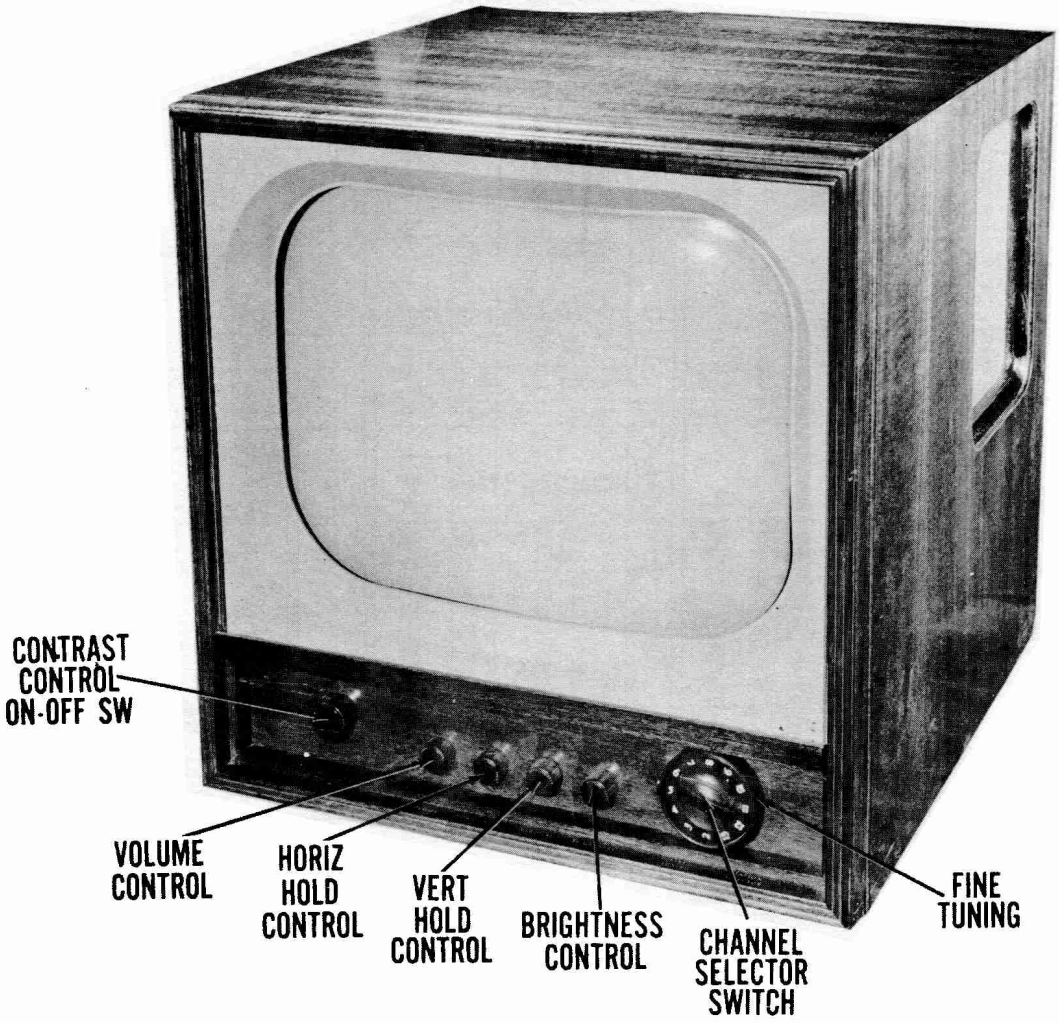
PHOTOFACT* Folder

MAGNAVOX CHASSIS CT-270, CT-271, CT-272, CT-273, CT-274, CT-275, CT-276, CT-277, CT-278, CT-279, CT-280, CT-281, CT-282



MAGNAVOX CHASSIS CT-277

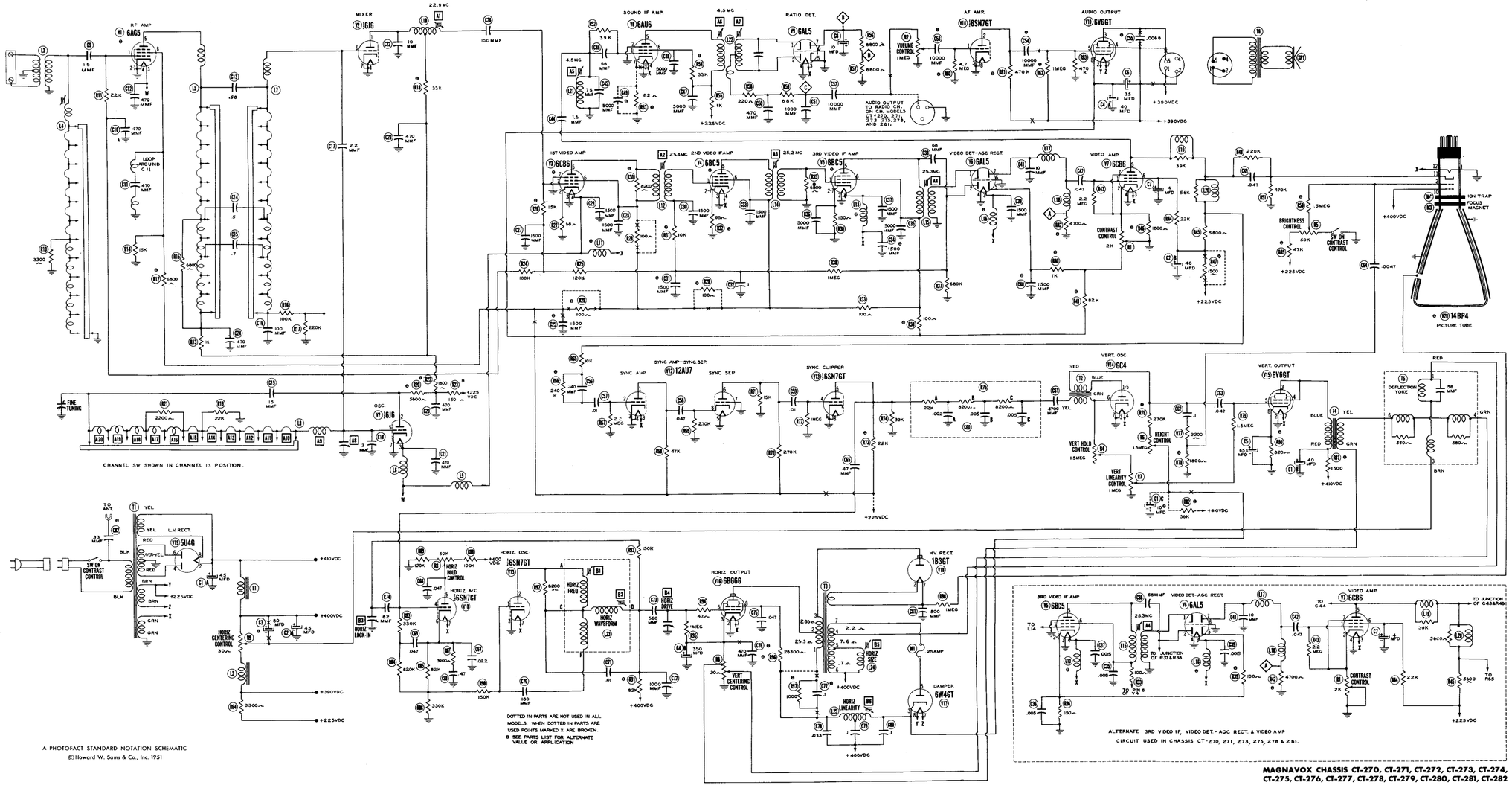
TRADE NAME	Magnavox, Chassis CT-270, CT-271, CT-272, CT-273, CT-274, CT-275, CT-276, CT-277, CT-278, CT-279, CT-280, CT-281, CT-282.
MANUFACTURER	Magnavox Co., Fort Wayne, Indiana
TYPE SET	Television only (Chassis CT-271, CT-273, CT-275, CT-278, CT-281 are used with radio chassis)
TUBES	Twenty
POWER SUPPLY	110-120 Volts AC-60 Cycle — RATING 1.7 Amp. at 117 Volts AC
TUNING RANGE—CHANNELS	2 thru 13

INDEX

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

DATE 10-51 SET 148 FOLDER 8

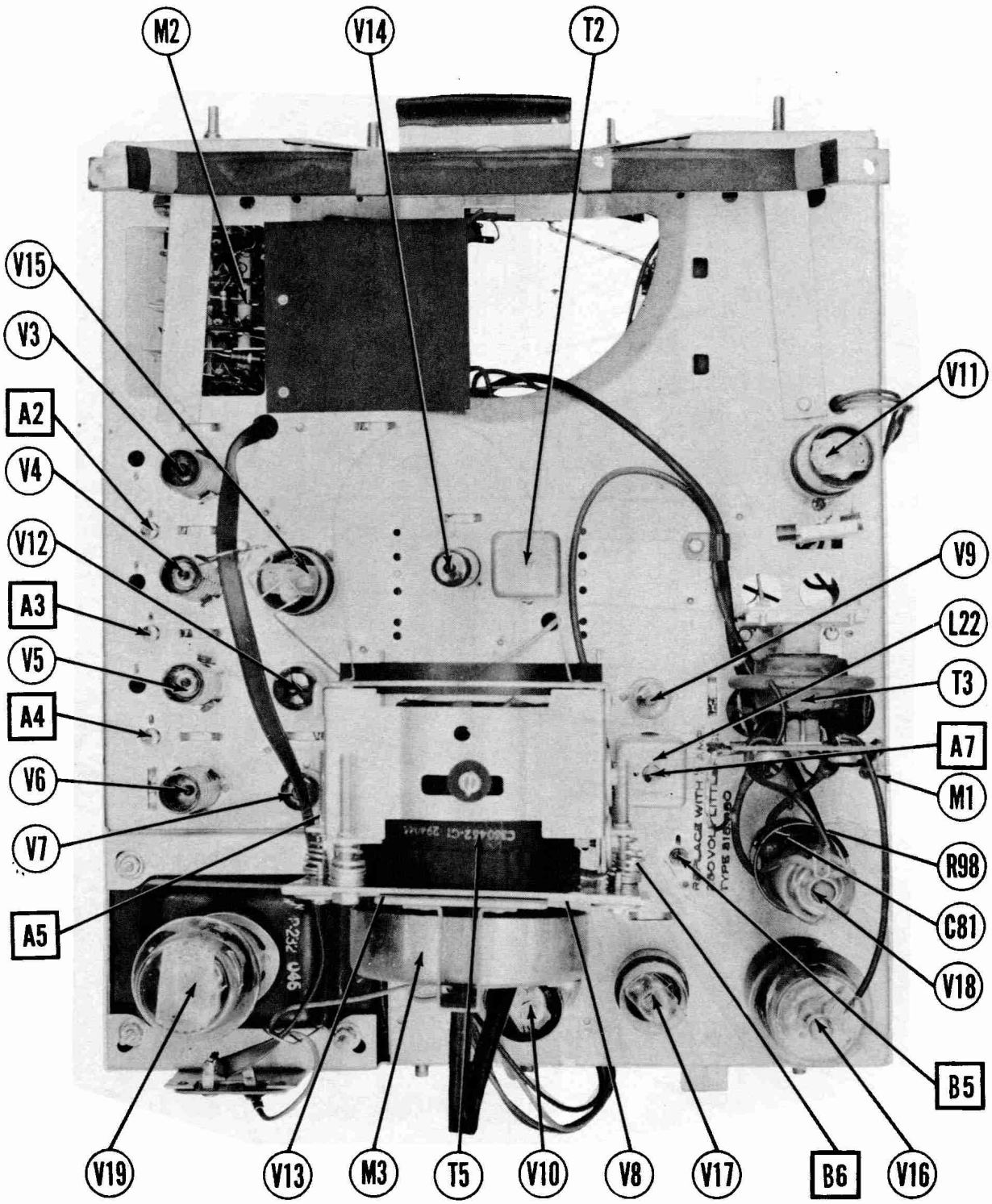
MAGNAVOX CHASSIS CT-270, CT-271, CT-272, CT-273, CT-274, CT-275, CT-276, CT-277, CT-278, CT-279, CT-280, CT-281, CT-282



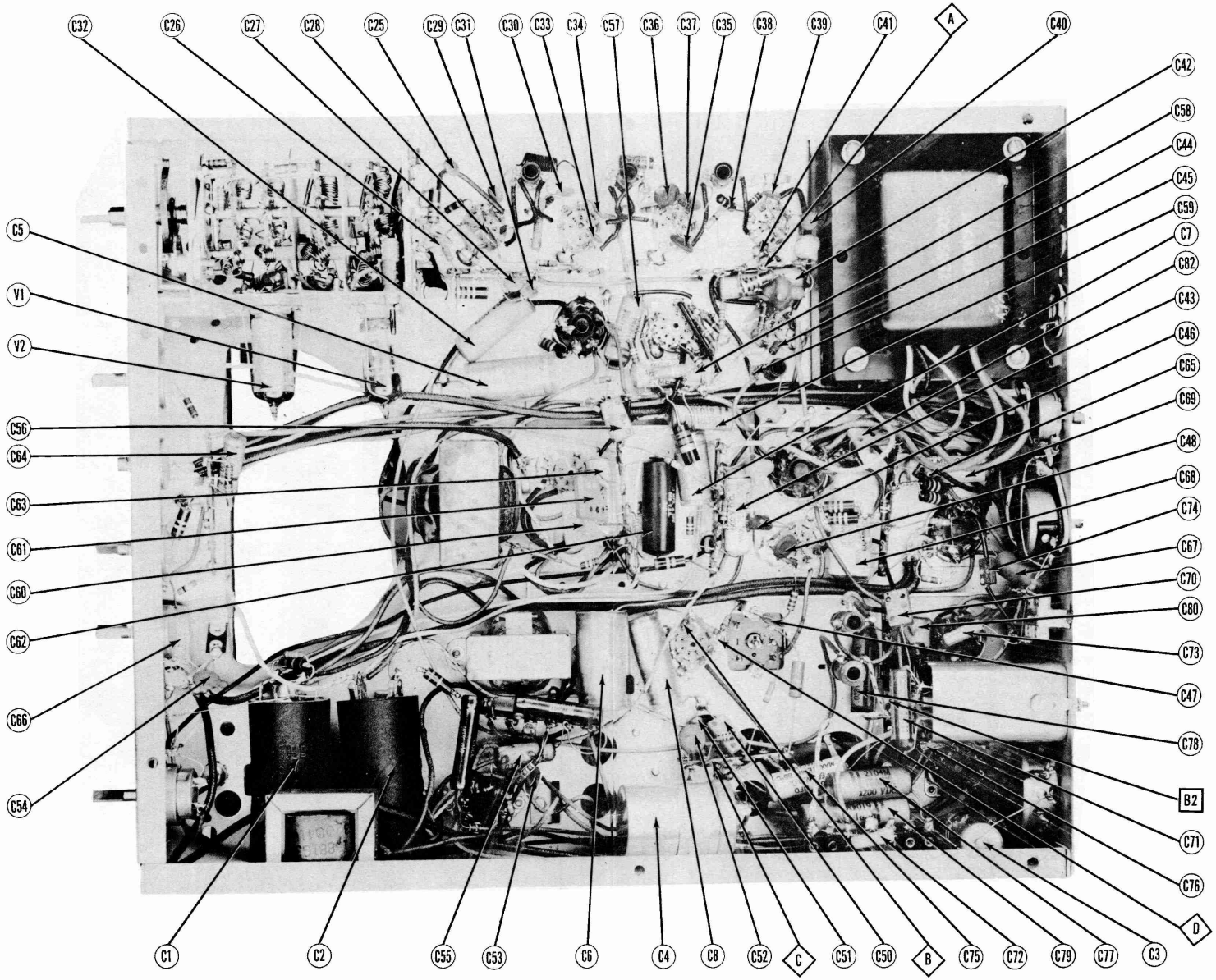
A PHOTOFACT STANDARD NOTATION SCHEMATIC

MAGNAVOX CHASSIS CT-270, CT-271, CT-272, CT-273, CT-274, CT-275, CT-276, CT-277, CT-278, CT-279, CT-280, CT-281, CT-282

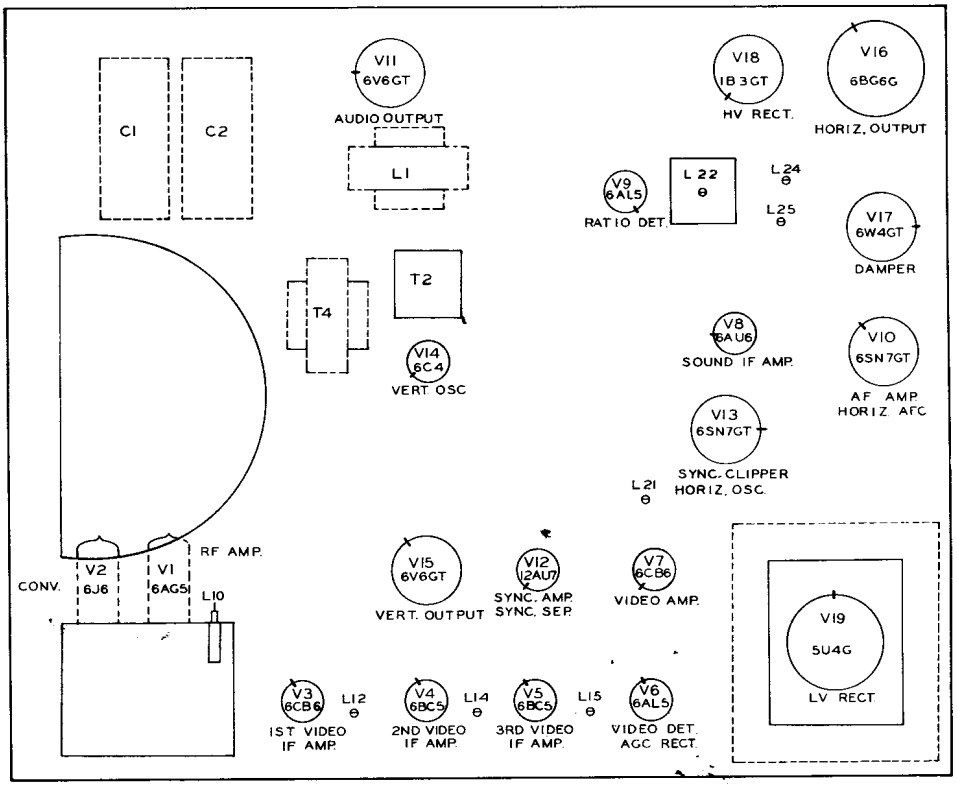
MAGNAVOX CHASSIS CT-270, CT-271, CT-272, CT-273, CT-274, CT-275, CT-276, CT-277, CT-278, CT-279, CT-280, CT-281, CT-282



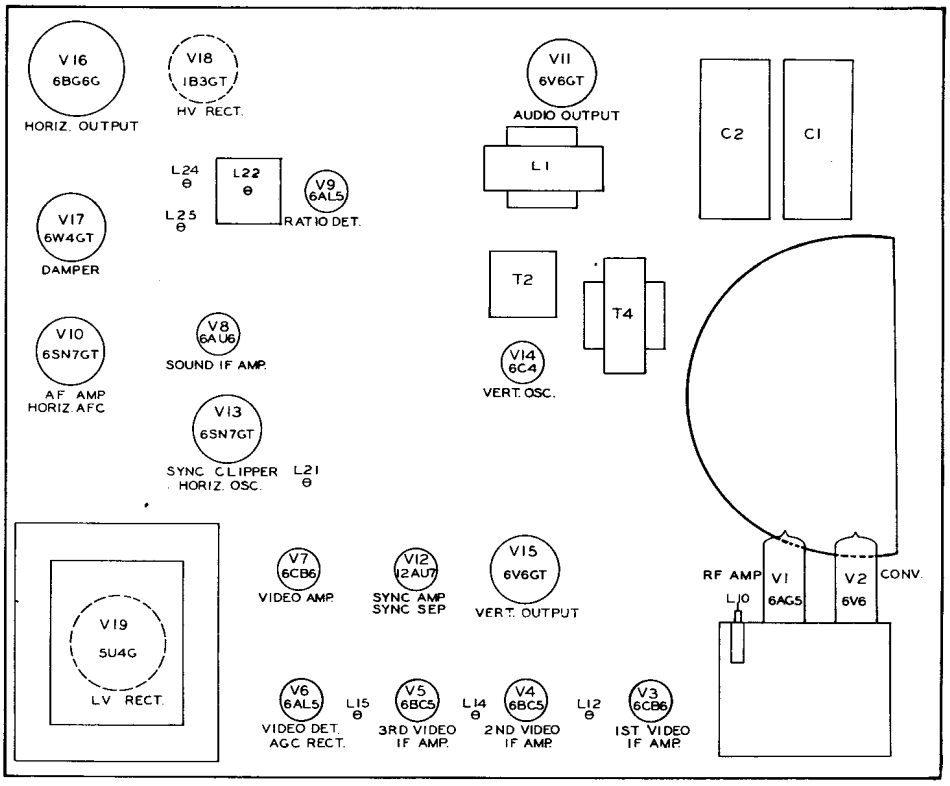
CHASSIS TOP VIEW



CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION



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 to disable the high voltage

VIDEO IF ALIGNMENT

Remove the converter tube, (V2), and replace it with a 6J6 which has pin 2 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 C32. Connect the positive lead to chassis.

	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.	22.9MC (unmod.)	Any	DC Probe to Point (A). Common to chassis.	A1	Adjust for maximum deflection.
2.	"	"	23.4MC	"	"	A2	"
3.	"	"	25.2MC	"	"	A3	"
4.	"	"	25.3MC	"	"	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.	24MC (10MC SWP)	22.75MC 25.75MC	Any	Vert. Amp. to Point (A). Low side to chassis.		Check for response curve similar to fig. 1. If necessary retouch A1 thru A4 for proper response.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
6.	.01MFD.	High side to pin 1 (Grid), of 6CB46, (V7). 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% sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
6.	.01MFD.	High side to pin 1, (Grid) of 6CB6, (V7). 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 C8. Adjust for maximum amplitude and symmetry as per fig. 2.
7.	"	"	"	"	"	Vert. Amp. to Point (C). Low side to chassis.	A7	Reconnect capacitor C8. Adjust A7 so 4.5MC occurs at center of crossover lines as per fig. 3. SLIGHTLY retouch A6 for maximum amplitude and straightness of crossover lines.

OSCILLATOR ALIGNMENT

Remove the dummy converter tube and replace the original 6J6 in its socket.
Connect an unmodulated signal generator to an ungrounded tube shield floating over the first video IF tube, (V3).
Set the generator frequency to 25.75MC. This marker is used as a video IF referance.
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 channel. 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 oscillator coil for each channel that is off frequency. The high channel oscillator coils are adjusted by moving the loops up or down, and the low channel coils are adjusted by expanding or compressing the coil turns.
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	13	Vert. Amp. to Point (A). Low side to chassis.	A9	Adjust coil, until markers coincide on response curve.
			207MC (10MC SWP)	205.25MC	12		A10	
			201MC (10MC SWP)	199.25MC	11		A11	
			195MC (10MC SWP)	193.25MC	10		A12	
			189MC (10MC SWP)	187.25MC	9		A13	
			183MC (10MC SWP)	181.25MC	8		A14	
			177MC (10MC SWP)	175.25MC	7		A15	
			85MC (10MC SWP)	83.25MC	6		A16	
			79MC (10MC SWP)	77.25MC	5		A17	
			69MC (10MC SWP)	67.25MC	4		A18	
			63MC (10MC SWP)	61.25MC	3		A19	
			57MC (10MC SWP)	55.25MC	2		A20	

THE RF AND MIXER 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.

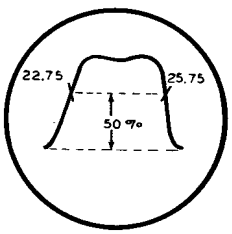


FIG. 1

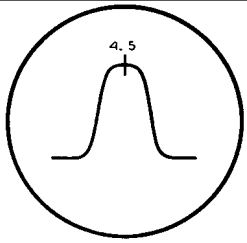


FIG. 2

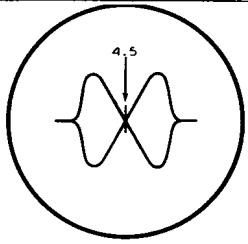
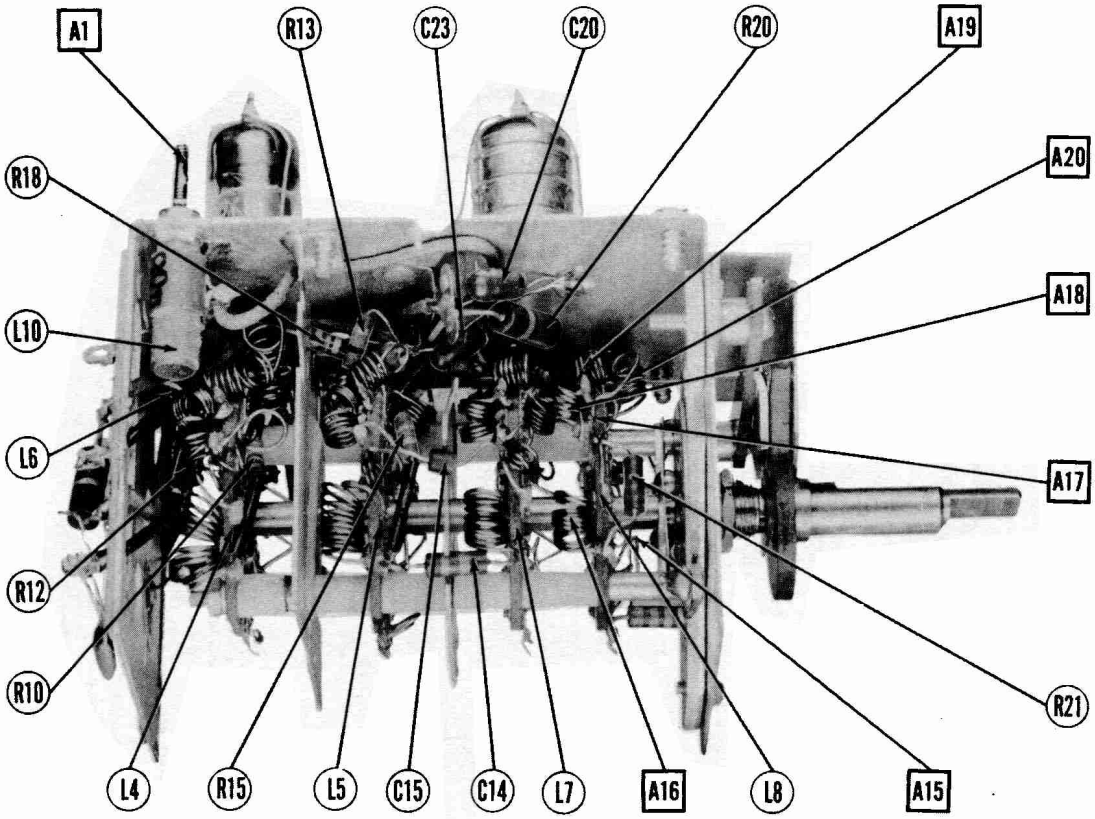
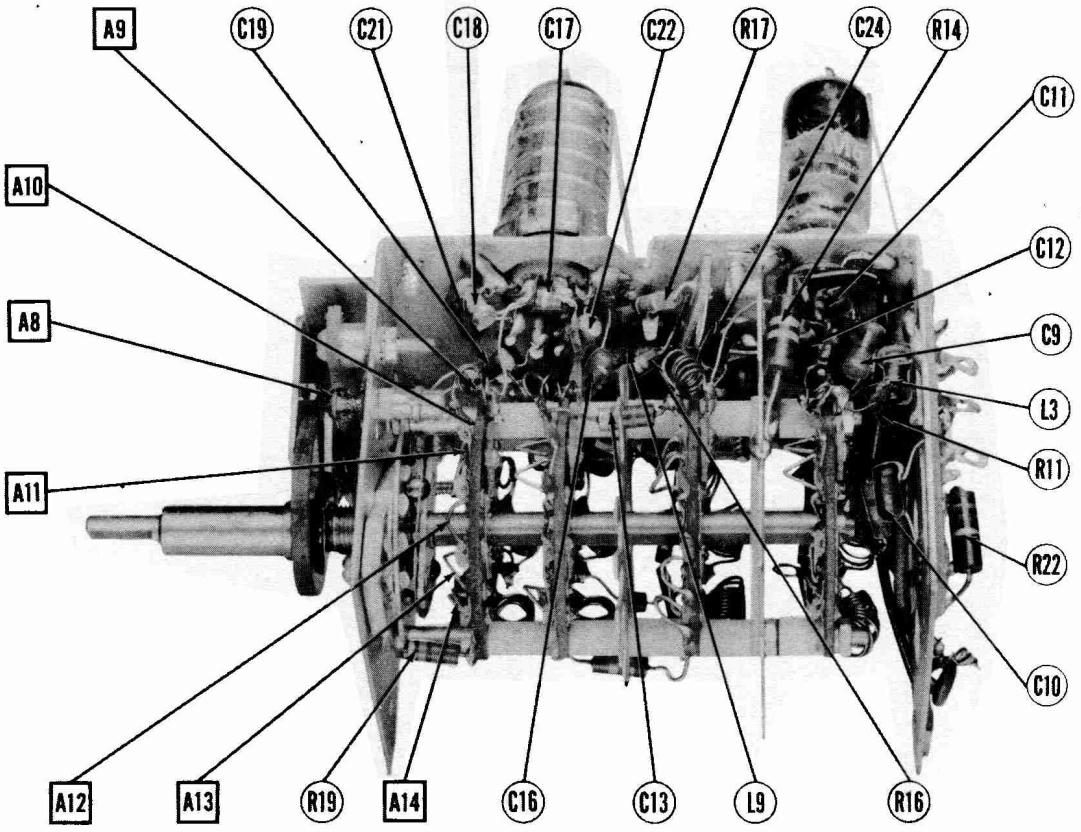


FIG. 3



RF TUNER-LEFT SIDE



RF TUNER-RIGHT SIDE

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	6AG5	-2.7VDC	0V	6.2VAC	0V	200VDC	85VDC	0V		
V 2	6J6	80VDC	125VDC	6.1VAC	0V	§-3.3VDC	-1.3VDC	0V		
V 3	6CB6	-.3VDC	.6VDC	0V	6.3VAC	120VDC	120VDC	0V		
V 4	6BC5	-.2VDC	.4VDC	0V	6.2VAC	125VDC	125VDC	.4VDC		
V 5	6BC5	0V	1.5VDC	0V	6.2VAC	120VDC	120VDC	1.5VDC		
V 6	6AL5	0V	-3.6VDC	6.2VAC	0V	0V	0V	-.4VDC		
V 7	6CB6	.5VDC	17VDC	6.3VAC	0V	130VDC	110VDC	17VDC		
V 8	6AU6	-1.2VDC	0V	0V	6.3VAC	210VDC	110VDC	0V		
V 9	6AL5	-.3VDC	-.3VDC	6.3VAC	0V	0V	0V	-.4VDC		
V 10	6SN7GT	-.6VDC	21VDC	0V	-2.4VDC	160VDC 230VDC	-7.5VDC	6.3VAC	0V	
V 11	6V6GT	0V	¶0V	▲225VDC	▲245VDC	▲-15VDC	390VDC	¶6.3VAC	▲0V	
V 12	12AU7	39VDC	-2.8VDC	0V	0V	0V	6.3VDC	0V	1.6VDC	6.3VDC
V 13	6SN7GT	§-90VDC §-99VDC	225VDC	0V	§-.6VDC	46VDC	0V	6.3VAC	0V	
V 14	6C4	220VDC 480VDC	0V	0V	6.3VAC	220VDC 480VDC	§-40VDC §-80VDC	0V		
V 15	6V6GT	0V	0V	380VDC	380VDC	-3.3VDC	0V	6.3VAC	9.8VDC	
V 16	6BG6G	0V	0V	2.7VDC	0V	-21VDC	-21VDC	6.3VAC	290VDC	Top Cap *
V 17	6W4GT	0V	0V	590VDC	0V	400VDC	0V	¶6.3VAC	¶0V	
V 18	1B3GT	* DO NOT MEASURE								Top Cap *
V 19	5U4G	0V	410VDC	0V	370VAC	0V	370VAC	0V	410VDC	
V 20	14BP4	0V	0V 50VDC	PIN 10 400VDC	PIN 11 95VDC	PIN 12 6.3VAC	H. V. CONNECTOR ** 10750V			

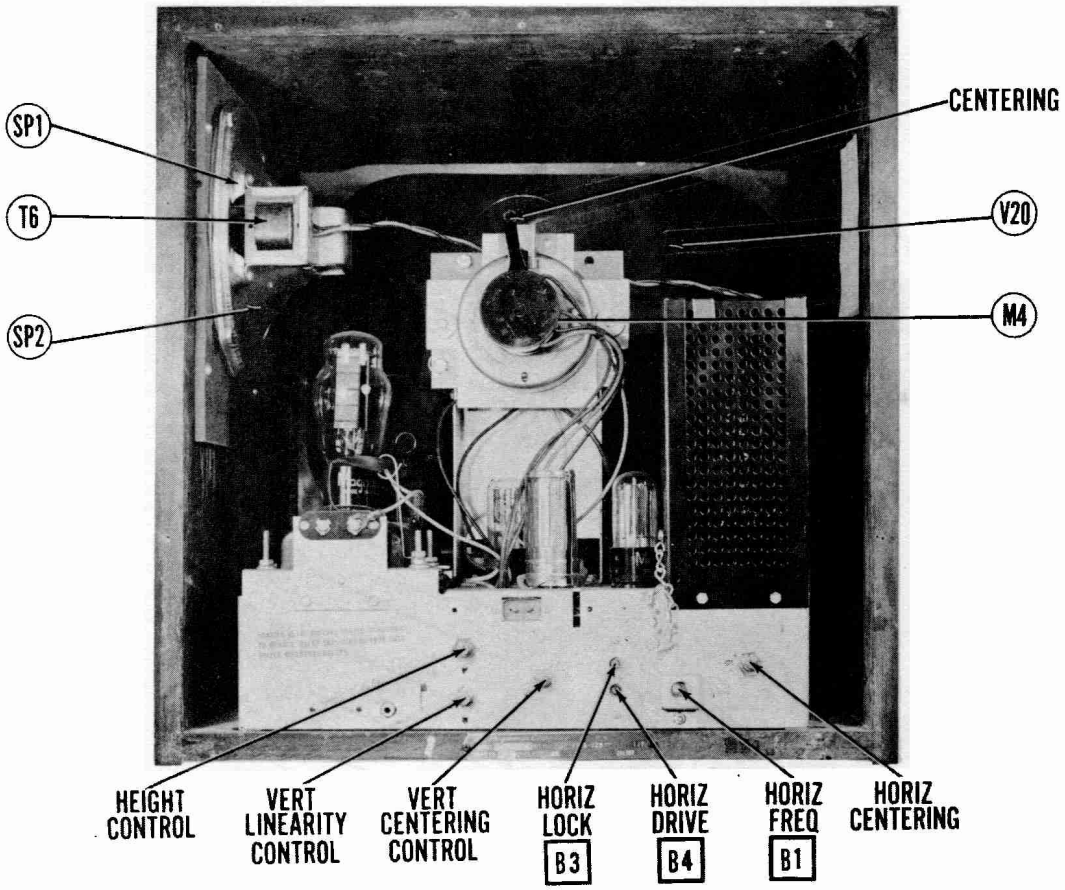
ALL MEASUREMENTS TAKEN WITH PICTURE TUBE REMOVED
¶ MEASURED FROM 225VDC LINE
* DO NOT MEASURE
§ TAKEN WITH VACUUM TUBE VOLTMETER
** USE EXTREME CAUTION WHEN MEASURING THIS VOLTAGE
▲ MEASURED FROM PIN 8 OF V11

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AG5	1.9Meg	0Ω	.4Ω	0Ω	†6.3KΩ	▲5.5KΩ	0Ω		
V 2	6J6	†38KΩ	†9KΩ	.2Ω	0Ω	22KΩ	320KΩ	0Ω		
V 3	6CB6	1.8Meg	68Ω	0Ω	.1Ω	▲200Ω	▲200Ω	0Ω		
V 4	6BC5	1.6Meg	68Ω	0Ω	.1Ω	▲100Ω	▲100Ω	68Ω		
V 5	6BC5	.5Ω	150Ω	0Ω	.3Ω	▲200Ω	▲200Ω	150Ω		
V 6	6AL5	.5Ω	680KΩ	.2Ω	0Ω	1KΩ	0Ω	4.7KΩ		
V 7	6CB6	2.2Meg	1KΩ	.1Ω	0Ω	†10.5KΩ	†27KΩ	1KΩ		
V 8	6AU6	39KΩ	0Ω	0Ω	.1Ω	†4.4KΩ	†37KΩ	0Ω		
V 9	6AL5	Inf.	Inf.	.1Ω	0Ω	0Ω	0Ω	13KΩ		
V 10	6SN7GT	4.7Meg	†470KΩ	0Ω	1.4Meg	†80KΩ †70KΩ	415KΩ	.1Ω	0Ω	
V 11	6V6GT	0Ω	¶0Ω	†650Ω	†110Ω	360KΩ	†85Ω	¶.1Ω	25KΩ	
V 12	12AU7	▲47KΩ	2.2Meg	0Ω	0Ω	0Ω	▲25KΩ	0Ω	270KΩ	.1Ω
V 13	6SN7GT	510KΩ	†82KΩ	0Ω	1Meg	▲15KΩ	0Ω	.1Ω	0Ω	
V 14	6C4	#1.7Meg #270KΩ	0Ω	0Ω	.1Ω	#1.7Meg #270KΩ	2.5Meg 1Meg	0Ω		
V 15	6V6GT	0Ω	0Ω	†2.3KΩ	†2.3KΩ	2.5Meg 1.5Meg	Inf.	.1Ω	820Ω	
V 16	6BG6G	Inf.	0Ω	27Ω	Inf.	1Meg	1Meg	.1Ω	#28KΩ	Top Cap #1KΩ
V 17	6W4GT	Inf.	Inf.	Inf.	Inf.	†65Ω	Inf.	¶.1Ω	¶0Ω	
V 18	1B3GT	PINS 1-8 HAVE INF. RESISTANCE								Top Cap #1.3KΩ
V 19	5U4G	Inf.	60KΩ	Inf.	20Ω	Inf.	23Ω	Inf.	60KΩ	
V 20	14BP4	0Ω	†1.6Meg †160KΩ	PIN 10 †55Ω	PIN 11 †160KΩ	PIN 12 .1Ω				

ALL MEASUREMENTS TAKEN WITH PICTURE TUBE REMOVED
† MEASURED FROM PIN 2 OF V19
# MEASURED FROM PIN 3 OF V17
¶ MEASURED FROM 225VDC LINE
▲ 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.



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

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

Turn the horizontal lock trimmer, (B3), trimmer, (B3), three turns counter-clockwise from tight.

Connect a short across terminals C and D of L23.

Turn the horizontal hold control to the mid-position of its range.

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

Remove the short from L23 and check to see if the picture will pull into synchronization, after interruption of the signal, at each end of the hold control range. If necessary adjust the horizontal phasing slug (B2), until the picture pulls in at both ends of the hold control range. If the above condition cannot be obtained by adjusting B2, adjust B2 until the picture is synchronized and proceed with the remainder of horizontal sweep circuit adjustments, and then come back and repeat entire oscillator alignment.

Adjust the horizontal drive trimmer, (B4). counter-clockwise as far as possible without crowding the left center of the picture.

Adjust the horizontal size slug, (B5), until the picture is slightly wider than necessary to fill the mask horizontally.

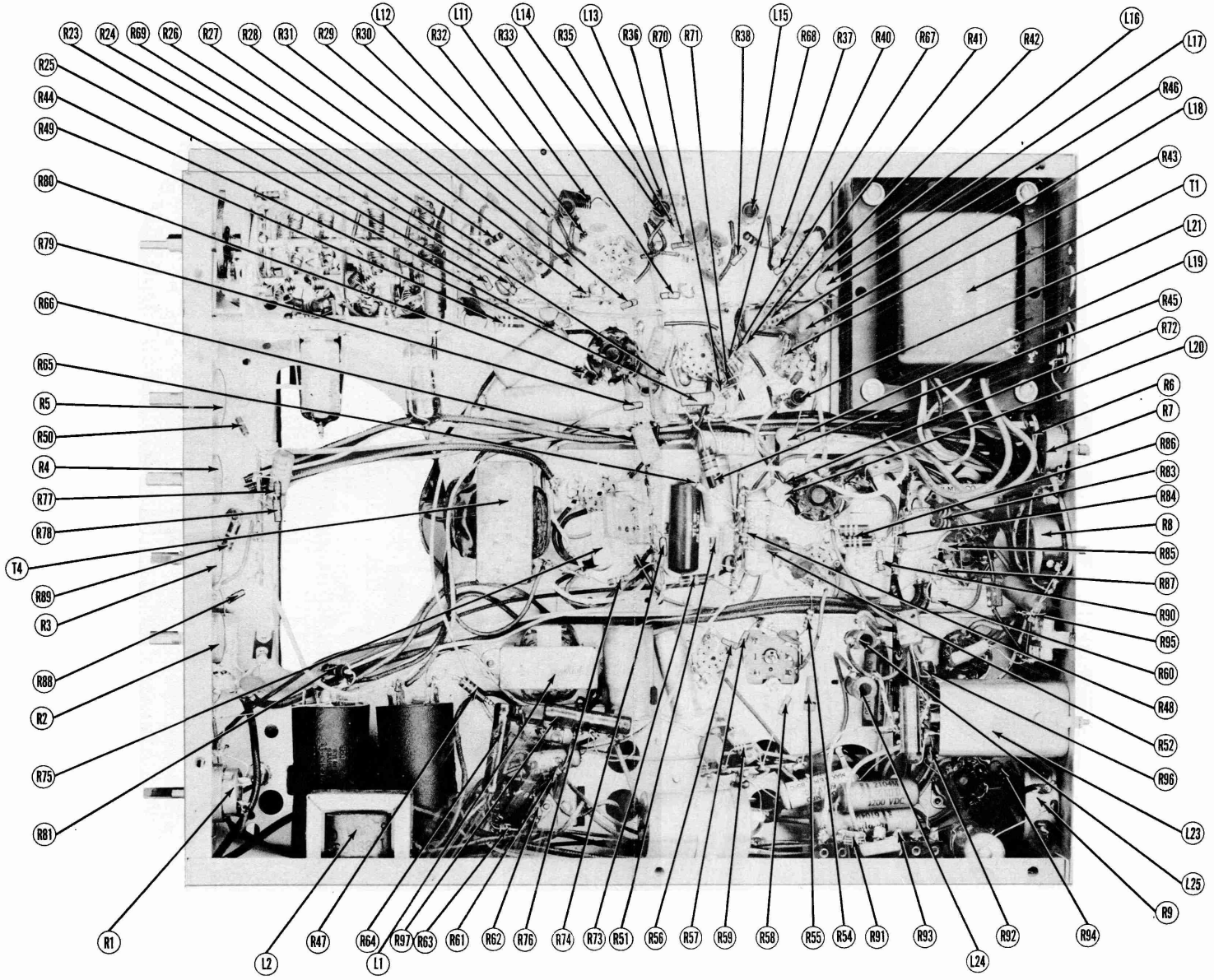
Adjust the horizontal linearity slug, (B6), until the picture is symmetrical from left to right.

Since both width and horizontal linearity are affected by the drive trimmer, it may be necessary to adjust them alternately for optimum results.

DISASSEMBLY INSTRUCTIONS

1. Remove seven push-on type control knobs.
2. Remove nine wood screws from rear cover. Remove rear cover.
3. Disconnect speaker.
4. Remove six 1/4" X 20 PK bolts from chassis. Remove chassis.
5. Remove three 11/32" hex nuts from speaker. Remove speaker.

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



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: MAGNAVOX PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	NOTES
V1A	RF Amplifier	6AG5	6AG5	7BD	
B	RF amplifier	6BC5	6BC5	7BD	
V2	Converter	6J6	6J6	7BF	
V3A	1st. Video IF Amp.	6CB6	6CB6	7CM	
B	1st. Video IF Amp.	6AU6	6AU6	7BK	
V4A	2nd. Video IF Amp.	6BC5	6BC5	7BD	
B	2nd. Video IF Amp.	6AG5	6AG5	7BD	
C	2nd. Video IF Amp.	6AU6	6AU6	7BK	
V5A	3rd. Video IF Amp.	6BC5	6BC5	7BD	
B	3rd. Video IF Amp.	6AG5	6AG5	7BD	
C	3rd. Video IF Amp.	6AU6	6AU6	7BK	
V6	Video Detector - AGC Rectifier	6AL5	6AL5	6BT	
V7	Video Amplifier	6CB6	6CB6	7CM	
V8	Sound IF Amp.	6AU6	6AU6	7BK	
V9	Ratio Detector	6AL5	6AL5	6BT	
V10	AF Amplifier - Horiz. AFC	6SN7GTA	6SN7GTA	8BD	Some models use V10 for Horiz. AFC only.
V11	Audio Output	6V6GT	6V6GT	7AC	
V12	Sync. Amplifier - Sync. Separator	12AU7	12AU7	9A	
V13	Sync. Clipper - Horiz. Oscillator	6SN7GT	6SN7GT	8BD	
V14	Vert. Oscillator	6C4	6C4	6BG	
V15	Vert. Output	6V6GT	6V6GT	7AC	
V16	Horiz. Output	6BG6G	6BG6G	5BT	
V17	Damper	6W4GT	6W4GT	4CG	
V18	HV Rectifier	1B3GT	1B3GT	3C	
V19	LV Rectifier	5U4G	5U4G	5T	

CATHODE-RAY TUBE

ITEM No.	REPLACEMENT DATA: MAGNAVOX PART No.	REPLACEMENT DATA: SYLVANIA PART No.	REPLACEMENT DATA: THOMAS PART No.	RMA BASE TYPE	NOTES
20A	14BP4	14BP4	14CP4 ②	12D	② Use single magnet ion trap.
B	14CP4	14CP4	14CP4	12D	③ Ground outer coating
C	16KP4	16KP4	16KP4	12D	④ Space permitting
D	16RP4	16RP4	16KP4	12D	
E	16XP4	16KP4 ② ③	16KP4 ② ③	12D	
F	16GP4	16GP4		12D	
G	16TP4	16TP4	16KP4 ④	12D	
H	17AP4	17BP4A ④	17BP4 ④	12D	
I	17BP4	17BP4A ③	17BP4	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: MAGNAVOX PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CORNELL-DUBILIER PART No.	REPLACEMENT DATA: ERIE PART No.	REPLACEMENT DATA: SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	45	475	270021-39 †	AFH2-72		UPT4450		TVL-2830	▲ Filter
B	40	475							▲ Vert. Output Dec.
C	10	475							Vert. Osc. Decoupling *
C2A	45	475	270021-39	AFH2-72		UPT4450		TVL-2830	▲ Filter
B	40	475							▲ Decoupling
C3	80	25	270027-18	PRS25/100		BRH25IA		TVA-1207	Horiz. Cent. Cont. Bypass *
C4A	40	250	270027-15	AFH4-73				R1156	▲ Decoupling
B	350	15							▲ Horiz. Output Cathode
C5	65	50	270027-17	PRS50/100		BRH50I		TVA-1310	Vert. Output Cathode
C6	35	300	270027-16	PRS450/40		BR3035		TVA-1610	Audio Output Dec.
C7	4	400	270027-14	PRS450/4		BR445		TVA-1702	Video Amp. Screen
C8	10	50	270027-4	*PRS50/10*		*BR105*		*TVA-1304*	*Stabilizing Cap.*
C9	15		250176-4	SI15	D6-150		GP1K-150	5GA-Q15	RF Coupling
C10	470		250176-18	SI470	D6-471		GP2K-471	5GA-T47	AGC Filter
C11	470		250176-18	SI470	D6-471		GP2K-471	5GA-T47	RF Amp. Screen
C12	470		250176-18	SI470	D6-471		GP2K-471	5GA-T47	RF Amp. Fil.
C13	.68		250164-7		TCZ-.68		N90K-R680		RF Coupling
C14	.5		250164-6		TCZ-.5		NP0K-R50		RF Coupling
C15	1.5		250164-8	SI1.5NP0	TCZ-1.5		NP0K-1R5		RF Coupling
C16	100		250176-6	SI100	D6-101		GP1K-101	5GA-T1	Mixer Grid Filter
C17	2.2		250164-13		TCZ-2.2		NP0K-2R2		Osc. Coupling
C18	3		250088-57				N330-331-150		Osc. Feedback
C19	15		250176-4	SI15	D6-150		GP1K-150	5GA-Q15	Osc. Feedback
C20	470		250176-18	DI470	D6-471		GP2K-471	5GA-T47	RF Bypass
C21	470		250176-18	SI470	D6-471		GP2K-471	5GA-T47	Conv. Fil.
C22	10		250176-12	SI10	D6-100		GP1K-100	5GA-Q1	IF Coil Trimmer
C23	470		250176-18	SI470	D6-471		GP2K-471	5GA-T47	RF Bypass
C24	470		250176-18	SI470	D6-471		GP2K-471	5GA-T47	RF Bypass
C25	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	RF Bypass *
C26	100	500	250159-82	1468-0001	D6-101	5W5T1	GP1K-101	1FM-31	IF Coupling *
C27	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	AGC Filter
C28	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	1st. Video IF Dec.
C29	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	1st. Video IF Fil.
C30	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	AGC Filter
C31	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	AGC Filter *
C32	.1	200	250205-13	P288-1		DF-104	PTE4P1	2TM-P1	AGC Filter
C33	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	2nd. Video IF Dec.
C34	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	2nd. Video IF Fil. *
C35	5000		250175-1	BPD-005	DD-502	1D5D5	811-005	5HK-D5	3rd. Video IF Dec.
C36	5000		250175-1	BPD-005	DD-502	1D5D5	811-005	5HK-D5	3rd. Video IF Cathode
C37	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	3rd. Video IF Fil.
C38	68		250207-13	SI68	D6-680	5W5Q7	GP1K-680	5GA-Q68	IF Coupling
C39	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	Video Det. Fil.
C40	1500		250175-3	BPD-0015	DD-152	1W5D15	801-0015	5HK-D15	RF Bypass *
C41	10		250207-3	SI10	D6-100	5W5Q1	GP1K-100	5GA-Q1	Video Det. Filter
C42	.047	200	250205-11	P288-047	DF-503	PTE4S5		6TM-S47	Video Coupling
C43	.047	600	250203-11	P688-047	DF-503	PTE6S5		6TM-S47	Video Coupling
C44	1.5		250164-10	SI1.5NP0	TCZ-1.5		NP0K-1R5		Sound IF Coupling
C45	75	500	250187-19	1469-000075	TCZ-75		NP0-333-750		Fixed Trimmer
C46	56	500	250187-50					MS-46	Sound IF Coupling

CAPACITORS (CONT.)

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: MAGNAVOX PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CORNELL-DUBILIER PART No.	REPLACEMENT DATA: ERIE PART No.	REPLACEMENT DATA: SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C47	5000		250175-1	BPD-005	DD-502	1D5D5	811-005	5HK-D5	Sound IF Plate
C48	5000		250175-1	BPD-005	DD-502	1D5D5	811-005	5HK-D5	Sound IF Screen
C49	5000		250175-1	BPD-005	DD-502	1D5D5	811-005	5HK-D5	Sound IF Cathode *
C50	470	500	250159-90	1468-0005	D6-471	5W5T25	GP2K-471	1FM-35	RF Bypass
C51	10000		250175-2	BPD-01	DD-103	1D3S1	821-01	5HK-S1	De-emphasis
C52	10000		250175-2	BPD-01	DD-103	1D3S1	821-01	5HK-S1	Audio Coupling
C53	10000		250175-2	BPD-01	DD-103	1D3S1	821-01	5HK-S1	Audio Coupling *
C54	10000		250175-2	BPD-01	DD-103	1D3S1	821-01	5HK-S1	Audio Coupling *
C55	.0068	600	250203-6	P688-0068	D6-682		GP2-333-682	6TM-D68	Audio Output Plate *
C56	240	500	250159-56	1469-00025		5R5T25			Sync. Coupling
C57	.01	600	250203-7	P688-01	D6-103	PTE6S1	GP2-33-103	6TM-S1	Sync. Coupling
C58	.047	600	250203-11	P688-047	DF-503	PTE6S5		6TM-S47	Sync. Coupling
C59	.01	600	250203-7	P688-01	D6-103	PTE6S1	GP2-333-103	6TM-S1	Sync. Coupling
C60A	.002	.		P688-002		PTE6D2	GP2-333-202		Vert. Integrator Net.
B	.005		♦250186-1	P688-005	♦PC-100	PTE6D5	GP2-333-502	♦101C1	Vert. Integrator Net.
C	.005			P688-005		PTE6D5	GP2-333-502		Vert. Integrator Net.
C61	4700	500	250161-24	1464-005		1DR5D4		MS-25	Vert. Osc. Grid
C62	.1	600	250203-13	*P688-1*	*DF-104*	PTE6P1		6TM-P1	Vert. Discharge
C63	.047	600	250203-11	P688-047	DF-503	PTE6S5		6TM-S47	Vert. Sweep Coupling
C64	.0047	600	250203-5	P688-0047	D6-472	PTE6D5	GP2-333-472	6TM-D47	Vert. Sweep Coupling
C65	47	500	250187-49	1468-00005	D6-470	5W5Q5	GP1K-470	1FM-45	Horiz. Sync. Coupling
C66	.047	600	250203-11	P688-047	DF-503	PTE6S5		6TM-S47	AFC Plate
C67	.022	600	250203-9	P688-022		PTE6S2		6TM-S22	AFC Filter
C68	.47	200	250205-17	P288-47		GT2P5		2TM-P47	AFC Filter
C69	.047	600	250203-11	P688-047	DF-503	PTE6S5		6TM-S47	AFC Filter
C70	180	500	250159-53	1469-0002		5R5T2		MS-32	Horiz. Osc. Grid
C71	.01	600	250203-7	P688-01	D6-103	PTE6S1	GP2-333-103	6TM-S1	Fixed Trimmer
C72	1000	500	250160-64	1468-001	D6-102	1W5D1	GP2L-102	1FM-21	Horiz. Discharge
C73	560	500	250159-130	SI560	D6-561	1W5T6	GP2K-561	MS-36	Horiz. Sweep Coupling
C74	82	500	250187-52				GP1K-820		Horiz. Feedback
C75	.047	600	250203-11	P688-047	DF-503	PTE6S5		6TM-S47	Horiz. Output Screen
C76	470	500	250159-90	1469-0005		5R5T5		MS-35	Horiz. Output Cathode *
C77	.1	200		P288-1		PTE4P1		2TM-P1	Horiz. Output Dec. *
C78	.033	600	250203-10	P688-033					Damper Filter
C79	.1	600	250203-13	P688-1		PTE6P1		6TM-P1	Damper Filter
C80	.1	600	250203-13	P688-1		PTE6P1		6TM-P1	Damper Filter
C81	500	20000	250189-1	BV20C	TV3-502				HV Filter
C82	33	500		SI33	D6-330		GP1K-330	5GA-Q33	Ant. Line Isolation *

* Not used in all models.
† This Part number replaces C1A and C1B only.
♦ Items C60A, C60B, C60C, R75A, R75B, R75C are combined in one unit.

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: MAGNAVOX PART No.	REPLACEMENT DATA: IRC PART No.	REPLACEMENT DATA: CLAROSTAT PART No.	REPLACEMENT DATA: CENTRALAB PART No.	INSTALLATION NOTES
R1A	2000Ω	½	220076-42	Q11-110	AM-11-S	B-6-S	Contrast Control
B	Shaft		Not req.	Not req.	FS-3	Not req.	Attach to R1A per instructions
C	Switch		Not req.	76-2	SWA-2	Not req.	Attach to R1A per instructions
R2A	1Meg	½	220076-19	Q13-137	AG-63-Z	B-70	Volume Control
B	Shaft		Not req.	Not req.	FS-3	Not req.	Attach to R2A per instructions
R3A	50KΩ	½	220076-15	Q11-123	AG-44-S	B-31	Horiz. Hold Control
B	Shaft		Not req.	Not req.	FS-3	Not req.	Attach to R3A per instructions
R4A	1.5Meg	½	220076-37	Q11-138	AG-83-S	B-75	Vert. Hold Control
B	Shaft		Not req.	Not req.	FS-3	Not req.	Attach to R4A per instructions
R5A	50KΩ	½	220076-15	Q11-123	AM-44-S	B-31	Brightness Control
B	Shaft		Not req.	Not req.	FS-3	Not req.	Attach to R5A per instructions
R6A	1.5Meg	½	220076-28	Q11-138	AG-83-S	AN-75	Height Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R6A per instructions
R7A	1Meg	½	220076-41	Q11-137	AG-61-S	AN-69	Vert. Linearity Control
B	Shaft		Not req.	Not req.	FKS-1/4	AK-1	Attach to R7A per instructions
R8	30Ω	2	220076-10	W-30X15	RTV-15	SVT-902	Vert. Centering Control - Wire Wound - Center tapped
R9	30Ω	4	220076-9		43-50	SVT-902	Horiz. Centering Control - Wire Wound

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: MAGNAVOX PART No.	REPLACEMENT DATA: IRC PART No.	IDENTIFICATION CODES ALL RESISTORS ± 10% UNLESS OTHERWISE SPECIFIED
R10	3300Ω	½	230104-68	BTS-3300	Antenna Coil Shunt
R11	22KΩ	½	230104-78	BTS-22K	RF Amp. Grid
R12	6800Ω	1	230105-72	BTA-6800	RF Amp. Screen - See Note 2
R13	1000Ω	½	230104-62	BTS-1000	RF Amp. Plate Decoupling
R14	15KΩ	1	230105-76	BTA-15K	Voltage Divider
R15	6800Ω	½	230104-72	BTS-6800	RF Coil Shunt
R16	100KΩ	½	230104-86	BTS-100K	Mixer Grid
R17	220KΩ	½	230104-90	BTS-220K	Mixer Grid
R18	33KΩ	½	230104-82	BTS-33K	Mixer Plate - See Note 3
R19	22KΩ	½	230104-78	BTS-22K	Osc. Grid
R20	5600Ω	1		BTA-5600	Osc. Plate - See Note 4
R21	2200Ω 5%	1	230104-66	BTS-2200-5%	Osc. Coil Shunt - See Note 21
R22	1800Ω	1		BTA-1800	Decoupling - See Note 1
R23	150Ω	½	230104-52	BTS-150	Decoupling - See Note 1
R24	100KΩ	½	230104-86	BTS-100K	AGC Network
R25	120KΩ	½	230104-87	BTS-120K	AGC Network
R26	15KΩ	½	230104-76	BTS-15K	1st. Video IF Amp. Grid - See Note 5
R27	68Ω	½			1st. Video IF Amp. Cathode
R28	100Ω	½	230104-50	BTS-100	1st. Video IF Amp. Decoupling - See Note 1
R29	100Ω	½	230104-50	BTS-100	Decoupling - See Note 1
R30	8200Ω	½	230104-73	BTS-8200	2nd. Video IF Transformer Shunt - See Notes 4 and 6
R31	10KΩ	½	230104-74	BTS-10K	AGC Network - See Note 1
R32	68Ω	½			2nd. Video IF Amp. Cathode - See Note 21
R33	100Ω	½	230104-50	BTS-100	Decoupling
R34	100Ω	½	230104-50	BTS-100	Decoupling - See Note 1
R35	6800Ω	½	230104-179	BTS-6800	3rd. Video IF Transformer Shunt - See Notes 7 and 8
R36	150Ω	½	230104-52	BTS-150	3rd. Video IF Amp. Cathode
R37	680KΩ	½	230104-96	BTS-680K	AGC Load
R38	1Meg	½	230104-98	BTS-1Meg	AGC Network
R39	100Ω	½	230104-50	BTS-100	Bias Network - See Note 1
R40	1000Ω	½	230104-62	BTS-1000	Bias Network - See Note 1
R41	82KΩ	½	230104-85	BTS-82K	Voltage Divider - See Note 1
R42	4700Ω	1	230104-70	BTA-4700	Video Det. Diode Load - See Note 9
R43	2.2Meg	½	230104-102	BTS-2.2Meg	Video Amp. Grid
R44	22KΩ	1	230105-78	BTA-22K	Video Amp. Screen

RESISTORS (CONT.)

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: MAGNAVOX PART No.	REPLACEMENT DATA: IRC PART No.	IDENTIFICATION CODES
R45	5600Ω	2	230106-71	BTB-5600	Video Amp. Plate
R46	1800Ω	½		BTS-1800	Contrast Control Shunt - See Notes 1 and 10
R47	1500Ω	2		BTB-1500	Video Amp. Decoupling - See Notes 1 and 2
R48	220KΩ	½	230104-90	BTS-220K	Isolation
R49	47KΩ	1	230105-82	BTA-47K	Voltage Divider - See Note 11
R50	1.5Meg	½	230104-100	BTS-1.5Meg	Picture Tube Grid - See Note 12
R51	470KΩ	½	230094-223	BTS-470K	Picture Tube Cathode
R52	39KΩ	½	230104-81	BTS-39K	Sound IF Amp. Grid
R53	82Ω	½	230104-49	BTS-82	Sound IF Amp. Cathode - See Note 1
R54	33KΩ	½		BTS-33K	Sound IF Amp. Screen - See Notes 6 and 13
R55	1000Ω	½	230104-62	BTS-1000	Sound IF Amp. Decoupling
R56	6800Ω 5%	½	230094-179	BTS-6800-5%	Ratio Det. Diode Load
R57	6800Ω 5%	½	230094-179	BTS-6800-5%	Ratio Det. Diode Load
R58	220Ω	½	230104-54	BTS-220	Balancing
R59	68KΩ	½	230104-84	BTS-68K	De-emphasis
R60	4.7Meg	½	230104-106	BTS-4.7Meg	AF Amp. Grid - See Note 20
R61	470KΩ	½	230104-94	BTS-470K	AF Amp. Plate - See Note 20
R62	1Meg	½	230104-98	BTS-1Meg	Bias Network - See Note 14
R63	470KΩ 5%	½	230094-223	BTS-470K-5%	Output Grid
R64	3300Ω	10	240021-18	1 3/4A-3500	Voltage Divider - Wire wound
R65	10KΩ	½	230104-74	BTS-10K	Isolation
R66	240KΩ 5%	1			Isolation - See Note 15
R67	2.2Meg	½	230104-102	BTS-2.2Meg	Sync. Amp. Grid
R68	47KΩ	½	230104-82	BTS-47K	Sync. Amp. Plate
R69	270KΩ	½	230104-91	BTS-270K	Sync. Sep. Cathode
R70	270KΩ	½	230104-91	BTS-270K	Sync. Sep. Plate
R71	15KΩ	½ ♦	230104-76	BTS-15K	Voltage Divider
R72	1Meg	½	230104-98	BTS-1Meg	Sync. Clipper Grid
R73	22KΩ	1	230105-78	BTA-22K	Sync. Clipper Plate - See Note 16
R74	39KΩ	½	230105-81	BTS-39K	Voltage Divider
R75A	22KΩ	½	250186-1 ♦	BTS-22K	Integrator
B	8200Ω	½		BTS-8200	Integrator
C	8200Ω	½		BTS-8200	Integrator
R76	270KΩ	½	230104-91	BTS-270K	Vert. Osc. Plate - See Note 12
R77	2300Ω 5%	½		BTS-2200-5%	Vert. Peaking
R78	1800Ω	½		BTS-1800	Vert. Retrace Blanking Network - See Note 17
R79	1.5Meg	½	230104-100	BTS-1.5Meg	Vert. Output Grid
R80	820Ω	1	230105-61	BTA-820	Vert. Output Cathode - See Note 18
R81	1500Ω	2	230106-64	BTB-1500	Vert. Output Decoupling - See Note 2
R82	56KΩ	½		BTS-56K	Vert. Osc. Decoupling - See Note 1
R83	330KΩ	1	230104-92	BTA-330K	Horiz. AFC Grid - See Note 2
R84	820KΩ	½	230094-221	BTS-820K	Horiz. AFC Grid
R85	82KΩ	½	230104-85	BTS-82K	Horiz. AFC Cathode
R86	330KΩ	1	230104-92	BTA-330K	Horiz. AFC Cathode
R87	3900Ω	½	230104-69	BTS-3900	Horiz. AFC Filter
R88	100KΩ	½	230104-86	BTS-100K	Horiz. AFC Plate
R89	120KΩ	1	230104-87	BTA-120K	Voltage Divider
R90	150KΩ 5%	½	230104-88	BTS-150K-5%	Horiz. Osc. Grid
R91	82KΩ	1	230105-85	BTA-82K	Horiz. Osc. Plate - See Note 2
R92	8200Ω	½	230104-73	BTS-8200	Horiz. Osc. Coil Shunt
R93	150KΩ 5%	½	230104-88	BTS-150K-5%	Horiz. Feedback
R94	47Ω	½	230104-46		Parasitic Suppressor
R95	1Meg	½	230104-98	BTS-1Meg	Horiz. Output Grid
R96	28,300Ω	10			Horiz. Output Screen - Wire Wound - See Note 19
R97	1000Ω	10		1 3/4A-1000	Decoupling - Wire Wound - See Note 1
R98	1Meg	1	230105-98		HV Filter

♦ Items R75A, R75B, R75C, C60A, C60B, and C60C are combined into one unit.

Note 1 Not used in all models.
Note 2 Some models use Parallel resistors in this application to obtain desired value.
Note 3 Some models use 47KΩ resistor in this application.
Note 4 Some models use 6800Ω resistor in this application.
Note 5 Some models use 10KΩ resistor in this application.
Note 6 Some models use 22KΩ resistor in this application.
Note 7 Some models use 3300Ω resistor in this application.
Note 8 Some models use 8200Ω resistor in this application.
Note 9 Some models use 5600Ω resistor in this application.
Note 10 Some models use 2200Ω resistor in this application.
Note 11 Some models use 180KΩ resistor in this application.
Note 12 Some models use 470KΩ resistor in this application.
Note 13 Some models use 15KΩ resistor in this application.
Note 14 Some models use 820KΩ resistor in this application.
Note 15 Some models use 270KΩ resistor in this application.
Note 16 Some models use 68KΩ resistor in this application.
Note 17 Some models use 3900Ω resistor in this application.
Note 18 Some models use 1500Ω resistor in this application.
Note 19 Some models use 38KΩ resistor in this application.
Note 20 Used in TV models only.
Note 21 Some models use 82Ω resistor in this application.

SPEAKER

ITEM No.	RATINGS: FIELD RES.	RATINGS: V. C. IMP.	REPLACEMENT DATA: MAGNAVOX PART No.	REPLACEMENT DATA: JENSEN PART No.	REPLACEMENT DATA: QUAM PART No.	NOTES
SP1	PM	3.4Ω		ST115 Model P8-V	8A31	
	CONE DIA.	V. C. DIA.				
SP2	7 3/8"	9/16"				

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	RATING: SEC. 1	RATING: SEC. 2	RATING: SEC. 3	REPLACEMENT DATA: MAGNAVOX PART No.	REPLACEMENT DATA: STANCOR PART No.	REPLACEMENT DATA: MERIT PART No.	REPLACEMENT DATA: CHICAGO PART No.
T1	117VAC ② 1.7A	720VCT .210ADC	5VAC ② 3A	6.3VAC ② 1.55A SEC. 4 6.3VAC ② 6A	300059-1		P-3069	

PARTS LIST CONTINUED ON PAGE 15

MAGNAVOX CHASSIS CT-270, CT-271, CT-272, CT-273, CT-274, CT-275, CT-276, CT-277, CT-278, CT-279, CT-280, CT-281, CT-282

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING DC RESISTANCE PRI.	RATING DC RESISTANCE SEC.	REPLACEMENT DATA MAGNAVOX PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.	NOTES
T2	140Ω	1.32KΩ	320030-6	A-8122	A-4000 ①	TBO-1	Vert. Block Osc. Trans.
T3	310Ω	10.5Ω	320055-1		HVO-7		Horiz. Output Trans.
	Tap 25.5Ω	Tap .7Ω & 8.3Ω					
		SEC. 2					
		0Ω					
T4	820Ω	13Ω	320056-2	A-8112 ①	A-3036	TSO-5 ①	Vert. Output Trans.
T5A	13Ω		360462-6	DY-7	MDF-70		Horiz. Deflection Coils
B	46Ω						Vert. Deflection Coils

① Drill one new mounting hole.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING IMPEDANCE PRI.	RATING IMPEDANCE SEC.	RATING DC RES. PRI.	RATING DC RES. SEC.	REPLACEMENT DATA MAGNAVOX PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.	INSTALLATION NOTES
T6	5.3KΩ	3.4Ω	540Ω	.6Ω		A-3849	A-3019	RO-9 ①	Drill one new mounting hole.

FILTER CHOKE

ITEM No.	RATINGS TOTAL DIRECT CURRENT	RATINGS D. C. RESISTANCE	RATINGS INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA MAGNAVOX PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA MERIT PART No.	REPLACEMENT DATA CHICAGO PART No.	INSTALLATION NOTES
L1	.150A	55Ω	1 Henry	320041-3	C-2326	C-2994	TR-3300 ①①	Drill one new mount-
L2	.050A	55Ω	1 Henry	320041-3	C-2326	C-2994	TR-3300 ①	ing hole.

COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA MAGNAVOX PART No.		IRC PART No.	NOTES
L3	Ant. Trans.	0Ω	0Ω	360490-2			
L4	Ant. Coils	0Ω					
L5	RF Coils	0Ω					
L6	Fil. Choke	.2Ω		360372-1		CLA	.47 Microhenries
L7	Mixer Grid Coils	0Ω					
L8	Osc. Coils	0Ω					
L9	Fil. Choke	.2Ω		360372-1		CLA	.47 Microhenries
L10	1st. Video IF	.7Ω	Tap .3Ω	360468-1			
L11	Fil. Choke	0Ω		360332-11			Not used in all models
L12	2nd. Video IF	.5Ω	.5Ω	360461-1			
L13	Fil. Choke	.2Ω		360372-1		CLA	.47 Microhenries(not used in all models)
L14	3rd. Video IF	.5Ω	.5Ω	360461-1			
L15	4th. Video IF	.5Ω	.5Ω	360461-1			
L16	Fil. Choke	.2Ω		360372-1		CLA	.47 Microhenries(not used in all models)
L17	Peaking	5Ω		360443-12			Yellow dot
L18	Peaking	10Ω		360443-2			Red dot
L19	Peaking	8Ω		360443-13			Wound on 39KΩ resistor (Brown dot)
L20	Peaking	10Ω		360443-14			Wound on 5.6KΩ resistor (Green dot)
L21	Sound IF	1Ω		360481-1			
L22	Ratio Det. Trans.	2.4Ω	.2Ω	360482-1			Tap .7Ω
L23	Horiz. Osc.	60Ω	50Ω	360479-1			Tap 23Ω
L24	Horiz. Size	.9Ω		360357-1			
L25	Horiz. Lin.	7Ω	Tap 3.1Ω	360358-1			

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA MAGNAVOX PART No. FUSE	REPLACEMENT DATA MAGNAVOX PART No. HOLDER	REPLACEMENT DATA LITTELFUSE PART No. FUSE	REPLACEMENT DATA LITTELFUSE PART No. HOLDER	REMARKS
M1	3AG Pigtail	.250A	180475-1		318.250		

MISCELLANEOUS

ITEM No.	PART NAME	MAGNAVOX PART No.	NOTES
M2	RF Tuner	700349-1	
M3	Focus Magnet	360485-1	
M4	Ion Trap	360492-1 (or) 360422-2	
B3, B4	Trimmer	260106-3	Dual (Horiz. lock - Horiz. drive)