

MAJESTIC MODEL 72

TRADE NAME	Majestic Models	70, 72, 73, 700, 701, 712, 715, 717, 718, 719 (Series 106), 800, 801, 802, 803, 804 (Series 108)
MANUFACTURER	Majestic Radio & Television Div. of Wilcox-Gay Corp.,	70 Washington St., BROOKLYN, N. Y.
TYPE SET	Television Receiver	
TUBES	Nineteen	
POWER SUPPLY	110-120 Volts AC - 60 Cycle	
RATING	1.6 Amp. at 117 Volts AC	
TUNING RANGE	CHANNELS 2 thru 13	

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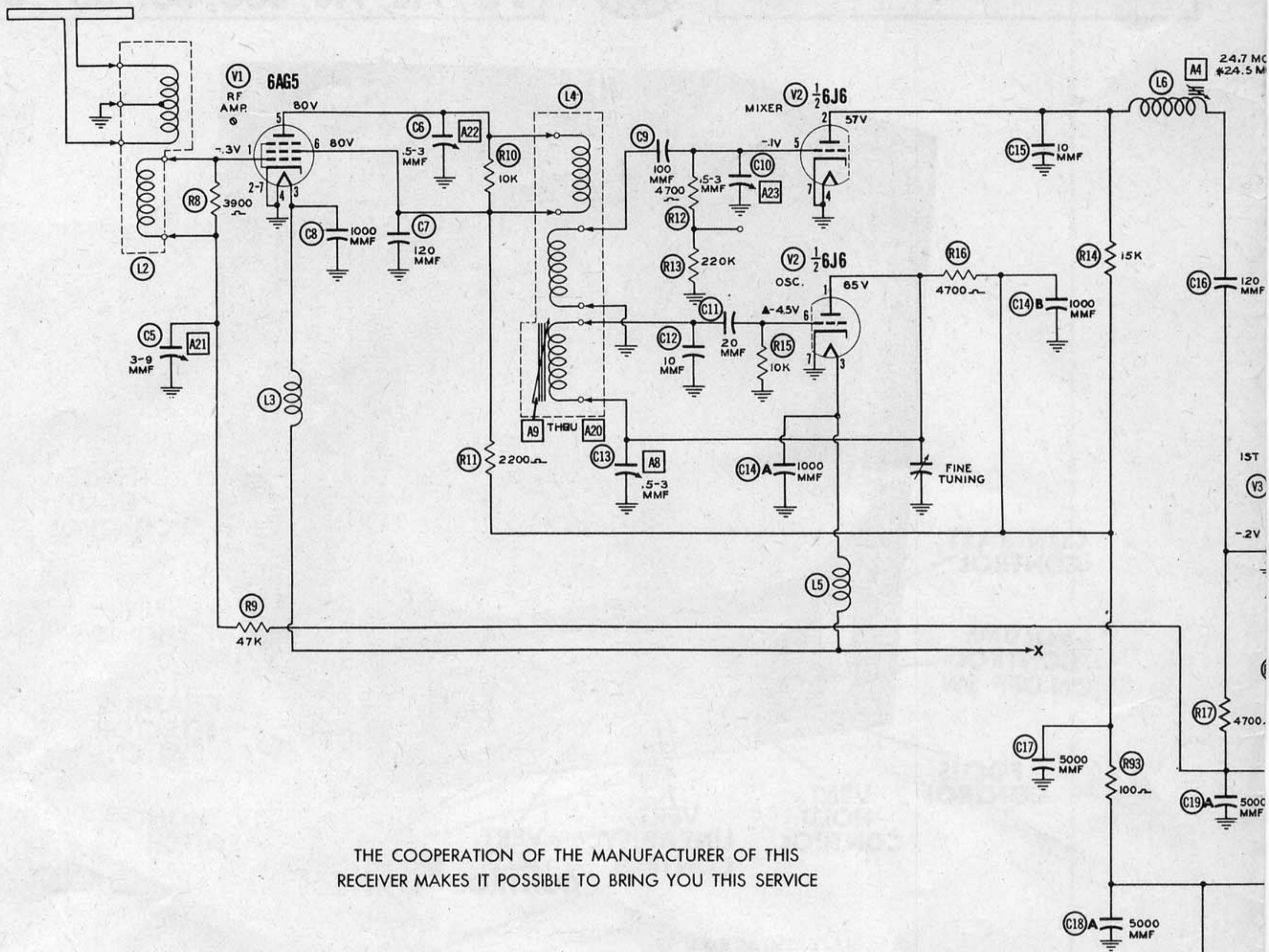
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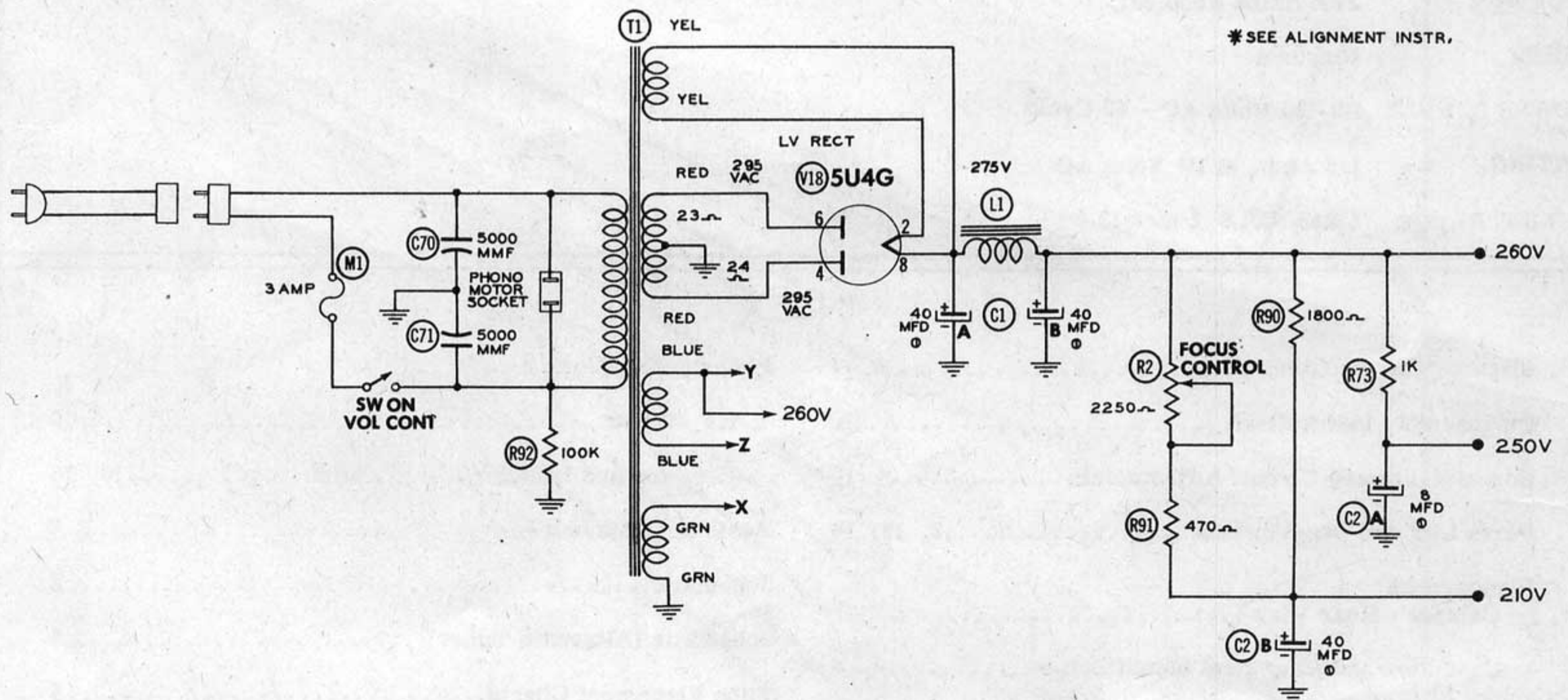
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MAJESTIC MODELS  
 70, 72, 73, 700, 701, 712, 715,  
 717, 718, 719, 800, 801, 802, 803, 804





THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE



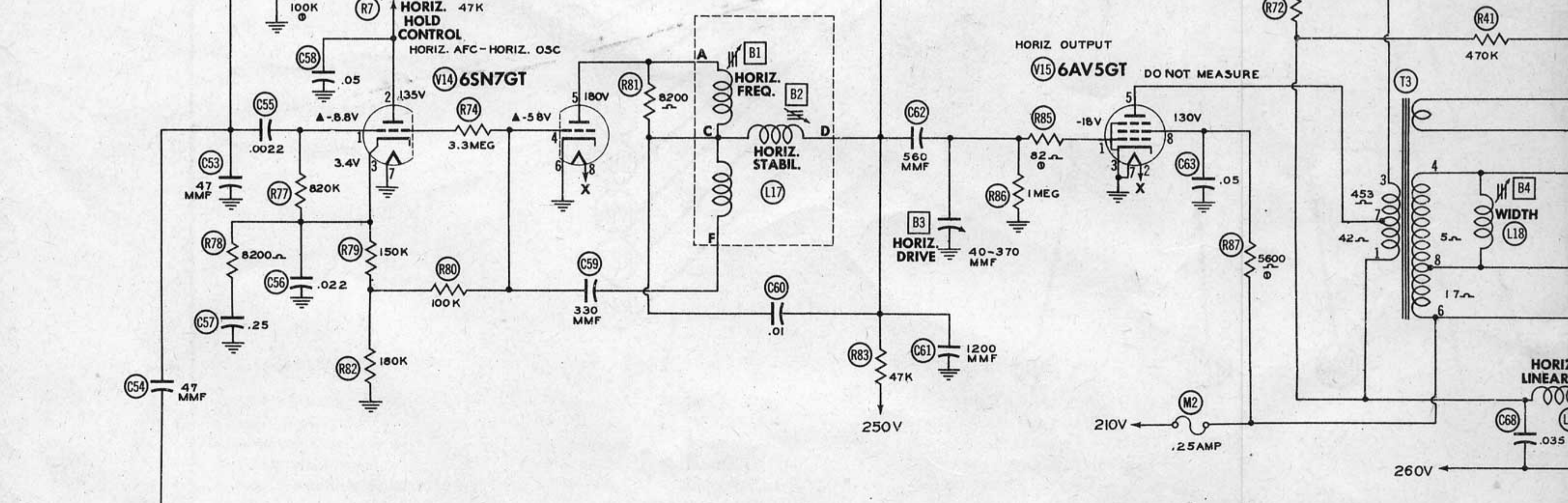
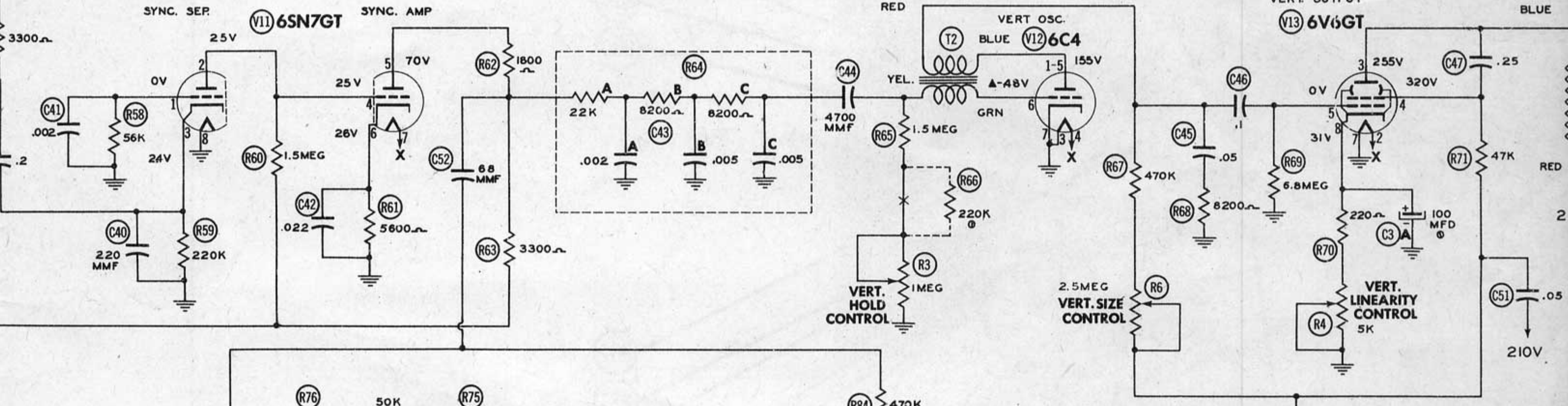
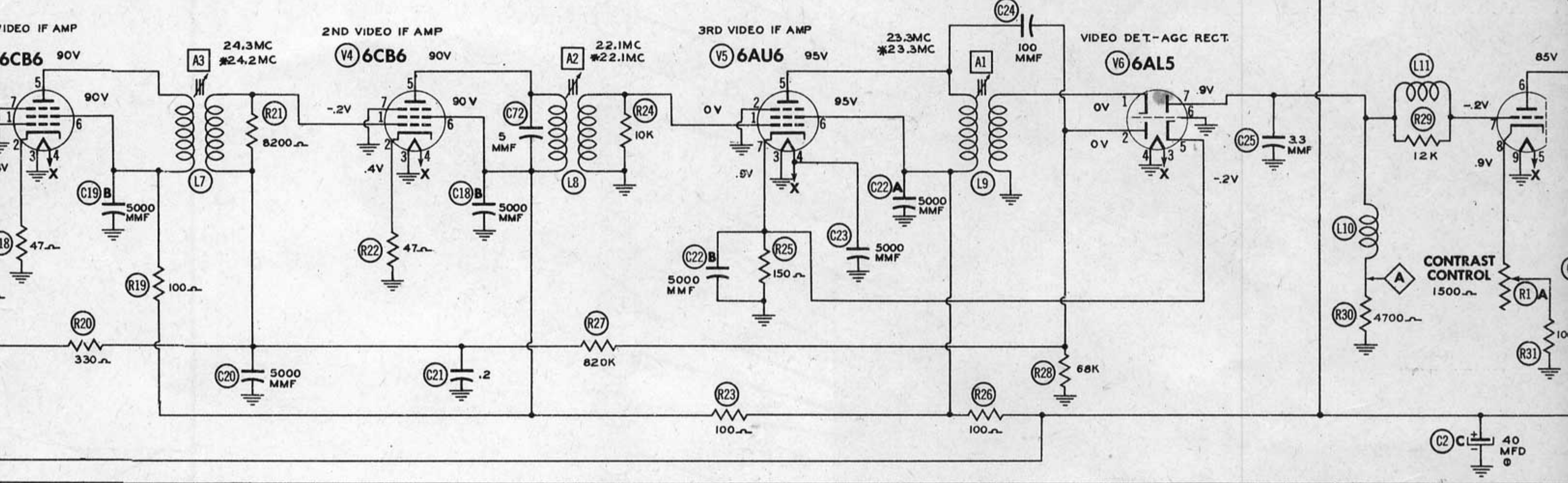
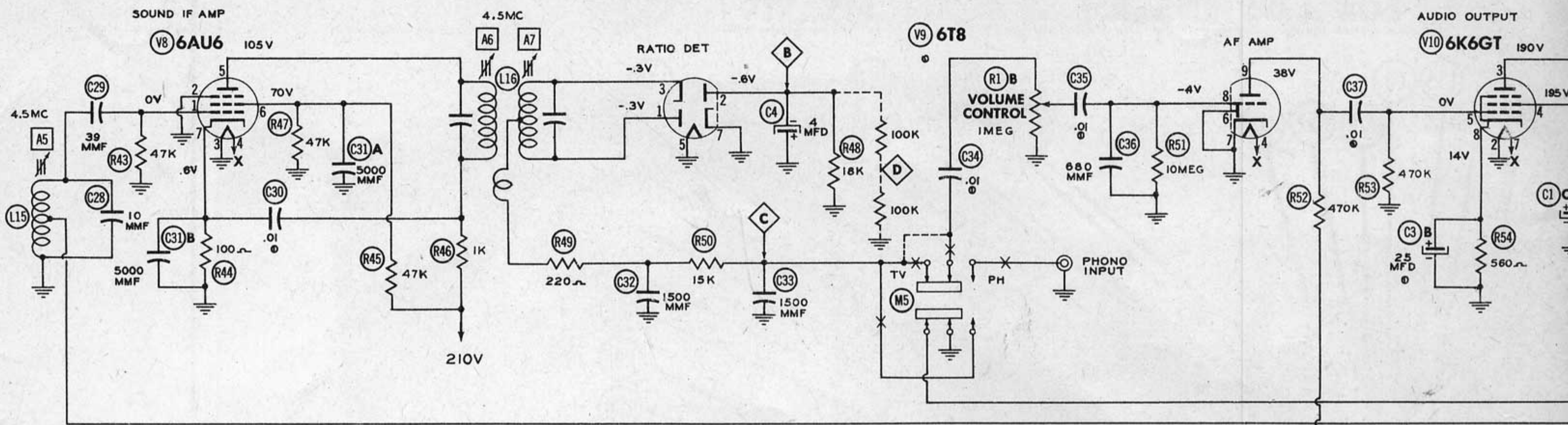
▲ MEASURED WITH VTVM.

\* SEE ALIGNMENT INSTR.

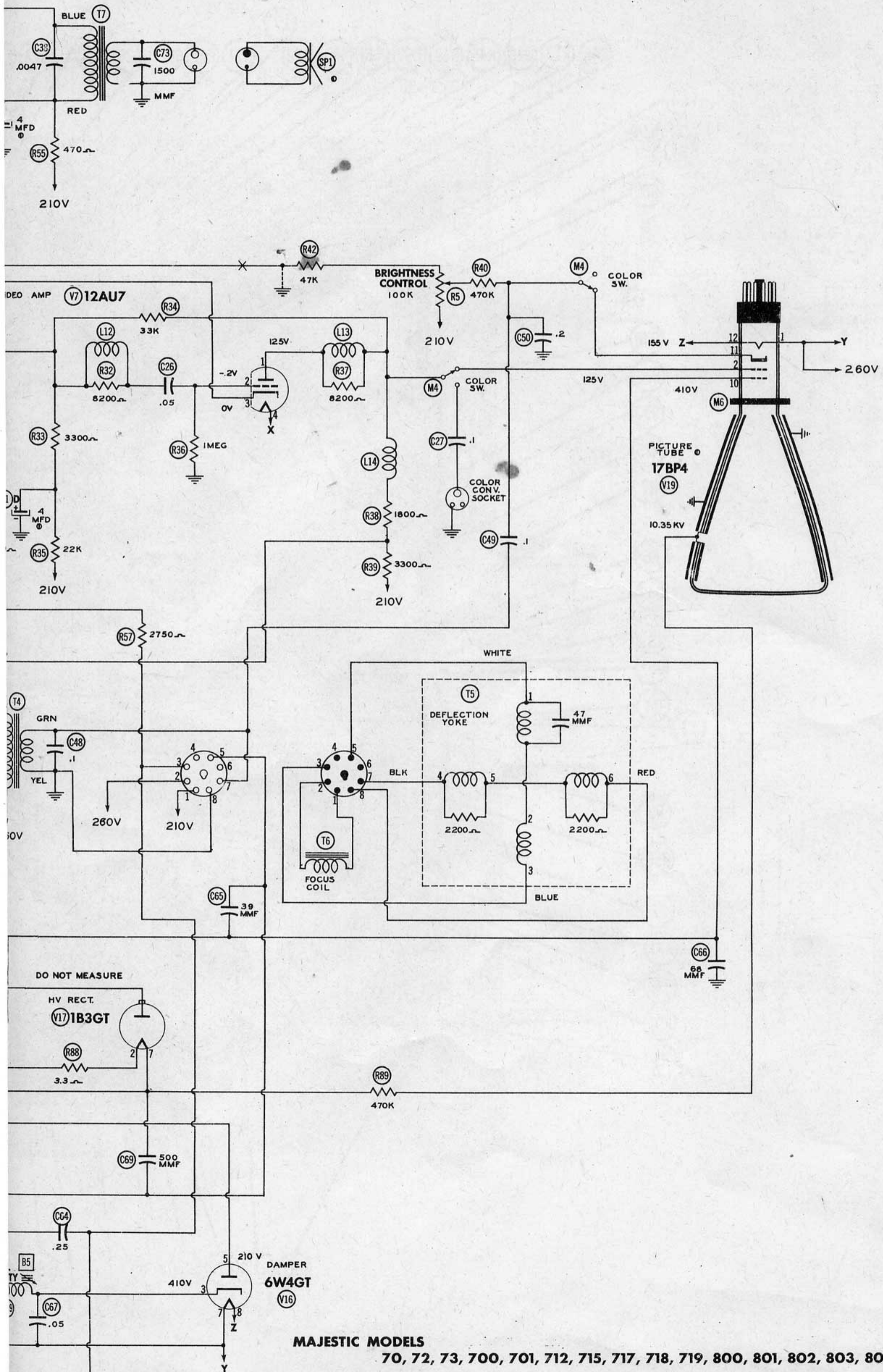
DOTTED IN PARTS ARE NOT USED IN ALL MODELS. WHEN DOTTED IN PARTS ARE USED POINTS MARKED X ARE BROKEN.

⊕ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION



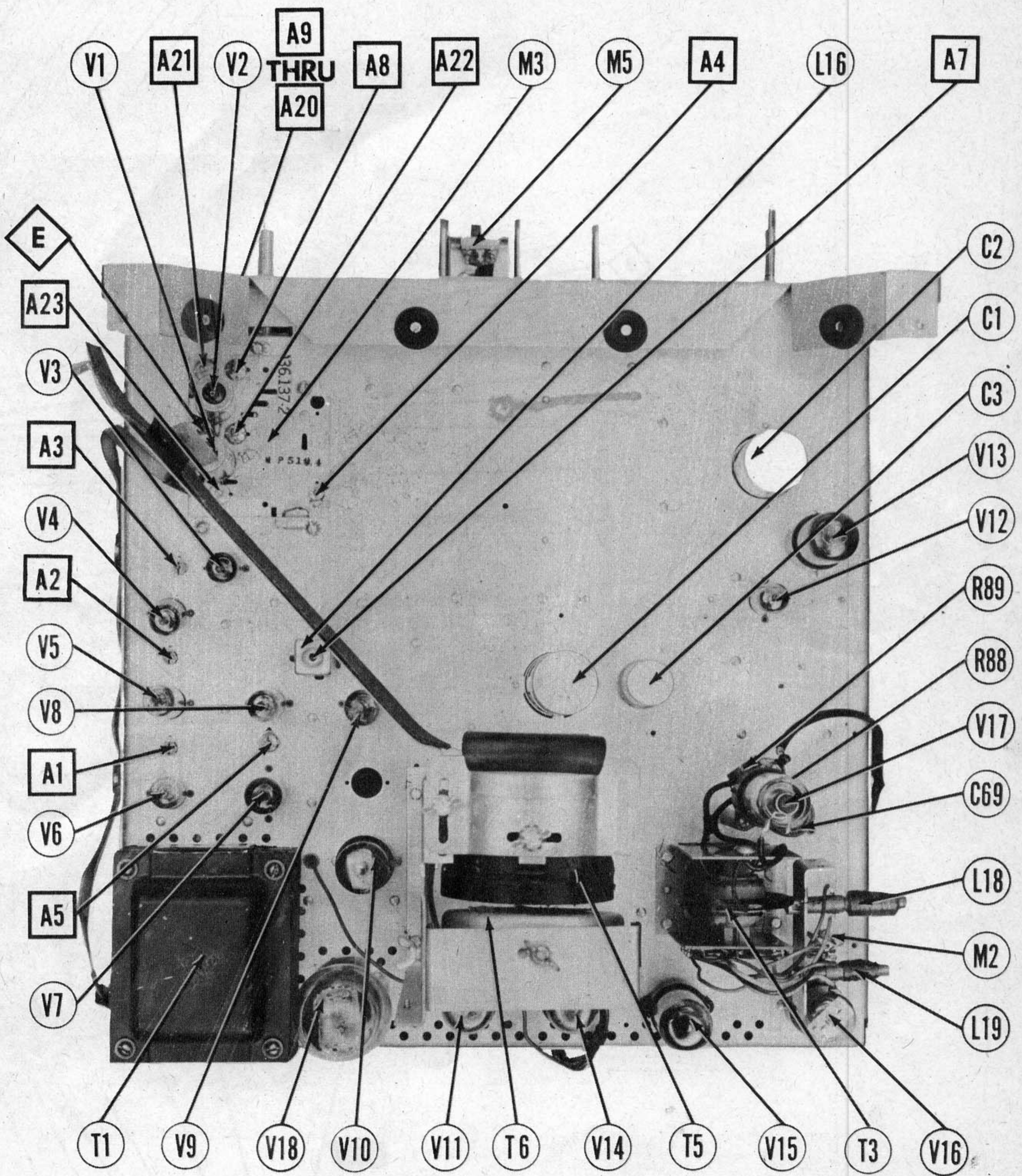






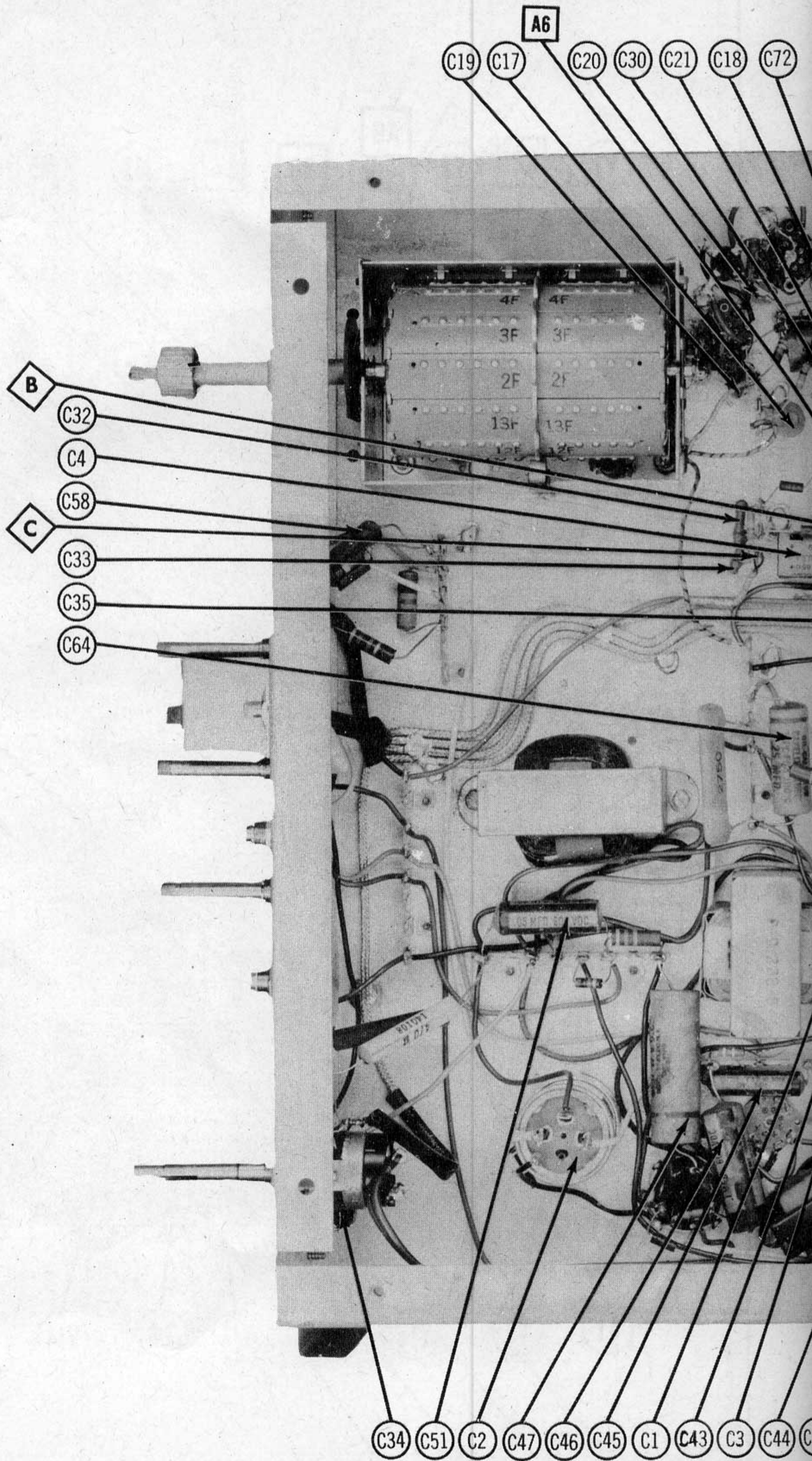
**MAJESTIC MODELS**  
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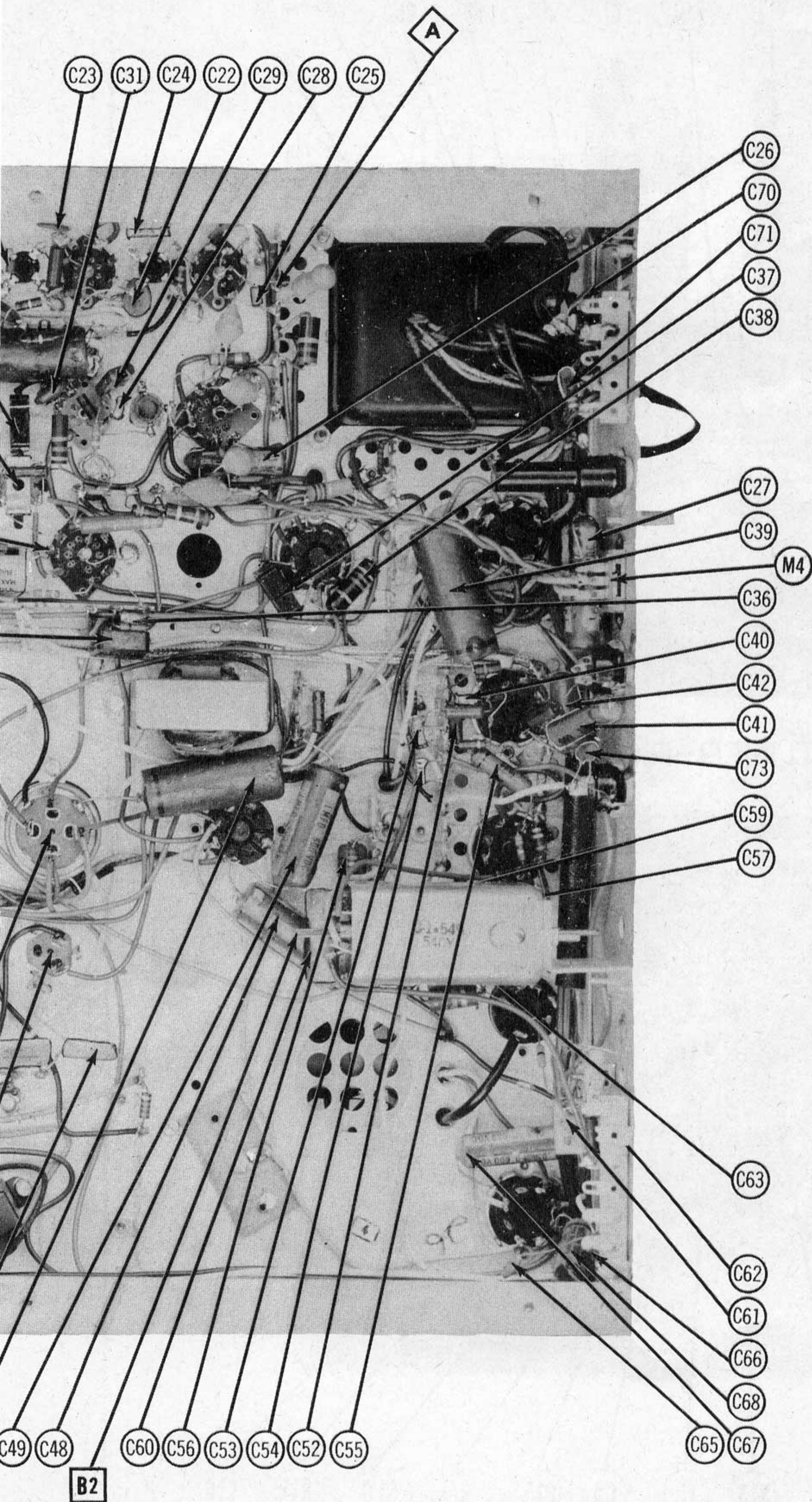
CHASSIS TOP VIEW





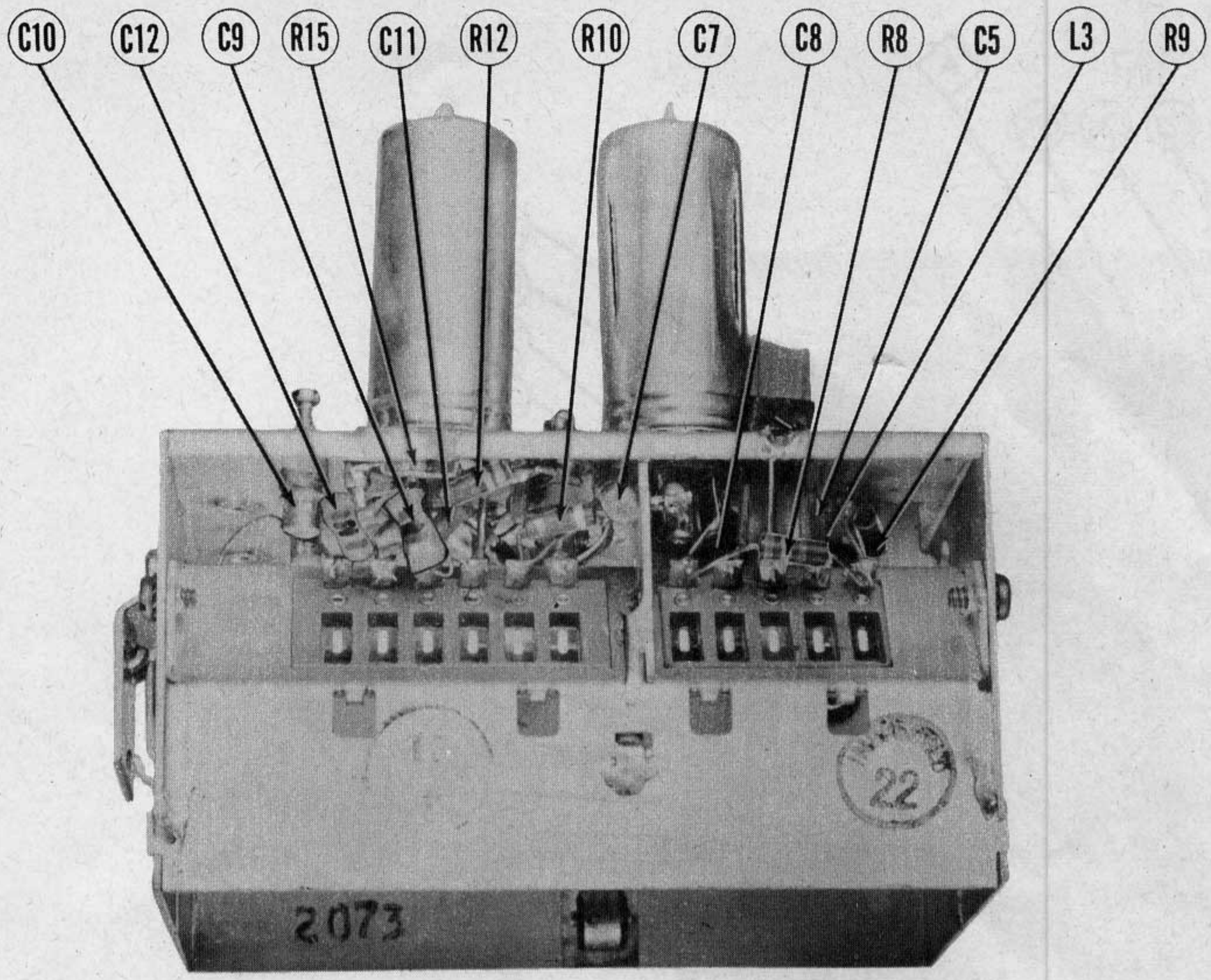
CHASSIS BOTTOM VIEW-CAPACITORS



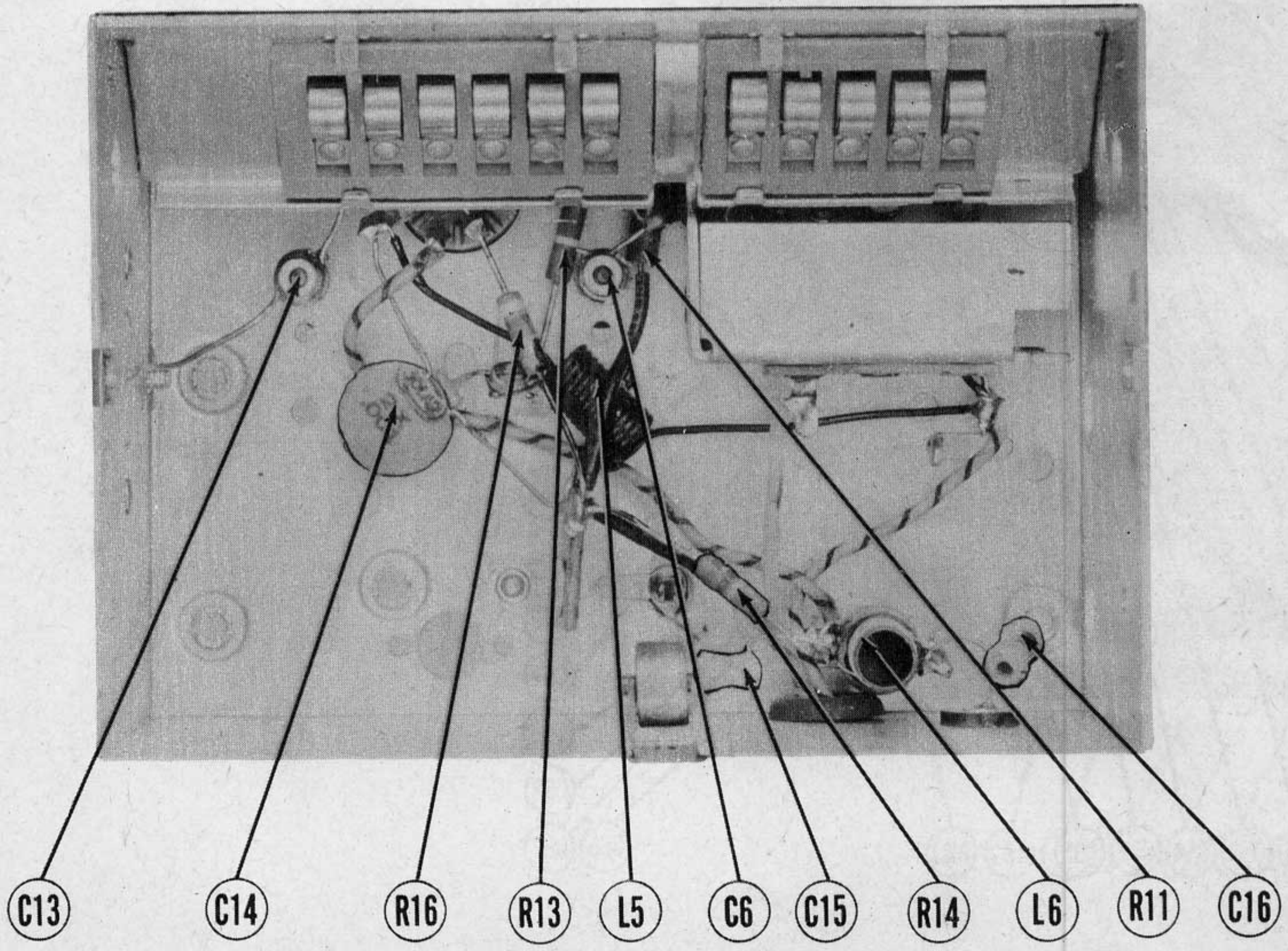


AND ALIGNMENT IDENTIFICATION



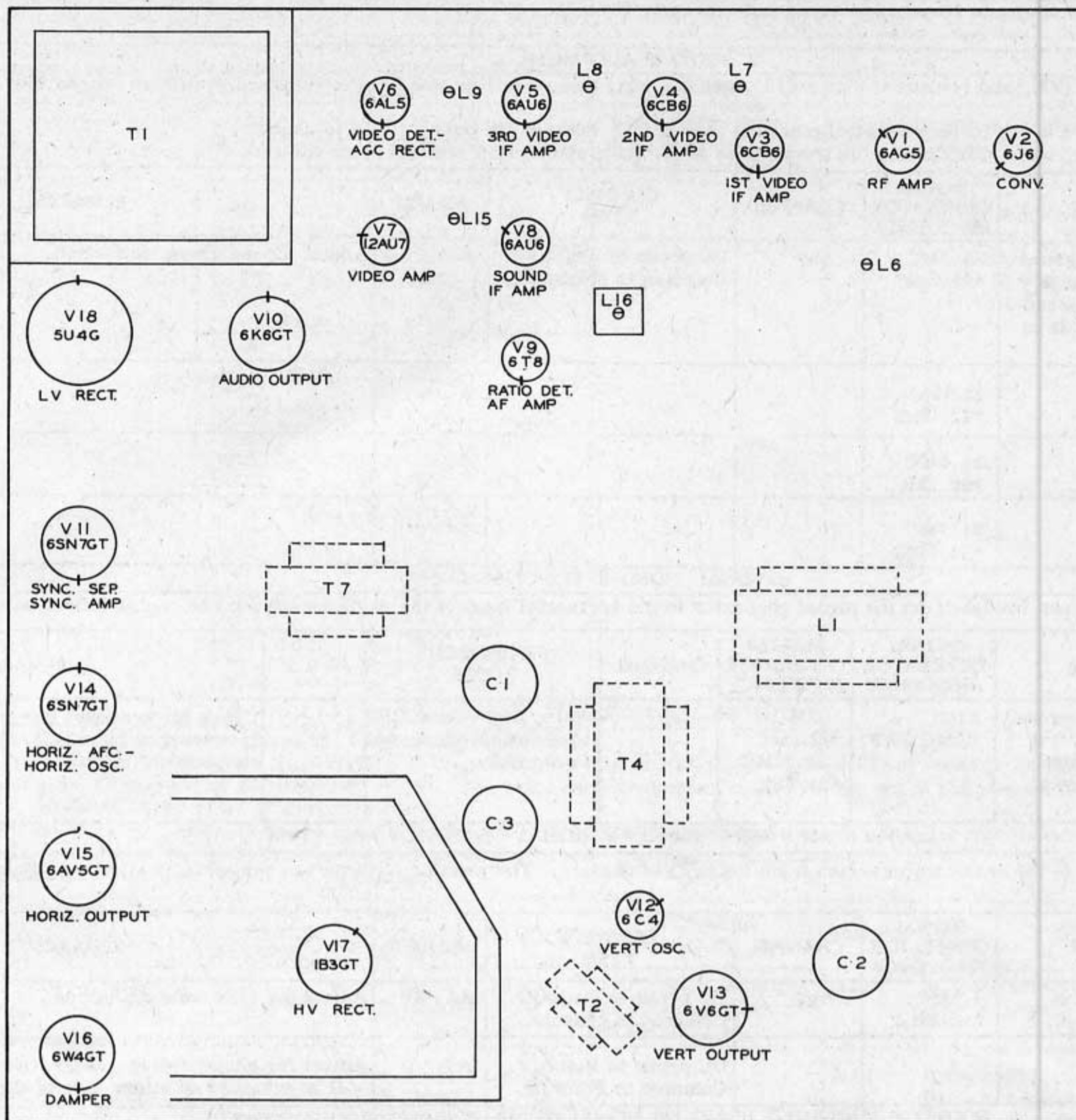


RF TUNER-RIGHT SIDE

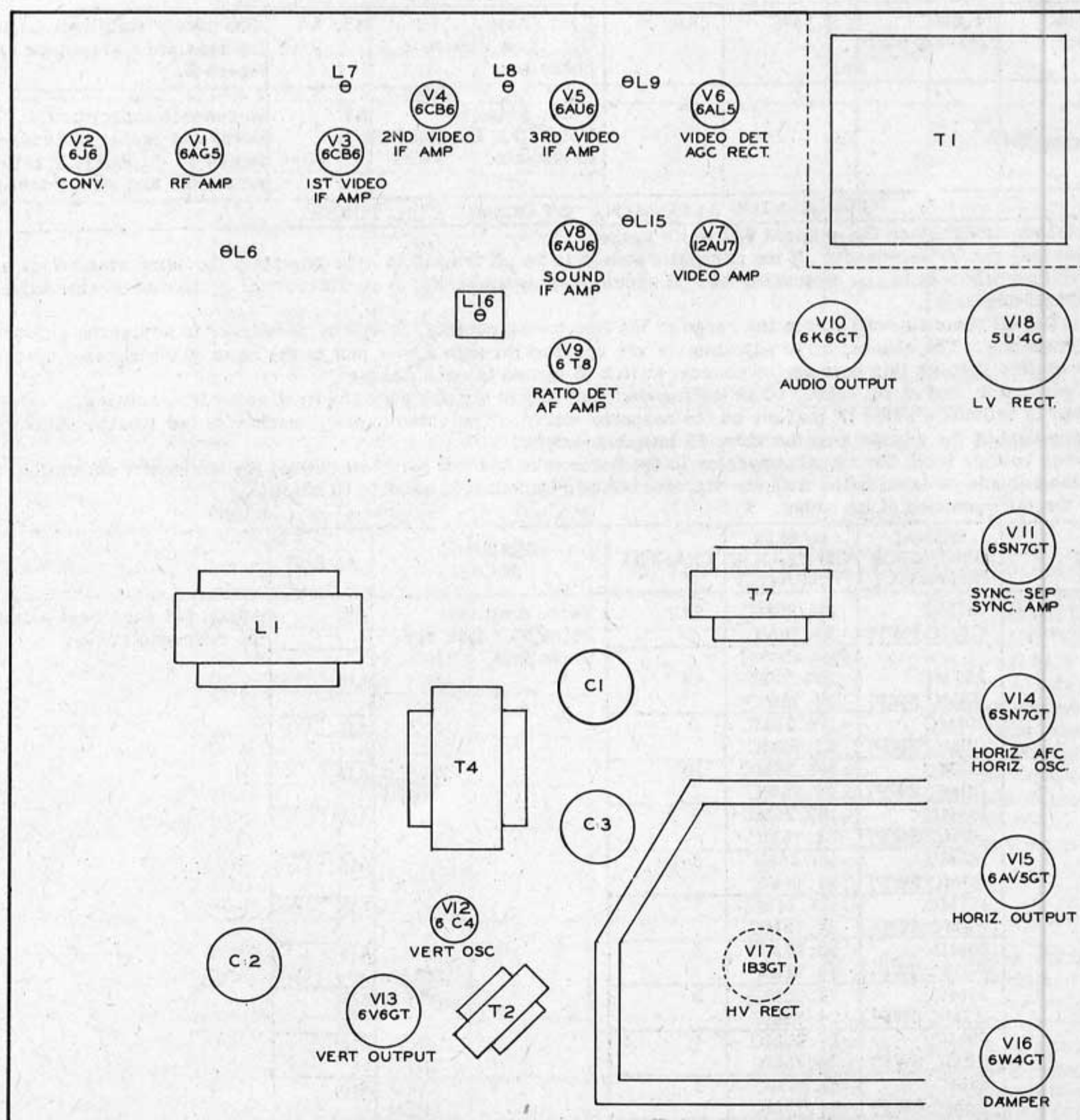


RF TUNER-BOTTOM VIEW





TOP VIEW



BOTTOM VIEW

TUBE PLACEMENT CHART



# ALIGNMENT INSTRUCTIONS

## ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The end of the high voltage lead should be securely taped and kept away from the chassis; do not remove the horizontal oscillator tube to disable the high voltage.

### VIDEO IF ALIGNMENT

Remove the converter tube, (V2), and replace it with a 6J6 which has pin 1 removed, this will disable the local oscillator and prevent the possibility of erroneous indications.  
Connect the negative lead of a 3 volt battery to the ungrounded lead of C21, connect the positive lead to chassis.  
If no bias supply is available, short C21 and use the frequencies in the table and figures marked by an asterisk (\*).

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1. Direct	High side to an ungrounded tube shield floating over dummy converter tube (V2). Low side to chassis.	23.3MC *23.3MC	Any	DC probe to Point A. Common to chassis.	A1	Adjust for maximum deflection.
2. "	"	22.1MC *22.1MC	"	"	A2	"
3. "	"	24.3MC *24.2MC	"	"	A3	"
4. "	"	24.7MC *24.5MC	"	"	A4	"

### 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	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
5. Direct	High side to an ungrounded tube shield floating over dummy converter tube, (V2). Low side to chassis.	23MC (10MC SWP)	22MC *21.9MC 24.75MC *24.6MC	Any	Vert. Amp. thru 10KΩ to Point A. Low side to chassis.		Check for response curve similar to figure 1. If necessary retouch A1 thru A4 for proper response.

### SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Connect two matched 100KΩ (± 1%) resistors in series from Point B 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. 1500MMF	High side to Point A. Low side to chassis.	4.5MC (unmod.)	Any	DC probe to Point B. Common to chassis.	A5, A6	Adjust for maximum deflection.
7. "	"	"	"	DC probe to Point C. Common to Point D.	A7	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

### SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120V sawtooth voltage in scope for horizontal deflection.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
6. 1500MMF	High side to Point A. Low side to chassis.	4.5MC (450KC SWP)	4.5MC	Any	Vert. Amp. to Point B. Low side to chassis.	A5, A6	Disconnect stabilizer capacitor C4. Adjust for maximum amplitude and symmetry as per figure 2.
7. "	"	"	"	"	Vert. Amp. to Point C. Low side to chassis.	A7	Reconnect capacitor C4. Adjust A7 so 4.5MC occurs at center of crossover lines as per figure 3. SLIGHTLY retouch A6 for maximum amplitude and straightness of crossover lines.

### OSCILLATOR ALIGNMENT (STANDARD COIL TUNER)

Remove the dummy converter tube and replace the original 6J6 in its socket.  
Complete oscillator alignment may not be necessary. If the oscillator seems to be off frequency approximately the same amount for a majority of the channels it may be possible to correct them in one step using A8. It should be noted that this is an all channel oscillator circuit adjustment and should not be adjusted for any individual channels.  
If adjustment of A8 will not bring all channels well within the range of the fine tuning control, it will be necessary to adjust the channel strip adjustment for each channel that is off frequency. The channel strip adjustments are reached through a hole just to the right of the channel switch shaft. The correct adjustment screw is accessible through this hole as the channel switch is turned to each channel.  
Connect an external marker generator, set at 24.75MC, to an ungrounded tube shield slipped over the first video IF amplifier.  
This marker generator is used to provide a video IF marker on the response curve. The video carrier marker is fed into the set at the antenna and the oscillator adjusted for zero beat of the markers on the video IF response curve.  
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.  
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.  
Set the fine tuning control to the mid-position of its range.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8. Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 24.75MC	13	Vert. Amp. to Point A. Low side to chassis.	A9	Adjust for zero beat between the markers on the response curve.
		207MC (10MC SWP)	(See above) 205.25MC 24.75MC	12		A10	
		201MC (10MC SWP)	199.25MC 24.75MC	11		A11	
		195MC (10MC SWP)	193.25MC 24.75MC	10		A12	
		189MC (10MC SWP)	187.25MC 24.75MC	9		A13	
		183MC (10MC SWP)	181.25MC 24.75MC	8		A14	
		177MC (10MC SWP)	175.25MC 24.75MC	7		A15	
		85MC (10MC SWP)	83.25MC 24.75MC	6		A16	
		79MC (10MC SWP)	77.25MC 24.75MC	5		A17	
		69MC (10MC SWP)	67.25MC 24.75MC	4		A18	
		63MC (10MC SWP)	61.25MC 24.75MC	3		A19	
		57MC (10MC SWP)	55.25MC 24.75MC	2		A20	





# ALIGNMENT INSTRUCTIONS (CONT.)

RF AND MIXER ALIGNMENT (STANDARD COIL TUNER)

Connect a short across C19A.  
Connect the synchronized sweep voltage from the signal 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	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
9. Two 120Ω carbon resistors	Across antenna terminal with 120Ω in each lead.	207MC (10MC SWP)	205.25MC 209.75MC	12	Vert. Amp. thru 10KΩ to Point E. Low side to chassis.	A21, A22, A23	Adjust for response curve similar to figure 4, with markers above 90%.
10. "	"	213MC (10MC SWP)	211.25MC 215.75MC	13	"		Check all channels for response curve similar to figure 4. If markers fall below 70% on any channel, make slight adjustment of A21, A22, and A23 with channel switch set for that channel. Recheck all channels to see that they have not been seriously effected.
		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			
		177MC (10MC SWP)	175.25MC 179.75MC	7			
		85MC (10MC SWP)	83.25MC 87.75MC	6			
		79MC (10MC SWP)	77.25MC 81.75MC	5			
		69MC (10MC SWP)	67.25MC 71.75MC	4			
		63MC (10MC SWP)	61.25MC 65.75MC	3			
		57MC (10MC SWP)	55.25MC 59.75MC	2			

## OSCILLATOR ALIGNMENT (SARKES TARZIAN TUNER)

Remove the dummy converter tube and replace the original 6J6 in its socket.  
Connect an external marker generator, set at 24.75MC, to an ungrounded tube shield slipped over the first video IF amplifier. This marker generator is used to provide a video IF marker on the response curve. The video carrier marker is fed into the set at the antenna and the oscillator is adjusted for zero beat of the markers on the video IF response curve.  
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.  
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.  
Set the fine tuning control to the mid-position of its range.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
11. Two 120Ω carbon resistors	Across antenna terminal with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 215.75MC	13	Vert. Amp. thru 10KΩ to Point A. Low side to chassis.	A24	Adjust for zero beat between markers on response curve.
12. "	"	207MC (10MC SWP)	205.25MC 209.75MC	12	"	A25	Check all high band channels to see if the markers can be zeroed within 15° rotation either way from center of the fine tuning control range. If not expand or compress turns of appropriate coil.
		201MC (10MC SWP)	199.25MC 203.75MC	11		A26	
		195MC (10MC SWP)	193.25MC 197.75MC	10		A27	
		189MC (10MC SWP)	187.25MC 191.75MC	9		A28	
		183MC (10MC SWP)	181.25MC 185.75MC	8		A29	
		177MC (10MC SWP)	175.25MC 179.75MC	7		A30	
		85MC (10MC SWP)	83.25MC 87.75MC	6		A31	
14. "	"	79MC (10MC SWP)	77.25MC 81.75MC	5		A32	Check all low band channels to see if the markers can be zeroed within 15° rotation either way from center of the fine tuning control range. If not expand or compress turns of appropriate coil.
		69MC (10MC SWP)	67.25MC 71.75MC	4		A33	
		63MC (10MC SWP)	61.25MC 65.75MC	3		A34	
		57MC (10MC SWP)	55.25MC 59.75MC	2		A35	

## RF ALIGNMENT (SARKES TARZIAN TUNER)

Connect a short across C19A.  
Connect the synchronized sweep voltage from the signal 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	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
15. Two 120Ω carbon resistors	Across antenna terminal with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 215.75MC	13	Vert. Amp. thru 10KΩ to Point F.	A36, A37, A38	Adjust for response curve similar to figure 4. In early production tuners, these adjustments are fixed and should not be adjusted in the field.
16. "	"	207MC (10MC SWP)	205.25MC 209.75MC	12	"	A39, A40	Check all high band channels for response similar to figure 4. If necessary, adjust loops on each channel by moving loop towards, or away from, the wafer. If some channels appear excessively tilted, it may be necessary to make compromise adjustments on the higher channels to obtain best response on all high band channels. When any channel is changed, all lower channels will require adjustment.
		201MC (10MC SWP)	199.25MC 203.75MC	11		A41, A42, A43, A44	
		195MC (10MC SWP)	193.25MC 197.75MC	10		A45, A46, A47	
		189MC (10MC SWP)	187.25MC 191.75MC	9		A48, A49, A50	
		183MC (10MC SWP)	181.25MC 185.75MC	8		A51, A52, A53	
		177MC (10MC SWP)	175.25MC 179.75MC	7		A54, A55, A56	
		85MC (10MC SWP)	83.25MC 87.75MC	6	"	A57, A58, A59	
18. "	"	79MC (10MC SWP)	77.25MC 81.75MC	5	"	A60, A61, A62	Expand or compress coil turns for response similar to figure 4. Bear in mind that when any channel is adjusted, all lower channels will require adjustment.
		69MC (10MC SWP)	67.25MC 71.75MC	4		A63, A64, A65	
		63MC (10MC SWP)	61.25MC 65.75MC	3		A66, A67, A68	
		57MC (10MC SWP)	55.25MC 59.75MC	2		A69, A70, A71	

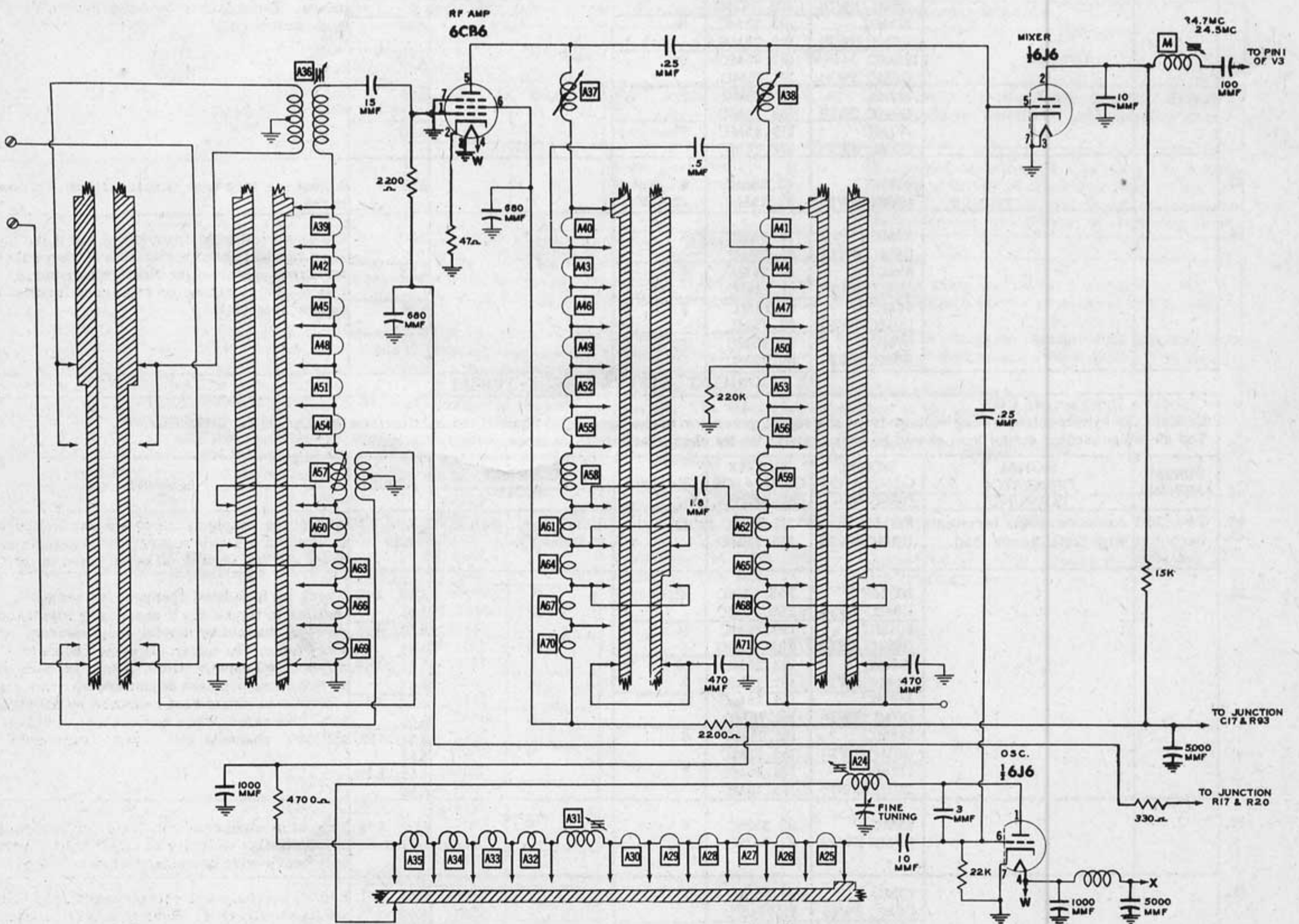


# RESISTANCE MEASUREMENTS

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	
V 1	6AG5	935KΩ	0Ω	.1Ω	0Ω	†5KΩ	†5KΩ	0Ω			
V 2	6J6	†9KΩ	†19KΩ	.1Ω	0Ω	225KΩ	10KΩ	0Ω			
V 3	6CB6	890KΩ	47Ω	0Ω	.1Ω	†3.4KΩ	†3.4KΩ	0Ω			
V 4	6CB6	890KΩ	47Ω	0Ω	.1Ω	†3.3KΩ	†3.3KΩ	0Ω			
V 5	6AU6	.4Ω	0Ω	0Ω	.1Ω	†3.2KΩ	†3.2KΩ	150Ω			
V 6	6AL5	.4Ω	68KΩ	.1Ω	0Ω	150Ω	0Ω	4.7KΩ			
V 7	12AU7	†5.4KΩ	1Meg	1.3Ω	.1Ω	.1Ω	†16KΩ	4.7KΩ	125Ω	0Ω	
V 8	6AU6	47KΩ	0Ω	0Ω	.1Ω	†1.3KΩ	†28KΩ	100Ω			
V 9	6T8	Inf.	18KΩ	Inf.	.1Ω	0Ω	0Ω	0Ω	10Meg	†470KΩ	
V 10	6K6GT	Inf.	0Ω	†1.1KΩ	†800Ω	470KΩ	†470KΩ	.1Ω	560Ω		
V 11	6SN7GT	56KΩ	†1.5Meg	220KΩ	†1.5Meg	†8.5KΩ	5600Ω	.1Ω	0Ω		
V 12	6C4	#1.4Meg	0Ω	0Ω	.1Ω	#1.4Meg	1.8Meg	0Ω			
V 13	6V6GT	Inf.	.1Ω	†750Ω	#57KΩ	6.8Meg	2.3KΩ	0Ω	2.6KΩ		
V 14	6SN7GT	1.2Meg	†48KΩ	330KΩ	280KΩ	†49KΩ	0Ω	0Ω	.1Ω		
V 15	6AV5GT	1Meg	.1Ω	0Ω	Inf.	#60Ω	Inf.	0Ω	†5.9KΩ		
V 16	6W4GT	330Ω	Inf.	Inf.	Inf.	†320Ω	■0Ω	■0Ω	■.2Ω		
V 17	1B3GT	PINS 1-8 HAVE INF. RESISTANCE									Top Cap #515Ω
V 18	5U4G	Inf.	36KΩ	Inf.	24Ω	†64Ω	23Ω	†64Ω	36KΩ		
V 19	17AP4A	■0Ω	†5.4KΩ	#470KΩ	PIN 10 †500KΩ	PIN 11 †500KΩ	PIN 12 ■.2Ω				

ALL CONTROLS SET FOR NORMAL OPERATION  
 † MEASURED FROM PIN 8 OF V18  
 # MEASURED FROM PIN 3 OF V16  
 ■ MEASURED FROM 260VDC LINE

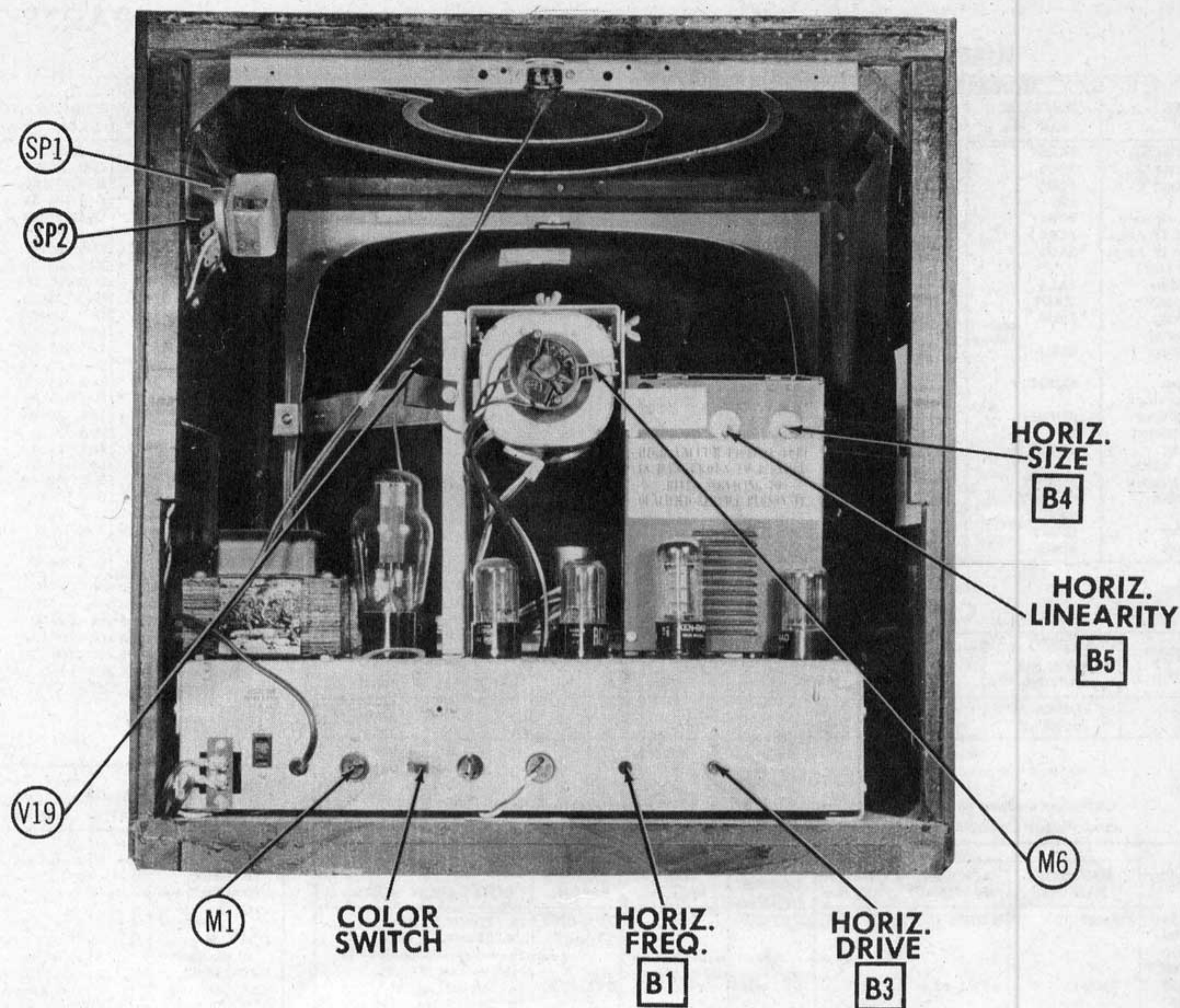


A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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CHANNEL 3W. SHOWN IN CHANNEL 13 POSITION

## ALTERNATE TUNER SCHEMATIC





## CABINET-REAR VIEW

### HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern.  
 Turn the horizontal hold control to the mid-position of its range.  
 Adjust the horizontal frequency slug, (B1), until the picture synchronizes horizontally.  
 Connect the vertical input lead of an oscilloscope, through a 10K $\Omega$  resistor, to terminal C of L17, connect the low side to chassis.  
 Adjust the horizontal stabilizing core, (B2), until the broad and narrow peaks of the waveform on the scope are of equal height as shown in figure 5. If necessary during adjustment of B2, readjust B1 to keep the picture synchronized.  
 Adjust the horizontal drive trimmer, (B3), counter-clockwise as far as possible without crowding or bright vertical bars appearing in the picture.  
 Adjust the width slug, (B4), until the picture is slightly wider than necessary to fill the mask horizontally.  
 Adjust the horizontal linearity slug, (B5), until the picture is symmetrical from left to right.  
 Since both width and horizontal linearity are effected by the drive trimmer, it may be necessary to adjust B3, B4, and B5 alternately for optimum results.

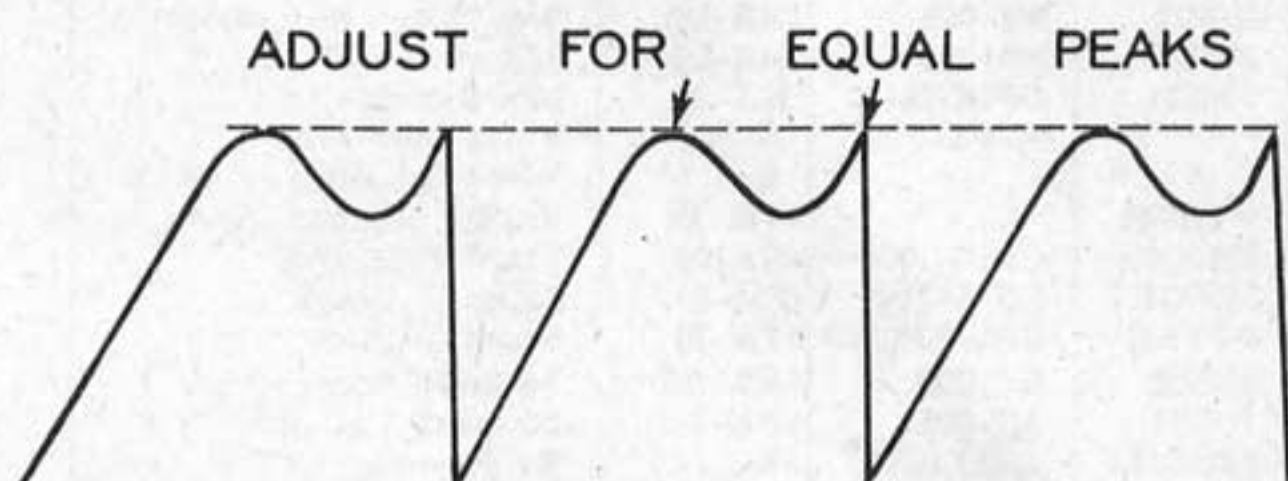


FIG. 5

## DISASSEMBLY INSTRUCTIONS

1. Remove four push-on type control knobs.
2. Remove three 1/4" hex head screws from rear cover. Remove rear cover.
3. Disconnect built-in antenna.
4. Disconnect speaker.
5. Remove inter-lock switching arrangement.
6. Remove six metal bolts from chassis. Remove chassis.
7. Remove three 1/4" hex nuts from speaker. Remove speaker.

NOTE: FOR PICTURE TUBE REMOVAL IT IS NECESSARY TO REMOVE THE CHASSIS AS OUTLINED ABOVE.



TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		MAJESTIC PART No.	STANDARD REPLACEMENT		
V1A	RF Amplifier	6AG5	6AG5	7BD	In some productions a 6AL5 and a 6AT6 or 6AV6 is used in place of V9 (6T8)
B	RF Amplifier	6BC5	6BC5	7BD	
C	RF Amplifier	6CB6	6CB6	7CM	
V2	Converter	6J6	6J6	7BF	
V3	1st. Video IF Amp.	6CB6	6CB6	7CM	
V4	2nd. Video IF Amp.	6CB6	6CB6	7CM	
V5	3rd. Video IF Amp.	6AU6	6AU6	7BK	
V6	Video Detector-AGC Rectifier	6AL5	6AL5	6BT	
V7	Video Amplifier	12AU7	12AU7	9A	
V8	Sound IF Amp.	6AU6	6AU6	7BK	
V9	Ratio Detector-AF Amplifier	6T8	6T8	9E	
V10	Audio Output	6K6GT	6K6GT	7S	
V11	Sync. Separator-Sync. Amplifier	6SN7GT	6SN7GT	8BD	
V12	Vert. Oscillator	6C4	6C4	6BG	
V13	Vert. Output	6V6GT	6V6GT	7AC	
V14	Horizontal AFC-Horiz. Oscillator	6SN7GT	6SN7GT	8BD	
V15	Horiz. Output	6AV5GT	6AV5GT	6CK	
V16	Damper	6W4GT	6W4GT	4CG	
V17	HV Rectifier	1B3GT	1B3GT	3C	
V18	LV Rectifier	5U4G	5U4G	5T	

ITEM No.	RATING		MAJESTIC PART No.	AEROVOX PART No.	CENTRALAB PART No.
	CAP.	VOLT			
C48	.1	600	D-.105-36	P688-1	DF-1
C49	.1	600	D-3.105-36	P688-1	DF-1
C50	.22	400	D-3.105-33	P488-22	
C51	.047	600	D-3.105-34		
C52	.68	500	D-4.104-93	1469-00007	
C53	.47		C-4.109-14	SI47NPO	TCZ-
C54	.47		D-4.109-12	SI47	D6-4
C55	.0022	600	D-3.105-26	P688-0022	D6-2
C56	.022	400	D-3.105-17	P488-022	DF-2
C57	.25	200	D-3.100-30	P488-25	
C58	.047	400	D-3.105-19		
C59	.330	500	D-4.104-59	1469-00035	
C60	.01	600	D-3.106-1	P688-01	D6-10
C61	1200	500	D-4.105-9		
C62	560	500	D-4.104-70		
C63	.047	600	B-3.105-34		
C64	.25	200	D-3.100-30	P488-25	
C65	.39	2000	B-4.129-2		
C66	.68	2000	B-4.129-4		
C67	.047	600	D-3.105-34		
C68	.035	600	D-3.100-46		
C69	500	20000	B-4.128	HV20C	TV3-
C70	5000		B-4.115-1	BPD-005	DD-5
C71	5000		B-4.115-1	BPD-005	DD-5
C72	4.7		C-4.111-6	SI4.7NPO	TCZ-
C73	1500		D-4.108-12	SI1500	D6-15

† Some models use 5000MMF. in this application. (Par)  
 ‡ Some models use .047MFD. in this application. (Par)  
 †† Some models use .022MFD. in this application. (Par)  
 ††† Some models combine C1A, C1B and C3A in one unit.  
 †††† Some models combine C2A, C2B, C2C and C3B in one unit.  
 ††††† Some models use cardboard tubulars in this application.  
 ♦ Items C43A, C43B, C43C, R64A, R64B, R64C are

CATHODE-RAY TUBE

ITEM No.	REPLACEMENT DATA			RTMA BASE TYPE	NOTES
	MAJESTIC PART No.	SYLVANIA PART No.	THOMAS PART No.		
V19A	17AP4A	17BP4A	17BP4	12D	
B	20CP4	20CP4	20CP4	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		REPLACEMENT DATA					IDENTIFICATION CODES AND INSTALLATION NOTES	
	CAP.	VOLT	MAJESTIC PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.		SPRAGUE PART No.
C1A	40	450	5.435-3	E4D415		UPT420		TVL-3785	▲ Filter †
B	40	450						TVA-1702	■ Filter †
C	4	450							▲ Audio Output Dec. ††
D	4	450							Decoupling ††
C2A	8	450	5.435-4	AFH3-43		UPT44145		TVL-3785	▲ Decoupling ††
B	40	450							■ Decoupling ††
C	40	450							▲ Decoupling ††
C3A	100	50	5.429-2	AFH3-12		UPT205		TVL-1320	▲ Vert. Output Cathode †
B	25	50						TVA-1306	▲ Audio Output Cathode ††
C4	4	50	C-5.430-1	PRS150/4		BR550		TVA-1303	Stabilizing Cap.
C5	3-9				829-10				Variable Trimmer
C6	.5-3				829-3				Variable Trimmer
C7	120				D6-121		GP2K-121	5GA-T12	RF Amp. Dec.
C8	1000				SI1000		GP2L-102	5HK-D1	RF Amp. Fil.
C9	100				SI100		GPIK-101	5GA-T1	RF Coupling
C10	.5-3				829-3				Variable Trimmer
C11	20				TCN-20		N750K-200		Osc. Grid Cap. †
C12	10				SI10NPO	TCZ-10	NP0K-100	5TCC-Q1	Fixed Trimmer
C13	.5-3				829-3				Variable Trimmer
C14A	1000				BPD-2X001	DD-2-102	812-001	5HK-2D1	Conv. Fil.
B	1000								RF Bypass
C15	10				SI10NPO	TCZ-10	NP0K-100	5TCC-Q1	Fixed Trimmer
C16	120				SI120	D6-121	GP2K-121	5GA-T12	IF Coupling
C17	5000		B-4.115-1	BPD-005	DD-502	ID5D5	811-005	5HK-D5	RF Bypass
C18A	5000		B-4.125-1	BPD-005	DD-2-502	ID5D5	811-005	5HK-D5	RF Bypass
B	5000			BPD-005		ID5D5	811-005	5HK-D5	2nd. Video IF Dec.
C19A	5000		B-4.125-1	BPD-005	DD-2-502	ID5D5	811-005	5HK-D5	AGC Filter
B	5000			BPD-005		ID5D5	811-005	5HK-D5	1st. Video IF Dec.
C20	5000		B-4.115-1	BPD-005	DD-502	ID5D5	811-005	5HK-D5	AGC Filter
C21	.22	400	D-3.105-23	P488-22		GT4P2		4TM-P22	AGC Filter
C22A	5000		B-4.125-1	BPD-005	DD-2-502	ID5D5	811-005	5HK-D5	3rd. Video IF Dec.
B	5000			BPD-005		ID5D5	811-005	5HK-D5	3rd. Video IF Cathode
C23	5000		B-4.115-1	BPD-005	DD-502	ID5D5	811-005	5HK-D5	3rd. Video IF Fil.
C24	100		C-4.109-10	SI100	D6-101	5W5T1	GPIK-101	5GA-T1	IF Coupling
C25	3.3		C-4.111-5	SI3.3NPO	TCZ-3.3		NP0K-3R3		Video Det. Filter
C26	.047	400	D-3.105-19						Video Coupling
C27	.1	600	D-3.105-21	P688-1	DF-104	PTE6P1		6TM-P1	Video Coupling
C28	10		C-4.109-16	SI10	D6-100	5W5Q1	GPIK-100	5GA-Q1	Fixed Trimmer
C29	39	500	D-4.104-21	1468-00004	D6-390	5W5Q4	GPIK-390	1FM-44	Sound IF Coupling
C30	.01	600	D-3.105-21	P688-01	D6-103	PTE6S1	GP2-333-103	6TM-S1	Sound IF Plate †
C31A	5000		B-4.125-1	BPD-005	DD-2-502	ID5D5	811-005	5HK-D5	Sound IF Screen
B	5000			BPD-005		ID5D5	811-005	5HK-D5	Sound IF Cathode
C32	1500		D-4.108-12	SI1500	D6-152	1W5D15	GP2L-152	5HK-D15	RF Bypass
C33	1500		D-4.108-12	SI1500	D6-152	1W5D15	GP2L-152	5HK-D15	De-emphasis
C34	.01	600	D-3.106-1	P688-01	D6-103	PTE6S1	GP2-333-103	6TM-S1	Audio Coupling †
C35	.01	600	D-3.106-1	P688-01	D6-103	PTE6S1	GP2-333-103	6TM-S1	Audio Coupling †
C36	.680		C-4.109-5	SI680	D6-681	1W5T7	GP2K-681	5GA-T68	AF Amp. Grid
C37	.01	600	D-3.106-1	P688-01	D6-103	PTE6S1	GP2-333-103	6TM-S1	Audio Coupling ††
C38	.0047	600	B-4.115-1	P688-0047	D6-472	PTE6D5	GP2-333-472	6TM-D47	Audio Output Plate
C39	.22	400	D-3.105-23	P488-22		GT4P2		4TM-P22	Sync. Coupling
C40	220		C-4.109-11	SI220	D6-221	5W5T25	GP2K-221	5GA-T22	Sync. Sep. Cathode
C41	.0022	600	D-3.105-26	P688-0022	D6-222	PTE6D2	GP2-333-222	6TM-D22	Sync. Sep. Grid
C42	.022	400	D-3.105-17	P488-022	DF-203	PTE4S2		4TM-S22	Sync. Amp. Cathode
C43A	.002		†10.101	P688-002		PTE6D2	GP2-333-202	†10IC1	Vert. Integrator Net.
B	.005			P688-005	†PC-100	PTE6D5	GP2-333-502	†10IC1	Vert. Integrator Net.
C	.005			P688-005		PTE6D5	GP2-333-502	†10IC1	Vert. Integrator Net.
C44	4700	500	D-4.105-24	1464-005		IDR5D4		MS-25	Vert. Osc. Grid Cap.
C45	.047	600	D-3.105-34						Vert. Discharge
C46	.1	600	D-3.105-36	P688-1	DF-104	PTE6P1		6TM-P1	Vert. Sweep Coupling
C47	.25	600	D-3.100-32	684-25		GP6P25		6TM-P25	Vert. Output Plate

ITEM No.	RATING		REPLACEMENT DATA		
	RESISTANCE	WATTS	MAJESTIC PART No.	IRC PART No.	CLAR PART No.
R1A	1500Ω	1/2	C-8.230-1	Concentrikit	RTV-2
B	1Meg			B11-109 †	
C	Shaft end			B13-137 †	
D	Switch			E-187 †	
R2	2250Ω	4	C-8.221	PQ13-137	RTV-9
R3A	1Meg		C-8.229-8	Not req.	AG-63
B	Shaft		Not req.	Not req.	RS-2
R4	5000Ω	2	C-8.206-6	Not req.	43-500
R5A	100KΩ	1/2	D-8.229-9	PQ11-128	AG-49
B	Shaft		Not req.	Not req.	RS-2
R6A	2.5Meg	1/2	C-8.219-5	Q11-239	AG-84
B	Shaft		Not req.	Not req.	RS-2
R7A	50KΩ	1/2	C-8.229-7	PQ13-123	AG-46
B	Shaft		Not req.	Not req.	RS-2

† Additional parts to be used with Concentrikit.

ITEM No.	RATING		REPLACEMENT DATA	
	RESISTANCE	WATTS	MAJESTIC PART No.	IRC PART No.
R8	3900Ω	1/2		BTS-3900
R9	47KΩ	20%		BTS-47K
R10	10KΩ	20%		BTS-10K
R11	2200Ω			BTS-2200
R12	4700Ω			BTS-4700
R13	220KΩ			BTS-220K
R14	15KΩ			BTS-15K
R15	10KΩ			BTS-10K
R16	4700Ω			BTS-4700
R17	4700Ω			BTS-4700
R18	47Ω	20%	D-7.101-44	
R19	100Ω		D-7.101-240	
R20	330Ω	20%	D-7.101-226	BTS-100
R21	8200Ω	20%	D-7.101-237	BTS-330
R22	47Ω	20%	D-7.101-55	BTS-8200
R23	100Ω		D-7.101-240	
R24	10KΩ		D-7.101-226	BTS-100
R25	150Ω		D-7.101-204	BTS-150
R26	100Ω		D-7.101-226	BTS-100
R27	820KΩ		D-7.101-138	BTS-820K
R28	68KΩ		D-7.101-93	BTS-68K
R29	12KΩ		D-7.101-62	BTS-12K
R30	4700Ω		D-7.101-44	BTS-4700
R31	100Ω		D-7.101-226	BTS-100
R32	8200Ω		D-7.101-55	BTS-8200
R33	3300Ω		D-7.101-37	BTS-3300



# DESCRIPTIONS

(CONT.)

IDENTIFICATION CODES AND INSTALLATION NOTES			
LAB No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.
	PTE6P1 PTE6P1 GT4P2		6TM-P1 6TM-P1 4TM-P22
	5R5Q7		MS-47
	5W5Q5	NP0L-470	5TCC-Q47
	PTE6D2	GPIK-470	5GA-Q47
	PTE4S2	GP2-333-222	6TM-D22
	GT2P25		4TM-S22
			2TM-P25
	PTE6S1	GP2-333-103	6TM-S1
	GT2P25		2TM-P25
	ID5D5	811-005	5HK-D5
	ID5D5	811-005	5HK-D5
	IW5D15	NPOK-4R7	5HK-D15
		GP2L-152	5HK-D15

# B-4.115-1)  
# D-3.105-19)  
# D-3.105-17)  
Part # 5.435-1)  
unit. (Part # 5.435-2)  
1. (Part # 5.418)  
combined in one unit.

## CONTROLS

STAT No.	CENTRALAB PART No.	INSTALLATION NOTES
		Contrast Control - Panel Volume Control and Switch - Rear Attach per instructions in Concentrikit. Attach per instructions in Concentrikit. Focus Control - Wire Wound Vertical Hold Control Vertical Linear Control - Wire Wound Brightness Control Attach to R5A per instructions Vertical Size Control Attach to R5A per instructions Horiz. Hold Control Attach to R7A per instructions
	B-70 Not req.	Vertical Hold Control Attach to R3A per instructions
	B-40 Not req. AN-83 Not req. B-32 Not req.	Vertical Linear Control - Wire Wound Brightness Control Attach to R5A per instructions Vertical Size Control Attach to R5A per instructions Horiz. Hold Control Attach to R7A per instructions

## RESISTORS

IDENTIFICATION CODES	
ALL RESISTORS ± 10% UNLESS OTHERWISE SPECIFIED	
Antenna Coil Shunt AGC Network RF Coil Shunt RF Amp. Decoupling Mixer Grid Mixer Grid Mixer Plate Osc. Grid Osc. Plate 1st. Video IF Amp. Grid 1st. Video IF Amp. Cathode 1st. Video IF Amp. Decoupling AGC Network 2nd. Video IF Transformer Shunt 2nd. Video IF Amp. Cathode Decoupling 3rd. Video IF Amp. Grid 3rd. Video IF Amp. Cathode Decoupling AGC Network AGC Rectifier Diode Load Peaking Coil Shunt Video Detector Diode Load Video Detector Cathode Peaking Coil Shunt Video Amp. Plate Voltage Divider Video Amp. Plate Decoupling Video Amp. Grid Peaking Coil Shunt Video Amp. Plate Video Amp. Plate Picture Tube Cathode Acc. Anode Load Voltage Divider Sound IF Amp. Grid Sound IF Amp. Cathode Sound IF Amp. Screen Sound IF Amp. Plate Decoupling Voltage Divider Ratio Detector Diode Load Balancing	

## RESISTORS (CONT.)

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	MAJESTIC PART No.	IRC PART No.	
R50	15KΩ	20%	D-7.101-66	BTS-15K	De-emphasis
R51	10Meg	20%	D-7.101-192	BTS-10Meg	AF Amp. Grid
R52	470KΩ	20%	D-7.101-129	BTS-470K	AF Amp. Plate
R53	470KΩ		D-7.101-129	BTS-470K	Output Grid
R54	560Ω		D-7.102-13	BTA-560	Output Cathode
R55	470Ω		D-7.102-10	BTA-470	Output Decoupling
R56	3300Ω		C-7.101-38	BTS-3300	Isolation
R57	2750Ω	10	B-6.211-4		Decoupling
R58	56KΩ		D-7.101-90	BTS-56K	Sync. Separator Grid
R59	220KΩ		D-7.101-114	BTS-220K	Sync. Separator Cathode
R60	1.5Meg		D-7.101-148	BTS-1.5Meg	Sync. Separator Plate
R61	5600Ω		D-7.101-48	BTS-5600	Sync. Amp. Cathode
R62	1800Ω	20%	D-7.101-27	BTS-1800	Sync. Amp. Plate
R63	3300Ω	20%	D-7.101-38	BTS-3300	Sync. Amp. Plate
R64A	22KΩ			BTS-22K	Integrator Network
B	8200 Ω		10.101 *	BTS-8200	Integrator Network
C	8200 Ω			BTS-8200	Integrator Network
				BTS-8200	Integrator Network
R65	1.5Meg		D-7.101-148	BTS-1.5Meg	Vertical Osc. Grid
R66	220KΩ		D-7.101-115	BTS-220K	Vertical Osc. Grid - See Note 1
R67	470KΩ	20%	D-7.101-129	BTS-470K	Vertical Osc. Plate
R68	8200Ω		D-7.101-55	BTS-8200	Vertical Peaking
R69	6.8Meg	20%	D-7.101-185	BTS-6.8Meg	Vertical Output Grid
R70	220Ω	20%	D-7.101-234	BTS-220	Vertical Output Cathode
R71	47KΩ	20%	D-7.102-94	BTA-47K	Vertical Output Screen
R72	10KΩ		D-7.101-59	BTS-10K	Voltage Divider
R73	1000Ω		D-7.102-24	BTA-1000	Decoupling
R74	3.3Meg		D-7.101-171	BTS-3.3Meg	Horiz. Feedback
R75	47KΩ		D-7.102-94	BTA-47K	AFC Plate
R76	100KΩ		D-7.102-108	BTA-100K	Voltage Divider - See Note 2
R77	820KΩ		D-7.101-138	BTS-820K	AFC Filter
R78	8200Ω		D-7.101-55	BTS-8200	AFC Filter
R79	150KΩ		D-7.101-107	BTS-150K	AFC Filter
R80	100KΩ		D-7.101-99	BTS-100K	Horiz. Osc. Grid
R81	8200Ω		D-7.101-55	BTS-8200	Horiz. Osc. Coil Shunt
R82	180KΩ		D-7.101-111	BTS-180K	Voltage Divider
R83	47KΩ	20%	D-7.102-94	BTA-47K	Horiz. Osc. Plate
R84	470KΩ		D-7.101-129	BTS-470K	Horiz. Feedback
R85	82Ω				Parasitic Suppressor - See Note 3
R86	1Meg		D-7.101-142	BTS-1Meg	Horiz. Output Grid
R87	5600Ω	2	D-7.103-118	BTB-5600	Horiz. Output Screen - See Note 2
R88	3.3Ω		C-6.212-1		HV Filament - Wire Wound
R89	470KΩ	1	D-7.102-137		HV Filter
R90	1800Ω	2	D-7.103-97	BTB-1800	Focus Coil Shunt
R91	470Ω	10	C-6.215-5		Focus Coil Shunt
R92	100KΩ		D-7.101-100	BTS-100K	Line Isolation
R93	100Ω		D-7.101-226	BTS-100	Decoupling

\* Items R64A, R64B, R64C, C43A, C43B, C43C, are combined in one unit.  
Note 1 Not used in all models.  
Note 2 Some models use resistors in parallel to obtain desired value.  
Note 3 Some models use 100Ω resistor in this application.

## TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC ① 1.6A	600VCT .220ADC	5VAC ① 3A	6.3VAC ① 1.8A 6.3VAC ① 6A	D-9252	P6315① & P5014②	P-3070	

① Add series resistor to reduce plate voltage if necessary.  
② Mount beneath chassis where space permits.

## TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	DC RESISTANCE		MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
T2	160Ω	1.3KΩ	C-9.230-4				Vert. Block Osc. Trans. Horiz. Output Trans.
T3	495Ω	22Ω	C-9.253-1-2				
	Tap 42Ω	Tap 17Ω					
T4	700Ω	7.5Ω	C-9.228-5	A-8112	A-3036	TSO-5 ③	Vert. Output Trans. Horiz. Deflection Coils Vert. Deflection Coils Focus Coil
T5A	18Ω		C-9.254-3	DY-8	MDF-70		
B	64Ω						
T6	370Ω		C-9234-4	FC-10	MF-3		

③ Drill one new mounting hole.

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T7	7.8KΩ	4.1Ω	450Ω	.7Ω	C-9225-3C	A-3020 ③	RO-16 ③	RO-16 ③	③ Drill one new mounting hole.



# PARTS LIST AND DESCRIPTIONS (Continued)

## SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
			MAJESTIC PART No.	VIKING PART No.	QUAM PART No.	
	FIELD RES.	V. C. IMP.				
SP1A B	PM	3-4Ω	E30.326 ④	5J4	5A1	④ Used in table models. ⑤ Used in console models.
	PM	3-4Ω	C30.328 ⑤	10J12	10A4A	
SP2A B	CONE DIA.	V. C. DIA.				
	5" 10"	9/16" 1"				

## FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 $\mu$ )	MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.200A	64Ω	3.2Henries	C-9.237-3	C-2325 ③	C-2974 ③	TR4200 ③	③ Drill one new mounting hole.

## COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	MAJESTIC PART No.		
L2	Ant. Coil	0Ω	0Ω	B-36.141-2		Channel # 2 } Part of Tuner Part # D-36.137-2
L3	Fil. Choke	0Ω				
L4	RF, Mixer Grid & Osc. Coils	0Ω		B-36.141-102		Channel # 2
L5	Fil. Choke	0Ω				
L6	1st. Video IF	.9Ω				
L7	2nd. Video IF	.4Ω	.4Ω	C-1.476		
L8	3rd. Video IF	.4Ω	.4Ω	C-1.476		
L9	4th. Video IF	.4Ω	.4Ω	C-1.476		
L10	Peaking	8Ω		C-1.522-3		Blue Dot
L11	Peaking	6.8Ω		C-1.522-4		Yellow Dot
L12	Peaking	6.8Ω		C-1.522-4		Yellow Dot
L13	Peaking	6.8Ω		C-1.522-4		Yellow Dot
L14	Peaking	6.8Ω		C-1.522-4		Yellow Dot
L15	Sound IF	3.5Ω		C-1.529-2		Tap 2.2Ω
L16	Ratio Det. Trans.	4Ω	1.2Ω	C-1.528-1		Tap 1.2Ω
L17	Horiz. Osc.	130Ω	36Ω	B-1.549		
L18	Horiz. Size	31Ω		B-1.553-1		
L19	Horiz. Lin.	21Ω		B-1.531		

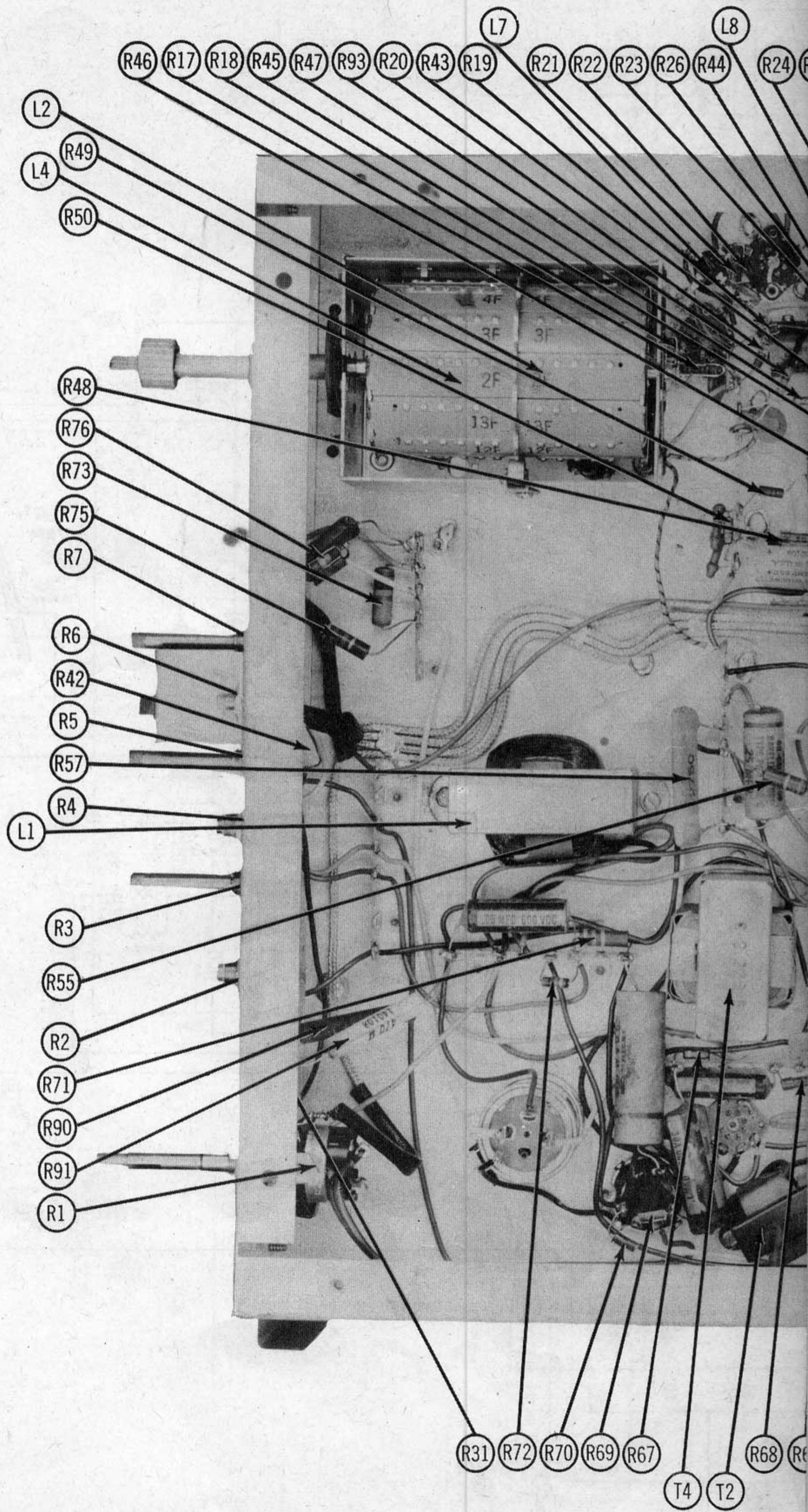
## FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				REMARKS
			MAJESTIC PART No.		LITTELFUSE PART No.		
			FUSE	HOLDER	FUSE	HOLDER	
M1	3AG	3A		B-36.131	312003	341001	
M2	3AG Pigtail	.250A			318.250		

## MISCELLANEOUS

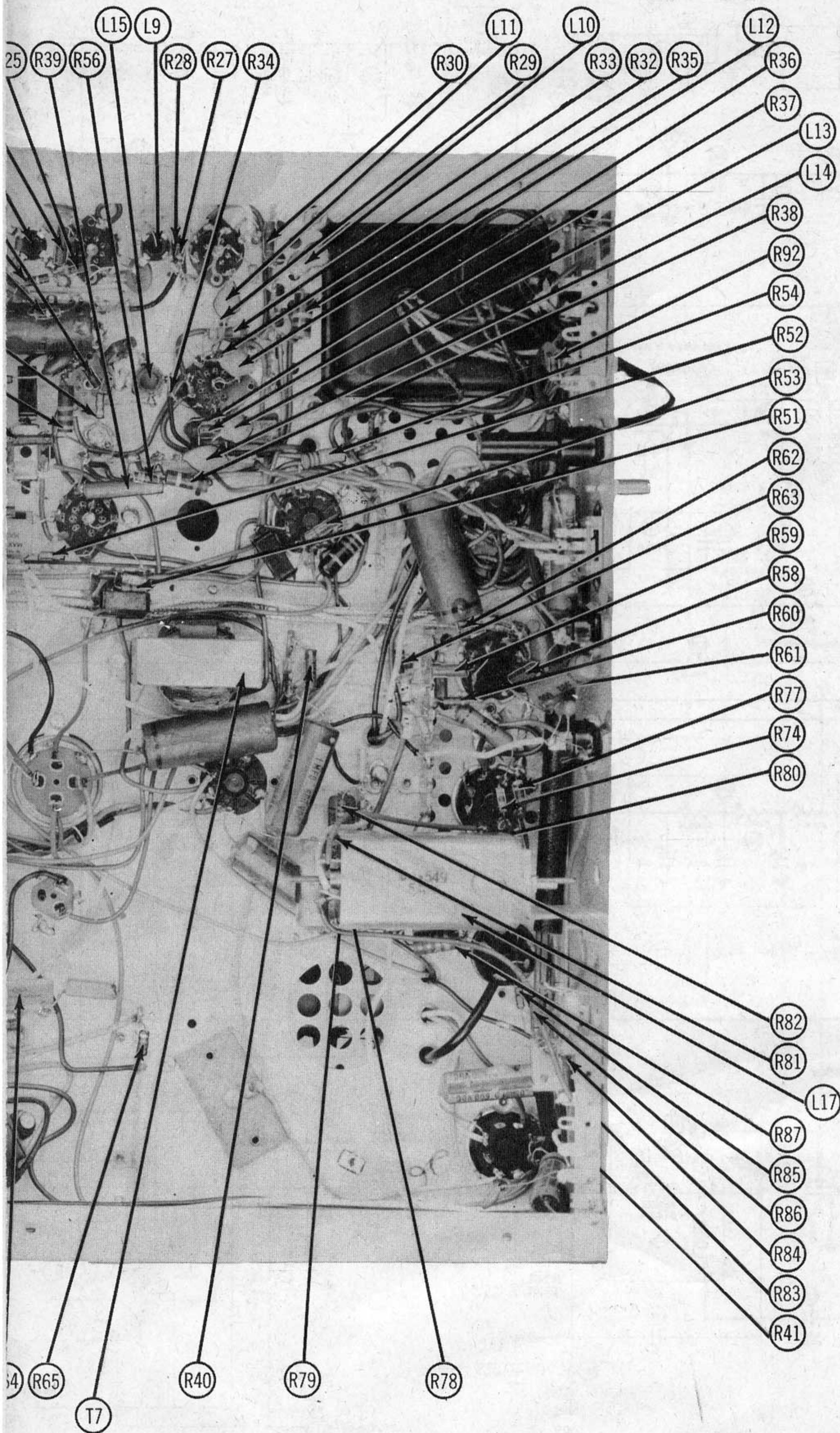
ITEM No.	PART NAME	MAJESTIC PART No.	NOTES
M3A	RF Tuner	D-36.137-2	Alternate Color TV-Phono
B	RF Tuner	E-36.143	
M4	Switch		
M5	Switch		
M6	Ion Trap		
B3	Trimmer	B-4.119-2	40-370MMF. (Horiz. Drive)
Ant. Coil		B-36.141-3	Channel # 3
		B-36.141-4	Channel # 4
		B-36.141-5	Channel # 5
		B-36.141-6	Channel # 6
		B-36.141-7	Channel # 7
		B-36.141-8	Channel # 8
		B-36.141-9	Channel # 9
		B-36.141-10	Channel # 10
		B-36.141-11	Channel # 11
		B-36.141-12	Channel # 12
		B-36.141-13	Channel # 13
		B-36.141-103	Channel # 3
		B-36.141-104	Channel # 4
B-36.141-105	Channel # 5		
B-36.141-106	Channel # 6		
B-36.141-107	Channel # 7		
B-36.141-108	Channel # 8		
B-36.141-109	Channel # 9		
B-36.141-110	Channel # 10		
B-36.141-111			
B-36.141-112			
B-36.141-113			
RF, Mixer Grid & Oscillator Coil		B-36.141-103	Channel # 3
		B-36.141-104	Channel # 4
		B-36.141-105	Channel # 5
		B-36.141-106	Channel # 6
		B-36.141-107	Channel # 7
		B-36.141-108	Channel # 8
		B-36.141-109	Channel # 9
		B-36.141-110	Channel # 10
		B-36.141-111	
		B-36.141-112	
		B-36.141-113	





CHASSIS BOTTOM VIEW-RESISTO





## R AND INDUCTOR IDENTIFICATION