

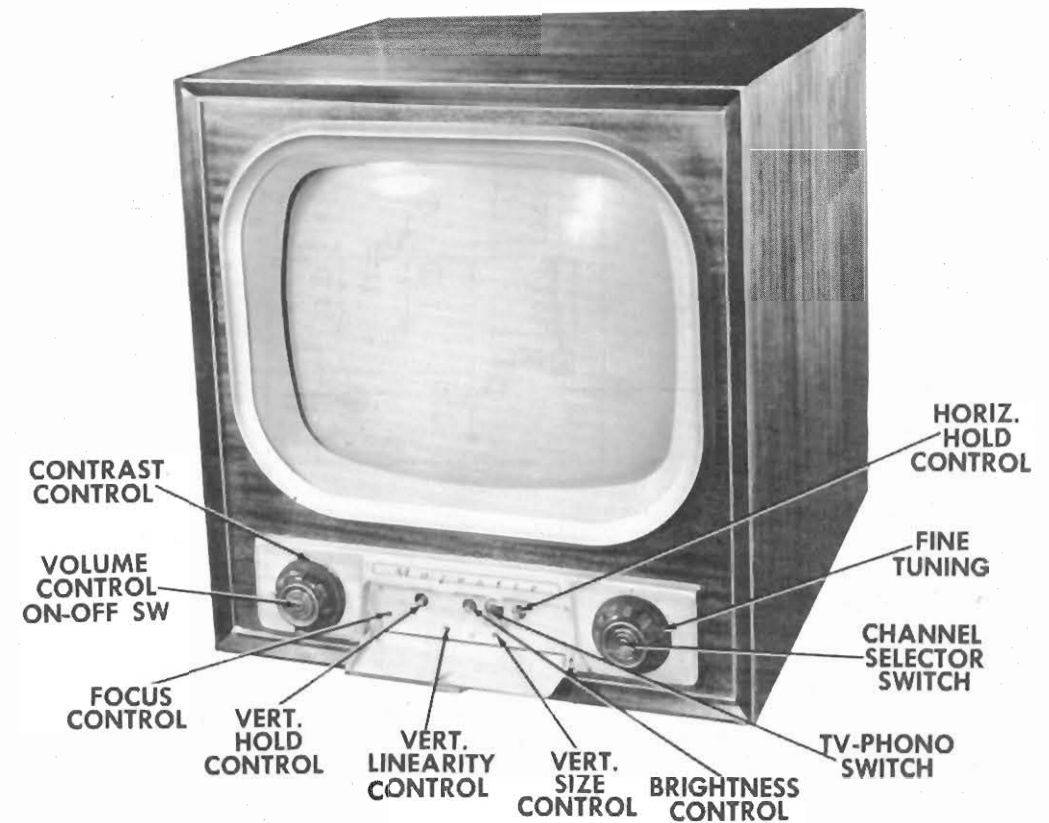
## RESISTOR AND INDUCTOR IDENTIFICATION

PHOTOFACT\* Folder



MAJESTIC MODELS

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



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 106)
MANUFACTURER	Majestic Radio & Television Div. of Wilcox-Gay Corp., 70 Washington St.,	ROCKY HILL, 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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HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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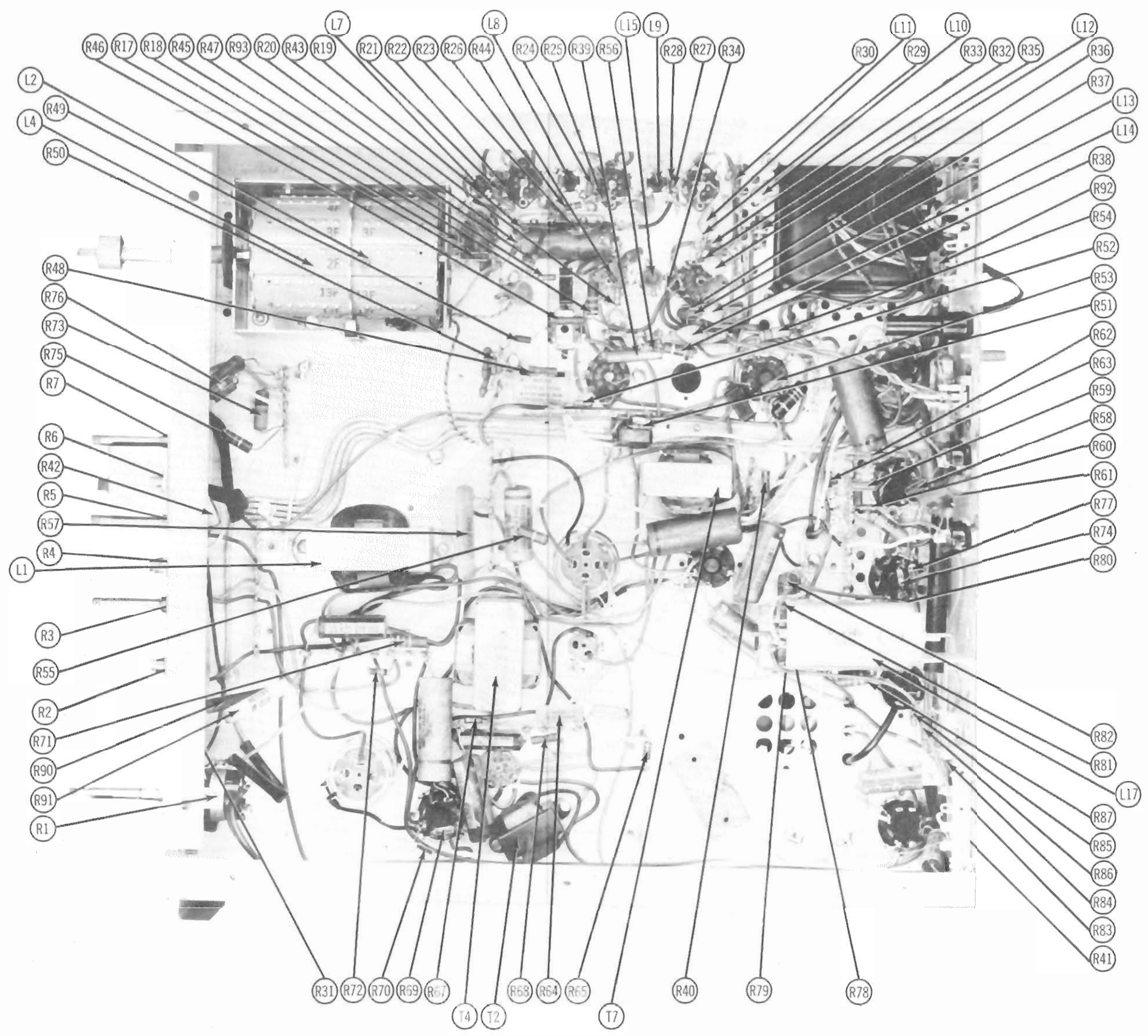
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SET 153

FOLDER 8

MAJESTIC MODELS

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



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

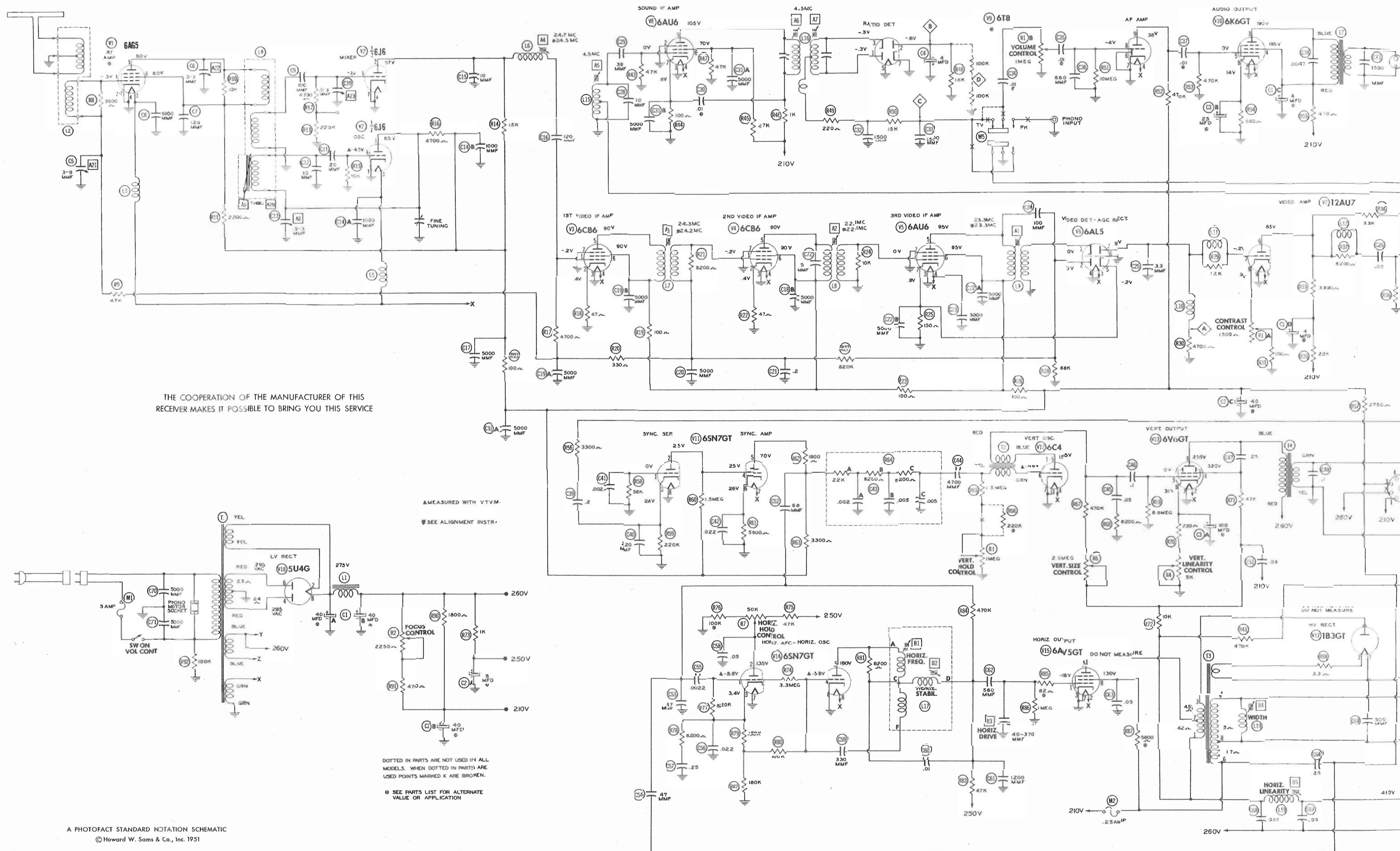
CONTRA  
CONTRC  
  
VOLUM  
CONTRC  
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CONT

TRADE NAME	Maje
	718,
MANUFACTURER	Maje
TYPE SET	Tele
TUBES	Ninet
POWER SUPPLY	110-12
RATING	1.6 A
TUNING RANGE	CHAI

Alignment Instructi
Disassembly Instru
Horizontal Sweep C
Parts List and Des
Photographs
Cabinet - Rear V
Capacitor and Al
Chassis - Top V

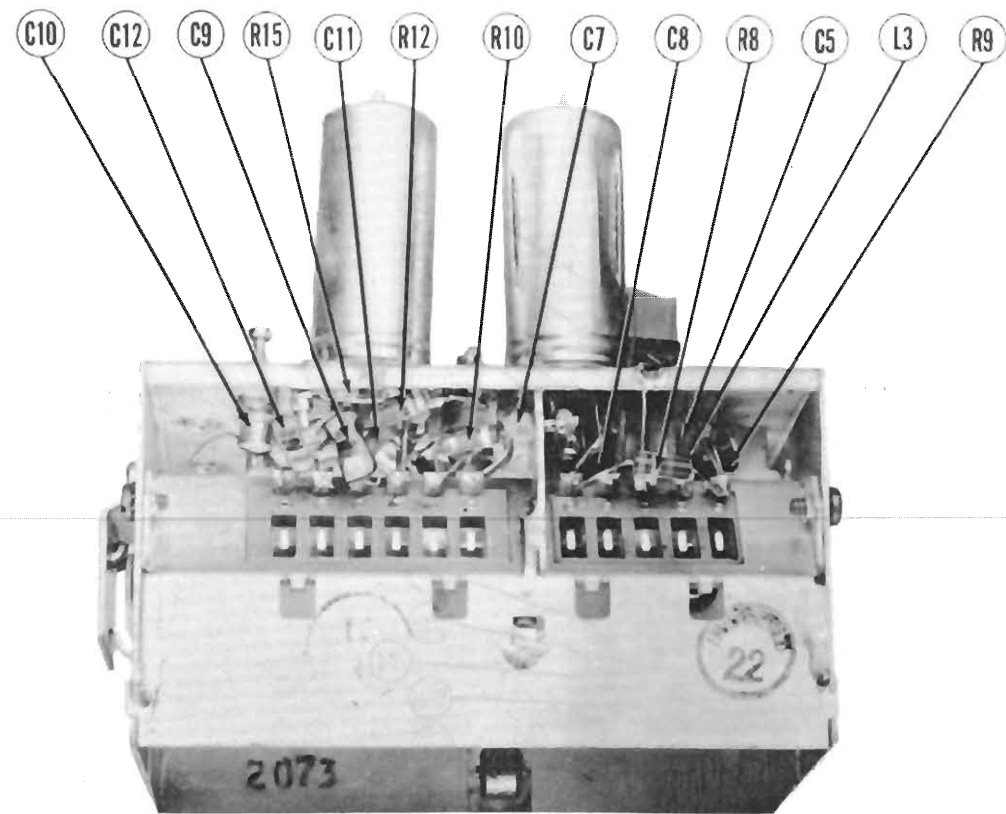
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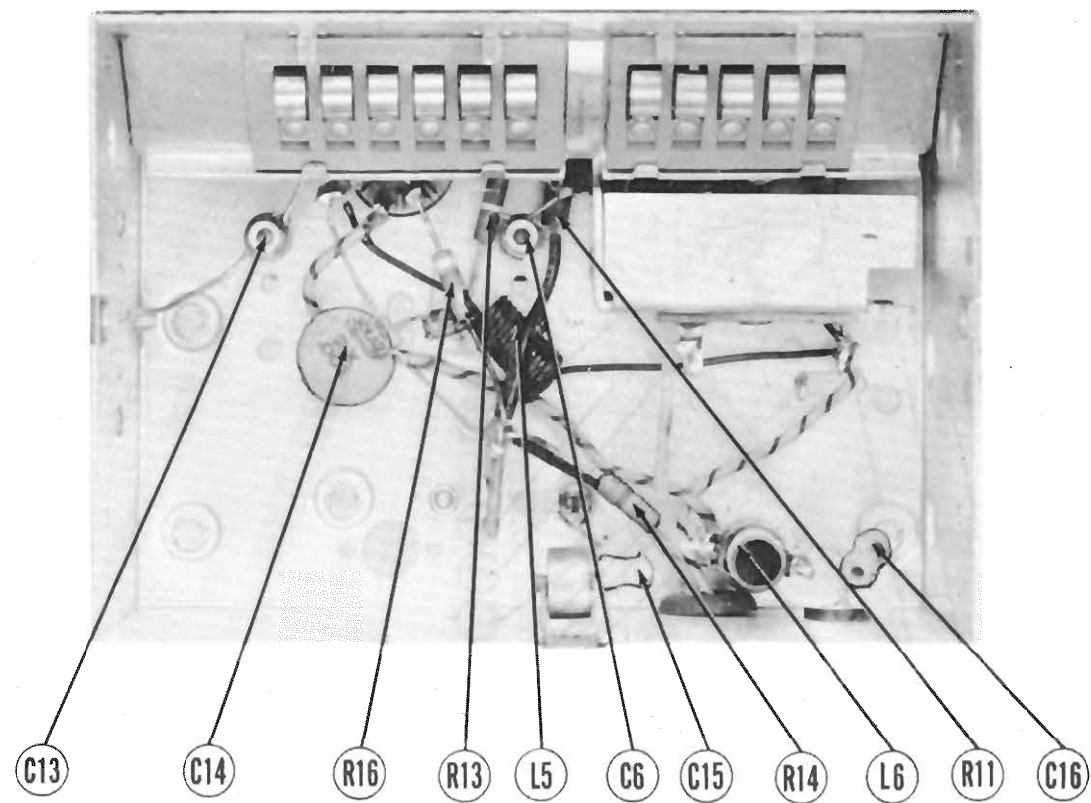




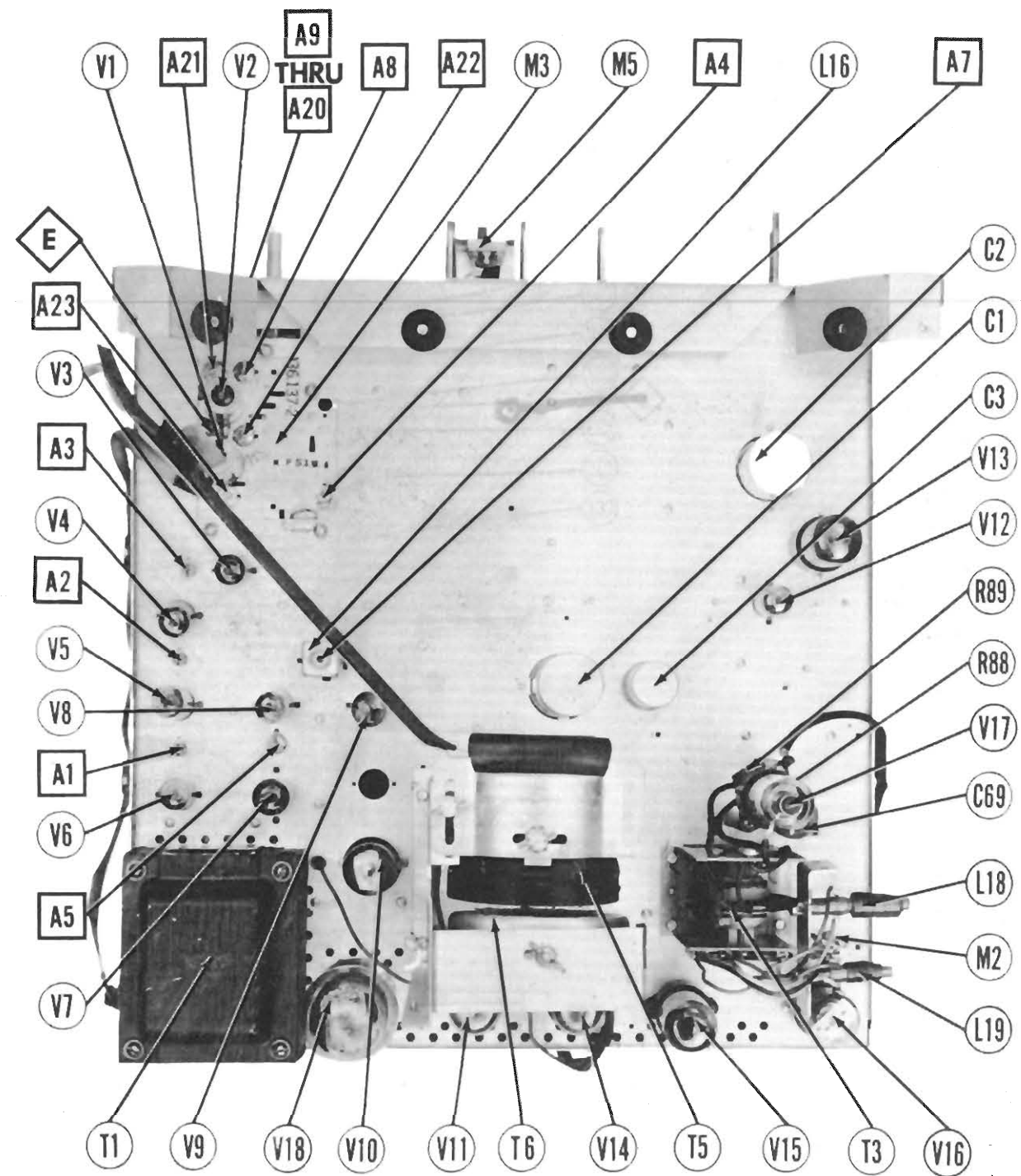




RF TUNER-RIGHT SIDE

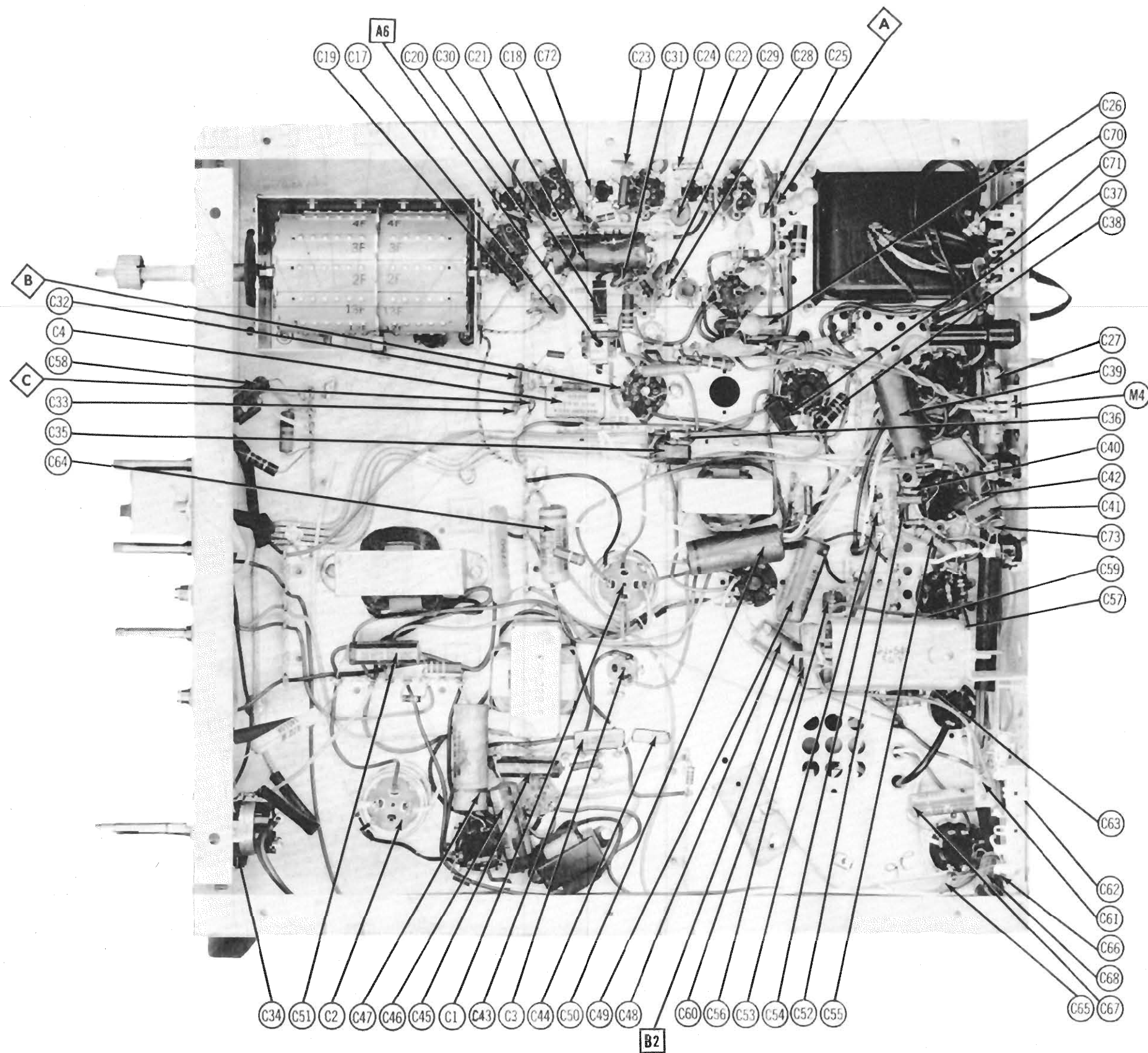


RF TUNER-BOTTOM VIEW



CHASSIS TOP VIEW

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



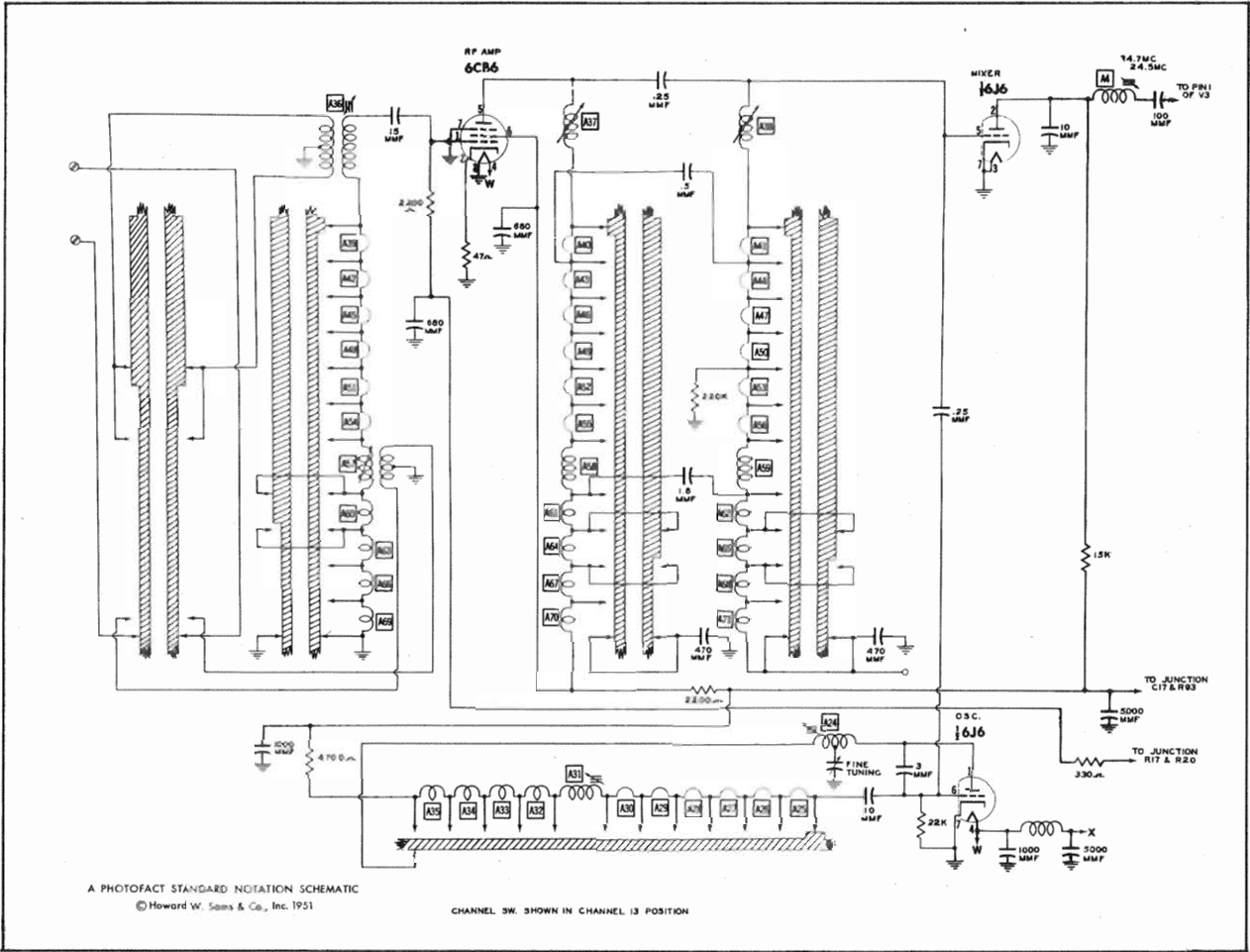
CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION



RESISTANCE MEASUREMENTS

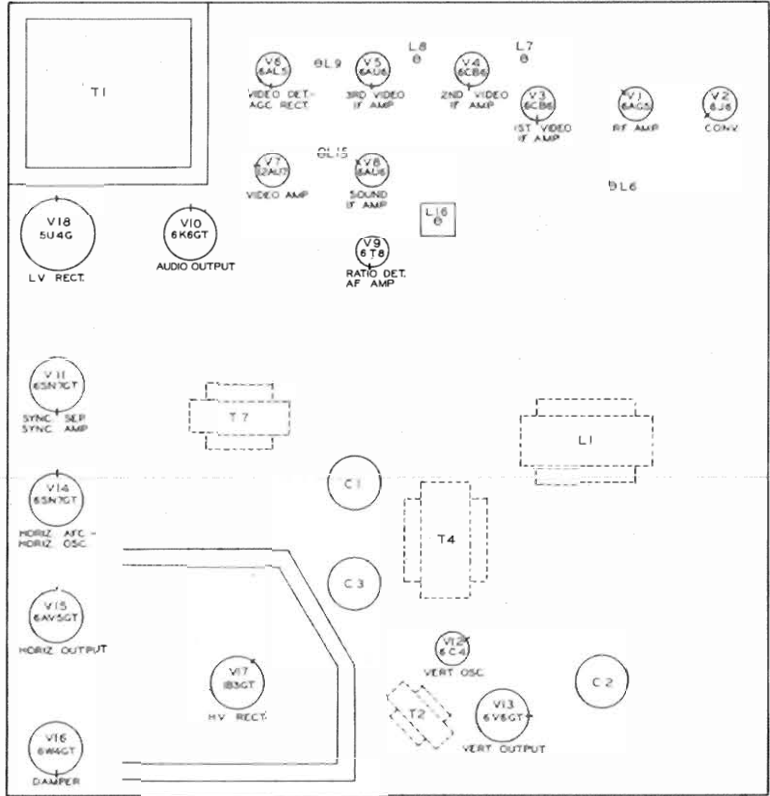
RESISTANCE READINGS									
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6AG5	935KΩ	0Ω	.1Ω	0Ω	†5KΩ	†5KΩ	0Ω	
V 2	6J6	†9KΩ	†19KΩ	.1Ω	0Ω	225KΩ	10KΩ	0Ω	
V 3	6CB6	890KΩ	47Ω	0Ω	.1Ω	†3.4KΩ	†3.4KΩ	0Ω	
V 4	6CB6	890KΩ	47Ω	0Ω	.1Ω	†3.3KΩ	†3.3KΩ	0Ω	
V 5	6AU6	.4Ω	0Ω	0Ω	.1Ω	†3.2KΩ	†3.2KΩ	150Ω	
V 6	6AL5	.4Ω	68KΩ	.1Ω	0Ω	150Ω	0Ω	4.7KΩ	
V 7	12AU7	†5.4KΩ	1Meg	1.3Ω	.1Ω	.1Ω	†16KΩ	4.7KΩ	125Ω
V 8	6AU6	47KΩ	0Ω	0Ω	.1Ω	†1.3KΩ	†28KΩ	100Ω	
V 9	6T8	Inf.	18KΩ	Inf.	.1Ω	0Ω	0Ω	0Ω	10Meg
V 10	6K6GT	Inf.	0Ω	†1.1KΩ	†600Ω	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	5.8Meg	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	.3Ω
V 17	1B3GT	PINS 1-8 HAVE INF. RESISTANCE							Top Cap
V 18	5U4G	Inf.	36KΩ	Inf.	24Ω	†64Ω	23Ω	†64Ω	36KΩ
V 19	17AP4A	0Ω	†5.4KΩ	†470KΩ	†500KΩ	.2Ω			

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

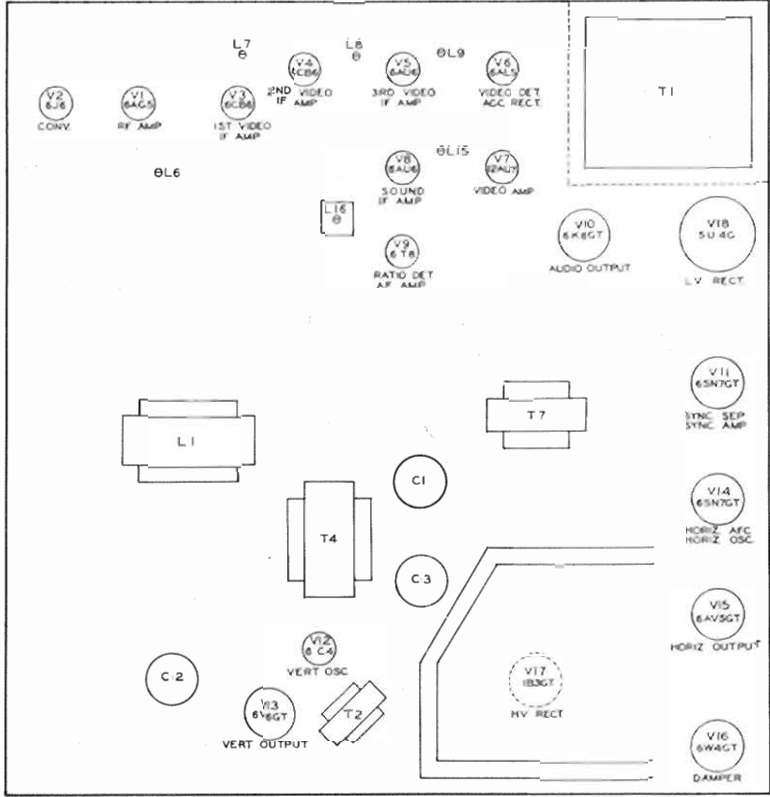


ALTERNATE TUNER SCHEMATIC

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



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 B.	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)	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	

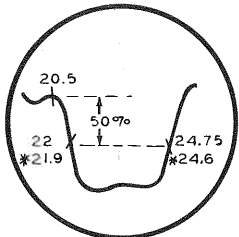


FIG. 1

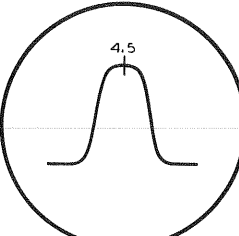


FIG. 2

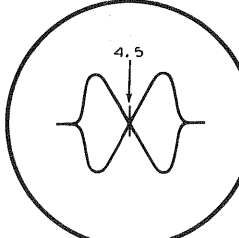


FIG. 3

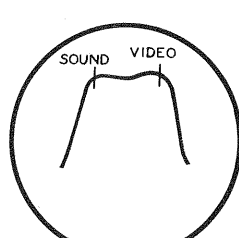


FIG. 4

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 terminals with 120Ω in each lead.	207MC (10MC SWP)	205.25MC 209.75MC	12	Vert. Amp. thru 10KΩ to Point A. 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 terminals 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	
13. "	"	85MC (10MC SWP)	83.25MC 87.75MC	6		A31	Adjust for zero beat of markers on response curve.
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 terminals with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 215.75MC	13	Vert. Amp. thru 10KΩ to Point A. Low side to chassis.	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, A41	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		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	
17. "	"	85MC (10MC SWP)	83.25MC 87.75MC	6	"	A57, A58, A59	Expand or compress coil turns for response curve similar to figure 4. CAUTION: Adjust only heavy-wire secondary winding of A57.
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	



# PARTS LIST AND DESCRIPTIONS (Continued)

## SPEAKER

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

## FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (10 CURRENT 1000 μ)	MAJESTIC PART No.	STANCOR PART No.	MERIT 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)

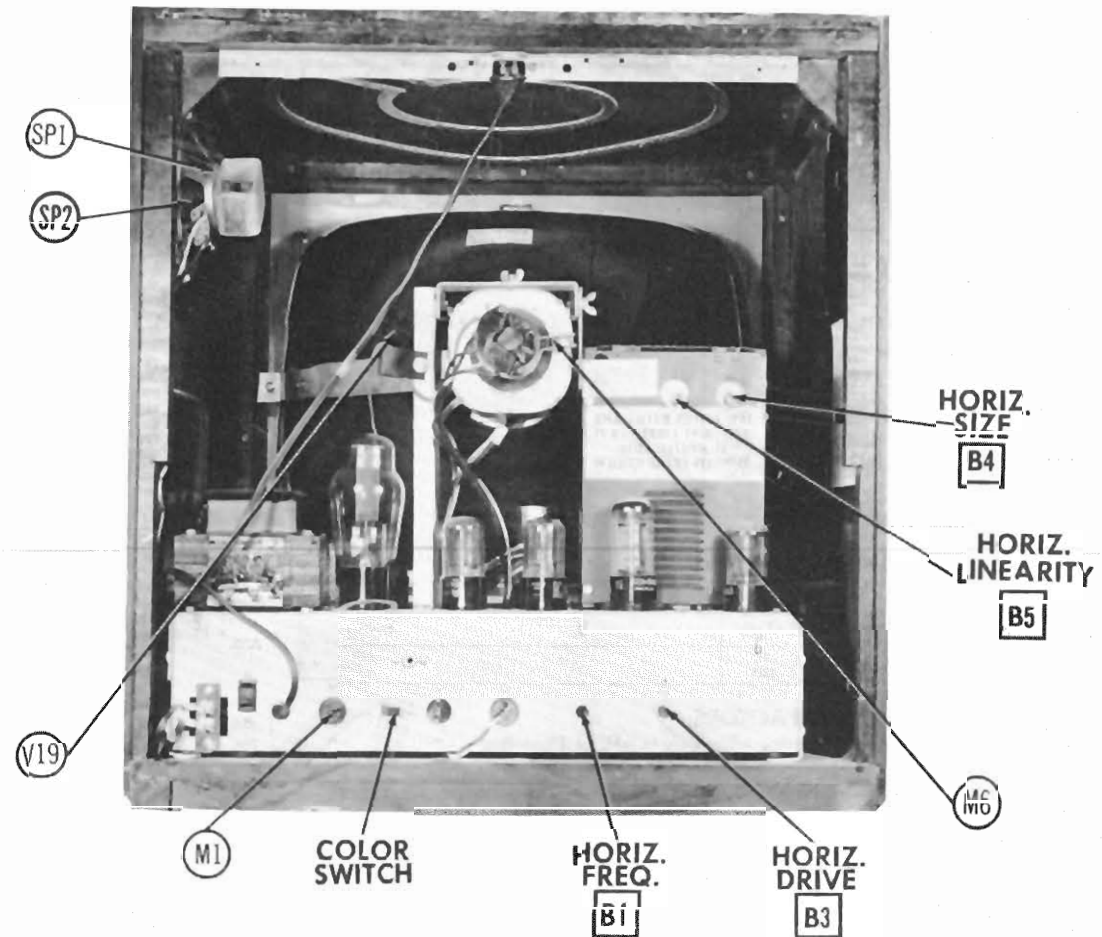
ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	MAJESTIC PART No.		
L2	Ant. Coil	0Ω	0Ω	B-36.141-2		Channel # 2 Part of Tuner Part # D-36.137-2
L3	Flt. Choke	0Ω				
L4	RF. Mixer Grid & Osc. Coils	0Ω		B-36.141-102		Channel # 2
L5	Flt. Choke	0Ω				
L6	1st. Video IF	.9Ω				
L7	2nd. Video IF	.4Ω	.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		
L11	Peaking	6.8Ω		C-1.522-4		
L12	Peaking	6.8Ω		C-1.522-4		
L13	Peaking	6.8Ω		C-1.522-4		
L14	Peaking	6.8Ω		C-1.522-4		
L15	Sound IF	3.5Ω		C-1.529-2		
L16	Ratio Det.					
L17	Trans.	4Ω	1.2Ω	C-1.528-1		Blue Dot Yellow Dot Yellow Dot Yellow Dot Yellow Dot Tap 2.2Ω
L18	Horiz. Osc.	130Ω	36Ω	B-1.549		
L19	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 B	1RF Tuner	D-36.137-2	
M4	1RF Tuner	E-36.143	
M5	Switch		Alternate Color
M6	Switch		TV-Phono
M6 B3	Ion Trip Trimmer		
		B-4.119-2	40-370MM1. (Horiz. Drive)
		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	Channel # 11
		B-36.141-112	Channel # 12
		B-36.141-113	Channel # 13



## 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 10KΩ 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.

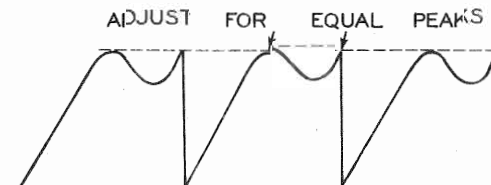


FIG. 5

## 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 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.

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

## PARTS LIST AND DESCRIPTIONS

## TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA			NOTES
		MAJESTIC PART No.	STANDARD REPLACEMENT	RMA BASE TYPE	
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	

## CATHODE-RAY TUBE

ITEM No.	REPLACEMENT DATA			RTMA BASE TYPE	NOTES
	MAJESTIC PART No.	SYLVANIA PART No.	THOMAS PART No.		
V19A	17AP4A	17BP4A	17BP4A	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.	CORNEILL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	40	450	5.435-3	E4D415				TVL-3785
B	40	450						TVA-1702
C	4	450						
D	4	450						
C2A	8	450	5.435-4	AFH3-43				TVL-3785
B	40	450						
C	40	450						
C3A	100	50	5.429-2	AFH3-12				TVL-1320
B	25	50						TVA-1306
C	4	50	C-5.430-1	PR5150/4				TVA-1303
C4	3-9				829-10			
C5	5-3				829-3			
C6	120				D6-121			
C7	1000				D6-102			
C8	100				D6-101			
C9	100				829-3			
C10	5-3				TCN-20			
C11	20				TCZ-10			
C12	10				829-3			
C13	5-3				829-3			
C14A	1000				BPD-2X001			
B	1000				DD-2-102			
C15	10				TCZ-10			
C16	120				SI020			
C17	5000		B-4.115-1	BPD-005	DD-502			
C18A	5000		B-4.125-1	BPD-005	DD-2-502			
B	5000				DD-2-502			
C19A	5000		B-4.125-1	BPD-005	DD-2-502			
B	5000				DD-2-502			
C20	5000		B-4.115-1	BPD-005	DD-502			
C21	22	400	D-3.105-23	P488-22	DD-502			
C22A	5000		B-4.125-1	BPD-005	DD-2-502			
B	5000				DD-2-502			
C23	5000		B-4.115-1	BPD-005	DD-502			
C24	100		C-4.109-10	SI000	D6-101			
C25	3-3		C-4.111-5	SI3.3NP0	TCZ-3.3			
C26	.047	400	D-3.105-19	P688-1	DF-104			
C27	1	600	D-3.105-21	SW5G1	DF-104			
C28	10		C-4.109-10	SI0	D6-100			
C29	39	500	D-4.104-21	1468-00004	D6-390			
C30	.01	600	D-3.105-21	P688-01	D6-103			
C31A	5000		B-4.125-1	BPD-005	DD-2-502			
B	5000				DD-2-502			
C32	1500		D-4.108-12	SI0500	D6-152			
C33	1500		D-4.108-12	SI0500	D6-152			
C34	.01	600	D-3.106-1	P688-01	D6-103			
C35	.01	600	D-3.106-1	P688-01	D6-103			
C36	.080		C-4.109-5	SI680	D6-81			
C37	.01	600	D-3.106-1	P688-01	D6-103			
C38	.0047	400	B-4.115-1	P688-047	D6-472			
C39	22	400	D-3.105-23	P488-22	DD-502			
C40	220		D-3.109-11	SI220	D6-221			
C41	.0022	600	D-3.105-26	P688-0022	D6-222			
C42	.022	400	D-3.105-17	P488-22	DF-203			
C43A	.002			P688-002	PTE6D2			
B	.005			P688-005	PTE6D5			
C	.005			P688-005	PTE6D5			
C44	4700	500	D-4.105-24		DF-104			
C45	.047	600	D-3.105-34		PTE6P1			
C46	.1	600	D-3.105-36		PTE6P1			
C47	.25	600	D-3.100-32		GP6P25			

## CAPACITORS (CONT.)

ITEM No.	RATING		REPLACEMENT DATA					IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT.	MAJESTIC PART No.	AEROVOX PART No.	CORNEILL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C48	.1	600	D-3.105-36	P688-1	DF-104			Fixed Trimmer
C49	.1	600	D-3.105-36	P688-1	DF-104			Vert. Sweep Coupling
C50	.22	400	D-3.105-33	P488-22	GT4P2			Integrator Net.
C51	.047	600	D-3.105-34					Decoupling
C52	.68	500	D-4.104-93	1469-00007	SI47NP0			Horiz. Sync. Coupling
C53	.47		C-4.109-14	TCZ-47				Voltage Divider
C54	.47		D-4.109-12	SI47	D6-470			Horiz. Feedback
C55	.0022	600	D-3.105-26	P688-0022	D6-222			Horiz. Sync. Coupling
C56	.022	400	D-3.105-17	P488-022	DF-203			AFC Filter
C57	.25	200	D-3.100-30	P488-25				AFC Filter
C58	.047	400	D-3.105-19					AFC Plate
C59	.330	500	D-4.104-59	1469-00035	D6-103			Horiz. Osc. Grid Cap.
C60	.01	600	D-3.106-1	P688-01	PTE6S1			Fixed Trimmer
C61	1200	500	D-4.105-9					Horiz. Discharge
C62	.560	500	D-4.104-70					Horiz. Sweep Coupling
C63	.047	600	D-3.105-34					Horiz. Output Screen
C64	.25	200	D-3.100-30	P488-25	GT2P25			Horiz. Sweep Coupling
C65	.39	2000	B-4.129-2					Horiz. Sweep Coupling
C66	.68	2000	B-4.129-4					Voltage Divider
C67	.047	600	D-3.105-34					Damper Filter
C68	.035	600	D-3.100-46					Damper Filter
C69	500	20000	B-4.128	HV20C	TV3-502			HV Filter
C70	5000		B-4.115-1	BPD-005	DD-502			Line Filter
C71	5000		B-4.115-1	BPD-005	DD-502			Line Filter
C72	4.7		C-4.111-6	SI4.7NP0	TCZ-4.7			Fixed Trimmer
C73	1500		D-4.108-12	SI1500	D6-152			Fixed Trimmer

† Some models use 5000MMF. in this application. (Part # B-4.115-1)  
† Some models use .047MFD. in this application. (Part # D-3.105-19)  
† Some models use .022MFD. in this application. (Part # D-3.105-17)  
† Some models combine C1A, C1B and C3A in one unit. (Part # 5.435-1)  
† Some models combine C2A, C2B, C2C and C3B in one unit. (Part # 5.435-2)  
† Some models use cardboard tubulars in this application. (Part # 5.438)  
\* Items C43A, C43B, C43C, R64A, R64B, R64C are combined in one unit.

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	MAJESTIC PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1A	1500Ω		C-8.230-1	B11-109 + B13-137 + E-167 + 76-1	RTV-233		Contrast Control - Panel
B	1Meg						Volume Control and Switch - Rear
C	Shaft end						Attach per instructions in Concentrik.
D	Switch						Attach per instructions in Concentrik.
R2	2250Ω		C-8.221	BQ13-137	RTV-9		Focus Control - Wire Wound
R3A	1Meg		C-8.229-8	Not req.	AG-63-Z	B-70	Vertical Hold Control
B	Shaft		Not req.	Not req.	RS-2	Not req.	Attach to R3A per instructions
R4	5000Ω		C-8.206-6	43-5000	AG-49-S	B-40	Vertical Linearity Control - Wire Wound
R5A	100KΩ		D-8.229-9	PQ11-128	AG-49-S	RS-2	Brightness Control
B	Shaft		Not req.	Not req.	AG-84-S	AN-83	Attach to R5A per instructions
R6A	2.5Meg		C-8.219-5	Q11-239	AG-84-S	AN-83	Vertical Size Control
B	Shaft		Not req.	Not req.	RS-2	Not req.	Attach to R6A per instructions
R7A	50KΩ		C-8.229-7	PQ13-123	AG-46-Z	B-32	Horiz. Hold Control
B	Shaft		Not req.	Not req.	RS-2	Not req.	Attach to R7A per instructions

† Additional parts to be used with Concentrik.

## RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	MAJESTIC PART No.	IRC PART No.	
R8	3900Ω				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%			BTS-100
R19	100Ω				BTS-100
R20	330Ω	20%			BTS-330
R21	8200Ω				BTS-8200
R22	47Ω	20%			BTS-100
R23	100Ω				BTS-100
R24	10KΩ				BTS-10K
R25	150Ω				BTS-150
R26	100Ω				BTS-100
R27	320KΩ				BTS-320K
R28	68KΩ				BTS-68K
R29	12KΩ				BTS-12K
R30	4700Ω				BTS-4700
R31	100Ω				BTS-100
R32	8200Ω				BTS-8200
R33	3300Ω				BTS-3300
R34	33KΩ				BTS-33K
R35	22KΩ				BTS-22K
R36	1Meg	20%			BTS-1Meg
R37	8200Ω	5%			BTS-8200
R38	1800Ω				BTA-1800
R39	3300Ω				BTS-3300
R40	4700Ω				BTS-4700
R41	470KΩ				BTS-470K
R42	47KΩ				BTS-47K
R43	47KΩ				BTS-47K
R44	100Ω				BTS-100
R45	47KΩ				BTS-47K
R46	1000Ω	5%			BTS-1000
R47	47KΩ				BTS-47K
R48	18KΩ	5%			BTS-18K
R49	220Ω	20%			BTS-220

## 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	1	D-7, 102-13	BTA-560	Output Cathode
R55	470Ω	1	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		10, 101 *	BTS-22K	Integrator Network
B	8200 Ω			BTS-8200	Integrator Network
C	8200 Ω			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	1	D-7, 102-24	BTA-1000	Decoupling
R74	3.3Meg		D-7, 101-171	BTS-3.3Meg	Horiz. Feedback
R75	47KΩ	1	D-7, 102-94	BTA-47K	AFC Plate
R76	100KΩ	1	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