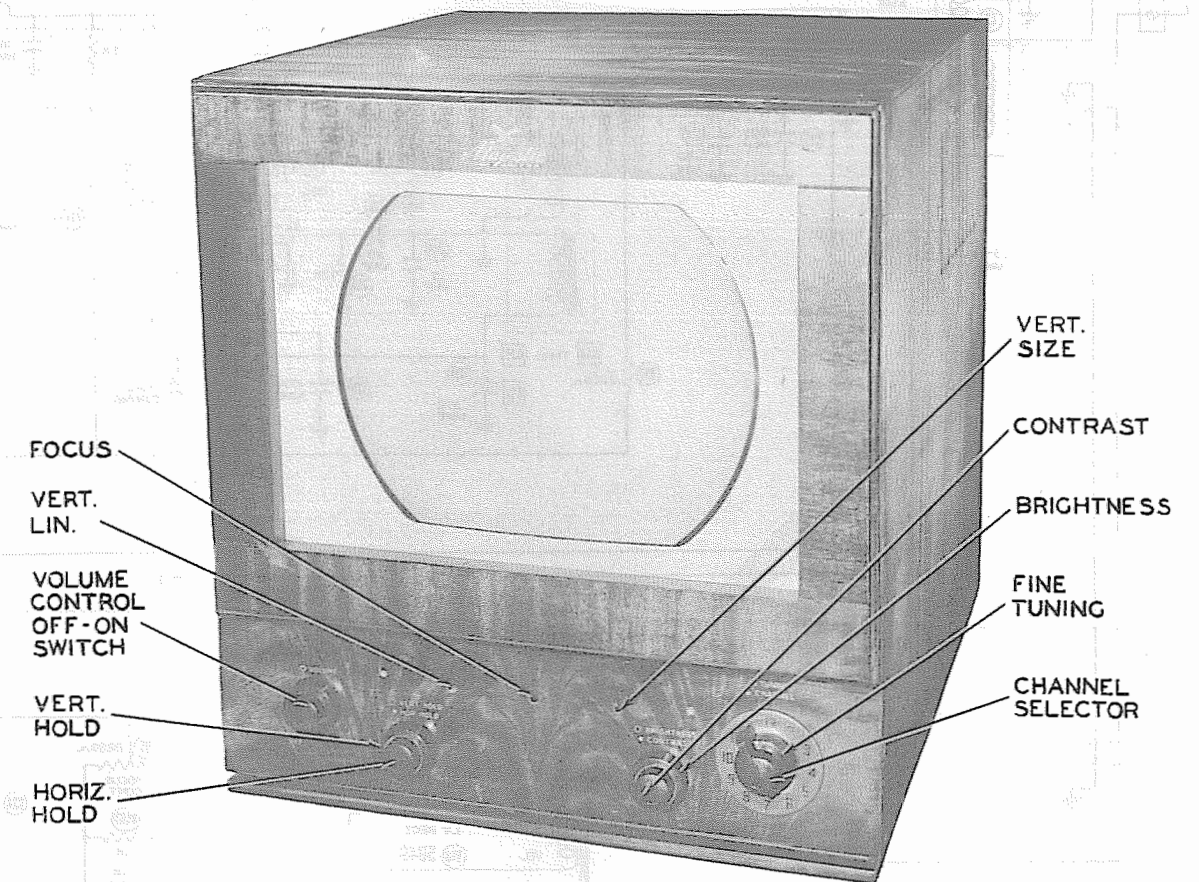


RESISTOR AND INDUCTOR IDENTIFICATION



MAJESTIC MODEL 12T2

TRADE NAME	Majestic, Models 12C4, 12C5, 12T2, 12T3, 16C4, 16C5, 16K1/63-3019, 16T2, 16T3
MANUFACTURER	Majestic Radio and Television, Inc., 70 Washington St., Brooklyn (1), N. Y.
TYPE SET	Television Receiver
TUBES	Nineteen

POWER SUPPLY	110 - 120 Volts AC - 60 Cycles	RATING	1.8 Amp. at 117 Volts AC
TUNING RANGE—	Channels 2 thru 13		

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Cabinet - Rear View	11	Tube Placement Chart	5
Capacitor and Alignment Identification	4, 9	Voltage and Resistance Measurements	8
Chassis - Top View	3		

THIS SERVICE INFORMATION SUPERCEDES PRELIMINARY DATA PREVIOUSLY ISSUED ON THESE MODELS.

HOWARD W. SAMS & CO., INC. • Indianapolis 1, Indiana

"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed."

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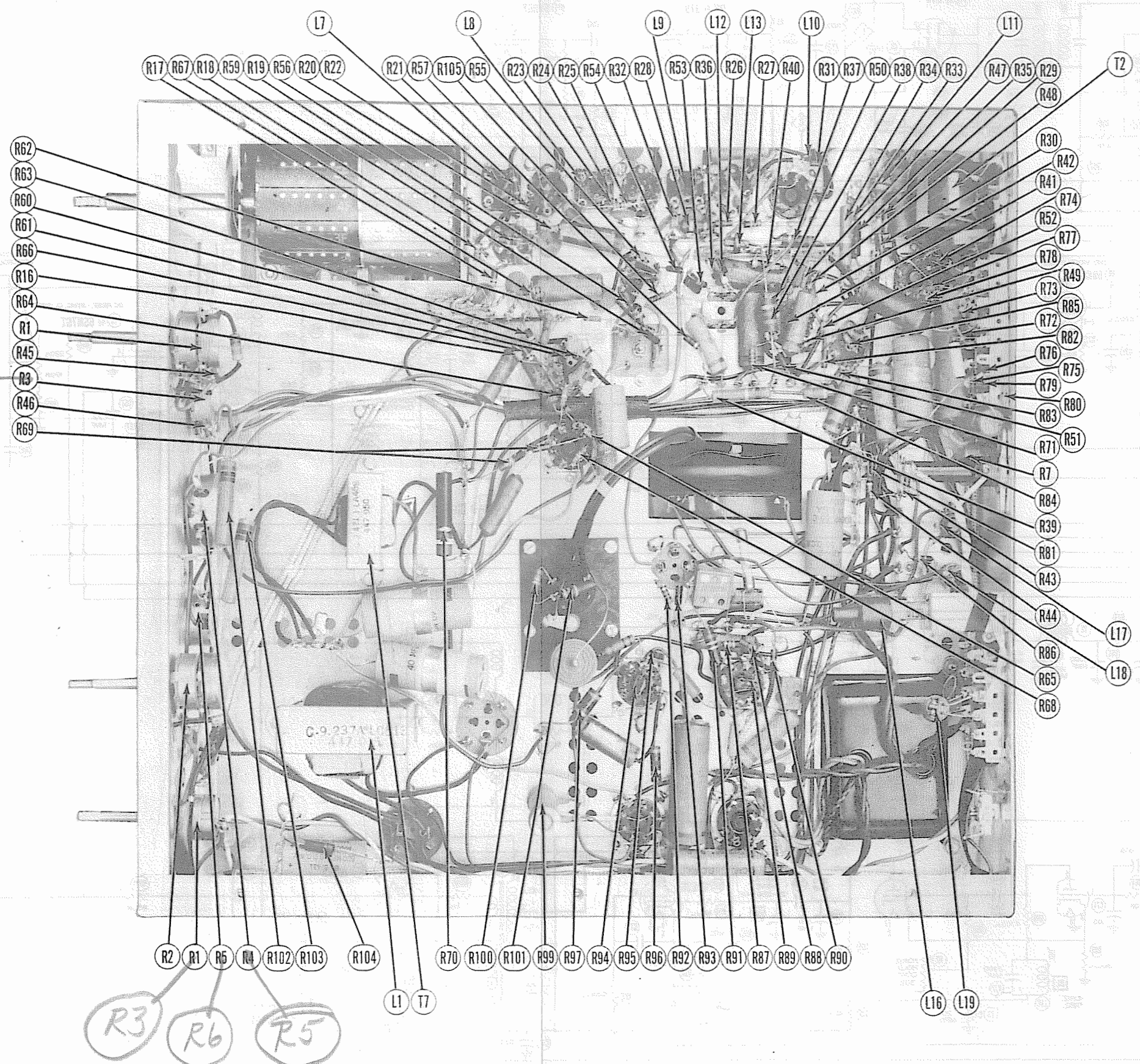
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MAJESTIC MODELS 12C4, 12C5, 12T2, 12T3,
16C4 16C5 16K1/63-3019 16T2 16T3

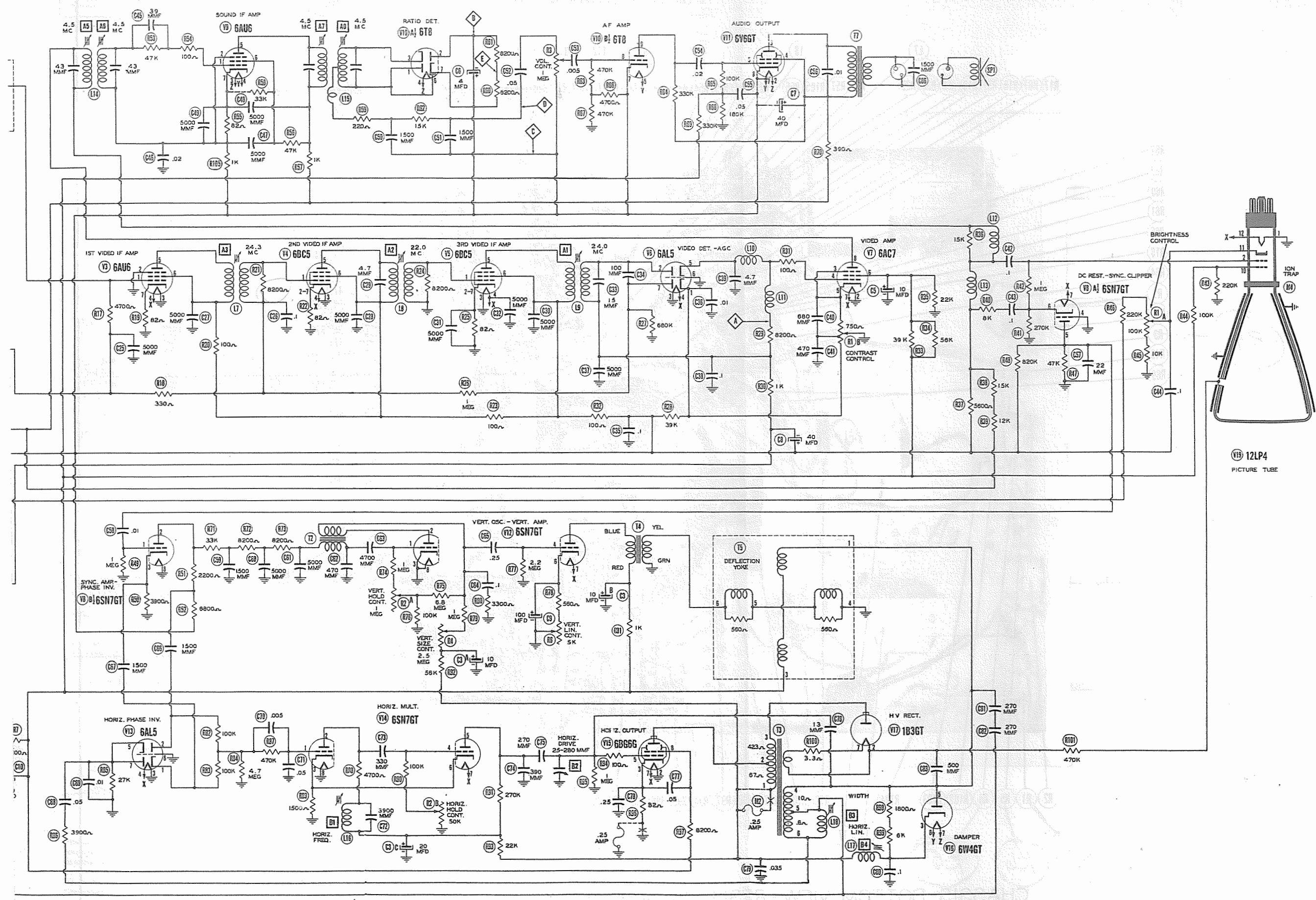
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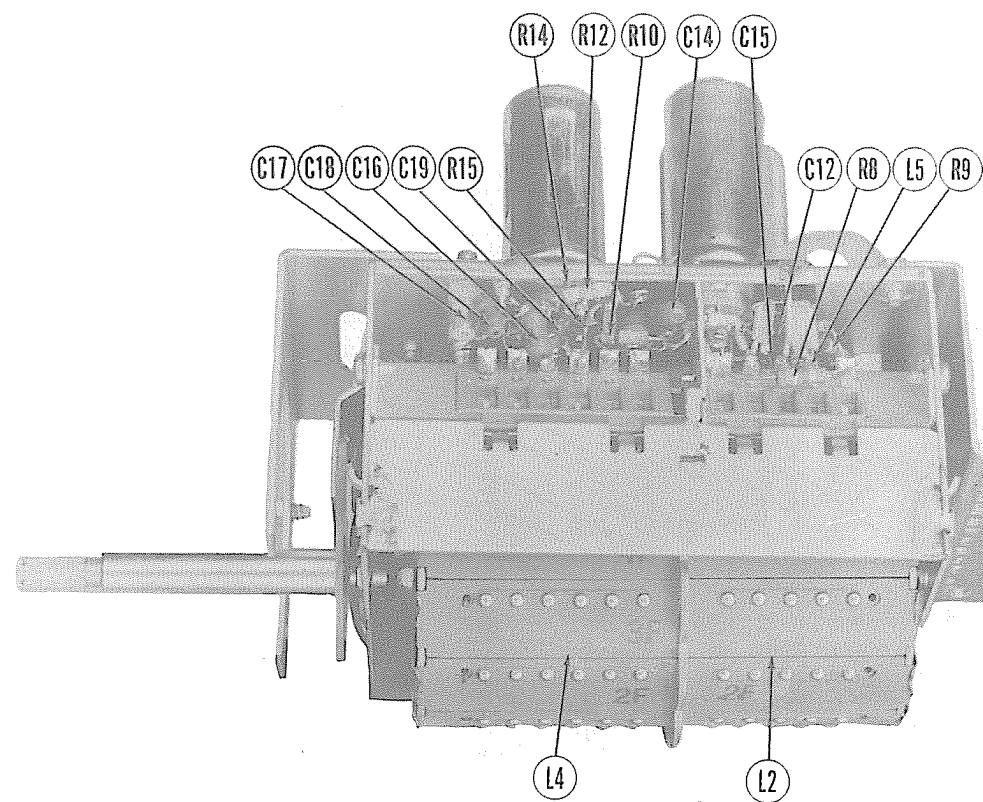
CHASSIS-BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

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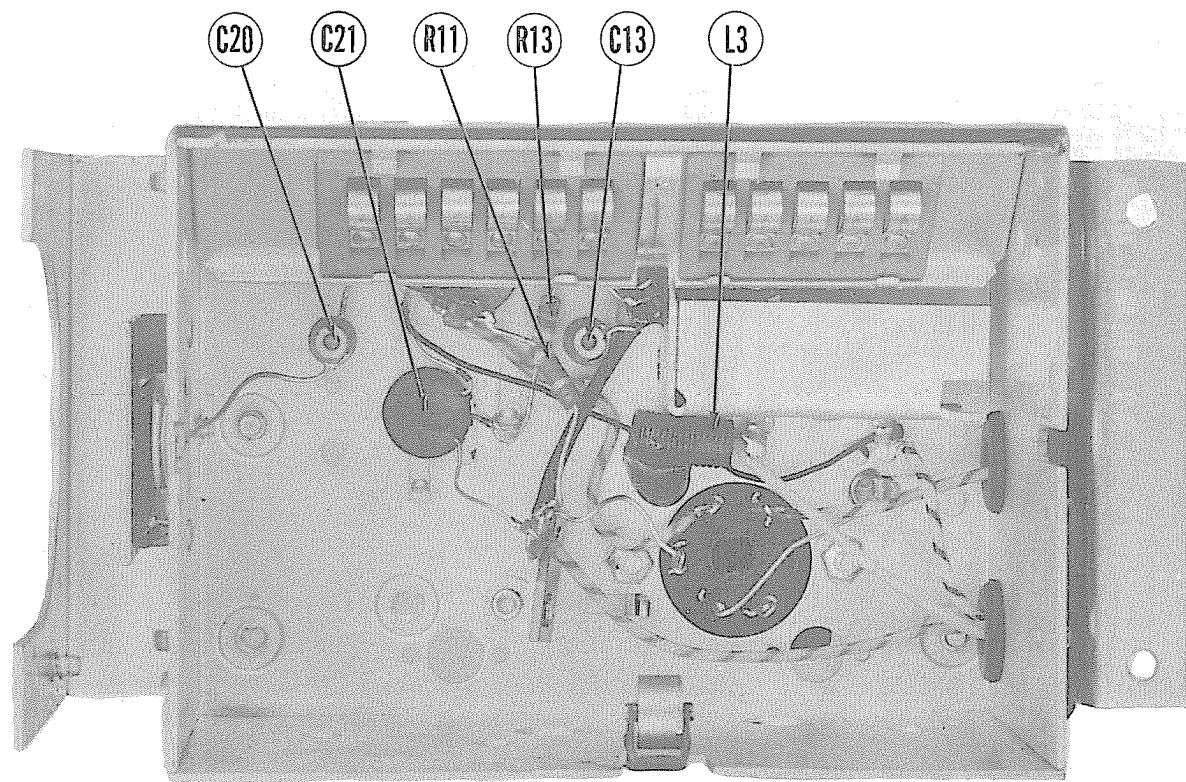




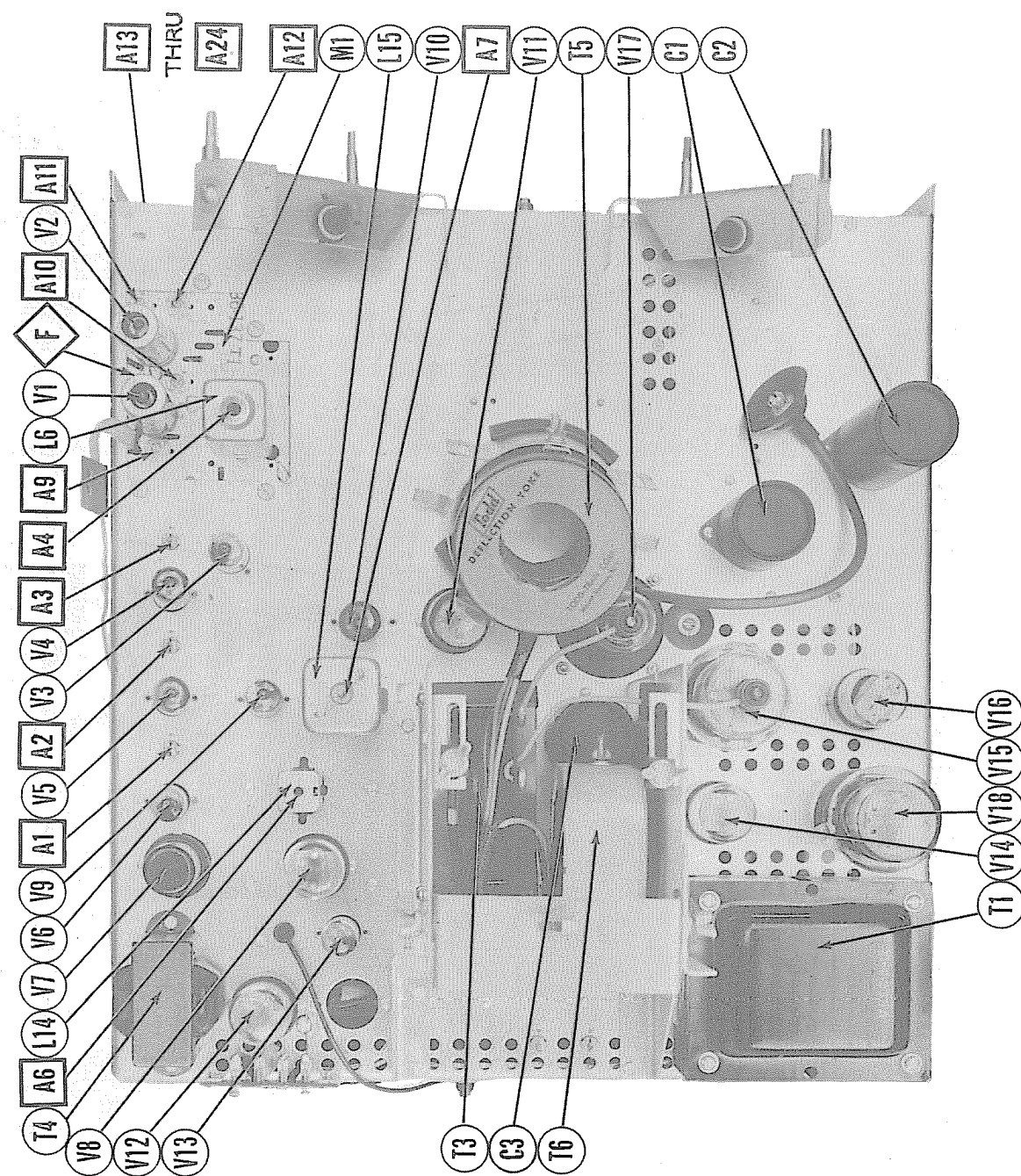
MAJESTIC MODELS 12C4, 12C5, 12T2, 12T3,
16C4, 16C5, 16K1/63-3019, 16T2, 16T3



RF TUNER-RIGHT SIDE



RF TUNER-BOTTOM VIEW



MAJESTIC MODELS 12C4, 12C5, 12T2, 12T3, 16C4, 16C5, 16K1/63-3019, 16T2, 16T3
MAIN PCH SSSVCHD

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS											RESISTANCE READINGS											
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	
V 1	6BC5	-4VDC	0V.	6.3VAC	0V.	110VDC	110VDC	0V.			V 1	6BC5	1.7 Meg.	0Ω	.1Ω	0Ω	#2.3KΩ	#2.3KΩ	0Ω			
V 2	616	90VDC	85VDC	6.3VAC	0V.	-1VDC	5-8.4VDC	0V.			V 2	616	#5.7KΩ	#15KΩ	.1Ω	0Ω	225KΩ	10KΩ	0Ω			
V 3	6AU6	-4VDC	0V.	0V.	6.3VAC	125VDC	125VDC	.7VDC			V 3	6AU6	1.7 Meg.	0Ω	0Ω	.1Ω	#300Ω	#300Ω	82Ω			
V 4	6BC5	-4VDC	.7VDC	0V.	6.3VAC	130VDC	130VDC	.7VDC			V 4	6BC5	1.7 Meg.	82Ω	0Ω	.1Ω	#200Ω	#200Ω	82Ω			
V 5	6BC5	0V.	.8VDC	0V.	6.3VAC	130VDC	130VDC	.8VDC			V 5	6BC5	.4Ω	82Ω	0Ω	.1Ω	#100Ω	#100Ω	82Ω			
V 6	6AL5	-1VDC	-3VDC	0V.	6.3VAC	-2.3VDC	0V.	-6VDC			V 6	6AL5	17Ω	1000Ω	0Ω	.1Ω	9KΩ	0Ω	600KΩ			
V 7	6AC7	0V.	0V.	1.5VDC	-2.6VDC	1.5VDC	180VDC	6.3VAC	165VDC		V 7	6AC7	0Ω	0Ω	750Ω	9KΩ	750Ω	117KΩ	.1Ω	119KΩ		
V 8	6SN7GT	0V.	125VDC	5.2VDC	0V.	6.4VDC	1VDC	6.3VAC	0V.		V 8	6SN7GT	1 Meg.	#9KΩ	3.9KΩ	0Ω	47KΩ	270KΩ	.1Ω	0Ω		
V 9	6AU6	#5VDC	#7.2VDC	#6.3VAC	#0V.	#225VDC	#100VDC	#8VDC			V 9	6AU6	#48KΩ	#1000Ω	#.1Ω	#0Ω	1100Ω	148KΩ	#1000Ω			
V 10	6T8	#-.4VDC	#-.6VDC	#-.4VDC	#6.3VAC	#0V.	#-.4VDC	#0V.	#-.5VDC	#95VDC	V 10	6T8	Inf.	#17KΩ	Inf.	#.1Ω	#0Ω	Inf.	#0Ω	#520KΩ	†330KΩ	
V 11	6V6GT	0V.	#6.3VAC	#205VDC	#220VDC	#-.9VDC	#-.9VDC	#0V.	#0V.		V 11	6V6GT	0Ω	#.1Ω	†770Ω	1460Ω	230KΩ	120KΩ	#0Ω			
V 12	6SN7GT	-6.6VDC	160VDC	0V.	.1VDC	350VDC	22VDC	6.3VAC	0V.		V 12	6SN7GT	2.1 Meg.	† 2.5 Meg.	0Ω	2.2 Meg.	†2KΩ	5.3KΩ	.1Ω	0Ω		
V 13	6AL5	2.8VDC	-1.6VDC	0V.	6.3VAC	-1VDC	0V.	-1VDC	0V.		V 13	6AL5	4.8 Meg.	4.8 Meg.	0Ω	.1Ω	27KΩ	0Ω	27KΩ			
V 14	6SN7GT	.3VDC	275VDC	11VDC	-3VDC	105VDC	11VDC	6.3VAC	0V.		V 14	6SN7GT	5 Meg.	†33KΩ	1.5KΩ	150KΩ	†300KΩ	1.5KΩ	.1Ω	0Ω		
V 15	6BG6G	-1.3VDC	0V.	8.6VDC	0V.	-1.3VDC	0V.	6.3VAC	250VDC		V 15	6BG6G	1 Meg.	0Ω	82Ω	Inf.	1 Meg.	Inf.	.1Ω	†8.5KΩ	†7KΩ	
V 16	6W4GT	0V.	#6.3VAC	440VDC	0V.	360VDC	0V.	#6.3VAC	0V.		V 16	6W4GT	Inf.	#.1Ω	†6.3KΩ	Inf.	†300Ω	Inf.	#.1Ω	#0Ω	TOP CAP †7.5KΩ	
V 17	1B3GT	* DO NOT MEASURE.										V 17	1B3GT	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP †7.5KΩ
V 18	5U4G	0V.	400VDC	0V.	380VAC	0V.	380VAC	0V.	400VDC		V 18	5U4G	Inf.	20KΩ	Inf.	40Ω	Inf.	40Ω	20KΩ			
V 19	12LP4	0V.	.3VDC	250VDC	115VDC	6.3VAC					V 19	12LP4	0Ω	1.3 Meg.	PIN 10 †50KΩ	PIN 11 †50KΩ	PIN 12 †.1Ω					

FOCUS CONTROL SET FULLY COUNTERCLOCKWISE.
‡ TAKEN WITH VACUUM TUBE VOLTMETER.
MEASURED FROM PIN 8 OF V11.

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.

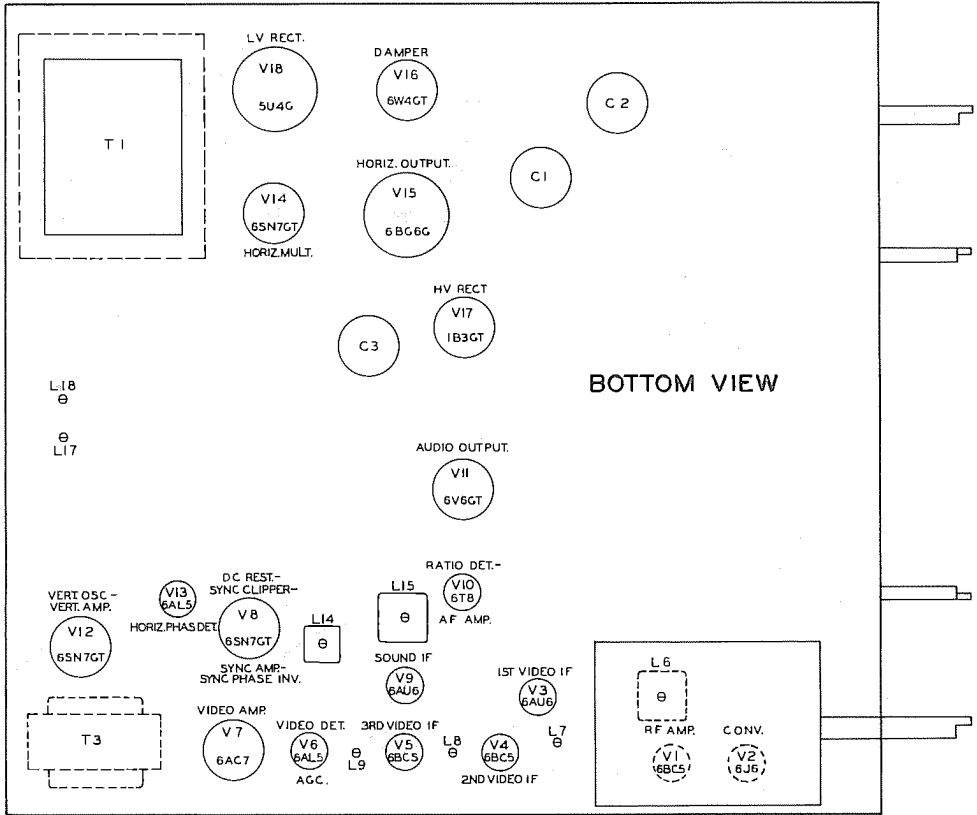
2. Pin numbers are counted in a clockwise direction on bottom of socket.

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

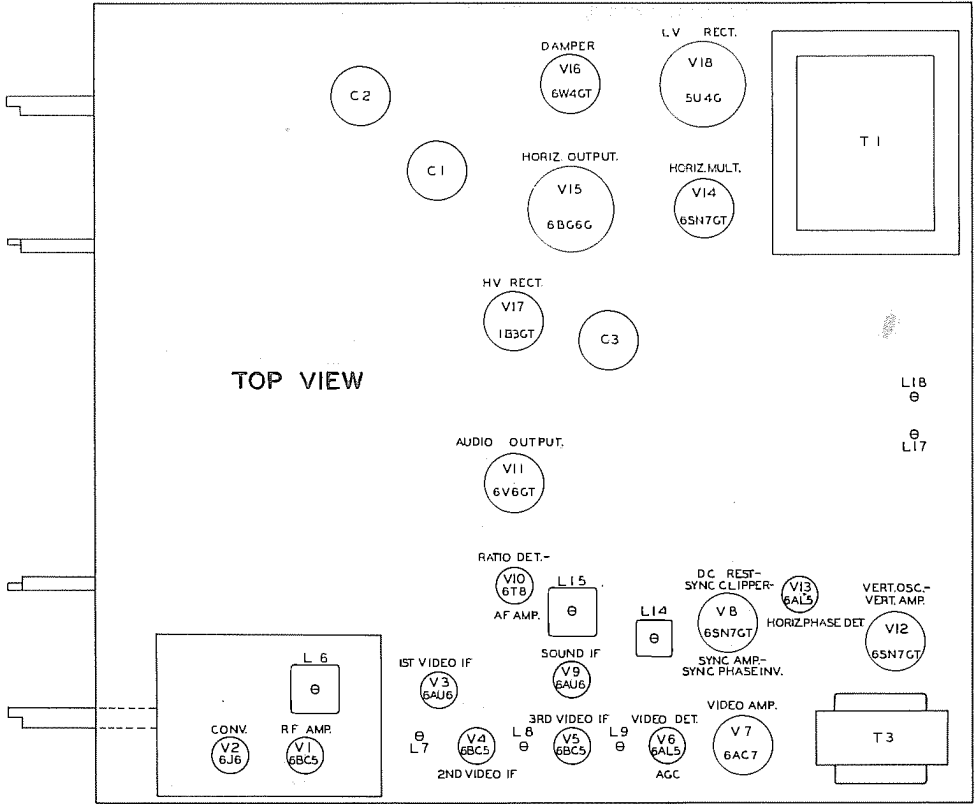
5. Front panels controls set at minimum.

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

FOCUS CONTROL SET FULLY COUNTERCLOCKWISE.
† MEASURED FROM PIN 8 OF V18.
MEASURED FROM PIN 8 OF V11.



TUBE PLACEMENT CHART



MAJESTIC MODELS 12C4, 12C5, 12T2, 12T3,
16C4, 16C5, 16K1/63-3019, 16T2, 16T3

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	DC RESISTANCE		MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.					
T2	150Ω	1400Ω		A-8128	HVO-3	TBO-2 ① TFB-3	Vert. Block Osc. Trans. Hor. Output Trans.
T3	490Ω	10.6Ω					
	Tap @	Tap @					
	67Ω	.6Ω					
		SEC. 2					
		0Ω					
T4	770Ω	8.6Ω		A-8112	A-3036	TSO-5	Vert. Output Trans. Hor. Deflection Coil Vert. Deflection Coil Focus Coil
T5A	14Ω			DY-7	MD-3		
T6	64Ω			FC-10	MF-3		
	370Ω						

① 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	4700Ω	3.8Ω	310Ω	.6Ω		A-3877 ①	A-3019	RO-9 ①	① Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
			MAJESTIC	JENSEN	QUAM	
	FIELD RES.	V. C. IMP.	PART No.	PART No.	PART No.	
SP1A	PM	3.8Ω	②		5A07	② Used in models 12T2 and 12T3. ③ Used in models 16T2 and 16T3. ④ Used in models 12C4, 12C5, 16C4 and 16C5.
B	PM		③			
C	PM		④			
	CONE DIA.	V. C. DIA.				
SP2A	4 1/2"	9/16"				
B	5 1/2"					
C	9 1/2"					

FILTER CHOKE

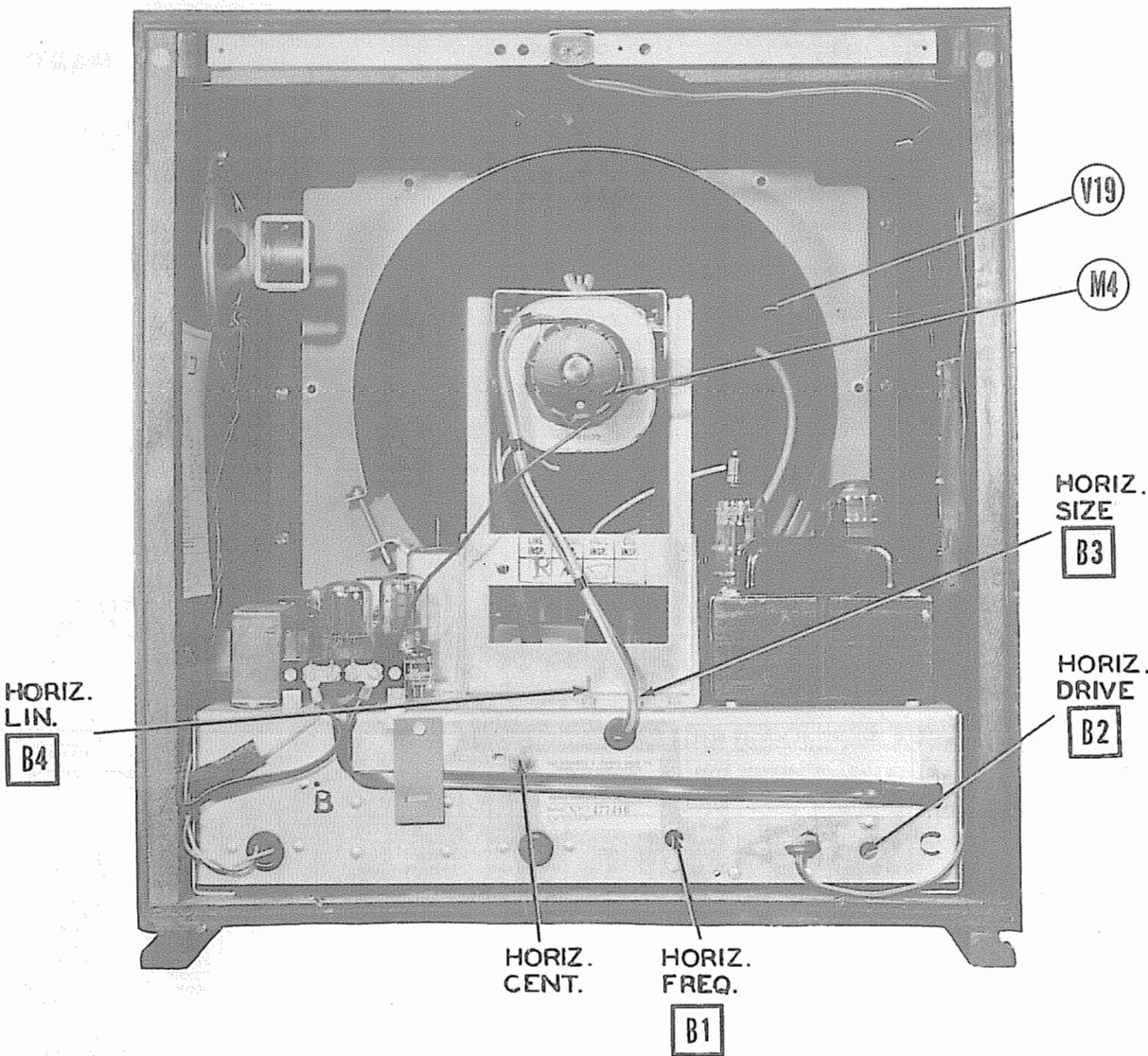
ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 Ω)	MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.200ADC	75Ω	2.8 Henries		C-2325	C-2991 ①	TR-4200 ①	① Drill one new mounting hole.

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	MAJESTIC PART No.	MEISSNER PART No.	
L2	Ant. Coils	0Ω	0Ω			
L3	Fl. Choke	.1Ω				
L4	RF, Mixer					
	Grid & Osc.	0Ω	0Ω			
L5	Fl. Choke	.1Ω				
L6	1st Video IF					
L7	2nd Video IF	.4Ω	.4Ω			
L8	3rd Video IF	.4Ω	.4Ω			
L9	4th Video IF	.4Ω	.4Ω			
L10	Peaking	9.5Ω				
L11	Peaking	17Ω				
L12	Peaking	9.5Ω				
L13	Peaking	15Ω				
L14	Sound IF	2.2Ω	2.2Ω			
L15	Ratio Det.					
	Trans.	.6Ω	.1Ω			
L16	Horiz. Osc.	125Ω				
L17	Horiz. Lin.	31Ω				
L18	Horiz. Size	.3Ω				
L19	AC Line Choke	.1Ω	.1Ω			

MISCELLANEOUS

ITEM No.	PART NAME	MAJESTIC PART No.	NOTES
M1	RF Tuner		
M2	Fuse		.25A 250V
M3	Fuse		3A 250V Type 3AG
M4	Ion Trap		
	Trimmer		Horiz. Drive 25-280LIMF



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, and adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.

Turn the horizontal drive trimmer (B2) clockwise as far as possible without crowding the right side of the picture.

Adjust the horizontal size slug (B3) until the picture fills the mask horizontally.

Adjust the horizontal linearity slug (B4) until the picture is symmetrical from left to right.

A slight readjustment of B2 may be necessary for optimum results.

MAJESTIC MODELS 12C4, 12C5, 12T2, 12T3, 16C4, 16C5, 16K1/63-3019, 16T2, 16T3

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		MAJESTIC PART No.	STANDARD REPLACEMENT		
V1A	RF Amp.	6BC5	6BC5	7BD	
B	RF Amp.	6AG5	6AG5	7BD	
V2	Converter	6J6	6J6	7BF	
V3	1st Video IF	6AU6	6AU6	7BK	
V4A	2nd Video IF	6BC5	6BC5	7BD	
B	2nd Video IF	6AG5	6AG5	7BD	
V5A	3rd Video IF	6BC5	6BC5	7BD	
B	3rd Video IF	6AG5	6AG5	7BD	
V6	Video DET-AGC	6AL5	6AL5	6BT	
V7	Video Amp.	6AC7	6AC7	8N	
V8	DC Rest.-Sync. Clipper-Sync. Amp. -Phase Inv.	6SN7GT	6SN7GT	8BD	
V9	Sound IF Amp.	6AU6	6AU6	7BK	
V10	Ratio Det.-Audio Amp.	6T8	6T8	9E	
V11	Audio Output	6V6GT	6V6GT	7AC	
V12	Vert. Osc.-Amp.	6SN7GT	6SN7GT	8BD	
V13	Hor. Phase Det.	6AL5	6AL5	6BT	
V14	Hor. Mult.	6SN7GT	6SN7GT	8BD	
V15	Hor. Output	6BG6G	6BG6G	5BT	
V16	Damper	6W4GT	6W4GT	4CG	
V17	HV Rect.	1B3GT	1B3GT	3C	
V18	LV Rect.	5U4G	5U4G	5T	
V19A	Picture Tube	12LP4	12LP4	12D	
B	Picture Tube	16HP4	16HP4	12D	
C	Picture Tube	16LP4	16LP4	12D	
D	Picture Tube	16JP4	16JP4	12D	
E	Picture Tube	16DP4	16DP4	12D	
F	Picture Tube	16FP4	16FP4	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
		MAJESTIC PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	
C1	40 475		E4A59		UP2250	TVL-1820
C2A	40 475		AF80X		UP4450	TVL-2630
B	40 475					
C3A	10 450		AFH22222		UPT11145	TVL-2780
B	10 450					
C	20 450					
C4	500 6		PRS6/500		BRH605A	TVA-1103
C5	10 150		PRS250/12		BR1015	TVA-1406
C6	4 50		PRS150/4		BBR4-50T	TVA-1303
C7	40 350		PRS450/40		BR4035	TVA-1611
C8	40 350		PRS450/40		BR4035	TVA-1611
C9	100 50		PRS50/100		BRH501	TVA-1310
C10	100 50		PRS50/100		BRH501	TVA-1310
C11	5		S15NPO			
C12	5-3			TCZ-4.7		
C13	5-3			829-3		
C14	120		SI120	D6-121		GP2K-120
C15	1000		SI1000	D6-102		GP2L-001
C16	100		SI100N750	TCN-100		N750L-100
C17	5-3			829-3		29C16
C18	20		SI20NPO	TCZ-20		NPOK-20
C19	10		SI10N750	TCN-10		N750K-10
C20	5-3			829-3		19C4
C21A	1000		BPD-2 x 001	DD-2-102		882-2 x 0015
B	1000					29C7
C22	5000		BPD-005	DD-502	ID5D5	811-005
C23	5000		BPD-005	DD-502	ID5D5	29C1
C24	5000		BPD-005	DD-502	ID5D5	29C1
C25	5000		BPD-005	DD-502	ID5D5	29C1
C26	1		P488-1	DF-104	PTE4PI	TM-1-4
C27	5000		BPD-005	DD-502	ID5D5	811-005
C28	5000		BPD-005	DD-502	ID5D5	29C1
C29	4.7		SI4.7NPO	TCZ-4.7	5R5V5	NPOK-4.7
C30	5000		BPD-005	DD-502	ID5D5	811-005
C31	5000		BPD-005	DD-502	ID5D5	29C1
C32	5000		BPD-005	DD-502	ID5D5	29C1
C33	15		SI15	D6-150	GPIK-15	19C22
C34	100		SI100	D6-101	5W5T1	GPIK-100
C35	.1	400	P488-1	DF-104	PTE4PI	TM-1-4
C36	.01	400	P488-01	D6-103	PTE4SI	TM-11-4
C37	5000		BPD-005	DD-502	ID5D5	811-005
C38	.1	400	P488-1	DF-104	PTE4PI	TM-1-4
C39	4.7		SI4.7	TCZ-4.7	5W5V5	MS-55
C40	680		SI680	D6-681	IW5T5	GP2K-680
C41	470		SI470	D6-471	5W5T5	GP2K-470
C42	.1	400	P488-1	DF-104	PTE4PI	TM-1-4
C43	.1	400	P488-1	DF-104	PTE4PI	TM-1-4
C44	.1	400	P488-1	DF-104	PTE4PI	TM-1-4
C45	39	500	1469-00004	TCZ-39	5R5Q4	GPIK-39
C46	.02	400	P488-02	DF-203	PTE4S2	TM-12-4
C47	5000		BPD-005	DD-502	ID5D5	811-005
C48	5000		BPD-005	DD-502	ID5D5	29C1
C49	5000		BPD-005	DD-502	ID5D5	29C1
C50	1500		SI1500	D6-152	IW5D15	GP2L-0015
C51	1500		SI1500	D6-152	IW5D15	GP2L-0015
C52	.05	400	P488-05	DF-503	PTE4S5	TM-15-4
C53	.005	600	P688-005	DF-502	PTE6D5	TM-25
C54	.02	400	P488-02	DF-203	PTE4S2	TM-12-4
C55	.05	400	P488-05	DF-503	PTE4S5	TM-15-4
C56	.01	400	P488-01	D6-103	PTE4SI	TM-11-4
C57	22	500	1468-000025	D6-220	5W5Q25	GPIK-22

CAPACITORS (CONT.)

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		MAJESTIC PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	
C58	.01	400	P488-01	D6-103	PTE4SI	811-01
C59	1500		SI1500	D6-152	IW5D15	GP2L-0015
C60	5000		BPD-005	DD-502	PTE6D5	811-005
C61	5000		BPD-005	DD-502	PTE6D5	29C1
C62	470		SI470	D6-471	5W5T5	GP2K-470
C63	4700	500	1467-005	D6-472	ID5D5	GP2M-0047
C64	.1	400	P488-1	DF-503	PTE4S5	TM-15-4
C65	.25	600	684-25		GT6P25	TM-1-4
C66	1500		SI1500	D6-152	IW5D15	GP2L-0015
C67	1500		SI1500	D6-152	IW5D15	29C8
C68	.05	400	P488-05	DF-503	PTE4S5	TM-15-4
C69	.01	400	P488-01	D6-103	PTE4SI	811-01
C70	.005	600	P688-005	D6-502	PTE6D5	811-005
C71	.05	400	P488-05	DF-503	PTE4S5	TM-15-4
C72	3900	500	1464-004		IDR5D4	MS-24
C73	330	500	1468-00035	D6-331	5W5T3	GP2K-330
C74	390	500	1468-0004	D6-391	5W5T4	GP2K-390
C75	270	500	1468-00025	D6-271	5W5T5	GP2K-270
C76	13	2000				
C77	.05	400	P488-05	DF-503	PTE4S5	TM-15-4
C78	.25	600	684-25		GT6P25	TC-2
C79	.035	600	P688-035			
C80	.1	600	P688-1		PTE6P1	TM-1
C81	270	2000				
C82	270	2000				
C83	500	20000				
C84	5000		HV20C	TV2-502		
C85	5000		BPD-005	DD-502	ID5D5	811-005
C86	1500		SI1500	D6-152	IW5D15	GP2L-0015

* Not used in all models.
† Some models use .02MFD in this application.
‡ Used only in models using 16FP4 picture tube.

CONTROLS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA				INSTALLATION NOTES
		MAJESTIC PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1A	100KΩ		C-8.226-1		RTV-104	Brightness control-front
B	750Ω					Contrast control-rear
R2A	1 Meg.		C-8.217-3		RTV-2	Vert. hold control-front
B	50KΩ					Horiz. hold control-rear
C	Shaft End					Attach per instr. in "Concentrikrit"
R3A	1 Meg.		Q13-137	AG-63-Z	B-70-S	Volume control
B	Shaft		Not Req.	FS-3	Not Req.	Attach to R3A per instructions
C	Switch		Not Req.	SWB	Not Req.	Attach to R3A per instructions
R4A	2.5 Meg.		C-8.207-5	Q11-239	AM-84-S	Vert. size control
B	Shaft		Not Req.	RQ	AK-1	Attach to R4A per instructions
R5	2250Ω	4	C-8.221		RTV-9	Focus control-Wire Wound
R6	5000Ω	1	C-8.206-6	W-5000 †	VK-135	Vert. linearity control-Wire Wound
R7	100Ω	2	C-8.206-3	W-100 †	VK-121	Horiz. centering control-Wire Wound-See Note 1

* Additional parts to be used with "Concentrikrit".
† File slot in shaft to duplicate original.
Note 1. This is not used in models using a 16FP4 picture tube.

RESISTORS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA		IDENTIFICATION CODES
		MAJESTIC PART No.	IRC PART No.	
R8	3900Ω			ALL RESISTORS ARE ± 10% UNLESS OTHERWISE STATED.
R9	47KΩ 20%		BTS-3900	RF Amp. Grid Coil Shunt
R10	10KΩ			AGC Network
R11	2200Ω 20%		BTS-2200	RF Amp. Plate Coil Shunt
R12	4700Ω		BTS-4700	RF Amp. Decoupling
R13	220KΩ 20%			Conv. Grid
R14	10KΩ			Conv. Grid
R15	4700Ω			Osc. Grid
R16	100Ω 20%		BTS-4700	Osc. Plate
R17	4700Ω 20%		BTS-4700	Decoupling
R18	330Ω		BTS-330	1st Video IF Amp. Grid
R19	82Ω		BTS-82	AGC Network
R20	100Ω 20%		BTS-100	1st Video IF Amp. Cathode
R21	820Ω			2nd Video IF Amp. Grid
R22	82Ω		BTS-82	2nd Video IF Amp. Cathode
R23	100Ω 20%		BTS-100	2nd Video IF Amp. Decoupling
R24	820Ω			3rd Video IF Amp. Grid
R25	82Ω		BTS-82	3rd Video IF Amp. Cathode
R26	1 Meg. 20%		BTS-1 Meg.	AGC Network
R27	680KΩ 20%		BTS-680K	AGC Rect. Diode Load
R28	39KΩ		BTA-39K	Voltage Divider
R29	8200Ω 5%		BTS-8200-5%	Video Det. Diode Load
R30	1000Ω 20%		BTS-1000	Bias Network
R31	100Ω 20%			Parasitic Suppressor
R32	100Ω 20%		BTS-100	3rd Video IF Amp. Decoupling
R33	39KΩ		BTB-39K	Video Amp. Screen
R34	56KΩ		BTB-56K	Video Amp. Screen
R35	22KΩ 20%		BTA-22K	Voltage Divider
R36	15KΩ 20%		BTA-15K	Peaking Coil Shunt
R37	5600Ω		BTA-5600	Voltage Divider
R38	15KΩ		BTB-15K	Video Amp. Plate
R39	12KΩ		BTB-12K	Video Amp. Plate
R40	8000Ω 5%		BTS-8200-5%	Isolation-See Note 2
R41	270KΩ		BTS-270K	DC Rest. Load

RESISTORS (CONT.)

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA		IDENTIFICATION CODES
		MAJESTIC PART No.	IRC PART No.	
R42	1 Meg. 20%		BTS-1 Meg.	Picture Tube Grid
R43	220KΩ 20%		BTS-220K	Voltage Divider
R44	100KΩ 20%		BTS-100K	Acc. Anode Load
R45	10KΩ 20%		BTS-10K	Voltage Divider
R46	220KΩ 20%		BTS-220K	Voltage Divider
R47	47KΩ 20%		BTS-47K	DC Rest. Load
R48	820KΩ		BTS-820K	Voltage Divider
R49	1 Meg. 20%		BTS-1 Meg.	Sync. Amp. Grid
R50	3900Ω		BTS-3900	Sync. Amp. Cathode
R51	2200Ω 20%		BTS-2200	Sync. Amp. Plate
R52	6800Ω		BTS-6800	Sync. Amp. Plate
R53	47KΩ 20%		BTS-47K	Sound IF Amp. Grid
R54	100Ω 20%		BTS-100Ω	Parasitic Suppressor-See Note 3
R55	82Ω		BTS-82	Sound IF Amp. Cathode-See Note 3
R56	47KΩ 20%		BTA-47K	Sound IF Amp. Screen
R57	1000Ω		BTS-1000	Sound IF Amp. Decoupling
R58	33KΩ		BTS-33K	Voltage Divider-See Note 3
R59	220Ω 20%		BTS-220	Balancing-See Note 3
R60	8200Ω		BTS-8200	Ratio Det. Diode Load
R61	8200Ω		BTS-8200	Ratio Det. Diode Load
R62	15KΩ 20%		BTS-15K	De-emphasis
R63	470KΩ 20%		BTS-470K	AF Amp. Grid
R64	330KΩ 20%		BTS-330K	AF Amp. Plate
R65	100KΩ 20%		BTS-100K	Audio Output Grid
R66	4700Ω 20%		BTS-4700	Voltage Divider
R67	470KΩ 20%		BTS-470K	Voltage Divider
R68	180KΩ 5%		BTS-180K-5%	Voltage Divider
R69	330KΩ		BTS-330K	Voltage Divider-See Note 4
R70	390Ω		BTB-390	Audio Output Decoupling-Wire Wound
R71	33KΩ 5%		BTS-33K-5%	Integrator
R72	8200Ω		BTS-8200	Integrator
R73	8200Ω		BTS-8200	Integrator
R74	1 Meg. 20%		BTS-1 Meg.	Vert. Osc. Grid
R75	6.8 Meg.		BTS-6.8 Meg.	
R76	100KΩ 20%		BTS-100K	Voltage Divider
R77	2.2 Meg.		BTS-2.2 Meg.	Voltage Divider
R78	560Ω		BTS-560	Vert. Output Grid
R79	1 Meg. 20%		BTS-1 Meg.	Vert.

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

If receiver is to be aligned with picture tube removed, the high voltage lead should be securely taped and dressed away from the chassis.

VIDEO IF ALIGNMENT

Remove the converter tube V2 from its socket, and replace with a 6J6 with pin 1 removed to prevent erroneous indications. Turn the contrast control fully counter-clockwise.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
Direct	High side to ungrounded tube shield floating over "dummy" converter tube (V2). Low side to chassis.	24MC (Unmod.)	Any	DC Probe to Point \diamond . Common to chassis.	A1	Adjust for maximum deflection.
Direct	"	22MC	"	"	A2	"
Direct	"	24.3MC	"	"	A3	"
Direct	"	22.9MC	"	"	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	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
Direct	High side to ungrounded tube shield floating over "dummy" converter tube (V2). Low side to chassis.	23MC (10MC SWP)	20.25MC 22MC 24.75MC	Any	Vert. Amp. to Point \diamond . Common to chassis.		Check for response curve similar to figure 1. The 22MC and 24.75MC markers should be at 50% response. If necessary, slightly retouch A1 thru A4 for proper response.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

It should be noted that the common lead of the VTVM is at a potential of approximately 140 volts with respect to chassis, avoid touching or grounding the VTVM case.

NOTE: On some models A7 and A8 are interchanged physically, i.e., A8 may be either on top or the bottom of the discriminator transformer.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
.01MFD	High side to pin 4 (Grid) of 6AC7 (V7). Low side to chassis.	4.5MC (Unmod.)	Any	DC Probe to Point \diamond . Common to Point \diamond .	A5, A6, A7	Adjust for maximum deflection.
.01MFD	"	"	"	DC Probe to Point \diamond . Common to Point \diamond .	A8	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 120 % sawtooth voltage in scope for horizontal deflection.

NOTE: On some models A7 and A8 are interchanged physically, i.e., A8 may be either on top or the bottom of the discriminator transformer.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
.01MFD	High side to pin 4 (Grid) of 6AC7 (V7). Low side to chassis.	4.5MC (450KC SWP)	4.5MC	Any	Vert. Amp. to Point \diamond . Low side to chassis.	A5, A6, A7	Disconnect stabilizer capacitor C6. Adjust for maximum amplitude and symmetry as per figure 2.
.01MFD	"	"	"	"	Vert. Amp. to Point \diamond . Low side to chassis.	A8	Reconnect capacitor C6. Adjust A8 to place 4.5MC at center of crossover lines as per figure 3. SLIGHTLY retouch A7 for maximum amplitude and straightness of crossover lines.

RF AND MIXER ALIGNMENT

Connect a short from junction of R18 and C25 to chassis.

The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	207MC (10MC SWP)	205.25MC 209.75MC	12	Vert. Amp. thru 10KΩ to Point \diamond . Low side to chassis.	A9, A10, A11	Adjust for response curve similar to figure 4 with markers as shown.
"	"	213MC (10MC SWP)	211.25MC 215.75MC	13	"		Check for response curve similar to figure 4. If markers fall below 80% on any channel, make slight adjustment of A9, A10, and A-11 with channel selector 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			

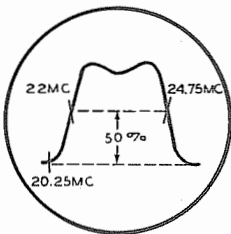


FIG. 1

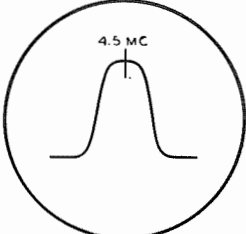


FIG. 2

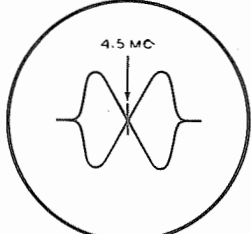


FIG. 3

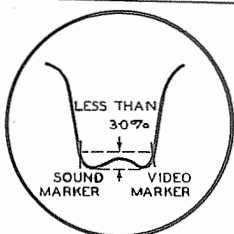


FIG. 4

ALIGNMENT INSTRUCTIONS (CONT.)

OSCILLATOR ALIGNMENT							
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 A12. It should be noted that this is an all channel oscillator circuit adjustment and should not be adjusted for any individual channel. If adjustment of A12 will not bring all channels within the range of the fine tuning control, it will be necessary to adjust the individual channel oscillator adjustment for each channel that is off frequency. The individual channel oscillator screws are reached through a hole just to the right of the channel selector switch shaft. The correct adjustment screw is accessible through this hole as the channel selector switch is turned to each channel. Remove the dummy converter tube and replace the original 6J6 in its socket. Set the fine tuning control to the mid-position of its range.							
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10. Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP) 207MC (10MC SWP) 201MC (10MC SWP) 195MC (10MC SWP) 189MC (10MC SWP) 183MC (10MC SWP) 177MC (10MC SWP) 85MC (10MC SWP) 79MC (10MC SWP) 69MC (10MC SWP) 63MC (10MC SWP) 57MC (10MC SWP)	211.25MC 215.75MC 205.25MC 209.75MC 199.25MC 203.75MC 193.25MC 197.75MC 187.25MC 191.75MC 181.25MC 185.75MC 175.25MC 179.75MC 83.25MC 87.75MC 77.25MC 81.75MC 67.25MC 71.75MC 61.25MC 65.75MC 55.25MC 59.75MC	13 12 11 10 9 8 7 6 5 4 3 2	Vert. Amp. to Point A. Low side to chassis.	A13 A14 A15 A16 A17 A18 A19 A20 A21 A22 A23 A24	Adjust to place sound marker as shown in figure 5. The video marker should be at 50% response.

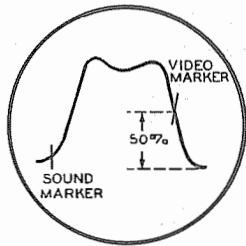
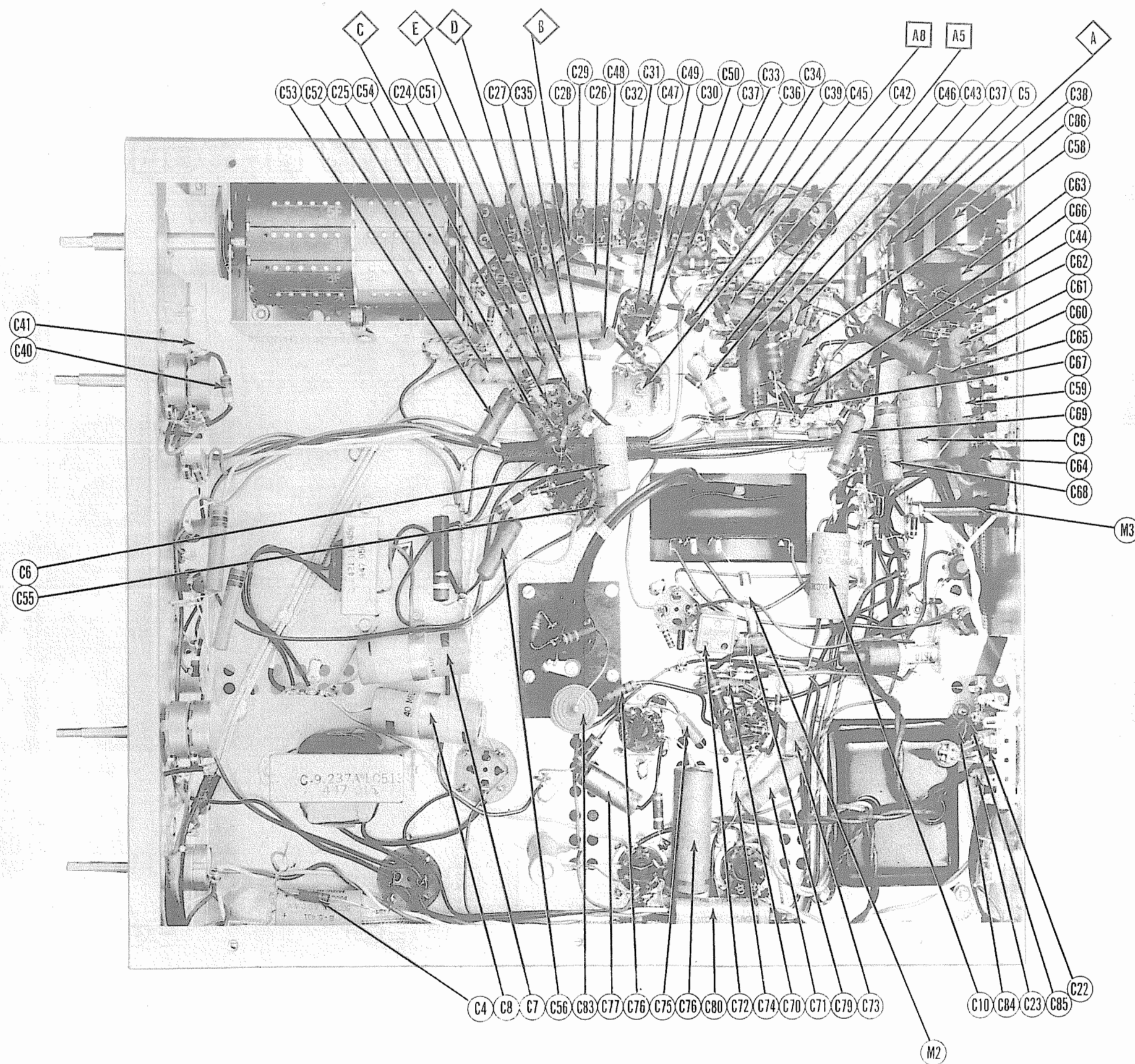


FIG. 5

MAJESTIC MODELS 12C4, 12C5, 12T2, 12T3,
16C4, 16C5, 16K1/63-3019, 16T2, 16T3



CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION