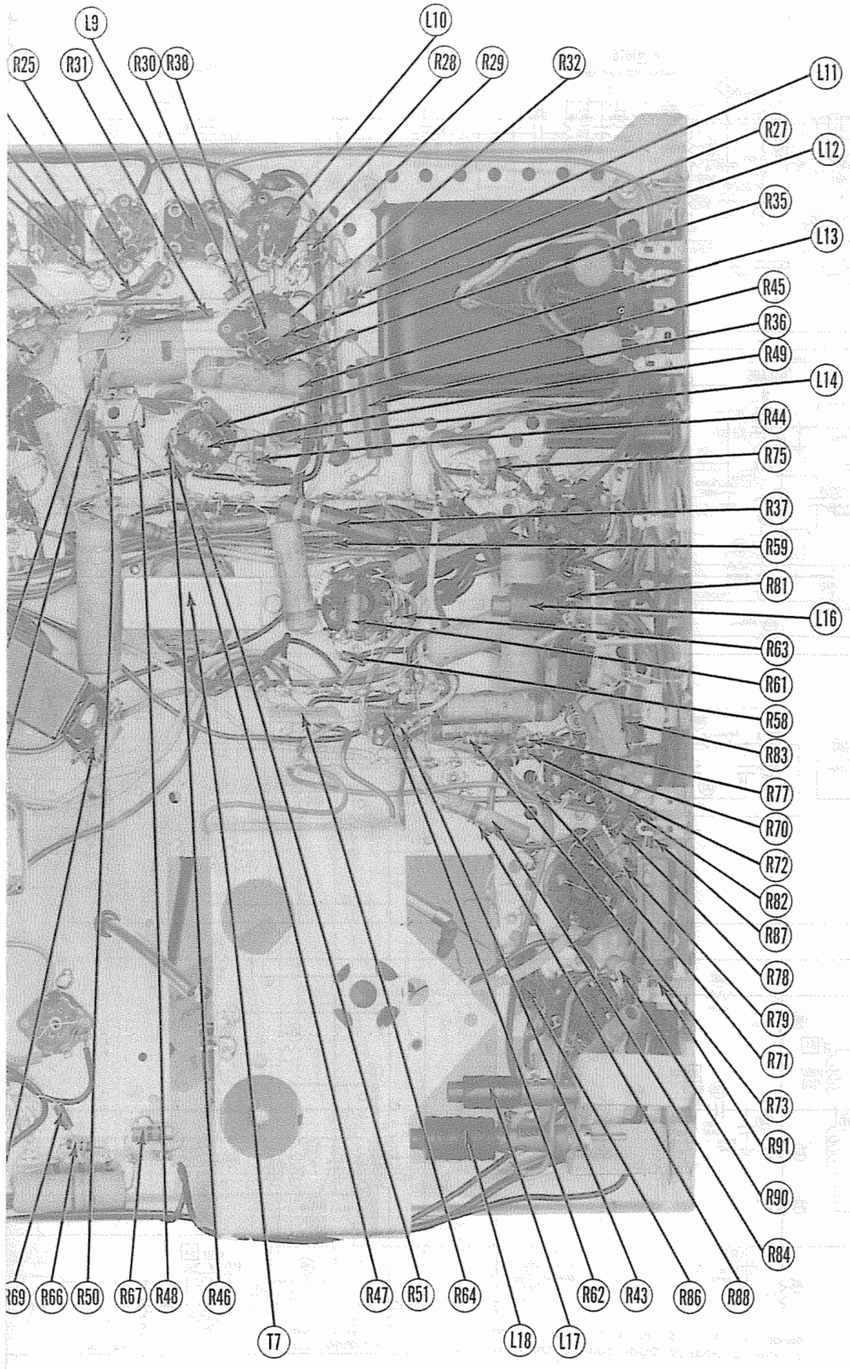


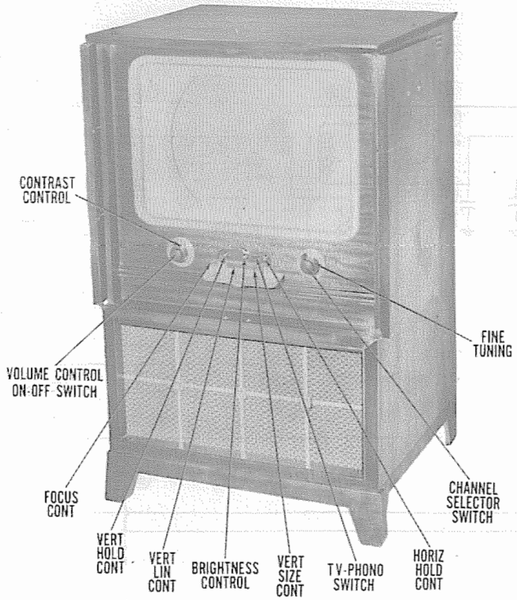
OR AND INDUCTOR IDENTIFICATION

PHOTOFACT* Folder

*TRADE MARK

MAJESTIC MODELS 17DA, GA, HA, 120, 121, B, 141, B, C, 142, B, 160, B, 162, 163, 170, 902, 903, 910, 911, 1400, B, 1401, 1600, B, 1605, B, 1610, B, 1710

MAJESTIC MODELS 17DA, GA, HA, 120, 121, B, 141, B, C, 142, B, 160, B, 162, 163, 170, 902, 903, 910, 911, 1400, B, 1401, 1600, B, 1605, B, 1610, B, 1710

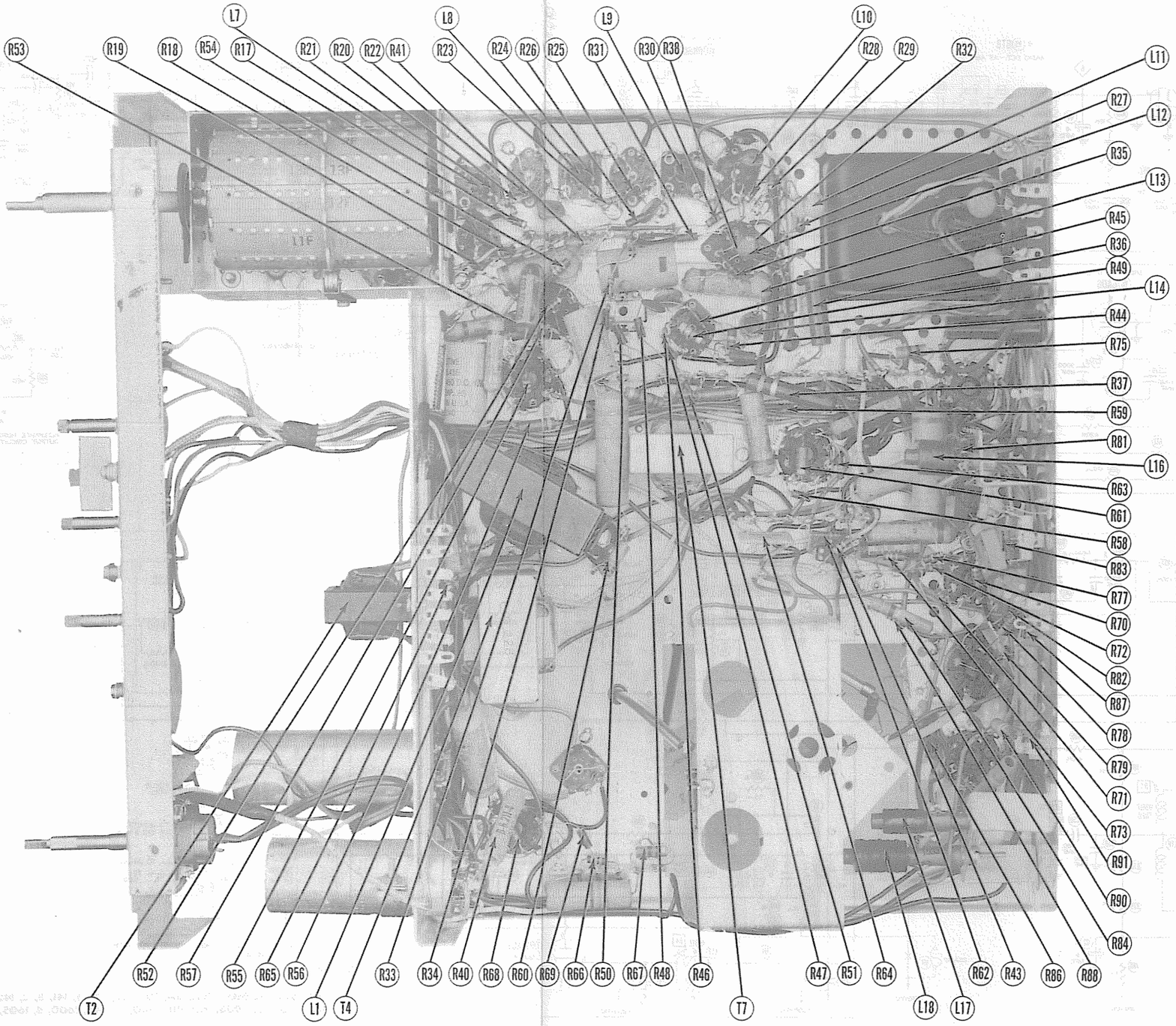


MAJESTIC MODEL 1610A

TRADE NAME	MAjestic	Series	Models
		99	120, 121, B
		100	141, B, 142, B, 1400, B,
		101	17DA, GA, HA, 141C, 160, B, 162, 163, 170, 1600, B, 1710
		102	1605, B, 1610, B
		103	902, 903, 910, 911
		105	1401
MANUFACTURER	Majestic Radio And Television, Div. of Wilcox-Gray Corp., 70 Washington St. Brooklyn, N.Y.		
TYPE SET	Television Receiver		
TUBES	Twenty		
POWER SUPPLY	110-120 Volts AC 60 Cycle		
RATING	1.6 Amp. @ 117 Volts AC		
TUNING RANGE	Channels 2 thru 13		

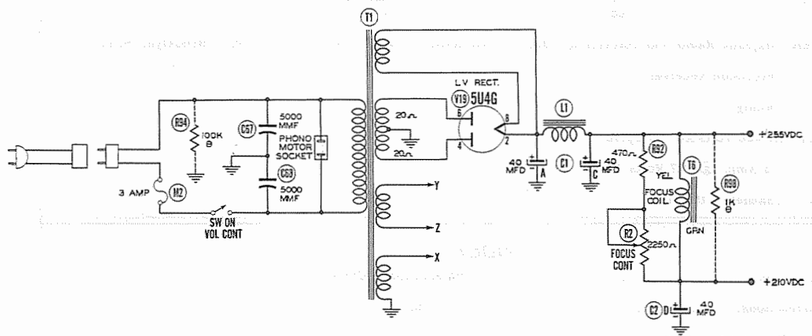
INDEX

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



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

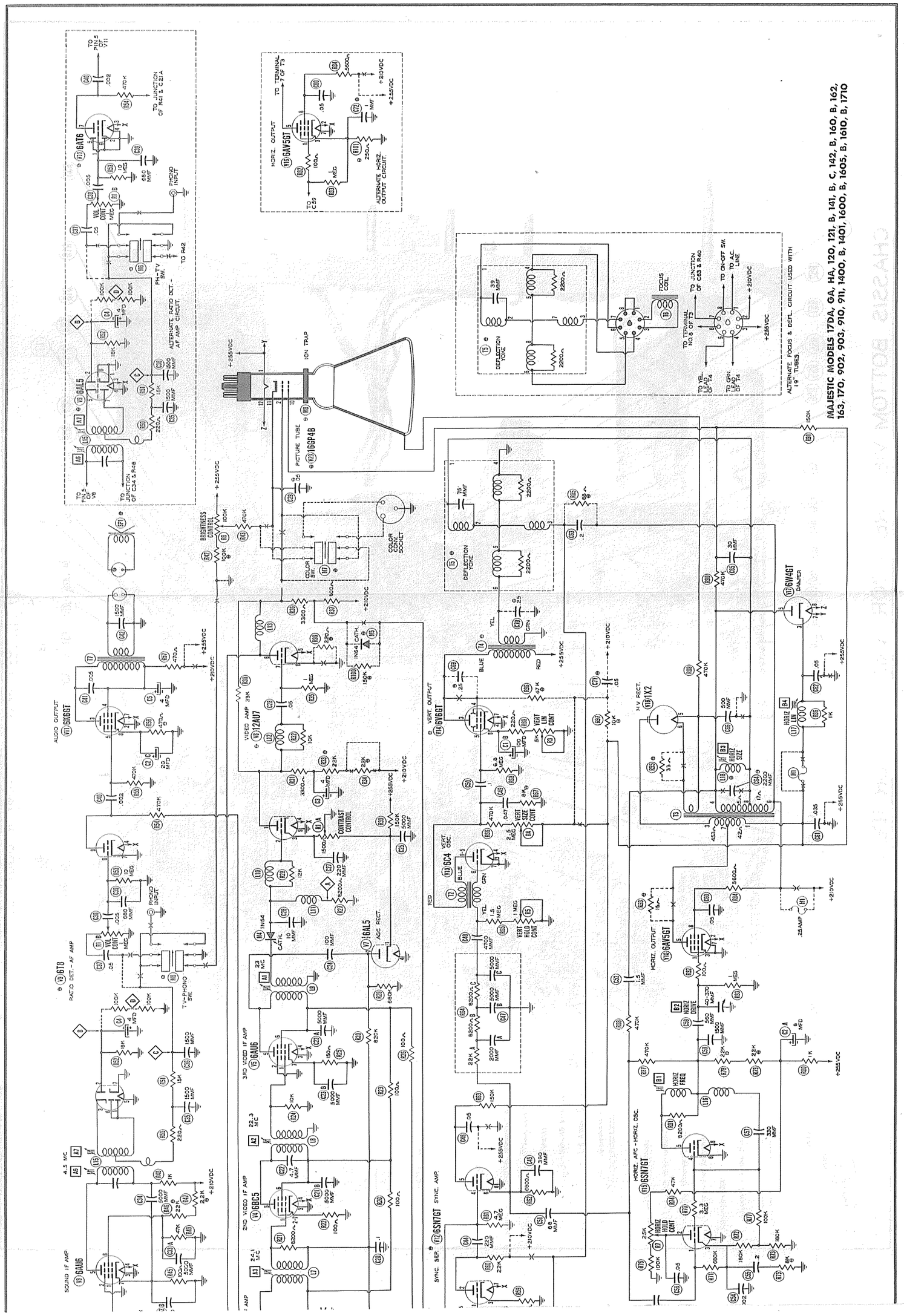
THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE



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

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

MAJESTIC MODELS 17DA, GA, HA, 120, 121, B, 141, B, C, 142, B, 160, B, 162, 163, 170, 902, 903, 910, 911, 1400, B, 1401, 1600, B, 1605, B, 1610, B, 1710



RF TUNER-RIGHT SIDE

RF TUNER-BOTTOM VIEW

CHASSIS TOP VIEW

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

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	90VDC	90VDC	0V		
V 2	6J6	85VDC	70VDC	6.3VAC	0V	-1.7VDC	§-4.4VDC	0V		
V 3	6BC5	-.4VDC	.6VDC	0V	6.3VAC	100VDC	100VDC	.6VDC		
V 4	6BC5	-.4VDC	.4VDC	0V	6.3VAC	105VDC	105VDC	.4VDC		
V 5	6AU6	0V	0V	0V	6.3VAC	107VDC	107VDC	1.2VDC		
V 6	12AU7	105VDC	-.1VDC	3.8VDC	6.3VAC	6.3VAC	130VDC	-.2VDC	0V	0V
V 7	6AL5	0V	-3VDC	6.3VAC	0V	0V	0V	-.6VDC		
V 8	6AU6	0V	0V	0V	6.3VAC	210VDC	70VDC	.5VDC		
V 9	6T8	-.6VDC	-1VDC	-.6VDC	6.3VAC	0V	-.6VDC	0V	-.8VDC	50VDC
V 10	NOT USED IN ALL MODELS									
V 11	6K6GT	0V	0V	195VDC	204VDC	0V	215VDC	6.3VAC	13VDC	
V 12	6SN7GT	.1VDC	110VDC	3.3VDC	-3VDC	155VDC	3.2VDC	6.3VAC	0V	
V 13	6C4	170VDC 40VDC	0V	0V	6.3VAC	170VDC 40VDC	-40VDC -2.4VDC	0V		
V 14	6V6GT	0V	0V	260VDC 230VDC	260VDC 230VDC	0V	215VDC	6.3VAC	30VDC 6VDC	
V 15	6SN7GT	-1.8VDC -2.5VDC	170VDC 130VDC	4.3VDC -.8VDC	-55VDC	165VDC	0V	0V	6.3VAC	
V 16	6AV5GT	-18VDC	6.3VAC	0V	0V	•	0V	0V	135VDC	
V 17	6W4GT	215VDC	0V	240VDC	0V	215VDC	0V	¶	¶	
V 18	1X2	• DO NOT MEASURE								
V 19	5U4G	0V	275VDC	0V	295VAC	255VDC	295VAC	255VDC	275VDC	
V 20	16GP4B	¶	135VDC	PIN 10 225VDC	PIN 240VDC	11 120VDC	PIN 12 ¶			

FOCUS CONTROL COUNTERCLOCKWISE
TV-PHONO SWITCH IN TV POSITION
§ TAKEN WITH VACUUM TUBE VOLTMETER
‡ 6.3VAC MEASURED ACROSS FILAMENTS
• DO NOT MEASURE

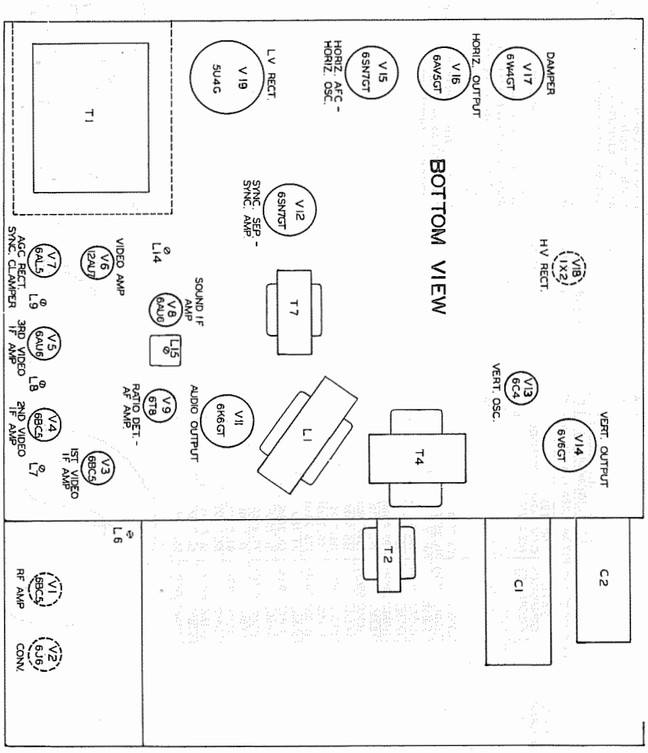
RESISTANCE READINGS

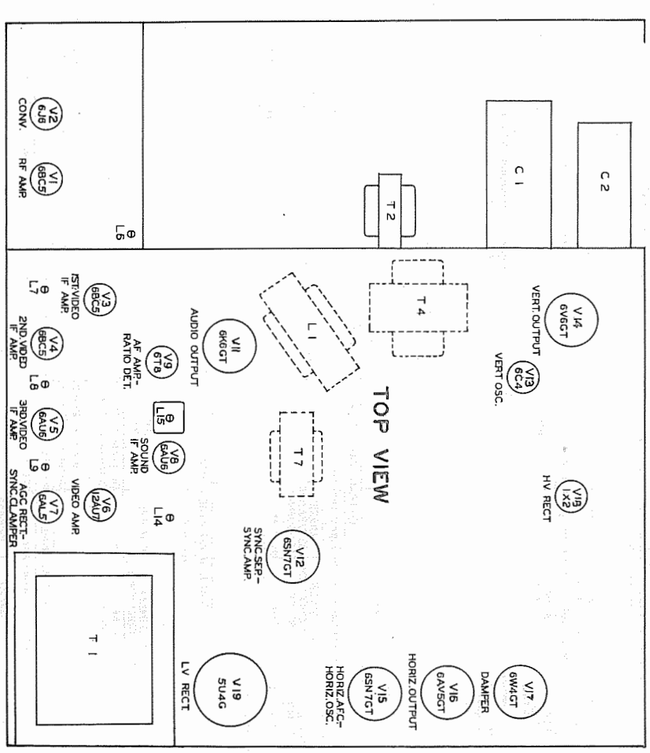
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BC5	1.5Meg	0Ω	.1Ω	0Ω	+5.3KΩ	+5.3KΩ	0Ω		
V 2	6J6	†7.8KΩ	+18KΩ	.1Ω	0Ω	225KΩ	10KΩ	0Ω		
V 3	6BC5	1.5Meg	82Ω	0Ω	.1Ω	+3.3KΩ	+3.3KΩ	82Ω		
V 4	6BC5	1.5Meg	100Ω	0Ω	.1Ω	+3.2KΩ	+3.2KΩ	100Ω		
V 5	6AU6	.4Ω	0Ω	0Ω	.1Ω	+3.1KΩ	+3.1KΩ	150Ω		
V 6	12AU7	+20KΩ	6.5KΩ	1.5KΩ	.1Ω	.1Ω	+5.1KΩ	1Meg	0Ω	0Ω
V 7	6AL5	0Ω	4.7Meg	.1Ω	0Ω	0Ω	0Ω	680KΩ		
V 8	6AU6	47KΩ	0Ω	0Ω	.1Ω	+1.3KΩ	+25KΩ	100Ω		
V 9	6T8	Inf.	18KΩ	Inf.	.1Ω	0Ω	Inf.	0Ω	10Meg	+175KΩ
V 10	NOT USED IN ALL MODELS									
V 11	6K6GT	Inf.	0Ω	+1.2KΩ	+750Ω	470KΩ	+270Ω	.1Ω	470Ω	
V 12	6SN7GT	1Meg	+22KΩ	560Ω	4.7Meg	▲150KΩ	6.8KΩ	.1Ω	0Ω	
V 13	6C4	▲470KΩ ▲3Meg	0Ω	0Ω	.1Ω	▲470KΩ ▲3Meg	1.5Meg 2.5Meg	0Ω		
V 14	6V6GT	Inf.	0Ω	†770Ω	+770Ω	6.8Meg	+300Ω	.1Ω	5.2KΩ 220Ω	
V 15	6SN7GT	800KΩ	+45KΩ +50KΩ	360KΩ	280KΩ	+45KΩ	0Ω	0Ω	.1Ω	
V 16	6AV5GT	1 Meg	.1Ω	0Ω	Inf.	▲65Ω	Inf.	0Ω	†5.9KΩ	
V 17	6W4GT	+300Ω	Inf.	+620KΩ	Inf.	+300Ω	Inf.	+72Ω	+72Ω	
V 18	1X2	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	TOP CAP ▲515Ω
V 19	5U4G	Inf.	35KΩ	Inf.	20Ω	+72Ω	20Ω	+72Ω	35KΩ	
V 20	16GP4B	+72Ω	+5.1KΩ	PIN 10 ▲150KΩ	PIN 500KΩ	11 600KΩ	PIN 12 +72Ω			

FOCUS CONTROL COUNTERCLOCKWISE
TV-PHONO SWITCH IN TV POSITION
† MEASURED FROM PIN 2 OF V19
▲ MEASURED FROM PIN 3 OF V17

1. DC Voltage meosurements 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.

TUBE PLACEMENT CHART





MAJESTIC MODELS 17DA, GA, HA, 120, 121, B, 141, B, G, 142, B, 160, B, 162, 163, 170, 902, 903, 910, 911, 1400, B, 1401, 1600, B, 1603, B, 1610, B, 1710

PARTS LIST AND DESCRIPTIONS (Continued)

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 c/s)	MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	220MA	72Ω	2.5H	C-9.237-3	C-2325 ①	C2991	TR3300 ①	① Drill one new mounting hole

COILS (RF-IF)

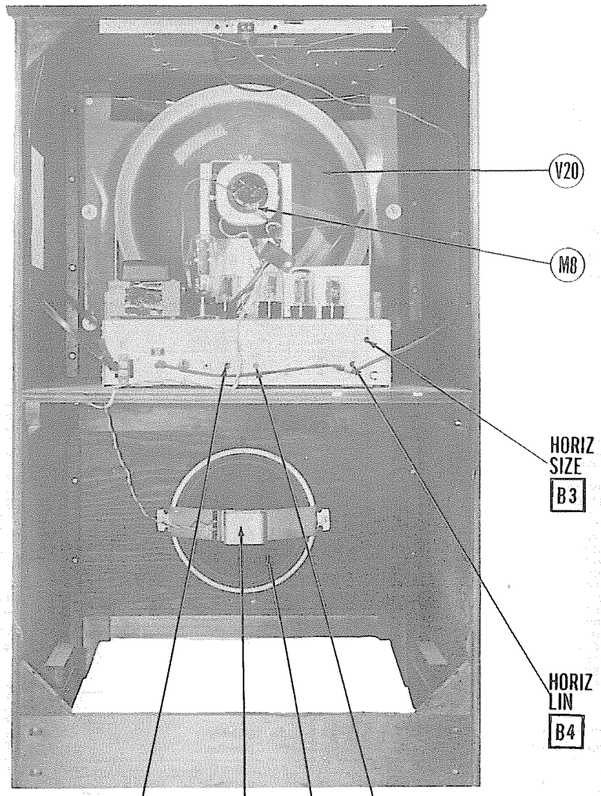
ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	MAJESTIC PART No.	MEISSNER PART No.	
L2	Ant. Coil	0Ω	0Ω			Part of Tuner.—Refer to Misc. Section
L3	Fil. Choke	0Ω				Part of Tuner
L4	RF, Mixer Grid and Osc. Coils	0Ω				Part of Tuner.—Refer to Misc. Section
L5	Fil. Choke	0Ω				Part of Tuner
L6	1st Video IF	1Ω				Part of Tuner
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	8.6Ω		C-1.522-3		Blue Dot
L11	Peaking	15Ω		C-1.522-2		Green Dot
L12	Peaking	8.6Ω		C-1.522-3		Blue Dot
L13	Peaking	7Ω		C-1.522-4		Yellow Dot
L14	Sound IF	3.8Ω		C-1.529-1		
L15	Ratio Det. Trans.	4Ω	1.5Ω	C-1.528-1		
L16	Horiz. Osc. Coil	125Ω		B-1.530		Tap AT 35Ω
L17	Horiz. Lin.	20Ω		B-1.531		
L18A	Horiz. Size	35Ω		B-1.533-1		101, 102 Series
B	Horiz. Size			B-1.532-1		99-100 Series

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				REMARKS
			MAJESTIC PART No.		LITTELFUSE PART No.		
			FUSE	HOLDER	FUSE	HOLDER	
M1	3AG	1/4A		B36.131	318.250		
M2	3AG	3A			312003	341001	

MISCELLANEOUS

ITEM No.	PART NAME	MAJESTIC PART No.	NOTES
M3A	RF Tuner	D-36.137-2	Turret Type
B	RF Tuner	E36.143	Alternate
M4	Crystal		Video Det. (1N-64)
M5	Crystal		DC Restorer (1N-64) (Not used in all models)
M6	Switch	B-11.210	TV-Phono. (Not used in all models)
M7	Switch		Color TV (Not used in all models)
			TYPE TUBE AND MANUFACTURER:
M8A	Ion Trap	C-36.144-1	Sylvania, G.E., Fidelity, Haydu, (Rectangular 14CP4); Haydu, (Rect. 14DP4); G.E., Haydu, Tel-O-Tube, (Rect. 16RP4); Eureka, N.U., Taylor, (Rect. 16TP4); Thomas, Tel-O-Tube, (Rect. 16RP4); G.E., Sheldon, N.U., Tel-O-Tube, (Rect. 17BP4); Haydu, American Tel., (Rect. 17AP4); Dumont, (Round Metal New Type 19AP4)
B	Ion Trap	C-36.139	Dumont, (Round metal old type 19AP4)
C	Ion Trap	C-36.144-3	Sarkes Tarzian, (Round metal new type 19AP4); Sarkes Tarzian, (Rect. 16TP4)
D	Ion Trap	C-36.144-2	American Tel., Thomas, Sheldon, (Rect. 16RP4); Tel-O-Tube, (Rect. 14DP4); RCA, Rauland, (Round Metal 16GP4)
E	Ion Trap	C-36.144-4	N.U., American Tel., (Round 12LP4); Sheldon, (Rect.14BP4)
F	Ion Trap	C-36.144-6	Dumont, (Rect. 14CP4)
	REPLACE MENT COILS FOR TURRET TYPE TUNER PART NO. D-36.137-2:		
	Ant. Coil	B-36.141-2	Channel 2
		B-36.141-3	" 3
		B-36.141-4	" 4
		B-36.141-5	" 5
		B-36.141-6	" 6
		B-36.141-7	" 7
		B-36.141-8	" 8
		B-36.141-9	" 9
		B-36.141-10	" 10
		B-36.141-11	" 11
		B-36.141-12	" 12
		B-36.141-13	" 13
	RF, Mixer Grid and Osc. Coils	B-36.141-102	Channel 2
		B-36.141-103	" 3
		B-36.141-104	" 4
		B-36.141-105	" 5
		B-36.141-106	" 6
		B-36.141-107	" 7
		B-36.141-108	" 8
		B-36.141-109	" 9
		B-36.141-110	" 10
		B-36.141-111	" 11
		B-36.141-112	" 12
		B-36.141-113	" 13
B2	Trimmer	B-4.119-2	Horiz. Drive (40-370 MMF)
	Safety Glass	D-26.565	Model 1610
	Safety Glass	D-26.614	Models 120, 121
	Safety Glass	D-26.615	Model 141
	Safety Glass	D-26.621	Models 150, 1600
	Safety Glass	D-26.624	Models 142, 1400
	Safety Glass	D-26.631	Model 1605



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station preferably a test pattern.

Turn the contrast control to the mid-position of its range.

Turn the horizontal hold control fully clockwise. Adjust the horizontal frequency slug (B1) until picture synchronizes, then turn B1 counter-clockwise until it just falls out of sync.

Adjust the horizontal drive trimmer (B2) for the best compromise between brightness and horizontal linearity. If any white vertical lines appear in picture adjust B2 until they disappear.

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

Adjust the horizontal linearity slug (B4) for best linearity of inner circles of test pattern. A slight readjustment of B2 may be necessary for optimum results.

DISASSEMBLY INSTRUCTIONS

1. Remove four push-on type control knobs.
2. Remove two 1/4" hex head screws holding rear cover in place. Remove rear cover.
3. Disconnect built-in antenna.
4. Disconnect speaker lead.
5. Remove interlock.
6. Remove six 1/4 X 20 bolts holding chassis in cabinet. Remove chassis.
7. Remove two 5/16" hex nuts from speaker. Remove speaker.

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

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: MAJESTIC PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	NOTES
V1A	RF Amplifier	6BC5	6BC5	7BD	
B	RF Amplifier	6AG5	6AG5	7BD	
C	RF Amplifier	6CB6	6CB6	7CM	
V2	Converter	6J6	6J6	7BF	
V3	1st. Video IF Amp.	6BC5	6BC5	7BD	
V4	2nd. Video IF Amp.	6BC5	6BC5	7BD	
V5	3rd. Video IF Amp.	6AU6	6AU6	7BK	
V6A	Video Amplifier	12AU7	12AU7	9A	
B	Video Amplifier	12BH7	12BH7	9A	
V7	AGC Rectifier-Sync. Clamp.	6AL5	6AL5	6BT	
V8	Sound IF Amp.	6AU6	6AU6	7BK	
V9A	Ratio Detector-AF Amplifier	6T8	6T8	9E	
B	Ratio Detector	6AL5	6AL5	6BT	
V10A	AF Amplifier	6AT6	6AT6	7BT	
B	AF Amplifier	6AV6	6AV6	7BK	Alternate
V11	Audio Output	6K6GT	6K6GT	7S	
V12A	Sync. Seperator-Sync. Amplifier	6SN7GT	6SN7GT	8BD	
B	Sync. Separator-Sync. Amplifier	12AU7	12AU7	9A	
V13	Vert. Oscillator	6C4	6C4	6BG	
V14A	Vert. Output	6V6GT	6V6GT	7AC	Used in chassis series 100, 101, 103, 105, some 102.
B	Vert. Output	6W6GT	6W6GT		Used only in series 102.
C	Vert. Output	6K6GT	6K6GT	7S	Used in series 99.
V15	Horiz. AFC-Horiz. Oscillator	6SN7GT	6SN7GT	8BD	
V16	Horiz. Output	6AV5GT	6AV5GT	6CK	
V17	Damper	6W4GT	6W4GT	4CG	
V18	HV Rectifier	1X2	1X2	7CB	
V19	LV Rectifier	5U4G	5U4G	5T	Models 1610
V20A	Picture Tube	16GP4B	16GP4B	12D	Models 1605, 1610
B	Picture Tube	16GP4	16GP4	12D	Models 160, 162, 1600
C	Picture Tube	16KP4	16KP4	12D	Models 160, 162, 1600
D	Picture Tube	16TP4	16TP4	12D	Models 160, 162, 1600
E	Picture Tube	16RP4	16RP4	12D	Models 120, 121
F	Picture Tube	12LP4	12LP4	12D	Models 141, 142, 1400, 1401
G	Picture Tube	14BP4	14BP4	12D	Models 141, 142, 1400, 1401
H	Picture Tube	14DP4	14DP4	12D	Models 141, 142, 1400, and 1401
I	Picture Tube	14CP4	14CP4	12D	Models 17DA, 17GA, 17HA, 1710
J	Picture Tube	17AP4	17AP4	12D	Models 17DA, 17GA, 17HA, 1710
K	Picture Tube	17BP4	17BP4	12D	Models 902, 903, 910, 911
L	Picture Tube	19AP4	19AP4	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.	RATING: VOLT	REPLACEMENT DATA: MAJESTIC PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	40	450	C-5.435-1	AFH88J16B		UPT4445V		TVL-3764	▲Filter
B	100	50				10			■Vert. Output Cath.
C	40	450							▲Filter
C2A	8	450	C-5.435-2	AFH862J4A		UPT44145		TVL-4736	▲Decoupling
B	40	450				V12			■Decoupling
C	20	25							▲Output Cath. Filter
D	40	450							
C3	4	450	B-	PRS450/4		BR445		TVA-1702	V. Amp. Dec.
C4	4	50	C-5.430-1	PRS150/4		BR550		TVA-1303	Stablizing Cap.
C5	4	450	B-5.418	PRS450/4		BR445		TVA-1702	Output Decoupling
C6	3-9								Variable Trimmer
C7	.5-3				829-3				Variable Trimmer
C8	120			SI120	D6-121		GP2K-120	19C29	RF Amp. Dec.
C9	1000			SI1000	D6-102		GP24-001	19C1	RF Amp. Fil.
C10	100			SI100N750	TCN-100		N750L-100	29C16	RF Coupling
C11	.5-3				829-3				Variable Trimmer
C12	20			SI20NPO	TCZ-20		NPOK-20		Osc. Grid Cap
C13	10			SI10N740	TCN-10		N750K-10	19C4	Fixed Trimmer
C14	.5-3				829-3				Variable Trimmer
C15A	1000		BPD-2X001		DD-2-102		8I2-2X001	29C7	RF Bypass
B	1000								Conv. Fil. Bypass
C16	10			SI10NPO	TCZ-10		NPOK-10	19C3	Fixed Trimmer
C17	120	500		SI120	DC-121		GP2K-120	19C29	IF Coupling
C18A	5000		B-4.125-1	BPD-2X004	DD-2-502	ID5D5	822-2X004	36C21	AGC Filter
B	5000					ID5D5			1st V. IF Dec.
C19	5000		B-4.115-1	BPD-005	DD-502	ID5D5	811-005	29C1	RF Bypass
C20	.1	400	D-3.100-23	P488-1	DF-104	PTE4P1		4TM-P1	AGC Filter
C21A	5000		B-4.125-1	BPD-2X004	DD-2-502	ID5D5	822-2X004	36C21	RF Bypass
B	5000					ID5D5			2nd V. IF Dec.
C22	4.7		C-4.111-6	SI4.7NPO	TCE-4.7		NPOK-4.7		Fixed Trimmer
C23A	5000		B-4.125-1	BPD-2X004	DD-2-502	ID5D5	822-2X004	36C21	3rd V. IF Dec.
B	5000					ID5D5			3rd V. IF Cath.
C24	100		C-4.109-10	SI100	D6-101	5W5T1	GP1K-100	19C11	IF Coupling
C25	5000		B-4.115-1	BPD-005	DD-502	ID5D5	811-005	29C1	DAGC Dec.
C26	10		C-4.109-16	SI10	D6-100	5W5Q1	GP1K-10	19C3	V. Diode Filter
C27	220		C-4.109-11	SI220	D6-221	5W5T25	GP2K-220	19C13	V. Amp. Cath.
C28	.05	400	D-3.100-19	P488-05	DF-503	PTE4S5		4TM-S5	Video Coupling
C29	.05	400	D-3.100-19	P488-05	DF-503	PTE4S5		4TM-S5	Pic. Tube Cath. †
C30	2.2		C-4.111-4		TCZ-2.2				S. IF Coupling
C31	39	500	D-4.104-21	1469-00001	TCZ-39	5R5Q4	GP1K-49	MS-44	S. IF Coupling
C32	4.7		C-5.111-6	SI4.7NPO	TCZ-4.7		NPOK-4.7		Fixed Trimmer
C33A	5000		B-4.125-1	BPD-2X004	DD-2-502	ID5D5	822-2X004	36C21	S. IF Screen
B	5000					ID5D5			S. IF Cath.
C34	5000		B-4.115-1	BPD-005	DD-502	ID5D5	811-005	29C1	S. IF Plate Dec.
C35	1500		D-4.108-12	SI1500	D6-152	1W5D15	GP2L-0015	29C8	Diode Load Cap
C36	1500		B-4.115-1	SI1500	D6-152	1W5D15	GP2L-0015	29C8	De-Emphasis
C37	.05	400	D-3.100-19	P488-05	DF-503	PTE4S5		4TM-S5	Audio Coupling
C38	.005	600	D-3.100-4	P688-005	D6-502	PTE6D5	811-005	6TM-D5	Audio Coupling
C39	680		C-4.109-5	SI680	D6-681	1W5T7	GP2K-680	19C17	AF Amp. Grid
C40	.022	600	D03.100-12	P688-022	DF-203	PTE6S2		6TM-S22	Audio Coupling
C41	.005	600	D-3.100-4	P688-005	D6-502	PTE6D5	811-005	6TM-D5	Output Plate
C42	1500		D-4.108-12	SI1500	D6-152	1W5D15	GP2L-0015	29C8	Fixed Trimmer
C43	.05	400	D-3.100-19	P488-05	DF-503	PTE4S5		4TM-S5	Sync Coupling
C44	220		C-4.109-11	SI220	D6-221	5W5T25	GP2K-220	19C13	Sync Coupling
C45	390	500	D-4.104-63	1469-0004	D6-391	5R5T4	GP2K-390	MS-34	Sync Amp. Cath.

CAPACITORS (CONT.)

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: MAJESTIC PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C46	.05	600	D-3.100-20	P688-05	DF-503	PTE6S5		6TM-S5	Sync Amp. Plate
C47A	2000		10.101 †	P688-002	†	PTE6D2	GP2M-002	6TM-D2	Integrator Net
B	5000			P688-005	PC-100	PTE6D5	811-005	6TM-D5	Integrator Net
C	5000			P688-005		PTE6D5	811-005	6TM-D5	Integrator Net
C48	4700	600	D-4.105-24	1467-005	D6-472	ID5D5	GP2M-0047	1FM-25	Vert. Osc. Grid
C49	.047	600	D-3.100-19	P688-047		PTE6S5		6TM-S47	Vert. Discharge
C50	.1	600	D-3.100-23	P688-1	DF-104	PTE6P1		6TM-P1	Vert. Sweep Coupling
C51	68	500	D-4.104-93	SI68	D6-680	5W5Q7	GP1K-68	19C10	Hor. Sync Coupling
C52	1.5	2000	D-4.108-17						Hor. Feedback
C53	.002	600	D-3.100-2	P688-002	D6-202	PTE6D2	GP2M-002	6TM-D2	Hor. Sync Coupling
C54	.002	600	D-3.100-2	P688-002	D6-202	PTE6D2	GP2M-002	6TM-D2	AFC Filter
C55	.2	400	D-3.100-40	P488-22		GT4P2		4TM-P22	AFC Filter
C56	.05	400	D-3.100-19	P488-05	DF-503	PTE4S5		4TM-S5	Hor. AFC Plate
C57	330	500	D-4.104-59	1469-00035	D6-331	5R5T3	GP2K-330	MS-33	Hor. Osc. Grid
C58	1500	500	D-4.105-10	1467-0015	D6-152	1W5D15	GP24-0015	1FM-215	Hor. Discharge
C59	560	500	D-4.104-70	SI560	D6-560	5R5T5	GP2K-560	MS-35	Hor. Sweep Coupling
C60	.05	600	D-3.100-2	P688-05	DF-503	PTE6S5		6TM-S5	Hor. Output Screen Damper Filter
C61	.035	600	D-3.100-46	P688-033					Damper Filter
C62	.05	600	D-3.100-20	P688-05		PTE6S5		6TM-S5	Damper Filter
C63	.2	400	D-3.100-40	P488-22		GT4P2		4TM-P22	Hor. Sweep Coupling
C64	2200	500							Fixed Trimmer *
C65	30	2000	B-4.127-1						Hor. Sweep Coupling
C66	500	20000	B-4.128	HV20C	TV3-502				H. V. Filter
C67	5000		B-4.115-1	BPD-005	DD-502	ID5D5	811-005	29C1	Line Filter
C68	5000		B-4.115-1	BPD-005	DD-502	ID5D5	811-005	29C1	Line Filter
C69	.25	600	D-3.100-32	684-25		GT6P25		6TM-P25	Vert. Output Plate *
C70	.25	200	D-3.100-30	P488-25		GT2P25		2TM-P25	Fixed Trimmer *
C71	.05	600	D-3.100-19	P688-05	DF-503	PTE6S5		6TM-S5	Decoupling *
C72	1	150	D-3.100-53	684-1.0		GT2W1		2TM-M1	Hor. Output Cath. §

† Items C47A, C47B, C47C, R64A, R64B, and R64C are combined into one unit.
* Not used in all models
† Some models use .2 MFD in this application.
§ Used only on 99-100 Series.

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: MAJESTIC PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1A	1500Ω	1/2	C-8.230-1		RTV-233		Contrast Control - Panel
B	1Meg	1/2					Volume Control and SW - Rear
R2	2250Ω	4	C-8.221		RTV-9		Focus Control - Wire Wound
R3	5000Ω	1	C-8.206-6		43-5000		Vert Linearity Control - Wire Wound
R4A	2.5Meg	1/2	C-8.219-5	Q11-239	AG-84-S	B83	Vertical Size Control
B	Shaft		Not Req	Not Req	FKS-1/4	Not Req	Attach to R4A Per Instructions
R5A	1Meg	1/2	C-8.229-2	Q11-137	AG-61-S	B-69	Vertical Hold Control
B	Shaft		Not Req	Not Req	RS-2	Not Req	Attach to R5A Per Instr.
R6A	100KΩ	1/2	C-8.229-3	Q11-128	AG-49-S	B-40	Brightness Control
B	Shaft		Not Req	Not Req	RS-2	Not Req	Attach to R6A Per Instr.
R7A	25KΩ	1/2	C-8.229-1	Q11-120	AG-40-S	B-26	Horizontal Hold Control
B	Shaft		Not Req	Not Req	RS-2	Not Req	Attach to R7A Per Instr.

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: MAJESTIC PART No.	IRC PART No.	IDENTIFICATION CODES ALL RESISTORS ±10% UNLESS OTHERWISE STATE
R8	3900Ω	1/2		BTS-3900	Antenna Coil Shunt
R 9	47KΩ 20%	1/2		BTS-47K	AGC Network
R 10	2200Ω 20%	1/2		BTS-2200	RF Amp Decoup
R 11	10KΩ	1/2			RF Coil Shunt
R 12	4700Ω 20%	1/2			Mixer Grid
R 13	220KΩ 20%	1/2			Mixer Grid
R 14	15KΩ 20%	1/2			Mixer Plate
R 15	10KΩ	1/2			Osc Grid
R 16	4700Ω	1/2		BTS-4700	Osc Plate
R 17	330Ω	1/2	D-7.101-227	BTS-336	AGC Network
R 18	4700Ω 20%	1/2	D-7.102-94	BTS-4700	1st Video IF Amp Grid
R 19	82Ω	1/2	D-7.101-235	BTS-82	1st Video IF Amp Cathode
R 20	100Ω 20%	1/2	D-7.101-226	BTS-100	1st Video IF Amp Decoup
R 21	8200Ω	1/2	D-7.101-55	BTS-8200	2nd Video IF Transformer Shunt
R 22	100Ω 20%	1/2	D-7.101-226	BTS-100	2nd Video IF Amp Cathode
R 23	100Ω 20%	1/2	D-7.101-226	BTS-100	Decoup
R 24	10KΩ 5%	1/2	D-7.101-5B		3rd Video IF Transformer Shunt
R 25	150Ω	1/2	D-7.101-204	BTS-150	3rd Video IF Amp Cathode
R 26	100Ω 20%	1/2	D-7.101-226	BTS-100	Decoup
R 27	8200Ω	1/2	D-7.101-55	BTS-8200	Video Det. Diode Load
R 28	12KΩ	1/2	D-7.101-62	BTS-12K	Video Peaking Coil Shunt
R 29	680KΩ	1/2	D-7.101-134	BTS-680K	AGC Load
R 30	820KΩ	1/2	D-7.101-138	BTS-820K	AGC Network
R 31	3300Ω 20%	1/2	D-7.101-38	BTS-3300	1st Video Amp Plate
R 32	10KΩ	1/2	D-7.101-58	BTS-10K	Video Peaking Coil Shunt
R 33	22KΩ 20%	1/2	D-7.102-81	BTA-47K	1st Video AmpPlate Decoup } See Note 4
R 34	22KΩ 20%	1/2	D-7.102-81		1st Video AmpPlate Decoup }
R 35	1Meg 20%	1/2	D-7.101-142	BTS-1Meg	2nd Video Amp Grid
R 36	3300Ω 20%	2	D-7.103-108	BTB-3300	2nd Video Amp Plate Decoup - Wire Wound
R 37	1800Ω	2		BTB-1800	2nd Video Amp Plate Decoup - Wire Wound
R 38	33KΩ 20%	1/2	D-7.101-80	BTS-33K	Voltage Divider
R 39	150KΩ	1/2		BTA-150K	Voltage Divider
R 40	2750Ω	7	B-6.211-1		Voltage Divider - Wire Wound
R 41	100Ω 20%	1/2	D-7.101-226	BTS-100	Decoup
R 42	100KΩ	1/2	D-7.101-100	BTS-100K	Voltage Divider - See Note 8
R 43	470KΩ 20%	1/2	D-7.101-129	BTS-470K	Picture Tube Cathode
R 44	47KΩ	1/2	D-7.101-87		Sound IF Amp Grid
R 45	100Ω 20%	1/2	D-7.101-226	BTS-100	Sound IF Amp Cathode
R 46	22KΩ 20%	1	D-7.102-81	BTA-47K	Sound IF Amp Screen } See Note 5
R 47	22KΩ 20%	1	D-7.102-81		Sound IF Amp Screen }
R 48	1000Ω 20%	1/2	D-7.101-17	BTS-1000	Sound IF Amp Plate
R 49	47KΩ	1/2	D-7.101-87	BTS-47K	Voltage Divider
R 50	220Ω 20%	1/2	D-7.101-234	BTS-220	Balancing
R 51	15KΩ 20%	1/2	D-7.101-66	BTS-15K	De-Emphasis
R 52	18KΩ	1/2	D-7.101-69	BTS-18K	Ratio Det. Diode Load
R 53	10Meg 20%	1/2	D-7.101-192	BTS-10Meg	AF Amp Grid
R 54	470KΩ 20%	1/2	D-7.101-129	BTS-470K	AF Amp Plate
R 55	470KΩ 20%	1/2	D-7.101-129	BTS-470K	Output Grid
R 56	470Ω	1		BTA-470	Output Cathode - See Note 1
R 57	470Ω	1		BTA-470	Output Decoup
R 58	1Meg 20%	1/2	D-7.101-142	BTS-1Meg	Sync Sep. Grid - See Note 7
R 59	560Ω	1/2	D-7.101-6	BTS-560	Sync Sep. Cathode
R 60	22KΩ 20%	1	D-7.102-81	BTA-22K	Sync Sep. Plate

RESISTORS (CONT.)

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: MAJESTIC PART No.	IRC PART No.	IDENTIFICATION CODES
R 61	4.7Meg 20%	1/2	D-7.101-179	BTS-4.7Meg	Sync Amp Grid
R 62	6800Ω 20%	1/2	D-7.101-52	BTS-6800	Sync Amp Cathode
R 63	150KΩ 20%	1/2	D-7.101-107	BTS-150K	Sync Amp Plate
R 64A	22KΩ	1/2	† 10.101		Integrator
B	8200Ω				Integrator
C	8200Ω				Integrator
R 65	1.5Meg	1/2	D-7.101-148	BTB-1.5Meg	Vertical Osc Grid
R 66	470KΩ 20%	1/2	D-7.101-129	BTS-470K	Vertical Osc Plate
R 67	8000Ω	1/2			Vertical Peaking - See Note 2
R 68	6.8Meg 20%	1/2	D-7.101-185	BTS-6.8Meg	Vertical Output Grid
R 69	220Ω 20%	1/2	D-7.101-234	BTS-220	Vertical Output Cathode
R 70	3.3Meg	1/2	D-7.101-171	BTS-3.3Meg	Voltage Divider
R 71	680KΩ	1/2	D-7.101-134	BTS-680K	Horizontal AFC Grid
R 72	180KΩ	1/2	D-7.101-111	BTS-180K	Horizontal AFC Cathode
R 73	180KΩ	1/2	D-7.101-111	BTS-180K	Horizontal AFC Cathode
R 74	47KΩ 20%	1	D-7.102-94	BTA-47K	Horizontal AFC Plate
R 75	8000Ω	1/2			Horizontal AFC Filter - See Note 2
R 76	100KΩ	1/2	D-7.101-100	BTS-100K	Voltage Divider
R 77	100KΩ 5%	1/2	D-7.101-99	BTS-100K-5%	Horizontal Osc Grid
R 78	22KΩ	1	D-7.102-81	BTA-47K	Horizontal Osc Plate Decoup See Note 6
R 79	22KΩ	1	D-7.102-81		Horizontal Osc Plate Decoup
R 80	1000Ω	1/2	D-7.101-17	BTS-1000	Decoup
R 81	8200Ω	1/2	D-7.101-55	BTS-8200	Horizontal Osc Transformer
R 82	100Ω 20%	1/2	D-7.101-226	BTB-100	Parasitic Supp.
R 83	1Meg 20%	1/2	D-7.101-142	BTS-1Meg	Horizontal Output Grid
R 84	5600Ω	2	D-7.103-118	BTB-5600	Horizontal Output Screen
R 85	68Ω	1			Voltage Divider - See Note 3
R 86	1000Ω 20%	1	D-7.102-24	BTA-1000	Horizontal Linearity Coil Shunt
R 87	470KΩ 20%	1/2	D-7.101-129	BTS-470K	Feedback Network
R 88	470KΩ 20%	1/2	D-7.101-129	BTS-470K	Feedback Network
R 89	470KΩ 20%	1	D-7.102-137		HV Filter
R 90	470KΩ	1	D-7.102-137	BTA-470K	Voltage Divider
R 91	150KΩ 20%	1/2	D-7.101-108	BTS-150K	Voltage Divider
R 92	470Ω	7	C-6.215-5		Focus Coil Shunt - Wire Wound
R 93	15Ω	1/2	C-6.212-3		Parasitic Suppressor - See Note 3
R 94	100KΩ	1/2	D-7.101-100	BTS-100K	Isolation - See Note 3
R 95	3.3Ω	1/2	C-6.212-1	BW-1/2-3.3	HV Rectifier Filament - Wire Wound - See Note 3
R 96	47KΩ	1	D-7.102-95	BTA-47K	Vertical Output Screen - See Note 3
R 97	10KΩ	1/2	D-7.101-59	BTS-10K	Decoupling - See Note 3
R 98	1000Ω	2	D-7.102-87	BTB-1000	Focus Coil Shunt - See Note 3
R 99	220Ω	1/2	D-7.101-234	BTS-220	2nd Video Amp. Cathode - See Note 3
R100	150KΩ	1/2	D07.101-108	BTS-150K	DC Restorer Diode Load - See Note 3
R101	250Ω	10	C-6.215-4	1 3/4A-250	Horizontal Output Cathode - See Note 3

† Items R64A, R64B, R64C, C47A, C47B, and C47C are combined into one unit
Note 1 Some models use 560Ω Resistor in this application
Note 2 Some models use 8200Ω Resistor in this application
Note 3 Not used in all models
Note 4 Some models may use a single 47KΩ 1watt Resistor in place of R33 and R34
Note 5 Some models may use a single 47KΩ 1 watt Resistor in place of R46 and R47
Note 6 Some models may use a single 47KΩ 1 watt Resistor in place of R78 and R79
Note 7 Some models use 68KΩ Resistor in this application
Note 8 Some models use 47KΩ Resistor in this application

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	RATING: SEC. 1	RATING: SEC. 2	RATING: SEC. 3	REPLACEMENT DATA: MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC ⑨1.6A	600VCT .220ADC	⑨3A	6.3VAC ⑨1.8A	D-9.252		P-3070	
				SEC. 4				
				6.3VAC ⑨6A				

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING: DC RESISTANCE PRI.	RATING: DC RESISTANCE SEC.	REPLACEMENT DATA: MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	NOTES
T2	160Ω	1.3KΩ	C9.230-4				Vert Block Osc Trans.
T3	495Ω Tap 42Ω	22Ω Tap 17Ω	C9.253-1 ④		HVO-6		Horizontal Output Trans.
T4	700Ω	7.5Ω	C9.228-5	A-8112	A-3036	TSO-5	Vert Output Trans.
T5A	17Ω		C9.254 ⑦		MD-70		Horizontal Deflection Coil
B	70Ω				MD-70		Vert Deflection Coil
T6	370Ω		C9.234-4		MF-3		Focus Coil

① Drill one new mounting hole
④ Used in Series 101-102
C9.241 used in Series 99-100
⑦ Used in Series 100-102
C9.240 used in Series 99

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING: IMPEDANCE PRI.	RATING: IMPEDANCE SEC.	RATING: DC RES. PRI.	RATING: DC RES. SEC.	REPLACEMENT DATA: MAJESTIC PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	INSTALLATION NOTES
T7	7.8KΩ	4.1Ω	450Ω	.7Ω	C-9.225-3	A3878 ①	A3020 ①	RO-16 ①	① Drill one new mounting hole

SPEAKER

ITEM No.	RATINGS: FIELD RES.	RATINGS: V. C. IMP.	REPLACEMENT DATA: MAJESTIC PART No.	VIKING PART No.	QUAM PART No.	NOTES
SP1	PM	4.1Ω	E30.328 ⑤ E30.326 ⑥	10J12	10A4A	⑤ Used in Consoles ⑥ Used in Table models
	CONE DIA.	V. C. DIA.				
SP2	9 1/8	1"				

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

If the receiver is to be aligned with the 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) and replace with a 6J6 with pin 1 removed to prevent erroneous indications.
Turn the contrast control fully counter-clockwise.
Connect the negative terminal of a 3 volt battery to the junction of R17 and C18A. Connect the positive terminal to chassis.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	Direct	High side to ungrounded tube shield floating over dummy converter tube (V2). Low side to chassis.	23MC (Unmod.)	Any	DC probe to Point ◇A. Common to chassis.	A1	Adjust for maximum deflection. Attenuate signal generator to maintain a maximum -1.5 volt reading.
2.	"	"	22.3MC	"	"	A2	"
3.	"	"	24.1MC	"	"	A3	"
4.	"	"	24.9MC	"	"	A4	"

OVERALL VIDEO IF RESPONSE CHECK

Connect the synchrontzed 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
5.	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 ◇A. Low side to chassis.		Check for response curve similar to figure 1 with markers as shown. If necessary, slightly 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.	.001MFD	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 120 ∿ sawtoothe voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
6.	.001MFD	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 stabilizing 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 to place 4.5MC at center of crossover lines as per figure 3. SLIGHTLY retouch A6 for max. amplitude and straightness of crossover lines.

RF ALIGNMENT (STANDARD COIL TUNER)

Remove the 3 volt battery from the junction of R17 and C18A and connect a short from the same point to chassis.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8.	Two 120Ω carbon resistor	Across antenna terminals with 120Ω in each lead.	207MC (10MC SWP)	209.75MC 205.25MC	12	Vert. amp. to Point ◇E. Low side to chassis.	A8, A9, A10	Adjust for response curve similar to figure 4 with markers above 90% response.
9.	"	"	213MC (10MC SWP)	215.75MC 211.25MC	13	"		Check all response curve on all channels. If markers fall below 70% on any one channel a compromise adjustment of A8, A9 and A10 will be necessary.
			201MC (10MC SWP)	203.75MC 199.25MC	11			
			195MC (10MC SWP)	197.75MC 193.25MC	10			
			189MC (10MC SWP)	191.75MC 187.25MC	9			
			183MC (10MC SWP)	185.75MC 181.25MC	8			
			177MC (10MC SWP)	179.75MC 175.25MC	7			
			85MC (10MC SWP)	87.75MC 83.25MC	6			
			79MC (10MC SWP)	81.75MC 77.25MC	5			
			69MC (10MC SWP)	71.75MC 67.25MC	4			
			63MC (10MC SWP)	65.75MC 61.25MC	3			
			57MC (10MC SWP)	59.75MC 55.25MC	2			

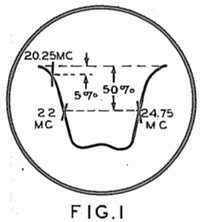


FIG.1

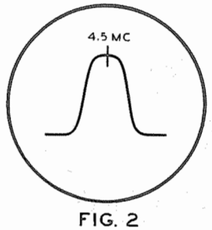


FIG. 2

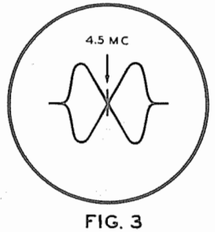


FIG. 3

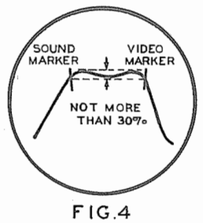


FIG.4

ALIGNMENT INSTRUCTIONS (CONT.)

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 seem to be off frequency approximately the same amount for a majority of the channels, it may be possible to correct them using A-11. 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 A-11 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 channels that is off frequency. The individual channel oscillator adjustment screws 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 the 3 volt battery as in Video IF Alignment.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	215.75MC 211.25MC	13	Vert. amp. to Point ◇A. Low side to chassis.	A12	Adjust to place sound marker at 5% as shown in figure 5. The video marker should be at 50%.
			207MC (10MC SWP)	209.75MC 205.25MC	12		A13	
			201MC (10MC SWP)	203.75MC 199.25MC	11		A14	
			195MC (10MC SWP)	197.75MC 193.25MC	10		A15	
			189MC (10MCSWP)	191.75MC 187.25MC	9		A16	
			183MC (10MC SWP)	185.75MC 181.25MC	8		A17	
			177MC (10MC SWP)	179.75MC 175.25MC	7		A18	
			85MC (10MC SWP)	87.75MC 83.25MC	6		A19	
			79MC (10MC SWP)	81.75MC 77.25MC	5		A20	
			69MC (10MC SWP)	71.75MC 67.25MC	4		A21	
			63MC (10MC SWP)	65.75MC 61.25MC	3		A22	
			57MC (10MC SWP)	59.75MC 55.25MC	2		A23	

OSCILLATOR ALIGNMENT (SARKES TARZIAN TUNER)

Remove the dummy converter tube and replace the original 6J6 in its socket.
Connect the 3 volt battery as outlined in VIDEO IF ALIGNMENT.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP 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)	215.75MC 211.25MC	13	Vert. amp. to Point ◇A. Low side to chassis.	A24	Adjust to place sound marker at 5% response as shown in figure 5. The video marker should be at 50% response.
12.	"	"	207MC (10MC SWP)	209.75MC 205.25MC	12	"		Check response curve on all high channels to see if markers can be properly placed well within the range of the fine tuning control. If not, a compromise adjustment of A24 will be necessary.
			201MC (10MC SWP)	203.75MC 199.25MC	11			
			195MC (10MC SWP)	197.75MC 193.25MC	10			
			189MC (10MC SWP)	191.75MC 187.25MC	9			
			183MC (10MC SWP)	185.75MC 181.25MC	8			
			177MC (10MC SWP)	179.25MC 175.25MC	7			
13.	"	"	85MC (10MC SWP)	87.75MC 83.25MC	6		A25	Adjust to place sound marker at 5% of response as shown in figure 5. The video marker should be at 50% response.
14	"	"	79MC (10MC SWP)	81.75MC 77.25MC	5			Check response curve on all channels to see if marker can be placed well within the range of the fine tuning control. If not, a compromise adjustment of A25 will be necessary.
			69MC (10MC SWP)	71.75MC 67.25MC	4			
			63MC (10MC SWP)	65.75MC 61.25MC	3			
			57MC (10MC SWP)	59.75MC 55.25MC	2			

THE RF PORTION OF THIS RECEIVER HAS BEEN PROPERLY ALIGNED AT THE FACTORY AND IS VERY STABLE: ALIGNMENT OF THIS PORTION SHOULD NOT BE REQUIRED IN THE FIELD.

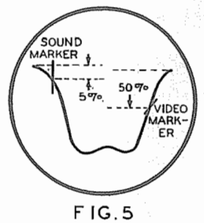


FIG.5

CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION