TV-1201, NC-TV-1202  
NC-TV-1225, NC-TV-1226



NATIONAL MODEL NC-TV-10T

TRADE NAME	National, Models NC-TV-10C, NC-TV-10T, NC-TV-10W, NC-TV-12C, NC-TV-12W, NC-TV-1001, NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226	
MANUFACTURER	National Co. Inc., Malden, Mass.	
TYPE SET	Television Receiver	
TUBES	Twenty Two	
POWER SUPPLY	110-120 Volts AC-60 Cycle	RATING 1.7 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13	

INDEX	
Alignment Instructions .....	6, 7, 8
Horizontal Sweep Circuit Adjustment .....	19
Parts List and Description .....	14, 15, 16
Photographs	
Cabinet-Rear View .....	19
Capacitor Identification .....	11, 18
Chassis-Top View .....	5
RF Tuner .....	13
Photographs (continued)	
Resistor Identification .....	12, 17
Trans., Inductor and Alignment Identification .....	4, 9
Schematic (Main) .....	2
Schematic (Alternate Tuner) .....	20
Tube Placement Chart .....	3
Voltage and Resistance Measurements .....	10

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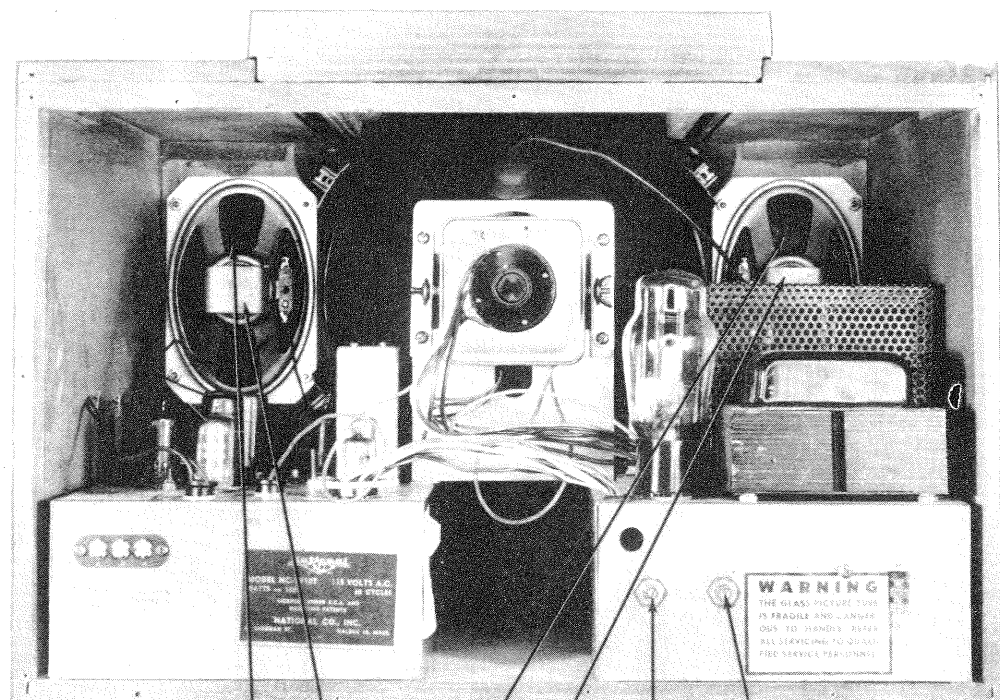
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DATE 5-50

SET 94

FOLDER 5

NATIONAL MODELS NC-TV-10C,T,W, NC-TV-12C,W, NC-TV-1001, NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226



## CABINET-REAR VIEW

## HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Tune in a test pattern from a TV station.

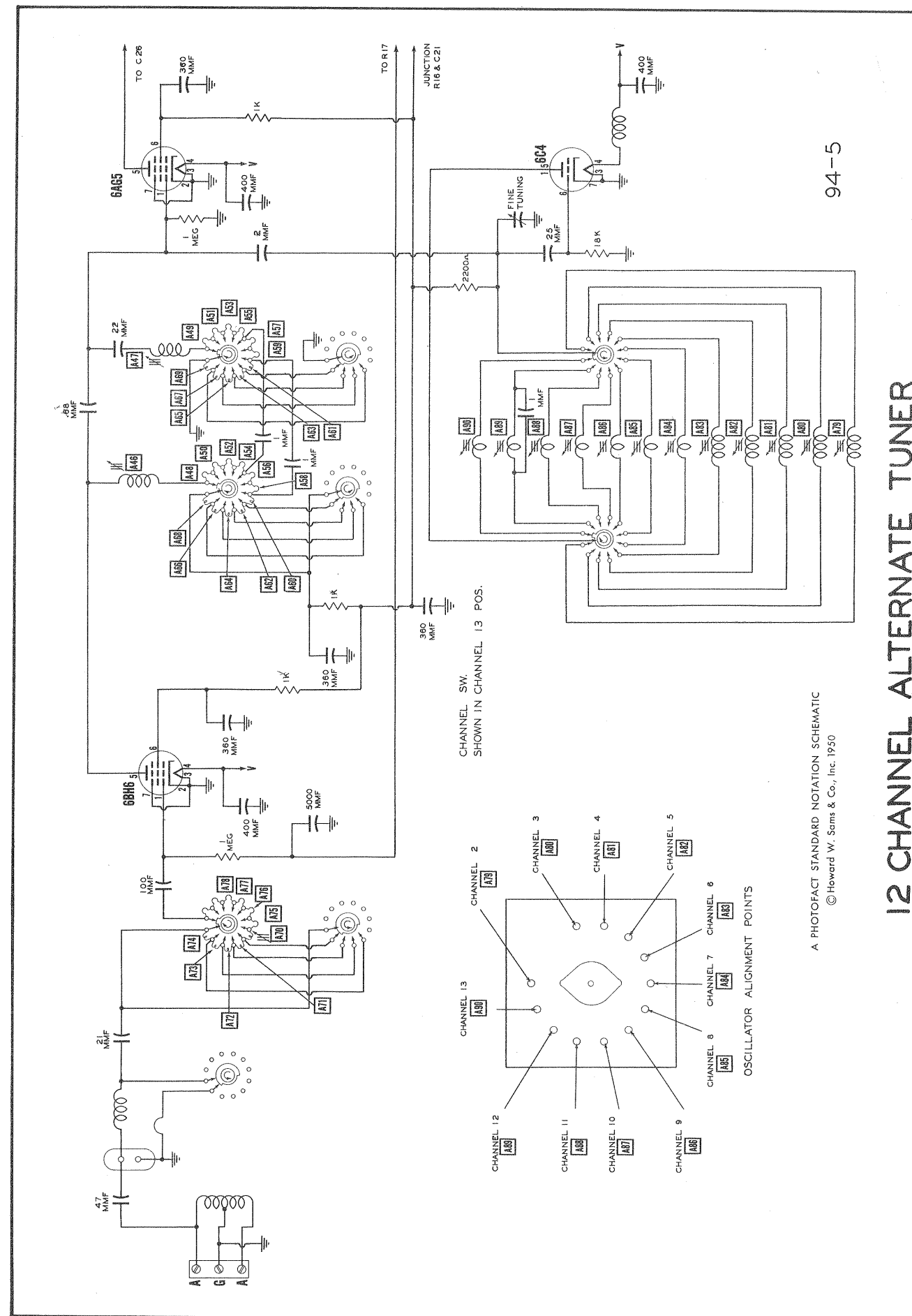
Set the horizontal hold control to the center of its range. Adjust B1 until picture syncs normally in the horizontal plane. Picture should remain in sync as the horizontal hold control is turned several degrees to either side of its center position.

Adjust the horizontal drive trimmer (B2) clockwise as far as possible without crowding the left hand side of the picture.

Adjust the horizontal size slug (B3) so test pattern fills the mask horizontally.

Adjust the horizontal linearity slug (B4) for best horizontal linearity of picture.

Adjustments B2, B3, and B4 are interacting and may require alternate adjustment to obtain optimum results.



VERT. HOLD  
HOR. HOLD  
FOCUS

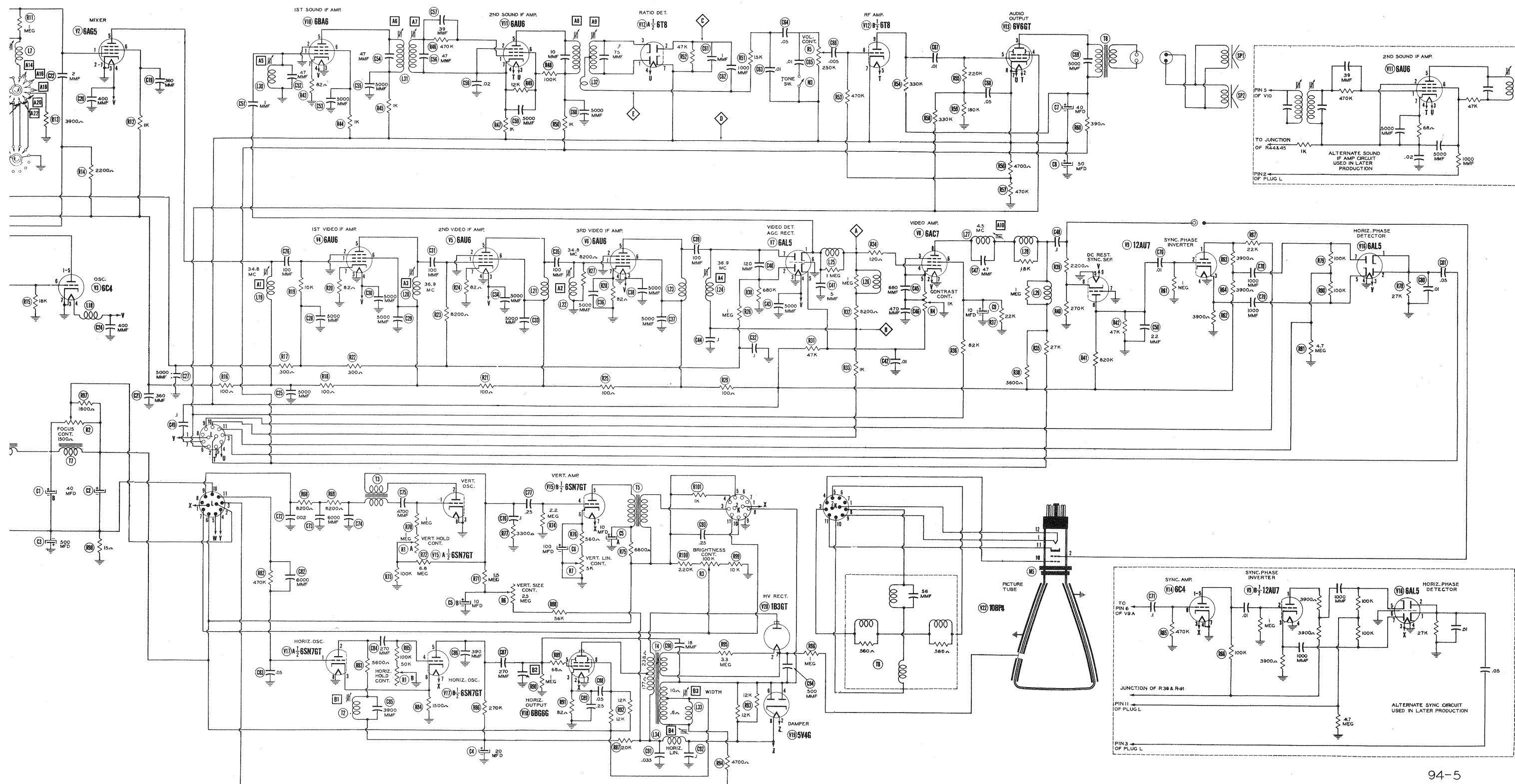
TRADE NAME	N
MANUFACTURER	N
TYPE SET	T
TUBES	T
POWER SUPPLY	11
TUNING RANGE	C

Alignment Instructions	...
Horizontal Sweep Circuit A	...
Parts List and Description	...
Photographs	...
Cabinet-Rear View	...
Capacitor Identification	...
Chassis-Top View	...
RF Tuner	...

HOV

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VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS									
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6AU6	- .5VDC	0V.	0V.	6.3VAC	112VDC	112VDC	0V.	
V 2	6AG5	- .7VDC	0V.	0V.	6.3VAC	115VDC	115VDC	0V.	
V 3	6C4	87VDC	0V.	0V.	6.3VAC	87VDC	8-1VDC	0V.	
V 4	6AU6	- .2VDC	0V.	0V.	6.3VAC	120VDC	120VDC	.4VDC	
V 5	6AU6	- .2VDC	0V.	0V.	6.3VAC	120VDC	120VDC	.6VDC	
V 6	6AU6	0V.	0V.	0V.	6.3VAC	125VDC	125VDC	.7VDC	
V 7	6AL5	-2.3VDC	- .2VDC	0V.	6.3VAC	0V.	0V.	-2.5VDC	
V 8	6AC7	0V.	6.3VAC	1.2VDC	-2.3VDC	1.2VDC	180VDC	0V.	167VDC
V 9	12AU7	117VDC	0V.	5.8VDC	0V.	0V.	5.5VDC	0V.	1.1VDC
V 10	6BA6	0V.	0V.	0V.	6.3VAC	118VDC	125VDC	1.2VDC	
V 11	6AU6	1.8VDC	12.4VDC	10V.	16.3VAC	1250VDC	128VDC	2.4VDC	
V 12	6T8	1- .4VDC	1- .7VDC	1- .4VDC	10V.	16.3VDC	1- .4VDC	10V.	192VDC
V 13	6V6GT	0V.	16.3VAC	1220VDC	1225VDC	1-6.5VDC	0V.	10V.	
V 14	6C4	NOT USED IN ALL MODELS							
V 15	6SN7GT	-5.6VDC	107VDC	0V.	0V.	310VDC	4.5VDC	6.3VAC	0V.
V 16	6AL5	0V.	0V.	6.3VAC	0V.	1.3VDC	0V.	-1 VDC	
V 17	6SN7GT	.1VDC	260VDC	9VDC	-3VDC	100VDC	9VDC	6.3VAC	0V.
V 18	6BG6G	Inf.	6.3VAC	8.8VDC	270VDC	.2VDC	0V.	270VDC	TOP CAP *
V 19	5V4G	285VDC	410VDC	0V.	350VDC	0V.	350VDC	0V.	410VDC
V 20	1B3GT	* DO NOT MEASURE.							
V 21	5U4G	0V.	390VDC	0V.	385VAC	0V.	385VAC	0V.	390VDC
V 22	10BP4	0V.	1 VDC	345VDC	110VDC	6.3VAC			

§ TAKEN WITH VACUUM TUBE VOLTMETER.  
† MEASURED FROM PIN 8 OF V13.  
\* DO NOT MEASURE.

RESISTANCE READINGS									
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6AU6	2.5 Meg.	0Ω	0Ω	.1Ω	11.5KΩ	11.5KΩ	0Ω	
V 2	6AG5	1 Meg.	0Ω	0Ω	.1Ω	1530Ω	11.5KΩ	0Ω	
V 3	6C4	13KΩ	Inf.	0Ω	.1Ω	13KΩ	118KΩ	0Ω	
V 4	6AU6	1.7 Meg.	0Ω	0Ω	.1Ω	1300Ω	1300Ω	82Ω	
V 5	6AU6	1.7 Meg.	0Ω	.1Ω	0Ω	1200Ω	1200Ω	82Ω	
V 6	6AU6	.1Ω	0Ω	.1Ω	0Ω	1100Ω	1100Ω	82Ω	
V 7	6AL5	9KΩ	700KΩ	0Ω	.1Ω	.5Ω	0Ω	1000Ω	
V 8	6AC7	0Ω	.1Ω	1000Ω	10KΩ	1000Ω	15KΩ	0Ω	15.5KΩ
V 9	12AU7	19KΩ	1 Meg.	4KΩ	0Ω	0Ω	47KΩ	0Ω	270KΩ
V 10	6BA6	1.5Ω	0Ω	0Ω	.1Ω	11000Ω	11000Ω	82Ω	
V 11	6AU6	1470KΩ	11000Ω	1Ω	1Ω	1000Ω	11KΩ	11000Ω	
V 12	6T8	Inf.	147KΩ	Inf.	1Ω	1Ω	Inf.	1Ω	1475KΩ
V 13	6V6GT	Inf.	1Ω	650Ω	4275Ω	400KΩ	Inf.	1Ω	420KΩ
V 14	6C4	NOT USED IN ALL MODELS							
V 15	6SN7GT	1.2 Meg.	42.8 Meg.	0Ω	2.2 Meg.	48KΩ	5.5KΩ	.1Ω	0Ω
V 16	6AL5	27KΩ	27KΩ	.1Ω	0Ω	5 Meg.	Inf.	5 Meg.	
V 17	6SN7GT	5.2 Meg.	122KΩ	1.5KΩ	100KΩ	4300KΩ	1.5KΩ	.1Ω	0Ω
V 18	6BG6G	Inf.	.1Ω	8Ω	41KΩ	1 Meg.	0Ω	0Ω	41KΩ
V 19	5V4G	427KΩ	46.5KΩ	Inf.	4270Ω	Inf.	4270Ω	Inf.	46.5KΩ
V 20	1B3GT	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.
V 21	5U4G	Inf.	20KΩ	Inf.	760Ω	Inf.	740Ω	Inf.	20KΩ
V 22	10BP4	0Ω	300KΩ	1000Ω	100KΩ	.1Ω			

† MEASURED FROM PIN 8 OF V13.  
‡ MEASURED FROM PIN 8 OF V21.  
§ MEASURED FROM PIN 8 OF V19.

1. DC Voltage measurements are of 70,000 ohms per volt, AC Voltage measured at 1,000 ohms.

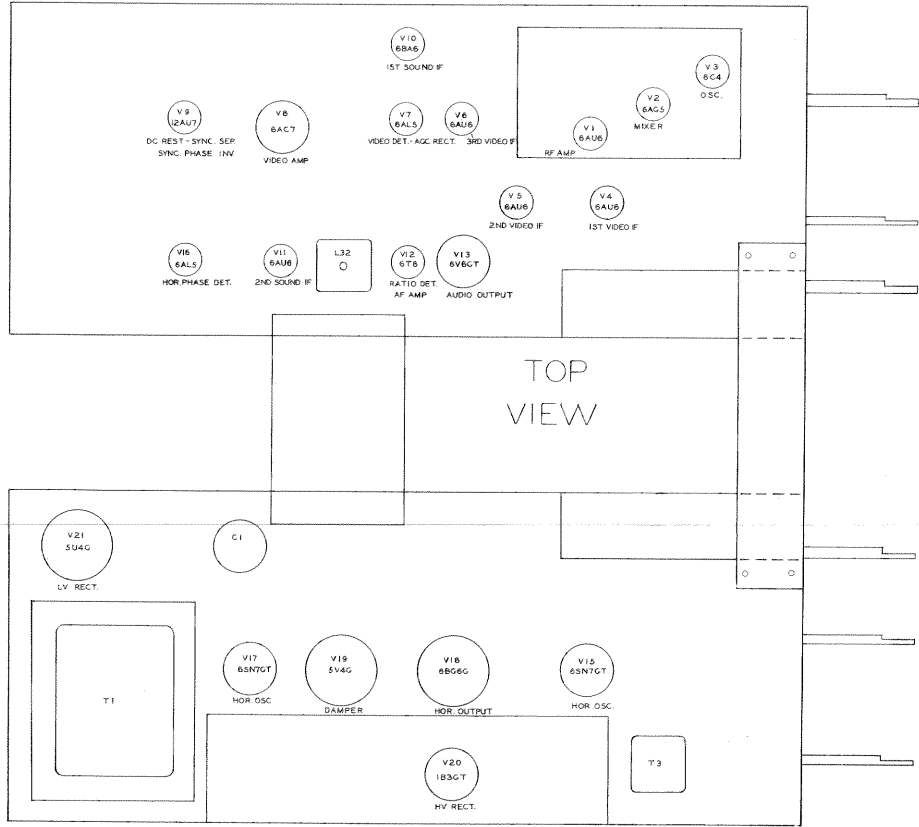
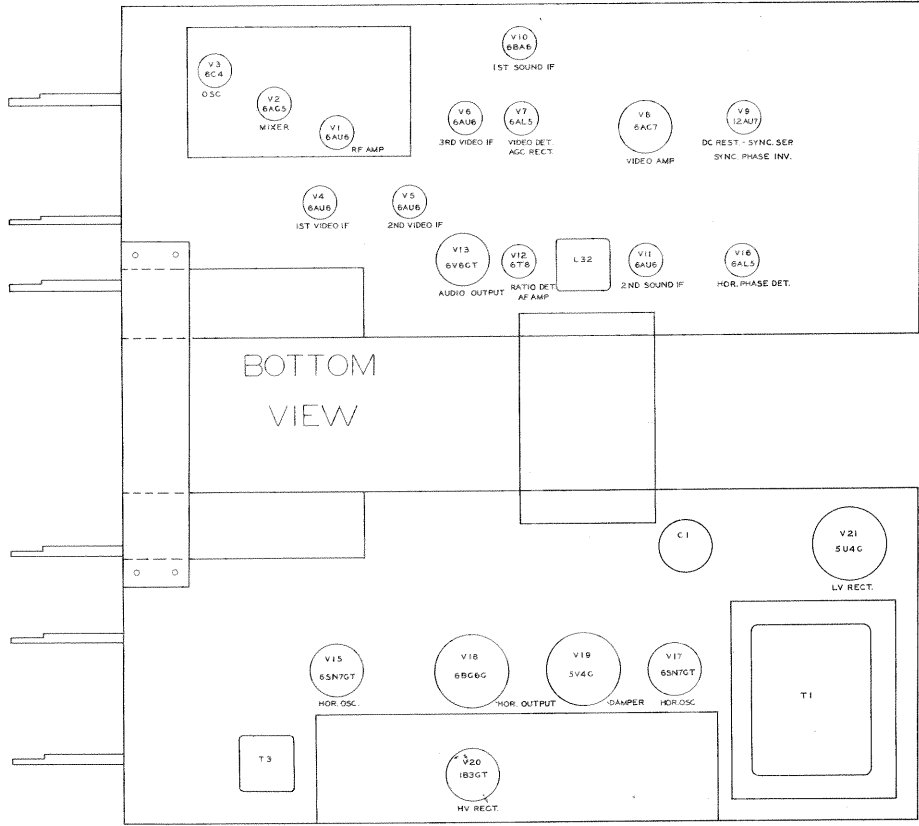
2. Pin numbers are counted in a clockwise direction on bottom of socket.

3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.

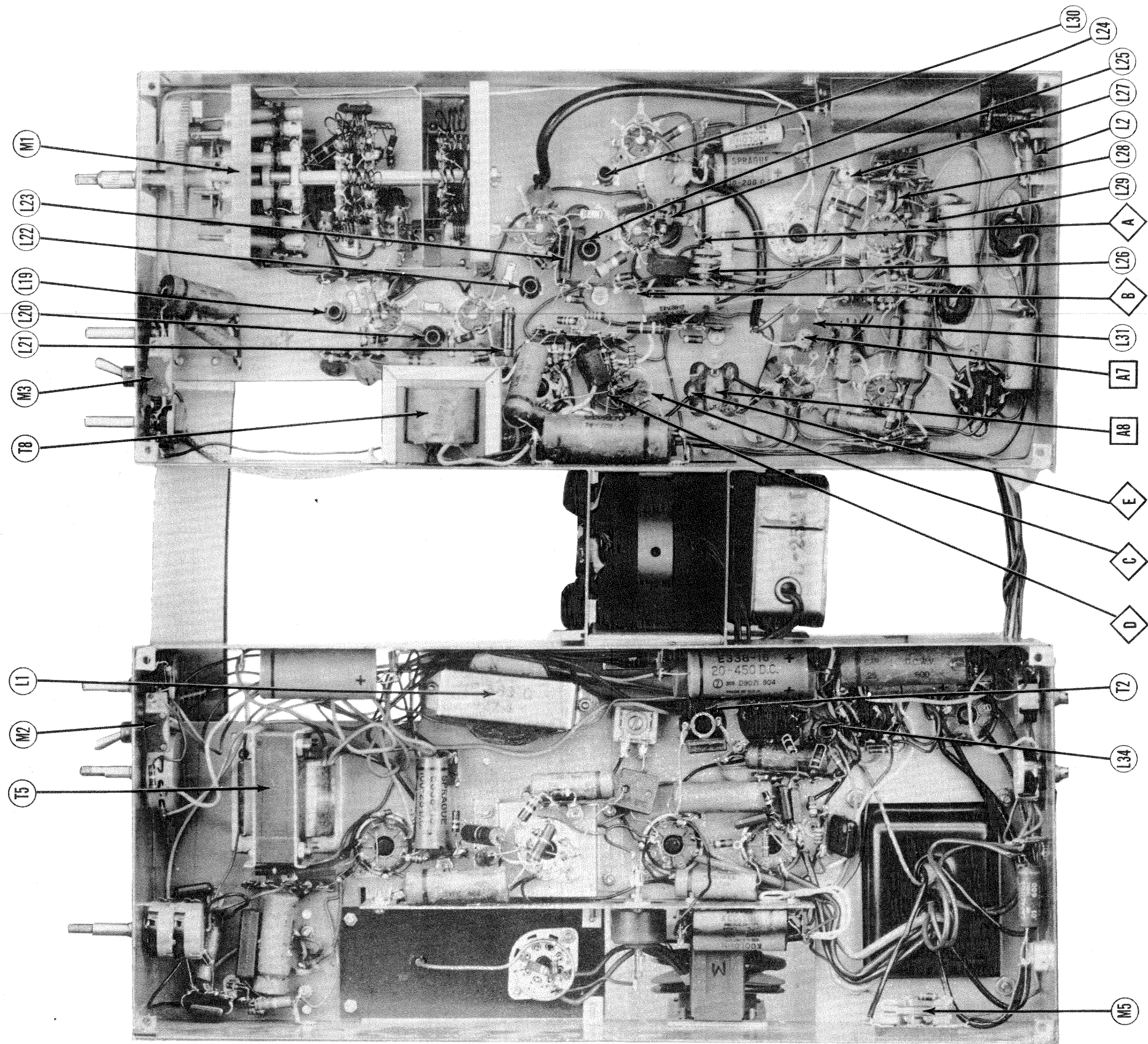
5. Front panels controls set at minimum.

6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.

TUBE PLACEMENT CHART



NATIONAL MODELS NC-TV-10C,T,W,NC-TV-12C,W,NC-TV-1001, NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226



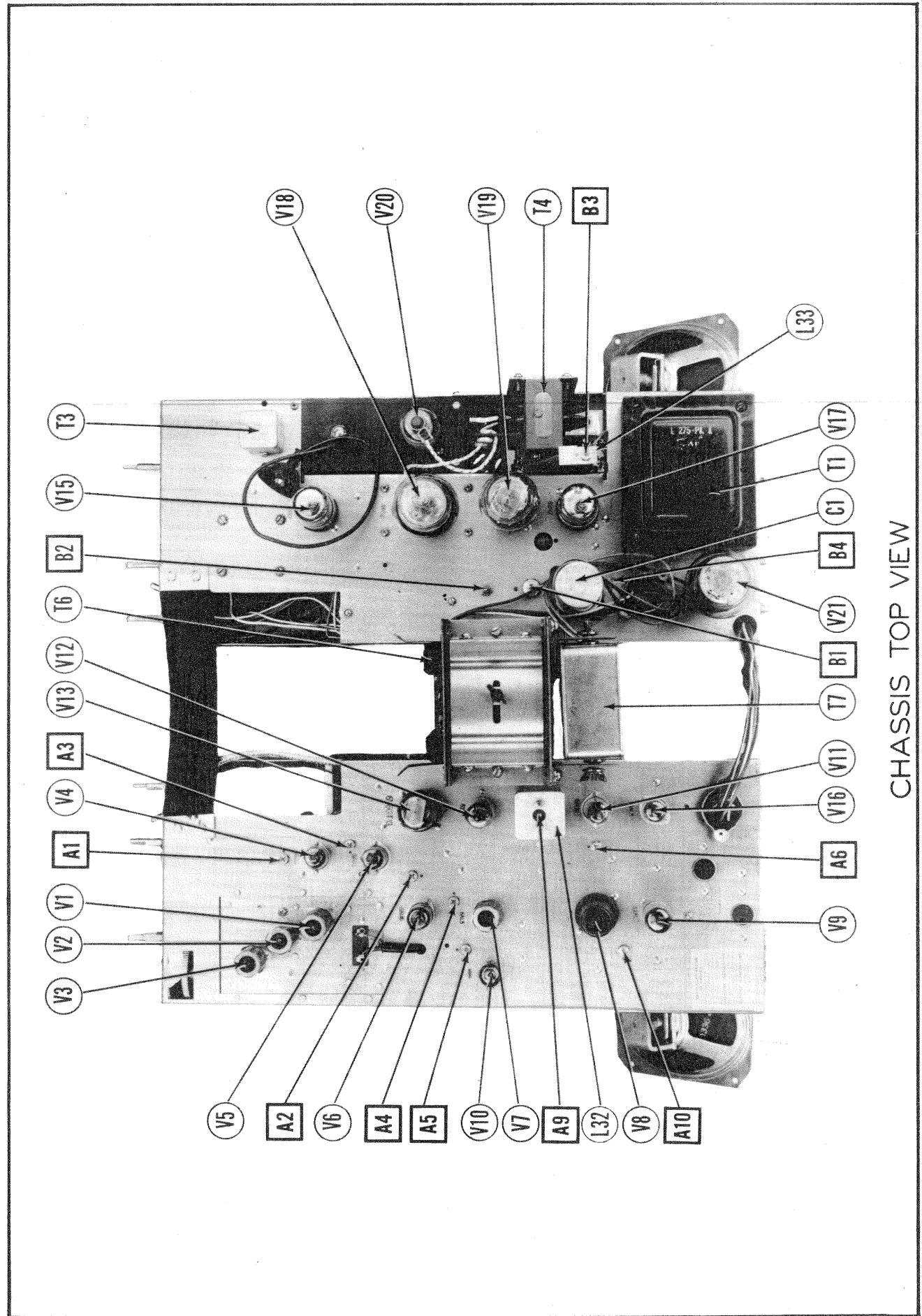
CHASSIS BOTTOM VIEW-TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION

NATIONAL MODELS NC-TV-10C, T, W, NC-TV-12C, W, NC-TV-1001,  
NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226

RF AND MIXER ALIGNMENT (12 CHANNEL TUNER)							
See steps A thru D of 9 channel tuner alignment.							
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
37. Direct	High side to left hand "A" terminal on antenna terminal strip. Low side to "G" terminal.	213MC (10MC SWP)	211.25MC 215.75MC	13	See instructions above	A46, A47	Adjust for response curve similar to Fig 2.
38. Direct	"	207MC (10MC SWP)	205.25MC 209.75MC	12	"	A48, A49	Expand or compress coil turns for response similar to Fig 2.
39. Direct	"	201MC (10MC SWP)	199.25MC 203.75MC	11	"	A50, A51	Expand or compress coil turns for response similar to Fig 3.
40. Direct	"	195MC (10MC SWP)	193.25MC 197.75MC	10	"	A52, A53	"
41. Direct	"	189MC (10MC SWP)	187.25MC 191.75MC	9	"	A54, A55	Expand or compress coil turns for response similar to Fig 4.
42. Direct	"	183MC (10MC SWP)	181.25MC 185.75MC	8	"	A56, A57	Expand or compress coil turns for response curve similar to Fig 5.
43. Direct	"	177MC (10MC SWP)	175.25MC 179.75MC	7	"	A58, A59	Expand or compress coil turns for response curve similar to Fig 6.
44. Direct	"	85MC (10MC SWP)	83.25MC 87.75MC	6	"	A60, A61	Expand or compress coil turns for response curve similar to Fig 5.
45. Direct	"	79MC (10MC SWP)	77.25MC 81.75MC	5	"	A62, A63	"
46. Direct	"	69MC (10MC SWP)	67.25MC 71.75MC	4	"	A64, A65	"
47. Direct	"	63MC (10MC SWP)	61.25MC 65.75MC	3	"	A66, A67	"
48. Direct	"	57MC (10MC SWP)	55.25MC 59.75MC	2	"	A68, A69	"

RF AMP. GRID CIRCUIT ALIGNMENT (12 CHANNEL TUNER)							
Remove the short across the channel 6 portion of L3.							
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
49. Direct	High side to left hand "A" terminal on antenna terminal strip. Low side to "G" terminal.	85MC (10MC SWP)	83.25MC 87.75MC	6	See instructions above RF and Mixer Alignment.	A70	Adjust for response curve similar to Fig 5.
50. Direct	"	79MC (10MC SWP)	77.25MC 81.75MC	5	"	A71	Expand or compress coil turns for response curve similar to Fig 5.
51. Direct	"	69MC (10MC SWP)	67.25MC 71.75MC	4	"	A72	"
52. Direct	"	63MC (10MC SWP)	61.25MC 65.75MC	3	"	A73	"
53. Direct	"	57MC (10MC SWP)	55.25MC 59.75MC	2	"	A74	"
54. Direct	"	177MC (10MC SWP)	175.25MC 179.75MC	7	"	A75	Expand or compress coil turns for response curve similar to Fig 6.
55. Direct	"	183MC (10MC SWP)	181.25MC 185.75MC	8	"	A76	Expand or compress coil turns for response curve similar to Fig 5.
56. Direct	"	189MC (10MC SWP)	187.25MC 191.75MC	9	"	A77	Expand or compress coil turns for response curve similar to Fig 4.
57. Direct	"	195MC (10MC SWP)	193.25MC 197.75MC	10	"	A78	Expand or compress coil turns for response curve similar to Fig 3.

OSCILLATOR ALIGNMENT (12 CHANNEL TUNER)						
Replace the local oscillator tube (V3). Set the fine tuning control to the mid-position of its range.						
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
58. Direct	High side to left hand "A" terminal on antenna terminal strip. Low side to "G" terminal.	92.55MC (Unmod.)	2	See instructions above RF and Mixer Alignment.	A79	Adjust for minimum response on oscilloscope. This will be indicated by a finely defined line between two wide lines.
59. Direct	"	98.55MC (Unmod.)	3	"	A80	"
60. Direct	"	104.55MC (Unmod.)	4	"	A81	"
61. Direct	"	114.55MC (Unmod.)	5	"	A82	"
62. Direct	"	120.55MC (Unmod.)	6	"	A83	"
63. Direct	"	141.25MC (Unmod.)	7	"	A84	"
64. Direct	"	147.25MC (Unmod.)	8	"	A85	"
65. Direct	"	153.25MC (Unmod.)	9	"	A86	"
66. Direct	"	159.25MC (Unmod.)	10	"	A87	"
67. Direct	"	165.25MC (Unmod.)	11	"	A88	"
68. Direct	"	171.25MC (Unmod.)	12	"	A89	"
69. Direct	"	177.25MC (Unmod.)	13	"	A90	"












NATIONAL MODELS NC-TV-10C, T, W, NC-TV-12C, W, NC-TV-1001, NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226

CHASSIS TOP VIEW



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT							
It is recommended that the horizontal oscillator tube (V17) be removed during alignment to remove high voltage shock hazard.							
VIDEO IF ALIGNMENT							
Remove the local oscillator tube (V3). Connect the negative lead of a 2 volt battery to the junction of C28 and R17. Connect the positive lead to chassis.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS	
1.	High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	34.8MC (Unmod.)	Any	DC Probe to Point  Common to Point 	A1, A2	Adjust for maximum deflection.	
2.	"	36.9MC	"	"	A3, A4	Adjust for maximum deflection. Repeat steps 1 and 2.	
OVERALL VIDEO IF RESPONSE CHECK							
Connect the synchronized sweep voltage from the signal 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
3.	High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	35MC (10MC SWP)	34.8MC 36.9MC	Any	Vert. Amp. to Point  Low side to chassis.		Check for response as shown in Fig 1 with markers as shown. If necessary retouch A1 thru A4 for proper response.
SOUND IF ALIGNMENT							
Remove 2 volt battery. Turn contrast control fully clockwise.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS	
3.	.01MFD High side to pin 7 (cathode) of 6AL5 (V6). Low side to chassis.	4.5MC (Unmod.)	Any	DC Probe to Point  Common to Point 	A5, A6, A7, A8	Adjust for maximum deflection. Adjust output of signal generator to give 4 volt reading. Leave generator at this setting until completion of step 4.	
4.	.01MFD "	"	"	DC Probe to Point  Common to Point 	A9	Adjust A9 for 2 volt reading. Repeat steps 3 and 4.	
5.	.01MFD "	"	"	DC Probe to Point  Common to Point 	A10	Remove tube V10. Connect a .005MFD capacitor from picture tube grid connection plug, to pin 5 of V10 socket. Adjust A10 for MINIMUM response.	
RF AND MIXER ALIGNMENT (9 CHANNEL TUNER)							
a) Disconnect the blue lead from the mixer and connect it thru a 4700 ohm resistor to the junction of R18 and C25. b) Connect the vertical amplifier of oscilloscope to the plate end of the 4700 ohm resistor, if scope does not have an isolating capacitor in the input connect a .1MFD capacitor in series with the vertical amplifier lead. Connect the low side to chassis. c) Connect a short circuit across the channel 6 section of L3. d) This section is the one on the rear shield, and has a tuning slug. e) The high channels can be aligned for all the odd numbered channels, or all the even numbered channels, but they cannot be intermixed. When aligning for channels 9, 11 and 13 ignore the steps for channels 8, 10 and 12. When aligning for channels 8, 10 and 12, ignore the step for channels 9, 11 and 13.							
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
6.	Direct High side to left hand "A" terminal on antenna terminal strip. Low side to "G" terminal.	213MC (12MC SWP)	211.25MC 215.75MC	13	See instructions above	A11, A12	Adjust for response curve as per Fig 2 with markers as shown.
7.	Direct "	207MC (12MC SWP)	205.25MC 209.75MC	12	"	A11, A12	"
8.	Direct "	201MC (12MC SWP)	199.25MC 203.75MC	11	"	A13, A14	Adjust for response as per Fig 3, with markers as shown.
9.	Direct "	195MC (12MC SWP)	193.25MC 197.75MC	10	"	A13, A14	"
10.	Direct "	189MC (12MC SWP)	187.25MC 191.75MC	9	"	A15, A16	Expand or compress coil turns for response as per Fig 4 with markers as shown.
11.	Direct "	183MC (12MC SWP)	181.25MC 185.75MC	8	"	A15, A16	Expand or compress coil turns for response as per Fig 5.
12.	Direct "	177MC (12MC SWP)	175.25MC 179.75MC	7	"	A17, A18	Expand or compress coil turns for response as per Fig 6.
13.	Direct "	85MC (10MC SWP)	83.25MC 87.75MC	6	"	A19, A20	Expand or compress coil turns and adjust coupling for response as per Fig 5.
14.	Direct "	79MC (10MC SWP)	77.25MC 81.75MC	5	"	A21, A22	"
15.	Direct "	69MC (10MC SWP)	67.25MC 71.75MC	4	"	A23, A24	"
16.	Direct "	63MC (10MC SWP)	61.25MC 65.75MC	3	"	A25, A26	"
17.	Direct "	57MC (10MC SWP)	55.25MC 59.75MC	2	"	A27, A28	"

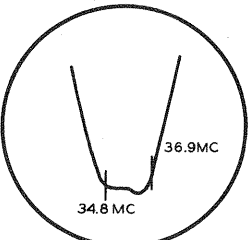


FIG.1

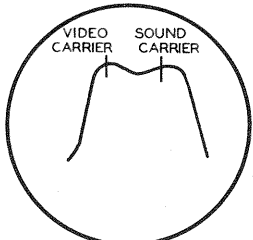


FIG.2

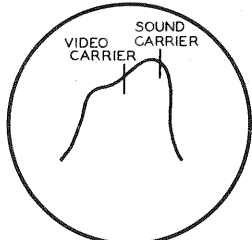


FIG.3

ALIGNMENT INSTRUCTIONS (CONT.)

RF AMP. GRID CIRCUIT ALIGNMENT (9 CHANNEL TUNER)							
Remove the short across the channel 6 section of L3.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS	
18.	Direct	High side to left hand "A" terminal on antenna terminal strip. Low side to "G" terminal.	85MC (10MC SWP)	83.25MC 87.75MC	6	See instructions above RF and Mixer Alignment	Adjust for response as per Fig 5.
19.	Direct	"	79MC (10MC SWP)	77.25MC 81.75MC	5	"	Expand or compress coil turns for response as per Fig 5.
20.	Direct	"	69MC (10MC SWP)	67.25MC 71.75MC	4	"	"
21.	Direct	"	63MC (10MC SWP)	61.25MC 65.75MC	3	"	"
22.	Direct	"	57MC (10MC SWP)	55.25MC 59.75MC	2	"	"
23.	Direct	"	177MC (12MC SWP)	175.25MC 179.75MC	7	"	Expand or compress coil turns for response as per Fig 6.
24.	Direct	"	183MC (12MC SWP)	181.25MC 185.75MC	8	"	Expand or compress coil turns for response as per Fig 5.
25.	Direct	"	189MC (12MC SWP)	187.25MC 191.75MC	9	"	Expand or compress coil turn for response as per Fig 4.
26.	Direct	"	195MC (12MC SWP)	193.25MC 197.75MC	10	"	Expand or compress coil turn for response as per Fig 3.
27.	Direct	"	201MC (12MC SWP)	199.25MC 203.75MC	11	"	"
OSCILLATOR ALIGNMENT (9 CHANNEL TUNER)							
Replace the local oscillator tube V3. Set fine tuning control to mid-position.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS	
28.	Direct	High side to left hand "A" terminal of antenna terminal strip. Low side to "G" terminal.	92.55MC (Unmod.)	2	See instructions above RF and Mixer Alignment.	A37	Adjust for minimum response on oscilloscope. This will be indicated by a finely defined line between two wide lines.
29.	Direct	"	98.55MC (Unmod.)	3	"	A38	"
30.	Direct	"	104.55MC (Unmod.)	4	"	A39	"
31.	Direct	"	114.55MC (Unmod.)	5	"	A40	"
32.	Direct	"	120.55MC (Unmod.)	6	"	A41	"
33.	Direct	"	141.25MC (Unmod.)	7	"	A42	"
34.	Direct	"	147.25MC (Unmod.) 153.25MC (Unmod.)	8 or 9	"	A43	"
35.	Direct	"	159.25MC (Unmod.) 165.25MC (Unmod.)	10 or 11	"	A44	"
36.	Direct	"	171.25MC (Unmod.) 177.25MC (Unmod.)	12 or 13	"	A45	"

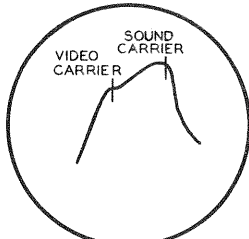


FIG.4

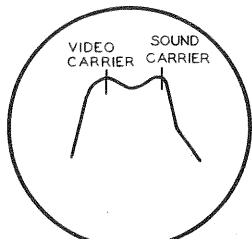


FIG.5

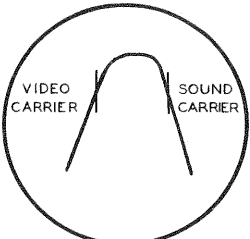


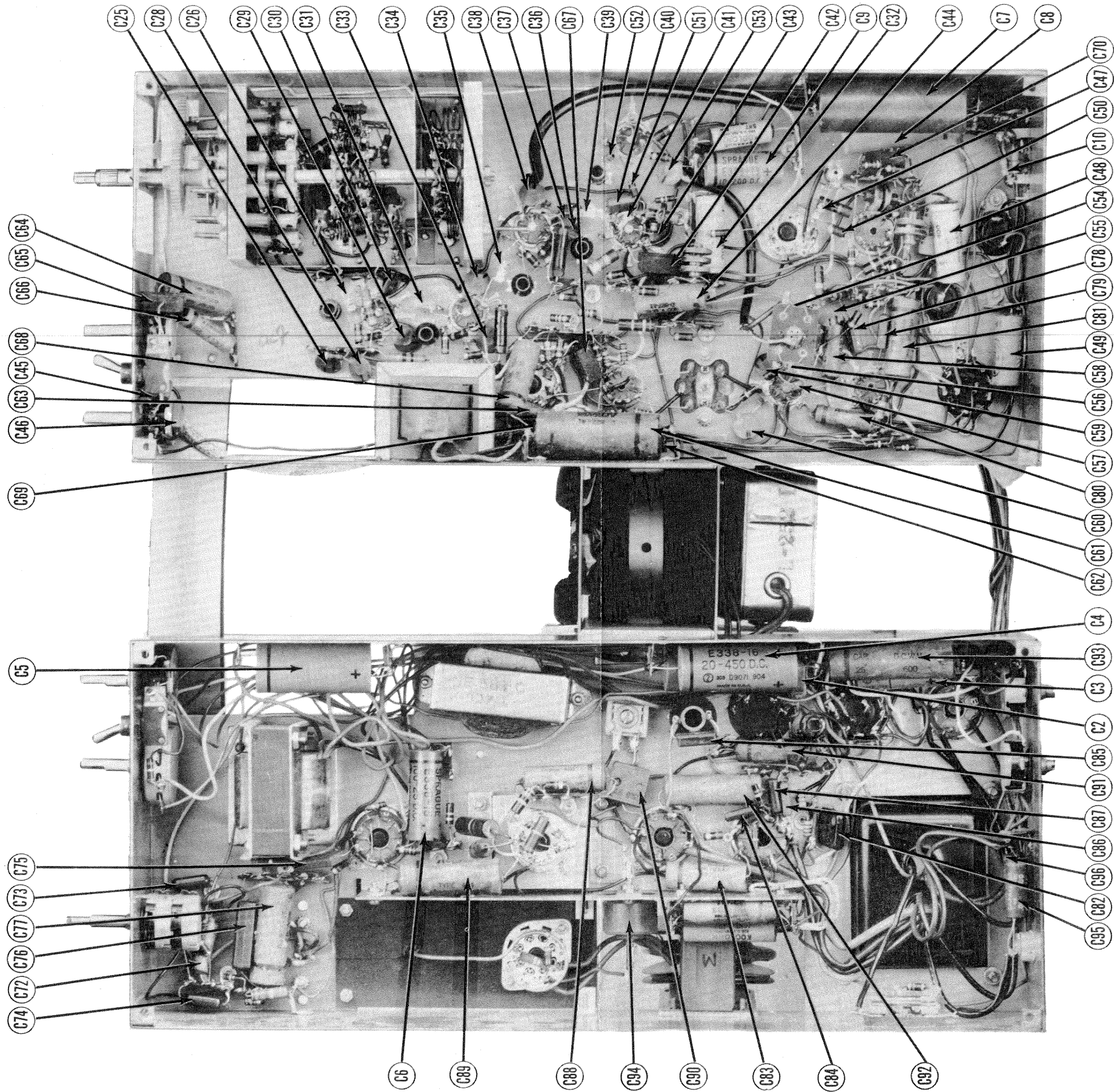
FIG.6

NATIONAL MODELS NC-TV-10C, T, W, NC-TV-12C, W, NC-TV-1001, NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226

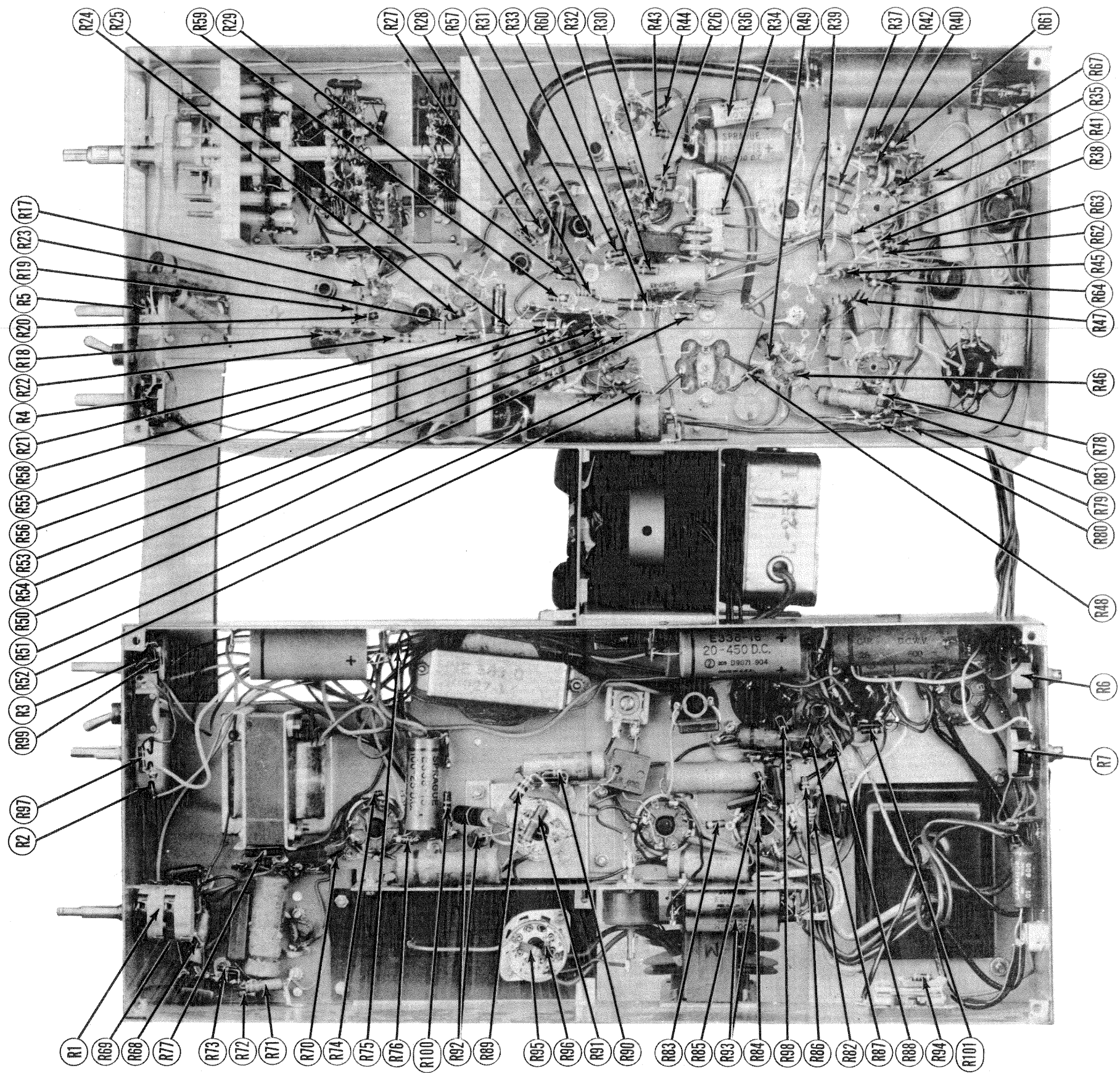


NATIONAL MODELS NC-TV-10C, T, W, NC-TV-12C, W, NC-TV-1001,  
NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226

# CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION







CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

NATIONAL MODELS NC-TV-10C, I, W, NC-TV-12C, W, NC-TV-1001,  
NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		NATIONAL PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T8	5K $\Omega$	7 $\Omega$	215 $\Omega$	.6 $\Omega$	E450-1	A-3825	A-2902 #	RO-9	# Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	NATIONAL PART No.	VIKING PART No.	QUAM PART No.	
SP1	PM	3.5Ω	K892-1	46J6	46A1	
SP2	PM	3.5Ω	K892-1	46J6	46A1	
	CONE DIA.	V. C. DIA.				
SP3	3 7/8" x 5 7/8"	9/16"				
SP4	3 7/8" x 5 7/8"	9/16"				

FILTER CHOKE

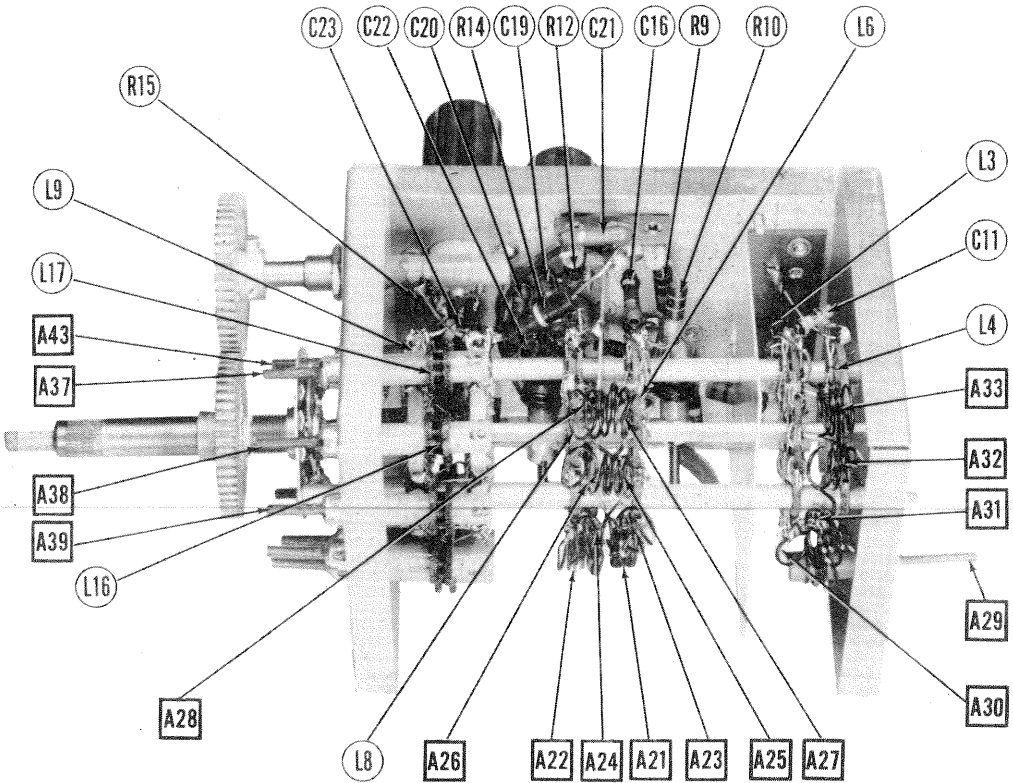
ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (10 CURRENT 1000 $\mu$ )	NATIONAL PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.195A	76 $\Omega$	3 Henries	K927-1	C-2325	C-2991 #	TR-3300	# Drill one new mounting hole.

COILS (RF-IF)

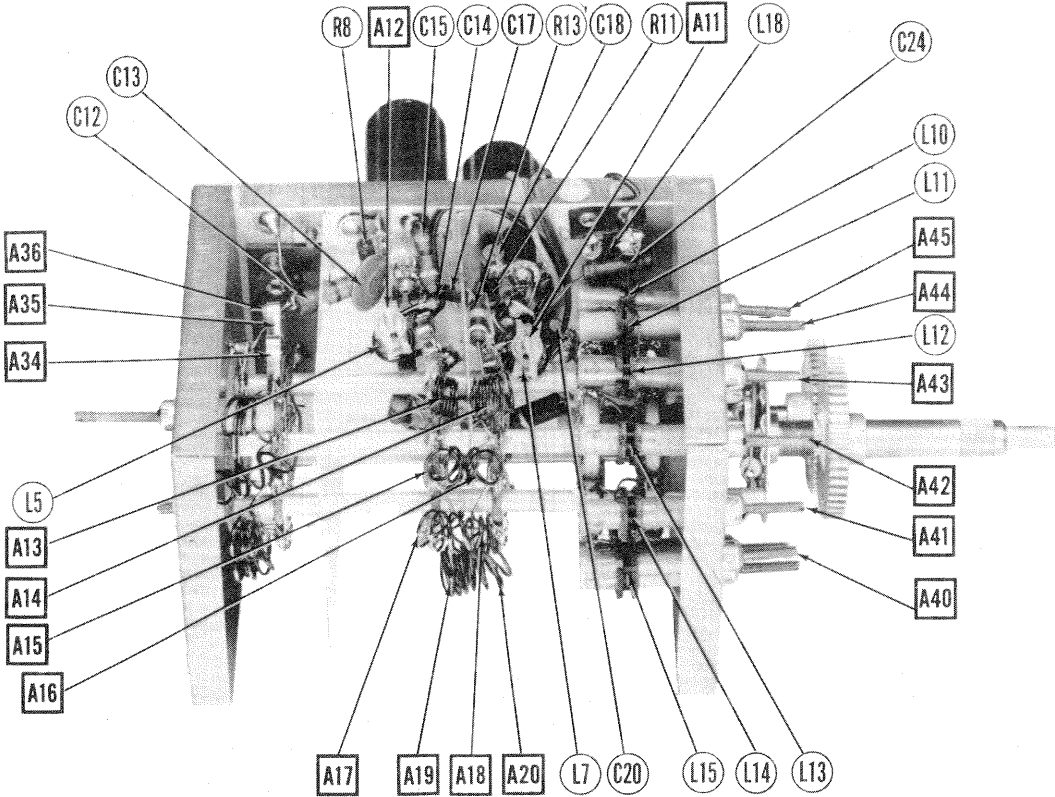
ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	NATIONAL	MEISSNER	
				PART No.	PART No.	
L2	Ant. Coil	0Ω		SA5448		Center Tapped
L3	Ant. Coil	0Ω		L888-1		
L4	RF Grid	0Ω		SA5060-4		Multi-Tapped
L5	RF Plate	0Ω		SA5059-2		
L6	RF Plate	0Ω		SA5055		Multi-Tapped
L7	Mixer Grid	0Ω		SA5059-1		
L8	Mixer Grid	0Ω		SA5060		
L9	Osc. Coil	0Ω		SA5054-6		Channel 8 and 9
L10	Osc. Coil	0Ω		SA5054-5		Channel 7
L11	Osc. Coil	0Ω		SA5054-4		Channel 6
L12	Osc. Coil	0Ω		SA5054-4		Channel 5
L13	Osc. Coil	0Ω		SA5054-3		Channel 4
L14	Osc. Coil	0Ω		SA5054-2		Channel 3
L15	Osc. Coil	0Ω		SA5054-2		Channel 2
L16	Osc. Coil	0Ω		SA5054-7		Channels 12 and 13
L17	Osc. Coil	0Ω		SA5054-7		Channels 10 and 11
L18	Fl. Choke	.1Ω		SA5057		
L19	1st Video IF	.1Ω		SA5002		
L20	2nd Video IF	.1Ω		SA5002		
L21	IF Plate Chk.	1.3Ω		SA5069		
L22	3rd Video IF	.1Ω		SA5002		
L23	IF Plate Chk.	1.3Ω		SA5069		
L24	4th Video IF	.1Ω		SA5002		
L25	Peaking	3.2Ω		SA5489		Wound on 1 Meg. resistor.
L26	Peaking	12Ω		SA5491		Wound on 1 Meg. resistor.
L27	4.5MC Sound Trap	1.5Ω		SA5515		
L28	Peaking	3.8Ω		SA5493		Wound on 18KΩ resistor.
L29	Peaking	11.5Ω		SA5492		Wound on 1 Meg. resistor.
L30	4.5 MC Sound Trap	1.5Ω		SA5515		
L31	Sound IF	1.5Ω	1.5Ω	SA5498		
L32	Ratio Det.					
	Trans.	7Ω	1Ω	SA4997		
L33	Horiz. Size	1Ω		L256-1		
L34	Hor. Linearity	35Ω		L257-1		

MISCELLANEOUS

ITEM No.	PART NAME	NATIONAL PART No.	NOTES
M1	RF Tuner		
M2	Power Switch	E230-4	Toggle
M3	Tone Switch	E230-4	Toggle
M4	Ion Trap	L260	PM
M5	Fuse	F135-9	3A
	Plug	L266-1	11 Pin
	Plug	L264-1	Single Pin
	Plug	K294-1	Two Pin
	Socket	L267-1	11 Pin
	Socket	L265-1	Single Pin
	Socket	K293	Two Pin



RF TUNER-RIGHT SIDE



RF TUNER-LEFT SIDE

NATIONAL MODELS NC-TV-10C,T,W,NC-TV-12C,W,NC-TV-1001, NC-TV-1025, NC-TV-1201, NC-TV-1202, NC-TV-1225, NC-TV-1226



## PARTS LIST AND DESCRIPTIONS

## TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		NATIONAL PART No.	STANDARD REPLACEMENT		
V1	RF Amp.	6AU6	6AU6	7BK	
V2	Mixer	6AG5	6AG5	7BD	
V3	Oscillator	6C4	6C4	6BG	
V4	1st Video IF	6AU6	6AU6	7BK	
V5	2nd Video IF	6AU6	6AU6	7BK	
V6	3rd Video IF	6AU6	6AU6	7BK	
V7	Video Det. -AGC Rect.	6AL5	6AL5	6BT	
V8	Video Amp.	6AC7	6AC7	8N	
V9	DC Rest. -Sync. Sep. -Sync. Phase Inv.	12AU7	12AU7	9A	
V10	1st Sound IF	6BA6	6BA6	7BK	
V11	2nd Sound IF	6AU6	6AU6	7BK	
V12	Ratio Det. -AF Amp.	6T8	6T8	9E	
V13	Audio Output	6V6GT	6V6GT	7AC	
V14	Sync. Amp.	6C4	6C4	6BG	
V15	Vert. Osc. Vert. Amp.	6SN7GT	6SN7GT	8BD	
V16	Hor. Phase Det.	6AL5	6AL5	6BT	
V17	Hor. Osc.	6SN7GT	6SN7GT	8BD	
V18	Hor. Output	6BG6G	6BG6G	5BT	
V19	Damper	5V4G	5V4G	5L	
V20	HV Rectifier	1B3GT	1B3GT	3C	
V21	LV Rectifier	5U4G	5U4G	5T	
V22A	Picture Tube	10BP4	10BP4	12D	
B	Picture Tube	12LP4	12LP4	12D	

## CAPACITORS

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

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		NATIONAL PART No.	AEROVOX PART No.	CENTRALAB PART No.	ERIE PART No.	
C1A	40	450	K495-1	AF88J		TVL-64
B	40	450				Filter
C2	40	450	E338-17	PRS450/40		TVL-24
C3	500	12	E338-6	PRS12/500		TVA-4
C4	20	450	E338-16	PRS450/20		TVA-22
C5A	10	450	L189-1	PRSA450/10-10		TVA-25
B	10	450				Decoupling
C6	100	25	E338-15	PRS25/100		TVA-8
C7	40	450	E338-17	PRS450/40		TVA-24
C8	50	300	E338-17	PRS450/40		TVA-24
C9	10	200	E338-19	PRS250/12		UT-122
C10	47		J695-1	GP47M		
C11	21		D825D-410	GP22M		
C12	100		F913-2	GP100M		
C13	5000		K946-1	BPD-5		
C14	360		K941-1	GP360M		
C15	400		K941-2	GP360M		
C16	360		K941-1	GP360M		
C17	1		L081-4	D2-1		
C18	22		F912-10	GP22K		
C19	360		K941-1	GP360M		
C20	400		K941-2	GP360M		
C21	360		K941-1	GP360M		
C22	2		F912-3			
C23	25		F912-11	GP25K		
C24	400		K941-2	GP360M		
C25	5000		K946-1	BPD-5		
C26	100		D825D-421	GP100M		
C27	5000		K946-1	BPD-5		
C28	5000		K946-1	BPD-5		
C29	5000		K946-1	BPD-5		
C30	5000		K946-1	BPD-5		
C31	100		D825D-421	GP100M		
C32	1		D827-11	P488-1		
C33	5000		K946-1	BPD-5		
C34	5000		K946-1	GP100M		
C35	100		D825D-421	BPD-5		
C36	5000		K946-1	BPD-5		
C37	5000		K946-1	BPD-5		
C38	5000		K946-1	BPD-5		
C39	100		D825D-421	GP100M		
C40	120		J665-35	1468-00015		
C41	5		D825D-401	GP5K		
C42	.01		D827-7	P688-01		
C43	5000		K946-1	BPD-5		
C44	.1		D827-11	P488-1		
C45	680		J665-63			
C46	470		J665-56	1468-0005		
C47	47		D825D-428	CN47JN750		
C48	.1		D827-11	P488-1		
C49	.1		D827-11	P488-1		
C50	22		L081-4	GP22K		
C51	1		L081-4	D2-1		
C52	47		D825D-428	CN47JN750		
C53	5000		K946-1	BPD-5		
C54	47		D825D-428	CN47JN750		
C55	5000		K946-1	BPD-5		
C56	47		D825D-428	CN47JN750		
C57	39		J665-17	1468-00004		
C58	.02		D827-43	P488-02		
C59	5000		K946-1	BPD-5		

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA					IDENTIFICATION CODES AND INSTALLATION NOTES
		NATIONAL PART No.	AEROVOX PART No.	CENTRALAB PART No.	ERIE PART No.	SPRAGUE PART No.	
C60	5000	K946-1	BPD-5	D6-502	811-005	29C1	2nd S. IF Decoupling
C61	1.0	D827-41	484-1.0			TC-10	Stabilizing Cap.
C62	1000	J665-71	1468-001	D6-102	GP2L-001	IFM-21	Diode Load Cap.
C63	.01	D827-7	P488-01	D6-103	GP2-335-01	TM-11	De-emphasis
C64	.05	D827-3	P688-05			TM-15	Audio Coupling
C65	.01	D827-7	P688-01	D6-103	GP2-335-01	TM-11	Tone Compensation
C66	.005	D827-27	P688-005	D6-502	GP2M-005	TM-25	Audio Coupling
C67	.01	D827-7	P688-01	D6-103	GP2-335-01	TM-11	Audio Coupling
C68	.05	D827-3	P688-05			TM-15	Bias Filter
C69	5000	K946-1	1467-005	D6-502	GP2M-005	29C1	Output Plate Bypass
C70	.01	D827-7	P688-01	D6-103	GP2-335-01	TM-11	Sync. Coupling
C71	.1	D827-11	P488-1			TM-1	Sync. Coupling †
C72	.002	D827-6	P688-002	D6-202	GP2M-002	TM-22	Integrator Net.
C73	6000	D827-27	1467-006	D6-562	GP2M-0056	IFM-26	Integrator Net. †
C74	6000	D827-27	1467-006	D6-562	GP2M-0056	IFM-26	Integrator Net. †
C75	4700	J666-40	1467-005	D6-472	GP2M-0047	IFM-25	Vert. Osc. Grid Cap.
C76	.1	D827-11	P488-1			TM-1	Vert. Discharge
C77	.25	D827-17	P488-25			TC-2	Vert. Sweep Coupling
C78	1000	J665-71	1468-001	D6-102	GP2L-001	IFM-21	Hor. Sync. Coupling
C79	1000	J665-71	1468-001	D6-102	GP2L-001	IFM-21	Hor. Sync. Coupling
C80	.01	D827-7	P688-01	D6-103	GP2-335-01	TM-11	Integrator Net.
C81	.05	D827-3	P688-05			TM-15	AFC Feedback
C82	6000	D827-27	1467-006	D6-562	GP2M-0056	IFM-26	AFC Filter †
C83	.05	D827-3	P688-05			TM-15	Hor. Osc. Grid Cap.
C84	270	J665-47	GP270K	D6-271	GP2K-270		Hor. Feedback
C85	3900	J819-3					Fixed Trimmer
C86	390	J665-53	1468-0004	D6-391	GP2K-390	IFM-34	Hor. Discharge
C87	270	J665-47	1468-00025	D6-271	GP2K-270	IFM-325	Hor. Sweep Coupling
C88	.05	D827-3	P688-05			TM-15	Hor. Output Screen Bypass
C89	.25	D827-17	P488-4			TC-2	Hor. Output Cathode Bypass
C90	18	J666-65					Hor. Feedback
C91	.035	D827-46	P688-033				Damper Filter
C92	.1	D827-15	P688-1			TM-1	Damper Filter
C93	.25	D827-25	684-25			TC-2	Hor. Sweep Coupling
C94	500	K891-2					HV Filter
C95	.01	D827-7	P688-01	D6-103		TM-11	Line Filter
C96	.01	D827-7	P688-01	D6-103		TM-11	Line Filter

\* Some models use 40MFD in this application.

† Some models use .005MFD in this application.

‡ Used only on models with serial numbers larger than 2610000.

## CONTROLS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA				INSTALLATION NOTES
		NATIONAL PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
RIA	1 Meg.		B11-137 *			Vert. hold control, panel
B	50KΩ		B11-123 *			Horiz. hold control, rear
C	Shaft End		E-187 *			Attach per instructions in "Concentrikrit"
R1	1500Ω	L285-1				Focus control-Wire Wound
R3	100KΩ	K915-12	Q11-128	M-49-S	B-40	Brightness control
R4	1000Ω	K915-11				Contrast control, tapped @ 750Ω
R5	250KΩ	K915-8	Q11-130	M-55-S	B-50	Volume control
R6	2.5 Meg.	K915-10	Q11-239	M-84-S	B-83	Vert. size control
R7	5000Ω	K915-9	Q11-114	M-19-S	B-10	Vert. linearity control

\* Additional parts to be used with "Concentrikrit".

## RESISTORS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA		IDENTIFICATION CODES
		NATIONAL PART No.	IRC PART No.	
R8	1 Meg.	J569-61		RF Grid
R9	1000Ω	J569-25		RF Screen Decoupling
R10	1000Ω	J569-25		RF Plate Decoupling
R11	1 Meg.	K379-61		Mixer Grid
R12	1000Ω	J569-25		Mixer Screen Decoupling
R13	3900Ω	J569-32		Mixer Grid Coil Shunt
R14	2200Ω	J571-29		Osc. Plate
R15	18KΩ	J569-40		Osc. Grid
R16	100Ω	J569-13		Decoupling Network-See Note 1
R17	330Ω 5%	J569-19		AGC Network
R18	100Ω	J569-13		Mixer Plate Decoupling
R19	10KΩ 5%	J569-89		1st Video IF Grid
R20	82Ω	J569-12		1st Video IF Cathode
R21	100Ω	J569-13		1st Video IF Decoupling
R22	330Ω 5%	J569-19		AGC Network
R23	8200Ω 5%	J569-93		2nd Video IF Grid
R24	82Ω	J569-12		2nd Video IF Cathode
R25	100Ω	J569-13		2nd Video IF Decoupling
R26	1 Meg.	J569-61		AGC Network
R27	8200Ω 5%	J569-90		3rd Video IF Grid Coil Shunt
R28	82Ω	J569-12		3rd Video IF Cathode
R29	100Ω	J569-13		3rd Video IF Decoupling
R30	680KΩ	J569-59		AGC Diode Load
R31	47KΩ	J571-45		Voltage Divider
R32	8200Ω	J569-36		Video Det. Diode Load
R33	1000Ω	J569-25		Bias Network
R34	120Ω	J569-14		Parasitic Supp.
R35	27KΩ	E959-20		Video Amp. Plate-Wire Wound
R36	22KΩ	E959-19		Video Amp. Screen-Wire Wound
R37	22KΩ	J571-41		Voltage Divider
R38	5600Ω	J571-34		Voltage Divider
R39	2200Ω	J569-29		Picture Tube Grid
R40	270KΩ	J569-54		DC Rest. Load
R41	820KΩ	J569-60		Voltage Divider
R42	47KΩ	J569-45		DC Rest. Load
R43	82Ω	J569-12		1st Sound IF Cathode

## RESISTORS (CONT.)

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA		IDENTIFICATION CODES
		NATIONAL PART No.	IRC PART No.	
R44	1000Ω	J569-25		1st Sound IF Screen Decoupling
R45	1000Ω	J569-25		1st Sound IF Plate Decoupling
R46	470KΩ	J569-57		2nd Sound IF Grid
R47	1000Ω	J569-25		2nd Sound IF Cathode
R48	100KΩ 5%	J569-49		2nd Sound IF Screen
R49	12KΩ		BTS-12K	Voltage Divider-See Note 2
R50	1000Ω	J569-25		2nd Sound IF Decoupling
R51	15KΩ	J569-39		De-emphasis
R52	47KΩ	J569-45		Ratio Det. Diode Load
R53	470KΩ	J569-57		AF Grid
R54	330KΩ	J569-55		AF Plate
R55	220KΩ	J569-53		Output Grid
R56	4700Ω	J569-33		Voltage Divider
R57	470KΩ	J569-57		Voltage Divider
R58	330KΩ 5%	J569-88		Voltage Divider
R59	180KΩ 5%	J569-89		Voltage Divider
R60	390Ω	J571-20		Filter
R61	1 Meg.	J569-61		BTS-1 Meg.
R62	3900Ω	J569-32		Sync Sep. Grid
R63	3900Ω	J569-32		Sync Sep. Cathode
R64	3900Ω	J569-32		Sync Sep. Plate
R65	470KΩ	J569-57		Sync Sep. Plate
R66	100KΩ	J569-49		Sync Amp. Grid-See Note 3
R67	22KΩ	J569-41		Sync Amp. Plate-See Note 3
R68	8200Ω	J569-36		Integrator
R69	8200Ω	J569-36		Integrator
R70	1 Meg.	J569-61		Vert. Osc. Grid
R71	1.5 Meg.	J569-63		Vert. Osc. Plate
R72	6.8 Meg.	J569-71		BTS-6.8 Meg.
R73	100KΩ 5%	J569-49		Voltage Divider
R74	2.2 Meg.	J569-65		Voltage Divider
R75	6800Ω	J569-35		Vert. Amp. Grid
R76	560Ω	J569-22		Vert. Amp. Plate Decoupling
R77	3300Ω	J569-31		Vert. Amp. Cathode
R78	27KΩ	J569-42		Vert. Peaking
R79	100KΩ	J569-48		Feedback Network