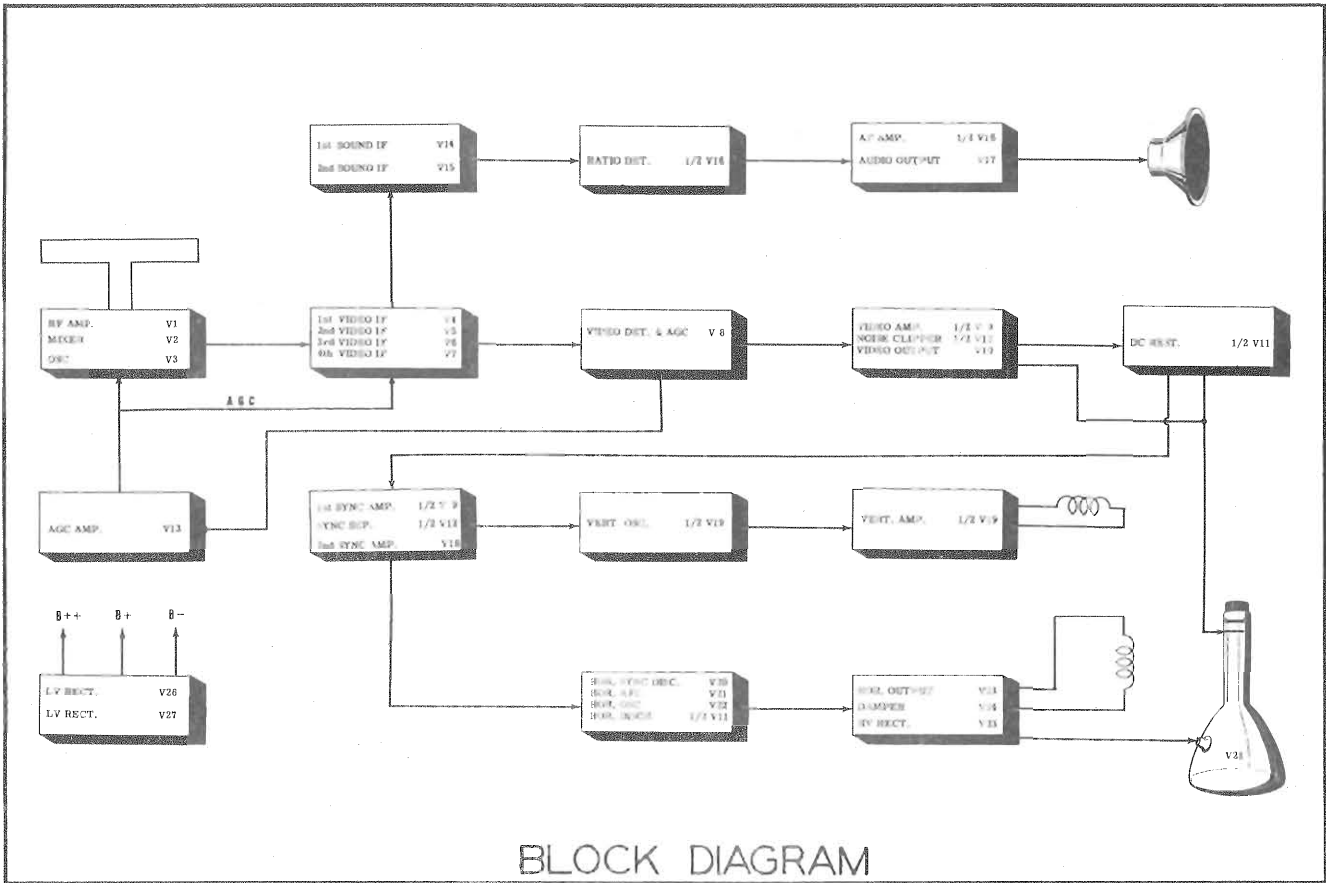


WESTINGHOUSE MODELS H-196A (DX),
H-207A (DX), H-207B (DX), H-225 (DX)



TRADE NAME	Westinghouse Models H-196A (DX) (Ch. V-2130-11DX or V-2130-12DX), H-207A (DX) (Ch. V-2130-11DX or V-2130-12DX and Radio Ch. V-2137), H-207B (DX) (Ch. V-2130-21DX or V-2130-22DX and Radio Ch. V-2137), H-225 (DX) (Ch. V-2130-31DX or V-2130-32DX)
MANUFACTURER	Westinghouse Electric Corp., Receiver Div., Sunbury, Pa.
TYPE SET	AM-FM-Phono-TV Combination Receiver (Models H-196A (DX) and H-225 (DX) TV Only).
TUBES	Thirty-Six (Combination Models) Twenty-Nine (TV Only Models)
POWER SUPPLY	110-120 Volts AC-60 Cycle
RATINGS	2.25Amp. at 117 Volts AC (TV) .76 Amp. at 117 Volts AC (Radio)
TUNING RANGES	AM... 540-1600KC, FM... 88-108MC, TV... Channels 2 thru 13

INDEX	
Alignment Instructions	6, 7
Block Diagram	28
Dial Cord Stringing	28
Disassembly Instructions	27
Horizontal Sweep Circuit Adjustment	27
Parts List and Description	18 thru 24
Photographs	
Capacitor Identification (Radio)	17
Capacitor Identification (TV)	15, 26
Chassis-Top View (Radio)	11
Chassis-Top View (TV)	3, 24
Photographs (continued)	
RF Tuner (TV)	10
Resistor Identification (Radio)	14
Resistor Identification (TV)	16, 25
Trans. Inductor and Alignment Identification (TV)	4, 13
Schematic (Radio)	8, 9
Schematic (TV)	2
Sensitivity Control Adjustment	27
Tube Placement Chart	5
Voltage and Resistance Measurements	12

HOWARD W. SAMS & CO., INC. • Indianapolis 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."

"Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1950 by Howard W. Sams & Co., Inc., Indianapolis Indiana, U. S. of America. Copyright under International Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America

DATE 1-50 SET 84 FOLDER 13

SENSITIVITY CONTROL ADJUSTMENTS

For average conditions, this control may be set as follows:

1. Disconnect antenna from receiver.
2. Connect VTVM from AGC line to chassis.
3. Turn sensitivity control fully clockwise.
4. Now slowly turn the control counter-clockwise until VTVM reading decreases to 0.6 volt.
5. If voltage will not decrease to 0.6 volt turn control to the point where the voltage stops decreasing.

Another method of adjustment is as follows:

1. Disconnect antenna from receiver.
2. Turn contrast control fully clockwise.
3. Turn brightness control just to the point where the raster appears.
4. Turn the sensitivity control fully counter-clockwise and notice the black noise dots which appear on the raster.
5. Slowly turn the sensitivity control clockwise to the point when the noise dots disappear.
6. Back up the control to point where the noise dots reappear.

The two methods outlined above are for average conditions. For extremely weak or strong signals this control should be adjusted for best picture quality on all available stations.

HORIZONTAL OSCILLATOR ALIGNMENT

Turn the set on and tune in a TV station. Turn the vertical hold control to synchronize the picture vertically.

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

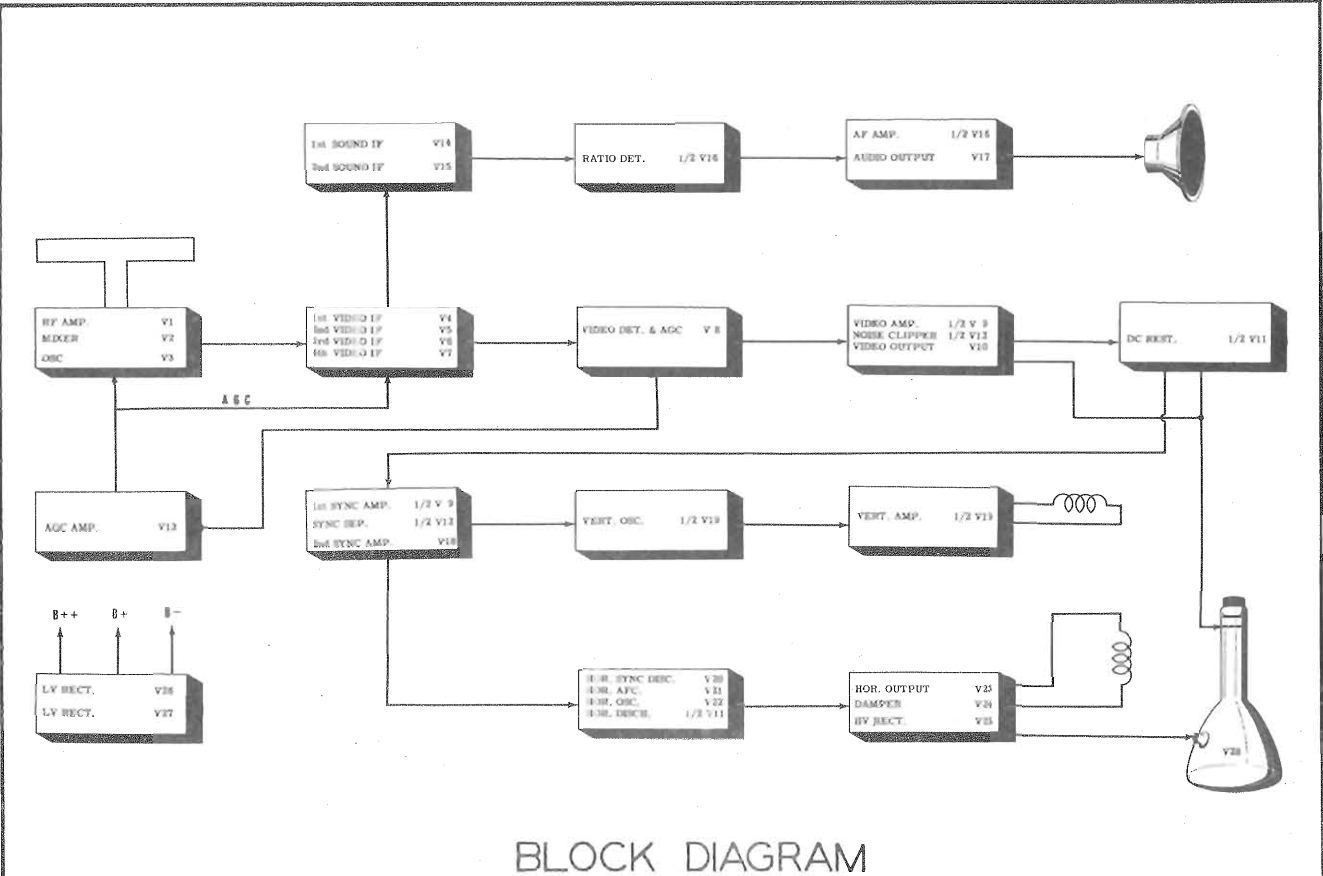
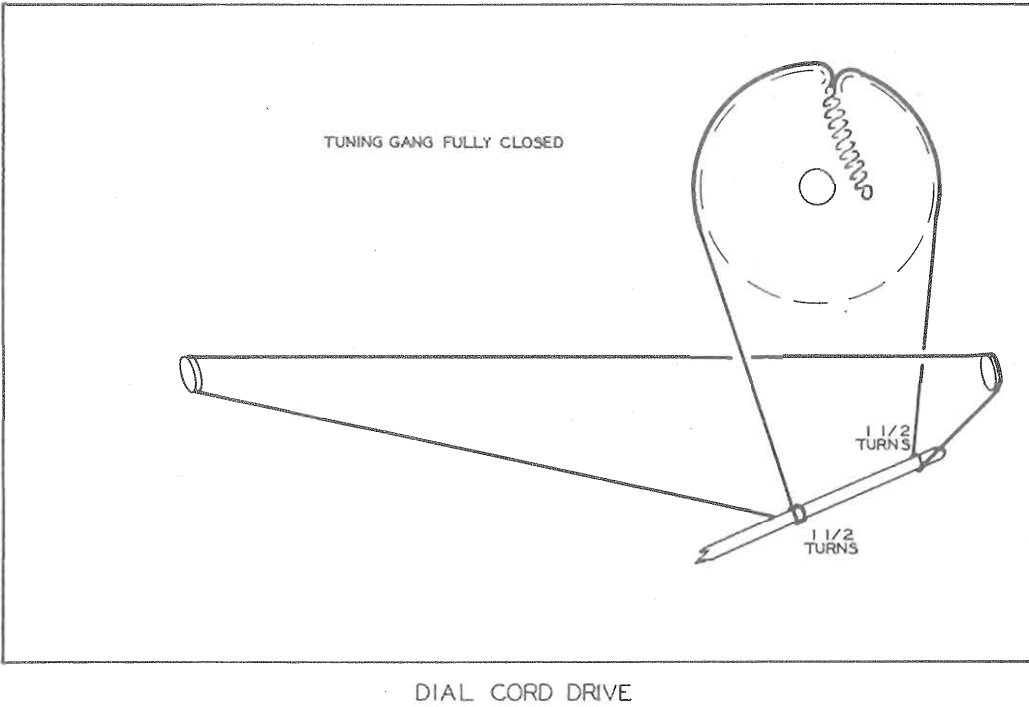
Adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally. Adjust the phasing slug (B2) until the blanking bar, which may appear in the picture, moves to the right and off the raster.

HORIZONTAL LINEARITY ADJUSTMENT

Adjust the width slug (B3) until the picture is of proper size to fill the mask horizontally. Adjust the horizontal linearity slug (B4) and the horizontal linearity control until the picture is symmetrical from left to right. The horizontal linearity control effects mainly the right half of the picture, and B4 effects the center of the picture. These two adjustments should be made alternately for best results.

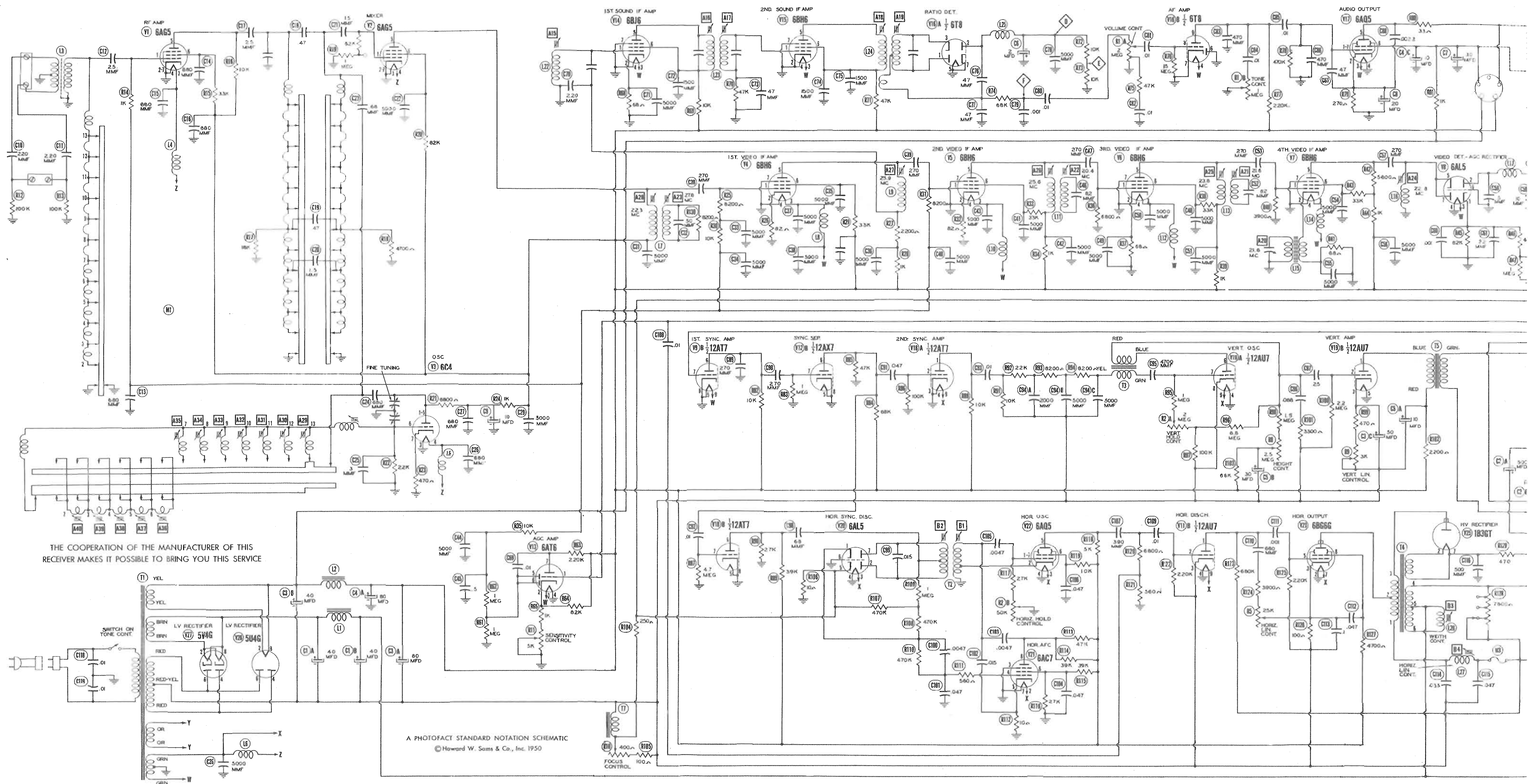
DISASSEMBLY INSTRUCTIONS

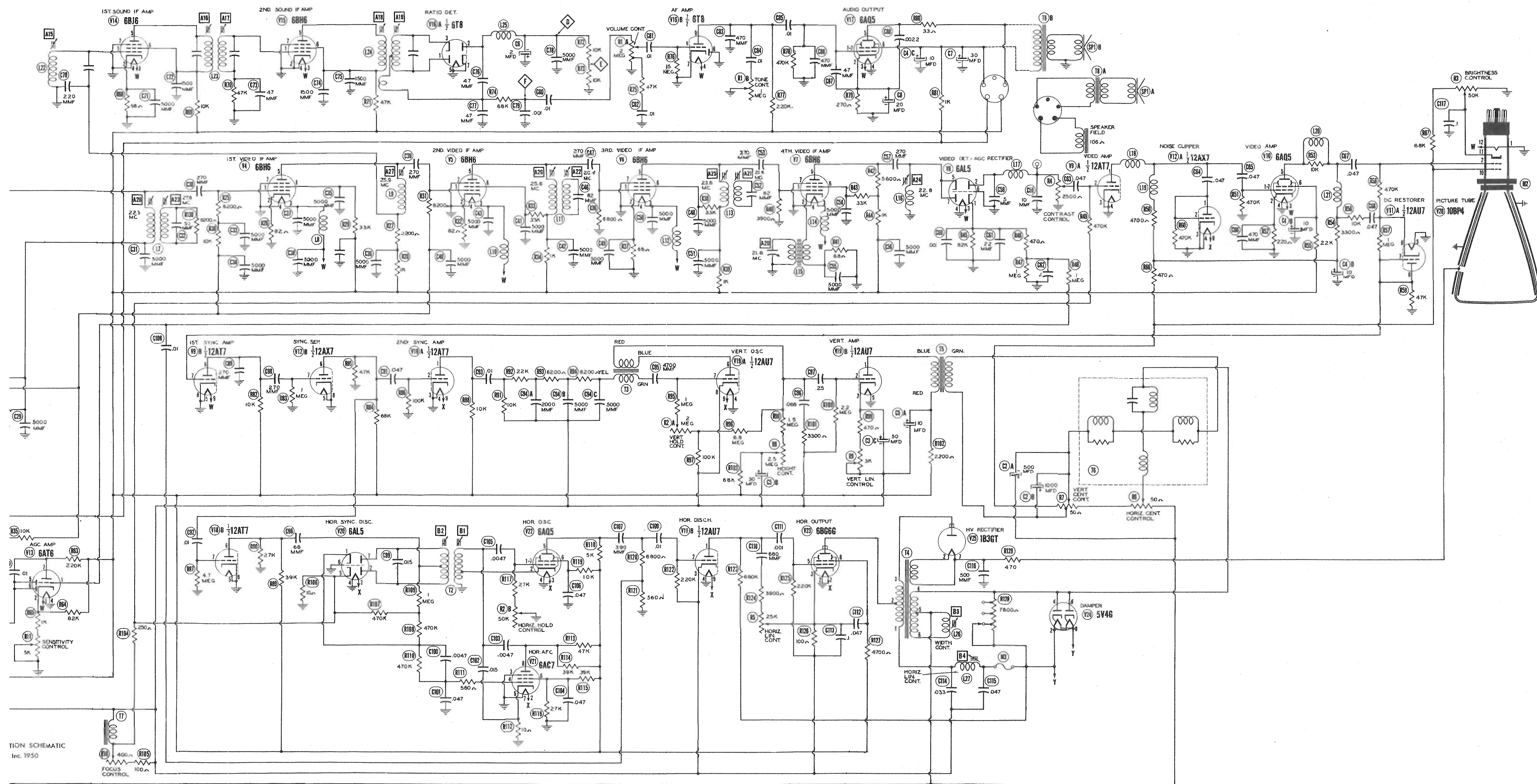
1. Remove 5 push-on type control knobs from TV.
2. Remove 12 screws holding rear cover. Pull out on left side, push up and remove cover.
3. Remove speaker plug from TV speaker.
4. Remove three 7/16" hex head bolts holding TV chassis. Remove chassis.
5. Remove four screws holding TV speaker. Remove speaker.
6. Remove two push-on type control knobs from receiver.
7. Disconnect phono motor and pick-up plugs from rear of receiver chassis.
8. Disconnect receiver power plug from under TV mounting board.
9. Remove AM and FM antenna leads from terminals on rear of receiver chassis.
10. Remove speaker leads from top of receiver chassis.
11. Remove three 1/4" hex head bolts holding receiver chassis. Remove chassis.
12. Remove five screws holding speaker. Remove speaker.



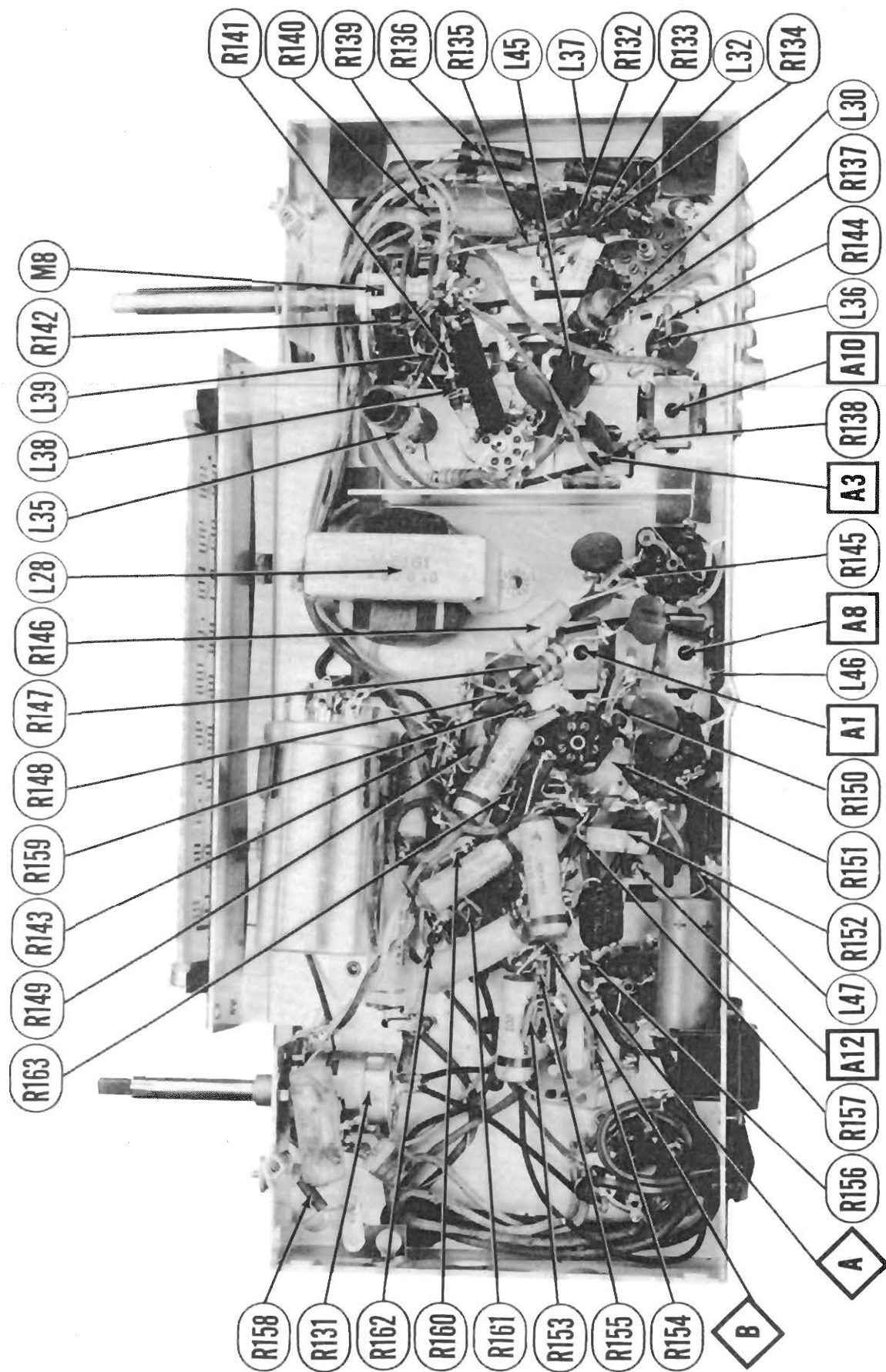
TRADE NAME
MANUFACTUR
TYPE SET
TUBES
POWER SUPPL
RATINGS
TUNING RANG
Alignment Instr
Block Diagram
Dial Cord Strin
Disassembly In
Horizontal Swee
Parts List and
Photographs
Capacitor Ide
Chassis-Top
Chassis-Top

The listing of any av
case a recommenda
as to the quality and
parts have been comp
Inc., by the manufact
"Reproduction or use

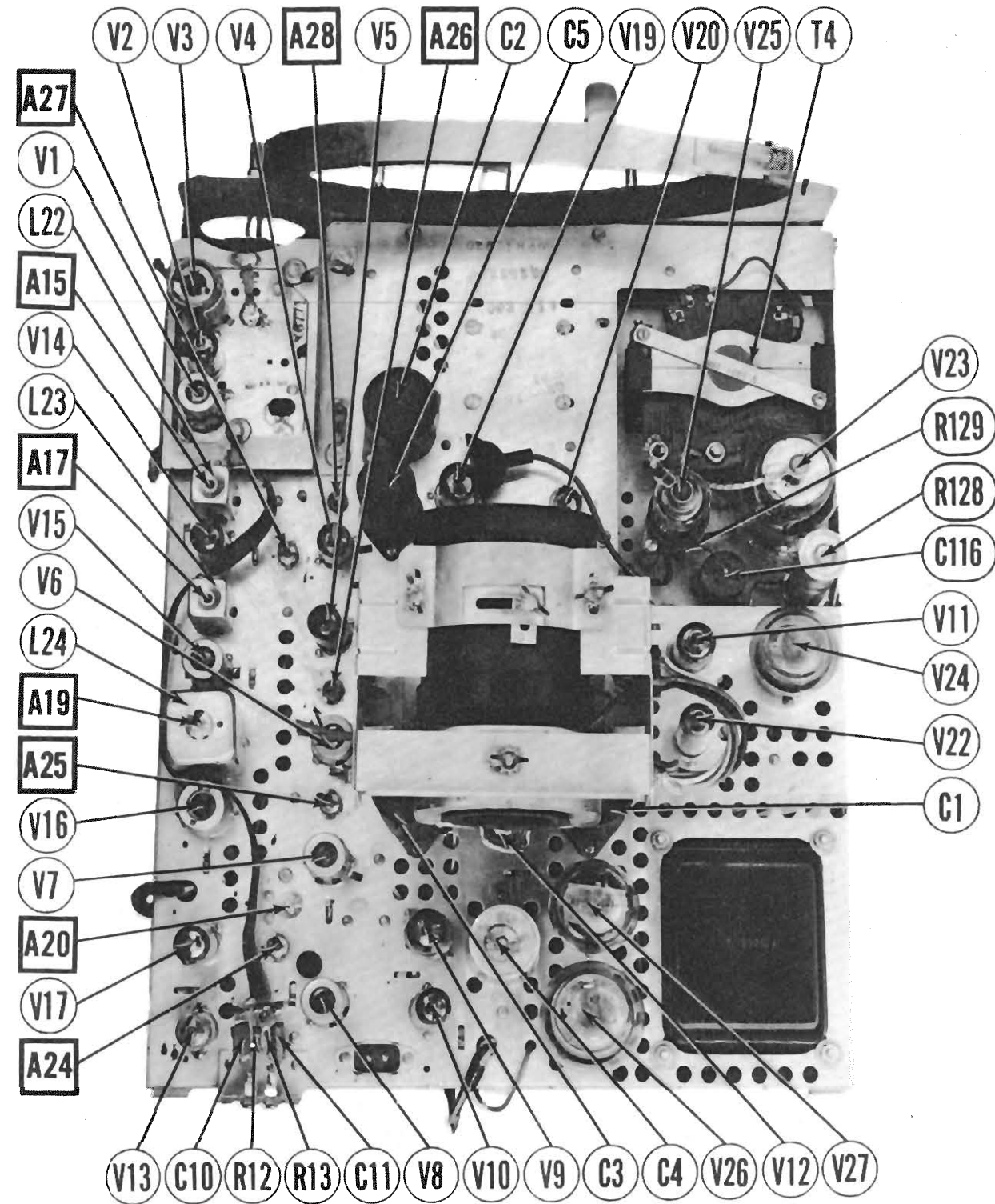




WESTINGHOUSE MODELS H-196A (DX),
H-207A (DX), H-207B (DX), H-225 (DX)

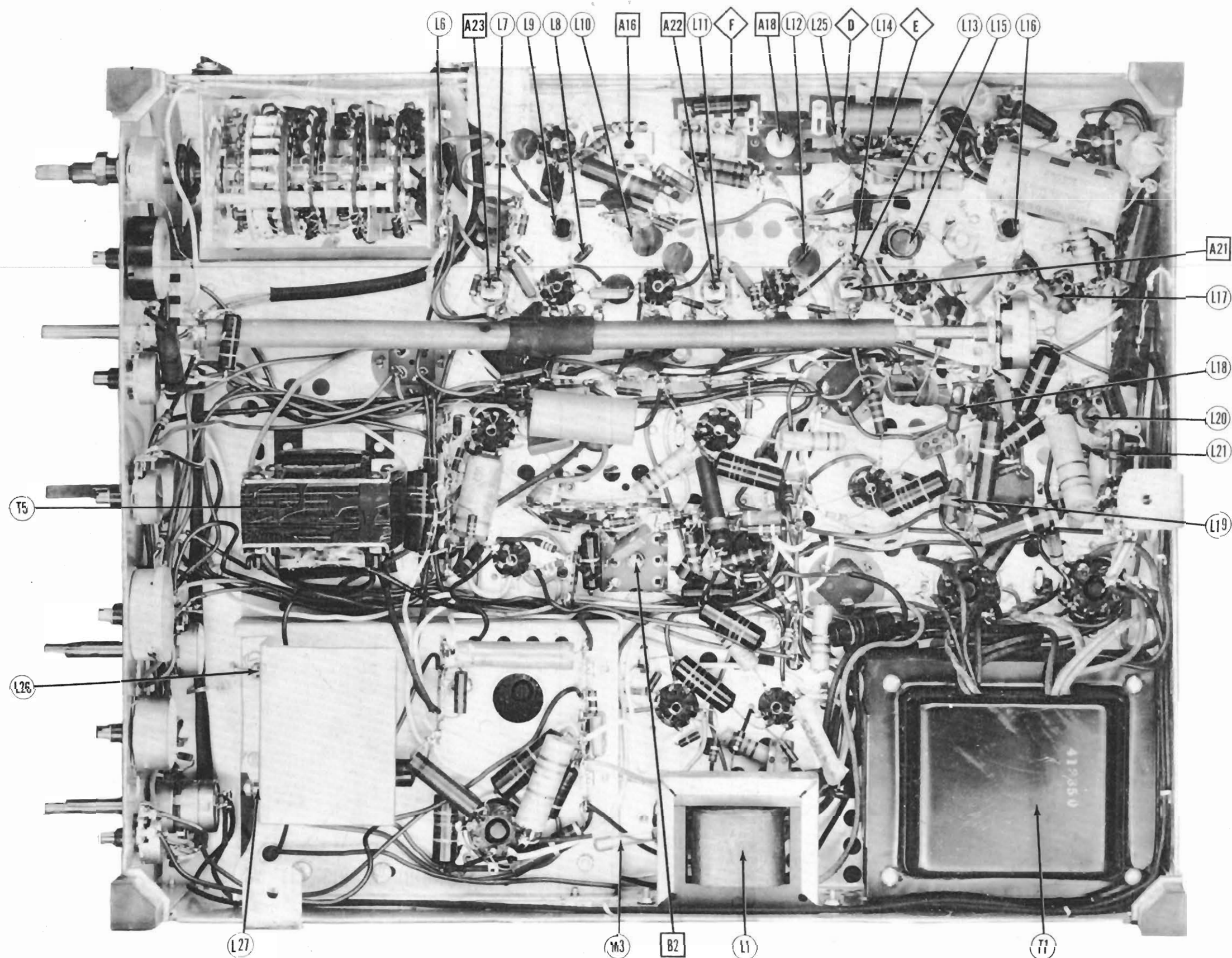


RADIO CHASSIS - BOTTOM VIEW - RESISTOR IDENTIFICATION



CHASSIS TOP VIEW

WESTINGHOUSE MODELS H-196A (DX),
H-207A (DX), H-207B (DX), H-225 (DX)



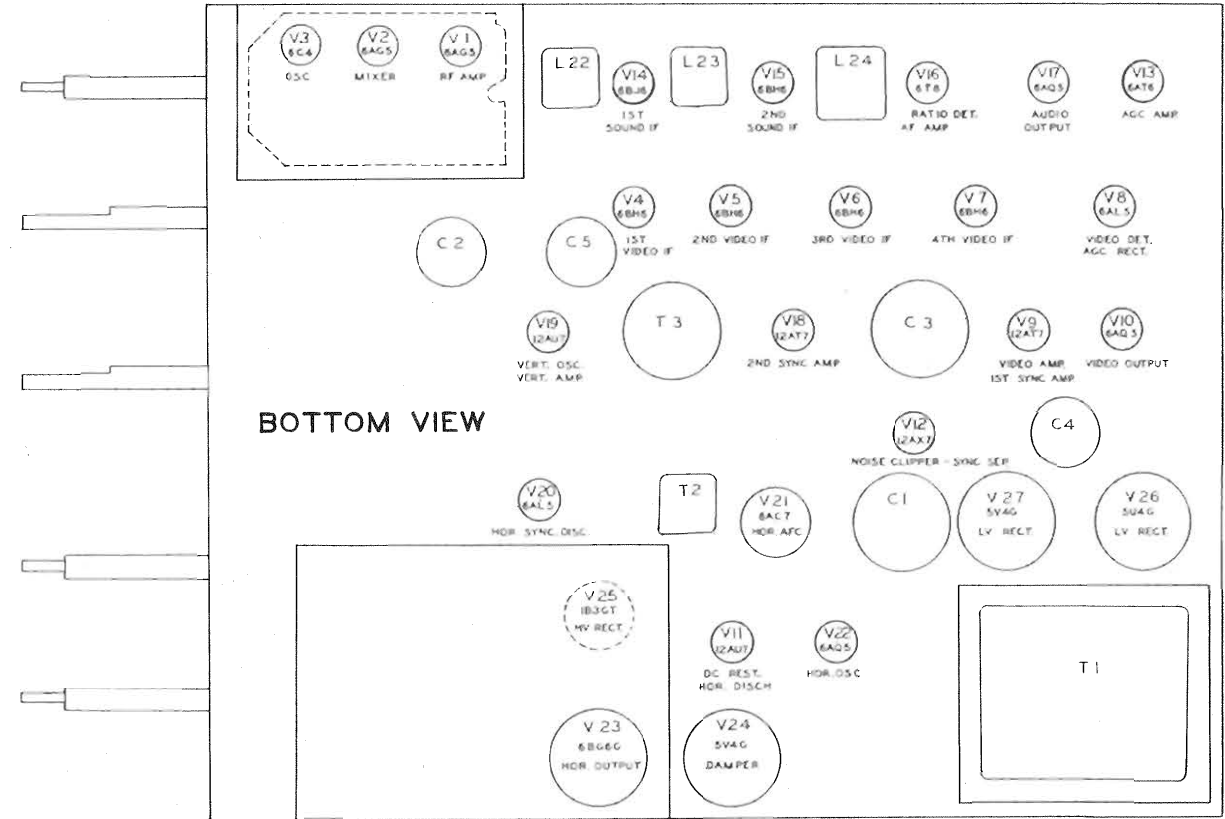
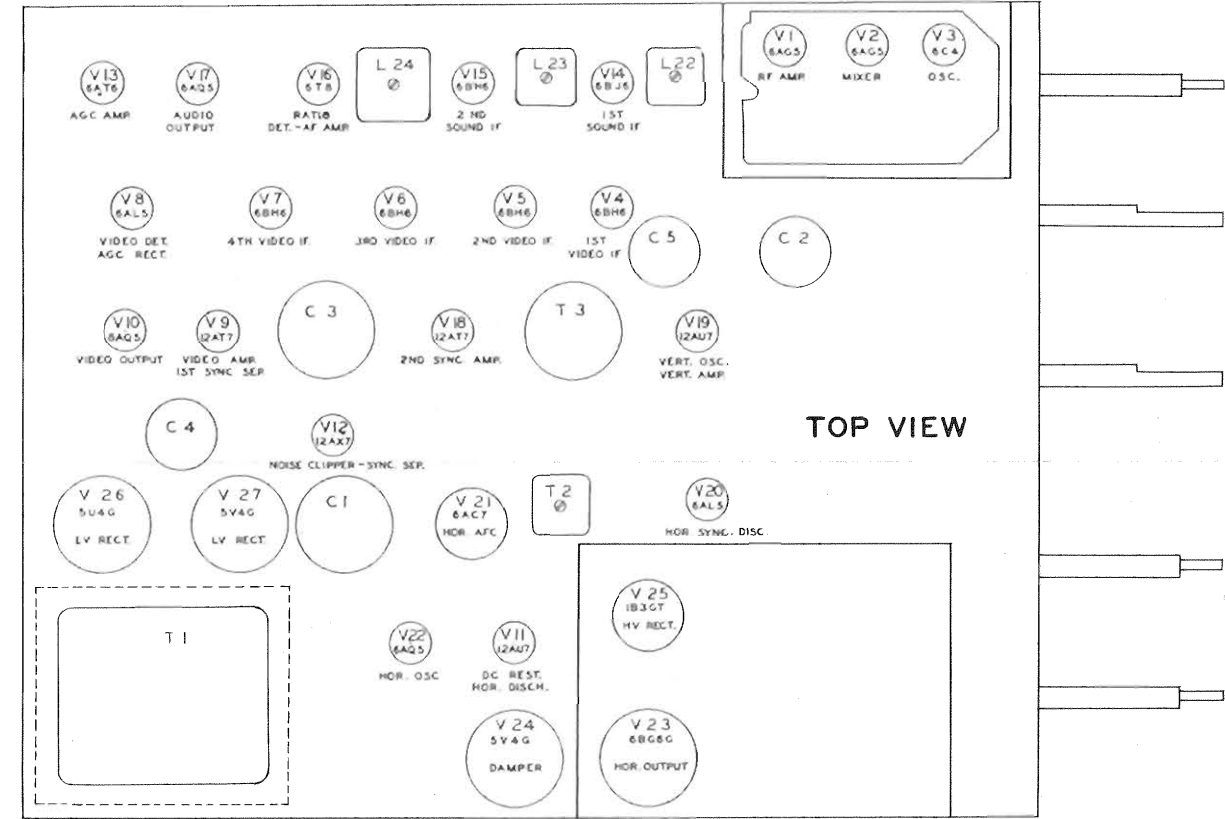
CHASSIS BOTTOM VIEW-TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS									
Pin	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V1	6AG5	-3.5VDC	0V	6.3VAC	0V	15VDC	11VDC	0V	0V
V2	6AG5	-1.5VDC	0V	6.3VAC	0V	25VDC	13VDC	0V	0V
V3	6CA	10VDC	0V	6.3VAC	0V	15VDC	1.2.5VDC	4.5VDC	0V
V4	6BH6	-3.5VDC	0V	6.3VAC	0V	22VDC	10VDC	0V	0V
V5	6BH6	-3.5VDC	0V	6.3VAC	0V	24VDC	10VDC	0V	0V
V6	6BH6	-3.5VDC	0V	6.3VAC	0V	23VDC	14VDC	0V	0V
V7	6BH6	0V	0V	6.3VAC	0V	20VDC	15VDC	0V	0V
V8	6AL5	3VDC	0V	6.3VAC	0V	0V	0V	0V	0V
V9	12AT7	25VDC	0V	6.3VAC	0V	14VDC	14VDC	0V	0V
V10	6AQ5	0V	0V	6.3VAC	0V	15VDC	10VDC	0V	0V
V11	12AU7	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V12	12AX7	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V13	6AT6	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V14	6BH6	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V15	6BH6	-3.5VDC	0V	6.3VAC	0V	0V	0V	0V	0V
V16	6T8	-3.5VDC	0V	6.3VAC	0V	0V	0V	0V	0V
V17	6AQ5	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V18	6AQ5	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V19	12AU7	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V20	6AL5	-3.5VDC	0V	6.3VAC	0V	0V	0V	0V	0V
V21	6AC7	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V22	6AQ5	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V23	6BG6	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V24	5Y4G	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V25	110T	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V26	5Y4G	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V27	5Y4G	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V28	100P4	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V29	12AX7	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V30A	6BE6	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V30B	6BE6	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V31	6BA6	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V32	6BA6	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V33	6AL5	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V34	6AV6	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V35	6Y4G	0V	0V	6.3VAC	0V	0V	0V	0V	0V
V36	5Y4G	0V	0V	6.3VAC	0V	0V	0V	0V	0V

1. DC Voltage measurements are at 20,000 ohm per volt AC Voltage measured at 1,000 ohm.
 2. Pin numbers are counted in a clockwise direction from bottom of socket.
 3. Measured values are from socket pin to common negative unless otherwise noted.
 4. Line voltage maintained at 117 volts for voltage readings.
 5. Front panel controls set at minimum.
 6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.

1. DO NOT MEASURE WITH VACUUM TUBE VOLTMETER.
 2. TAKEN IN FM POSITION.
 3. DO NOT MEASURE.
 4. MEASURED FROM PIN 8 OF V18.
 5. MEASURED FROM PIN 8 OF V26.
 6. MEASURED FROM PIN 8 OF V27.
 7. TAKEN IN FM POSITION.
 8. MEASURED FROM PIN 8 OF V19.
 9. MEASURED FROM PIN 8 OF V36.



TUBE PLACEMENT CHART

WESTINGHOUSE MODELS H-196A (DX),
 H-207A (DX), H-207B (DX), H-225 (DX)

RADIO ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT							
To set dial pointer, turn tuning capacitor fully closed and set pointer at last reference mark at left hand edge of dial. Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.							
AM ALIGNMENT							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1 .IMFD	High side to pin 1-6BA6 (V31). Low side to chassis.	455KC	AM (center pos.)	Tuning cap fully open	Across voice coil	A1, A2	Adjust for maximum output.
2 .IMFD	High side to pin 1-6BE6 (V30). Low side to chassis.	"	"	"	"	A3, A4	"
3	Loop	1600KC	"	1600KC	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
4	Loop	1400KC	"	Tune for max. output.	"	A6	Rock tuning cap and adjust for maximum output.
FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM							
Before starting step 7, connect two 100KΩ matched resistors (± 5%) connected in series from pin 7 6AL5 (V33) to chassis. (See Schematic). Connect the DC Probe of the VTVM to point B and the common lead to point C.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5 1000MMF	High side to pin 1-6BA6 (V31). Low side to chassis.	10.7MC	FM (ext. CCW)	Tuning cap fully open	DC Probe to Point A Common to chassis.	A7, A8, A9	Adjust for maximum deflection.
6 1000MMF	High side to pin 7 12AT7 (V29). Low side to chassis.	"	"	"	"	A10, A11	Adjust for maximum deflection.
7 1000MMF	"	"	"	"	DC Probe to Point B Common lead to Point C	A12	Adjust for zero reading. A positive or negative reading on either side denotes the correct setting. Remove the two 100KΩ resistors.
FM 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	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
5 1000MMF	High side to pin 1-6BA6 (V31). Low side to chassis.	10.7MC (450KC Sweep)	FM	Tuning cap fully open	Vertical Amp. to Point A Low side to chassis.	A7, A8, A9	Disconnect stabilizer capacitor (C12). Adjust for maximum amplitude and symmetry as per Fig 1.
6 1000MMF	High side to pin 7 12AT7 (V29). Low side to chassis.	"	"	"	"	A10, A11	Adjust for maximum amplitude and symmetry as per Fig 1.
7 1000MMF	"	"	"	"	Vertical Amp. to Point B Low side to chassis.	A12	Reconnect stabilizer cap. Adjust so cross-over point occurs at center of pattern as per Fig 2. If necessary, slightly retouch A7 for maximum amplitude and straightness of cross over lines.
FM RF ALIGNMENT							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
8 300Ω carbon res.	High side to terminal 1 of antenna strip. Low side to terminal 2.	105MC	FM	105MC	DC Probe to Point A Low side to chassis.	A13	Adjust for maximum deflection.
9 300Ω carbon res.	"	"	"	Tune for max. output.	"	A14	Adjust for maximum deflection.

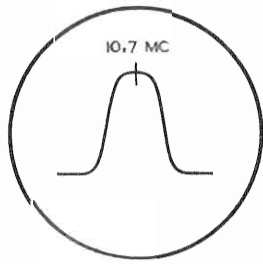


FIG. 1

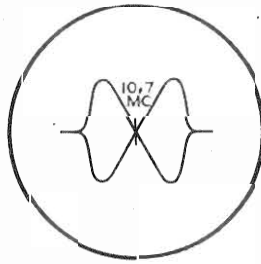
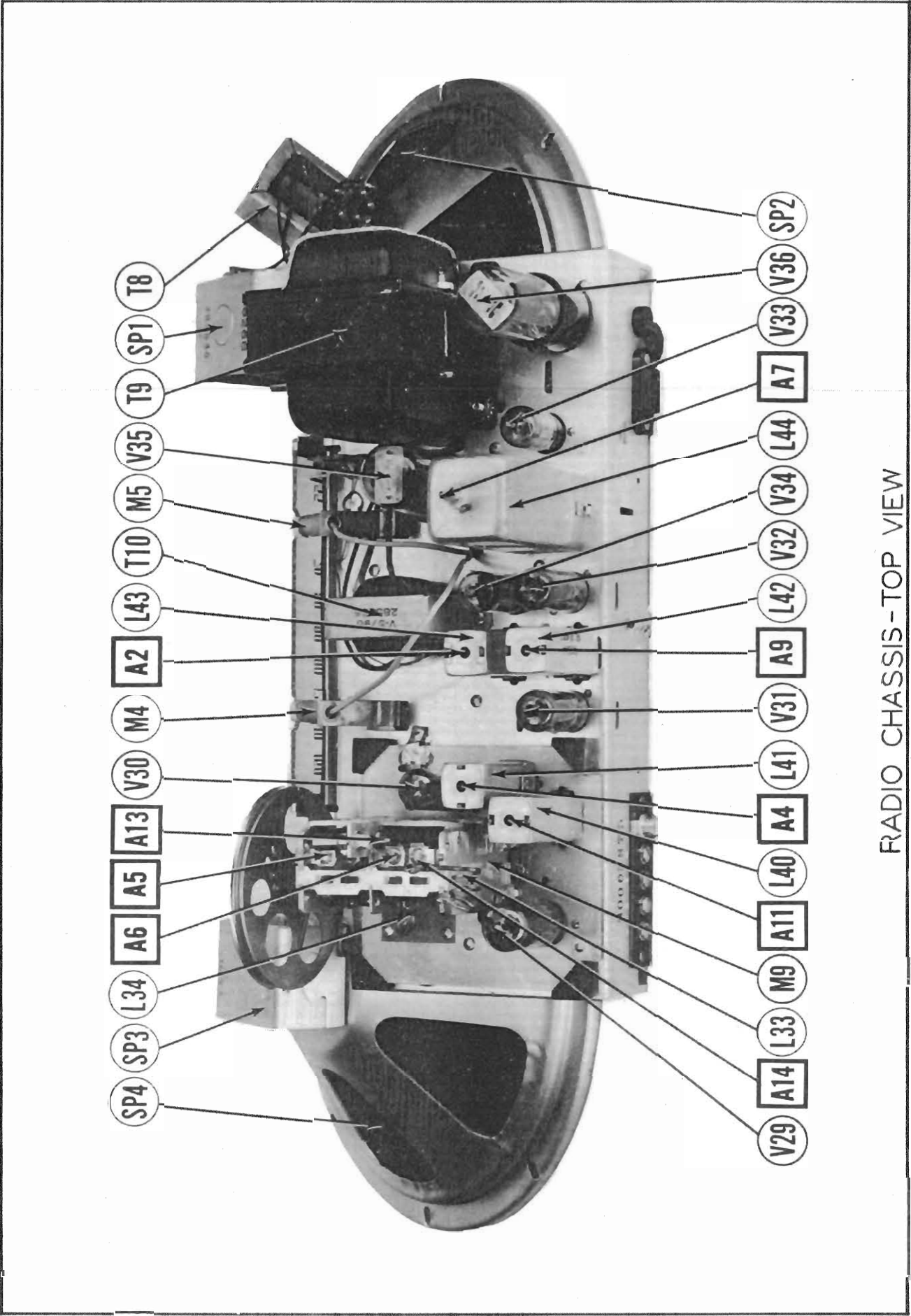
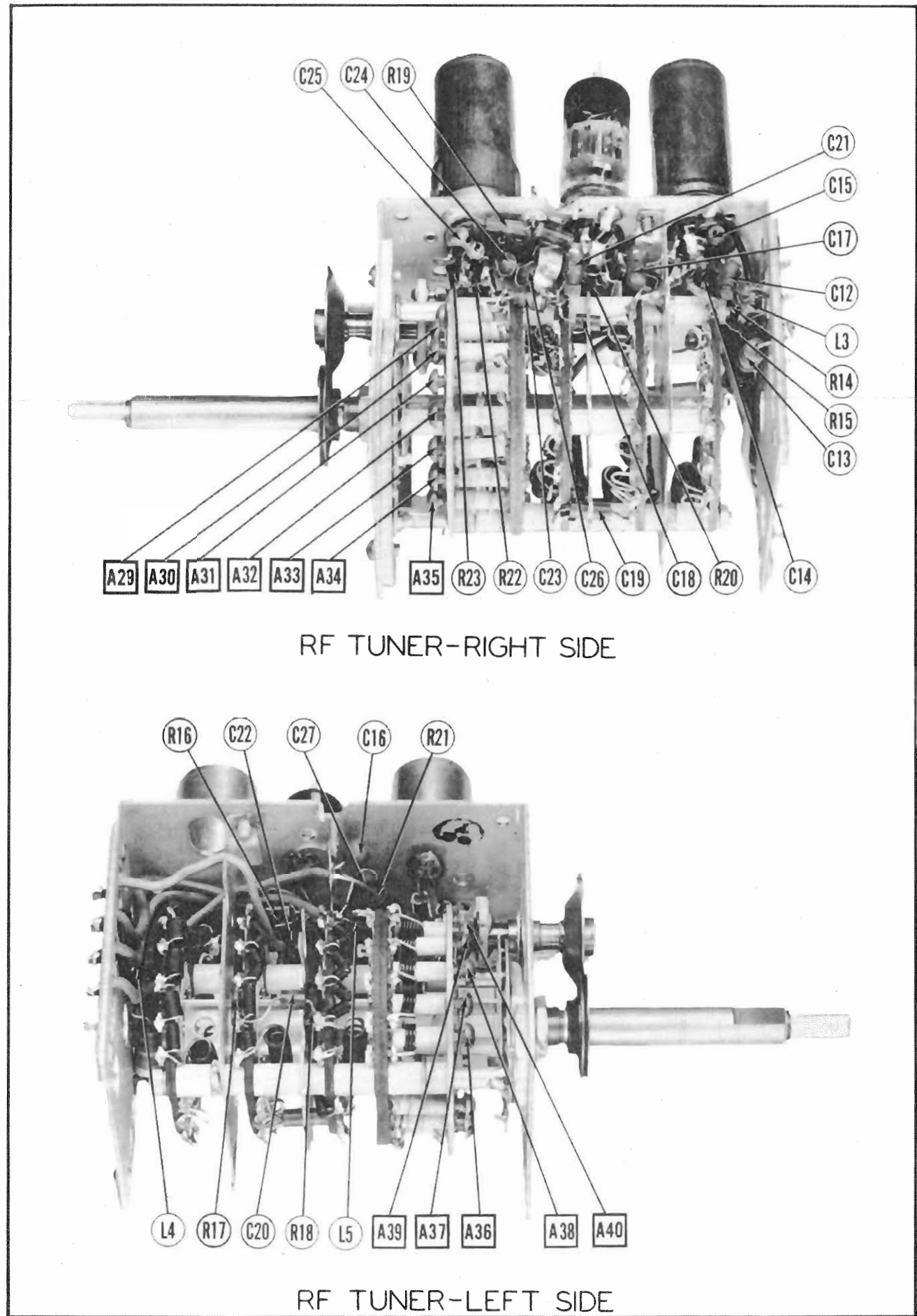


FIG. 2



WESTINGHOUSE MODELS H-196A (DX),
H-207A (DX), H-207B (DX), H-225 (DX)
RADIO CHASSIS VIEW






RF TUNER-RIGHT SIDE

RF TUNER-LEFT SIDE

TV ALIGNMENT INSTRUCTIONS

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Attenuate the signal generator to give approximately a 5 volt reading on the VTVM using the 10 volt scale.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
10	500MMF	High side to pin 1 (Grid) of 6AG5 (V2). Low side to chassis.	21.6MC	3	DC Probe to Point  Common to chassis.	A15, A16, A17, A18	Adjust for maximum deflection.
11	500MMF	"	"	"	DC Probe to Point  Common to Point 	A19	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

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10	500MMF	High side to pin 1 (Grid) of 6AG5 (V2). Low side to chassis.	21.6MC (1MC Sweep)	21.45MC 21.6MC 21.8MC	3	Vert. Amp. to Point \diamond Low side to chassis.	A15, A16, A17, A18	Disconnect stabilizer cap (C6). Adjust for maximum amplitude and symmetry as per Fig 3.
11	500MMF	"	"	21.35MC 21.6MC 21.85MC	3	Vert. Amp. to Point \diamond Low side to chassis.	A19	Reconnect stabilizer cap. Adjust A19 so 21.6MC marker appears at center of pattern as per Fig 4.

VIDEO IS ALIGNMENT

VIDEO IF ALIGNMENT

Connect the bias unit shown in Fig. 5 to the AGC line.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
12	500MMF	High side to pin 1 (Grid) of 6AG5 (V2). Low side to chassis.	21.6MC	3	DC Probe to Video Test Jack on chassis. Common to chassis.	A20	Adjust for minimum deflection.
13	500MMF	"	21.6MC	"	"	A21	Adjust for minimum deflection.
14	500MMF	"	20.4MC	"	"	A22	Adjust for minimum deflection.
15	500MMF	"	27.6MC	"	"	A23	Adjust for minimum deflection.
16	500MMF	"	22.8MC	"	"	A24	Adjust for maximum deflection.
17	500MMF	"	23.8MC	"	"	A25	Adjust for maximum deflection. If A25 required adjustment, repeat step 13.
18	500MMF	"	25.6MC	"	"	A25	Adjust for maximum deflection. If A26 required adjustment, repeat step 14.
19	500MMF	"	25.9MC	"	"	A27	Adjust for maximum deflection.
20	500MMF	"	22.3MC	"	"	A28	Adjust for maximum deflection. If A28 required adjustment, repeat step 15.

OVERALL VIDEO IF RESPONSE CHECK

OVERALL VIDEO IF RESPONSE CHECK

Shunt the vertical amplifier connections of the oscilloscope with a 500MMF capacitor and insert a 200K Ω resistor in series with the high side lead.
Connect the horizontal amplifier to the synchronized sweep voltage output of the signal generator.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
21	500MMF High side to pin 1 (Grid) of 6AG5 (V2). Low side to chassis.	25MC (12MC Sweep)	21.6MC 22.5MC 23.0MC 25.3MC 26.1MC 27.0MC	3	Vert. Amp. thru 200K Ω to video test jack. Low side to chassis. (See instructions above)	A20 thru A28	Check to see that markers appear on pattern obtained as per Fig 6. SLIGHT adjustment of A24 and A25 will usually properly place the markers. If readjustment of A25, A26 and A28 is made their respective traps must be rechecked. Do not adjust any trap except A22 to correct the response curve.

TV OSCILLATOR ALIGNMENT

The RF amplifier and mixer circuits of the tuner are very stable and normally do not require adjustment in the field.
When adjusting the oscillator circuits, turn the fine tuning control to the mid point of its tuning range.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
22	Two 150 Ω carbon res.	215.75MC (Unmod.) 209.75MC	13 12	DC Probe to Point \diamond Common to Point \diamond	A29 A30 A31 A32 A33 A34 A35 A36 A37 A38 A39 A40	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
		203.75MC	11			
		197.75MC	10			
		191.75MC	9			
		185.75MC	8			
		179.75MC	7			
		87.75MC	6			
		81.75MC	5			
		71.75MC	4			
		65.75MC	3			
		59.75MC	2			

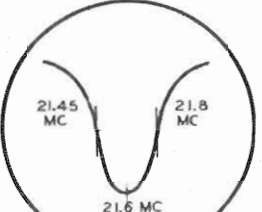


FIG. 3

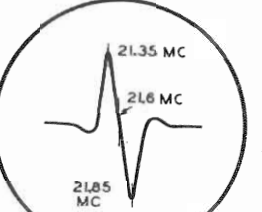


FIG. 4

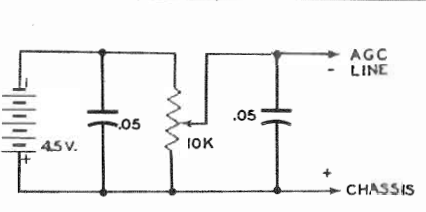


FIG. 5

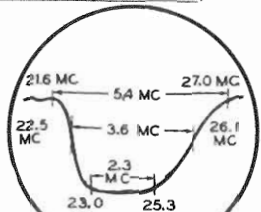
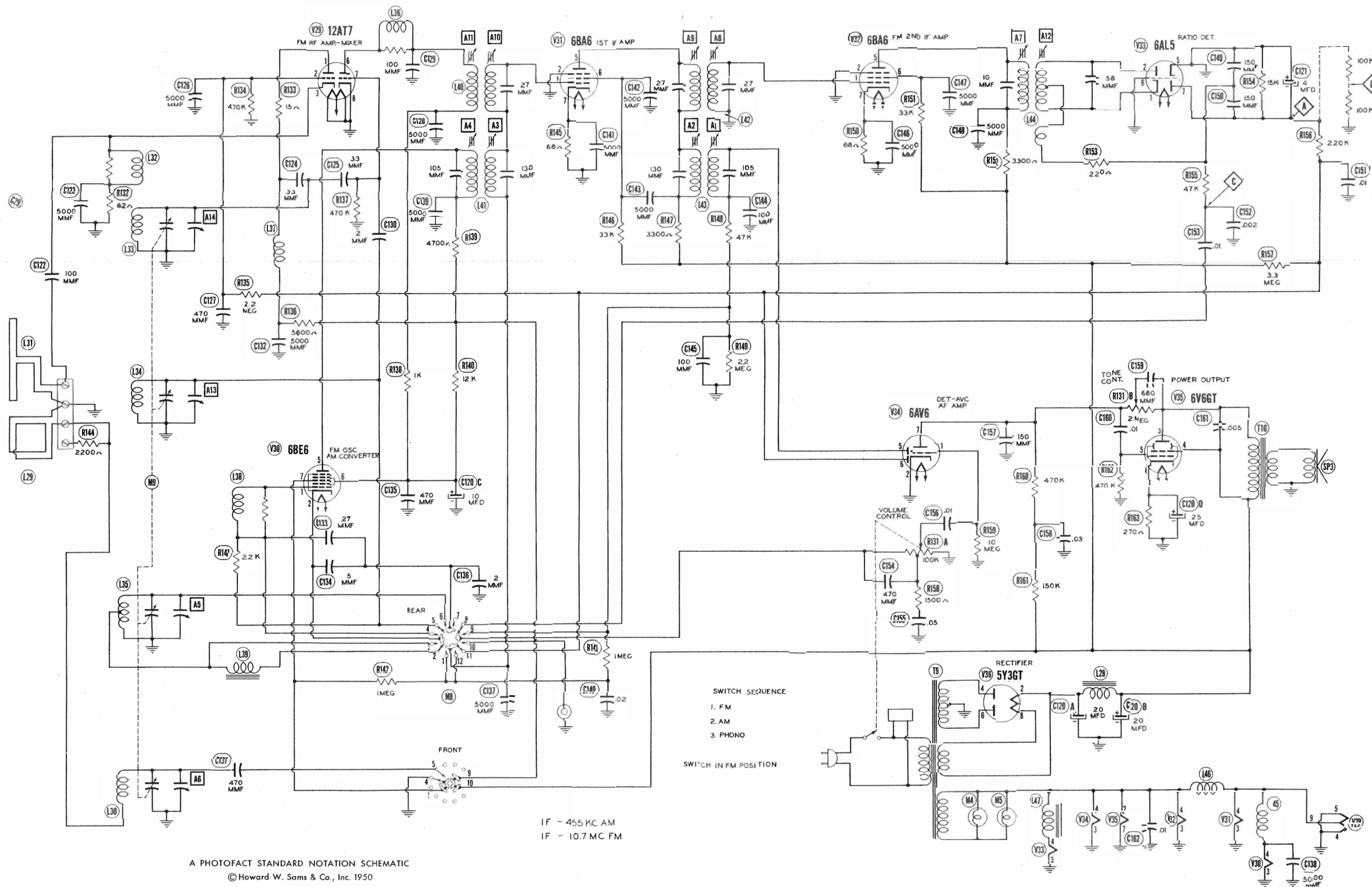
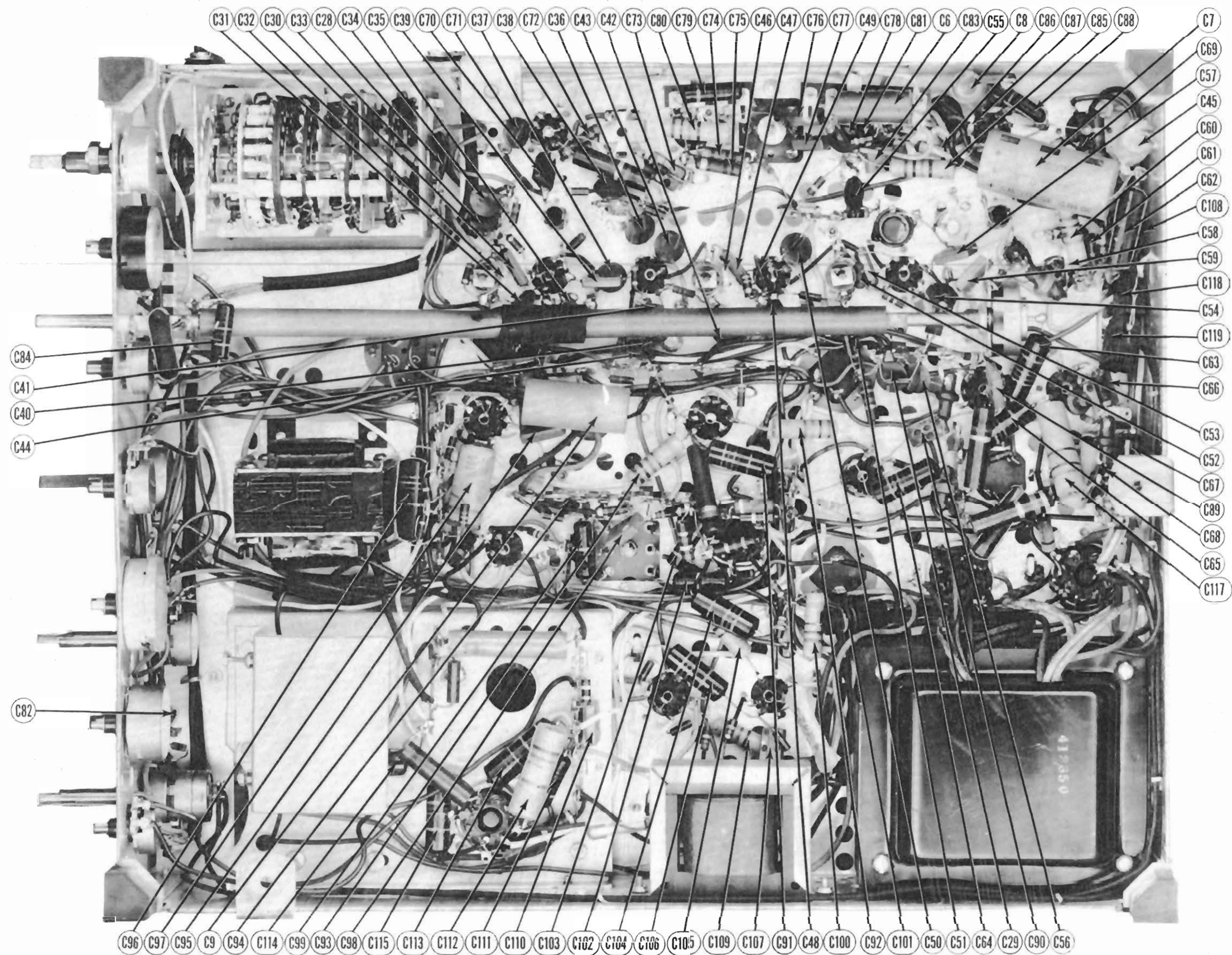


FIG. 6

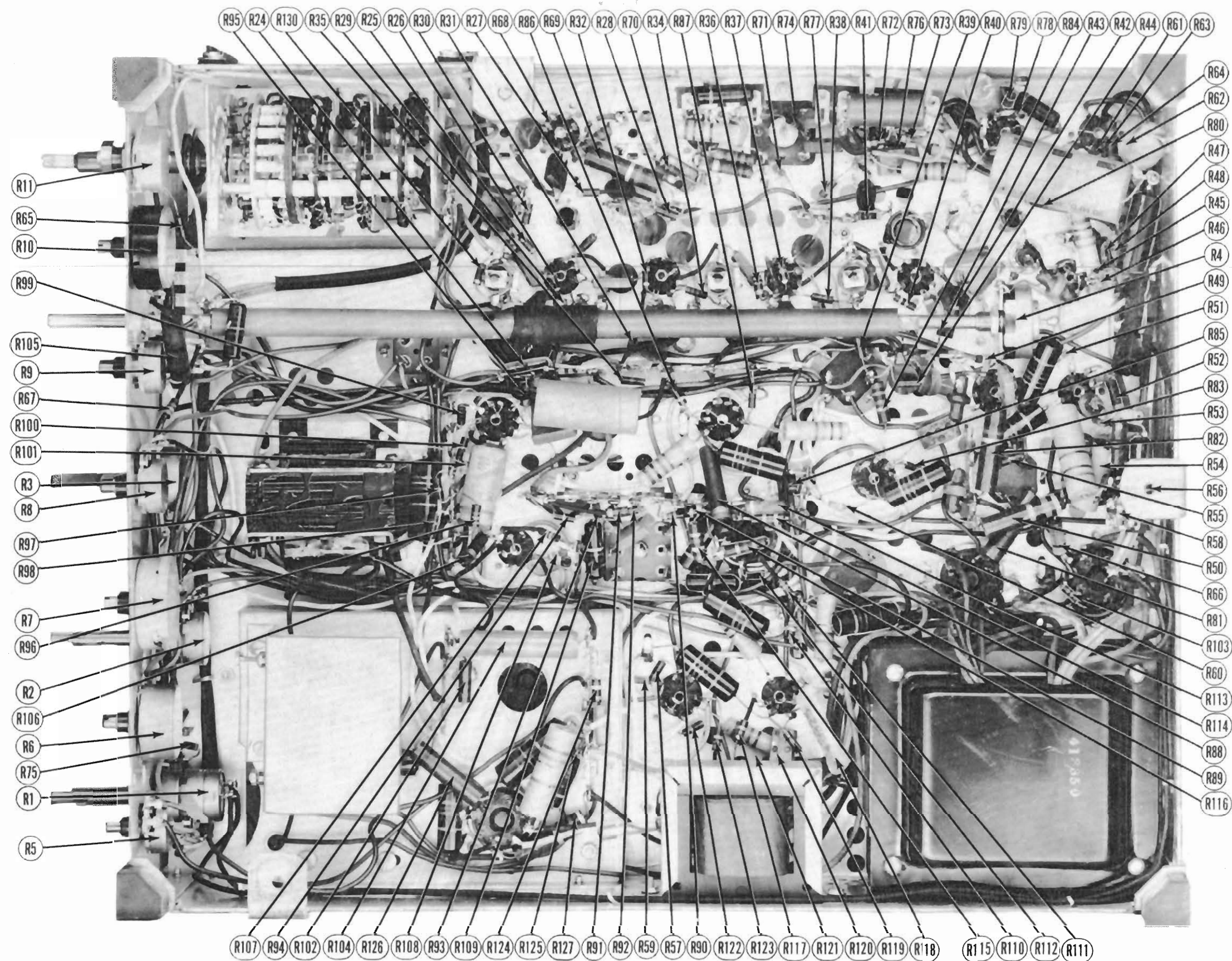
WESTINGHOUSE MODELS H-196A (DX), H-207A (DX), H-207B (DX), H-225 (DX)



RADIO CHASSIS V-2137



CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

WESTINGHOUSE MODELS H-196A (DX),
H-207A (DX), H-207B (DX), H-225 (DX)

RADIO PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
			WESTINGHOUSE PART No.	JENSEN PART No.	QUAM PART No.	
SP3	PM	3.3Ω	V-5571	ST-119 (12) MOD.P10-T	10A31	(12) Replace output transformer to match 6-8Ω voice coil.
SP4	CONE DIA.	V. C. DIA.				
	9 1/2"	3/4"				

DIAL LIGHTS

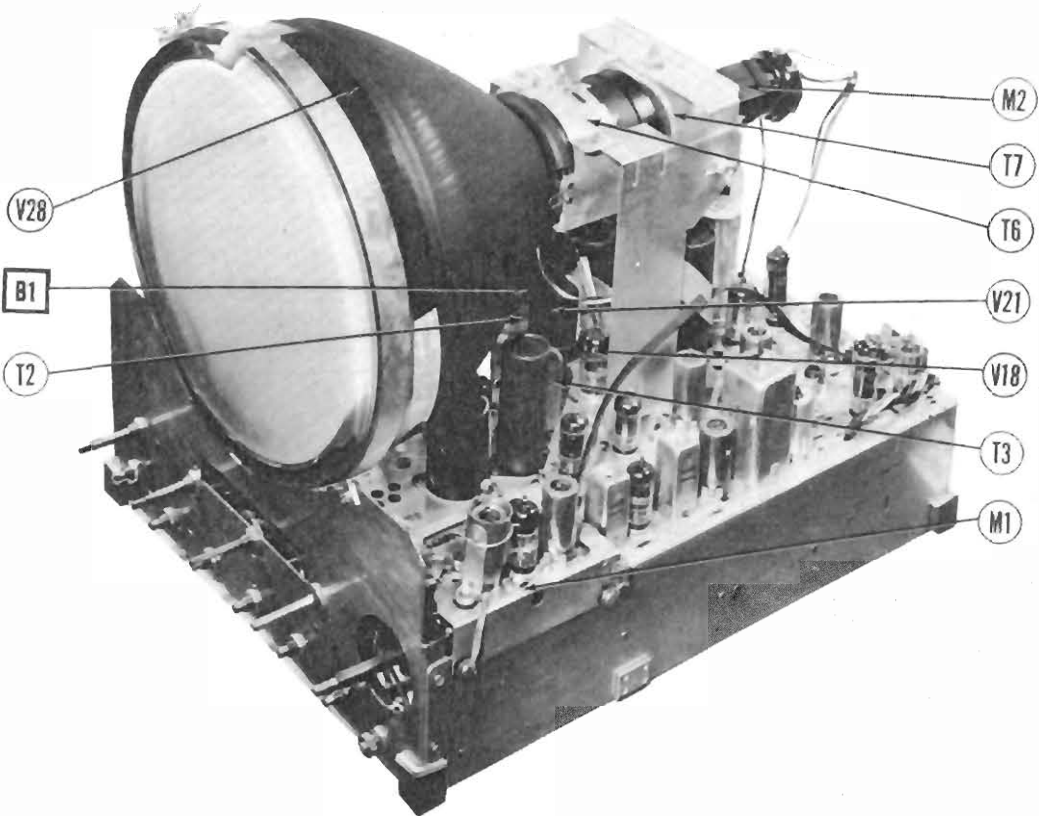
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					WESTINGHOUSE PART No.		
M4	Bayonet	6-8	.15	Brown	47		Type #47
M5	Bayonet	6-8	.15	Brown	47		Type #47

PHONO CARTRIDGE

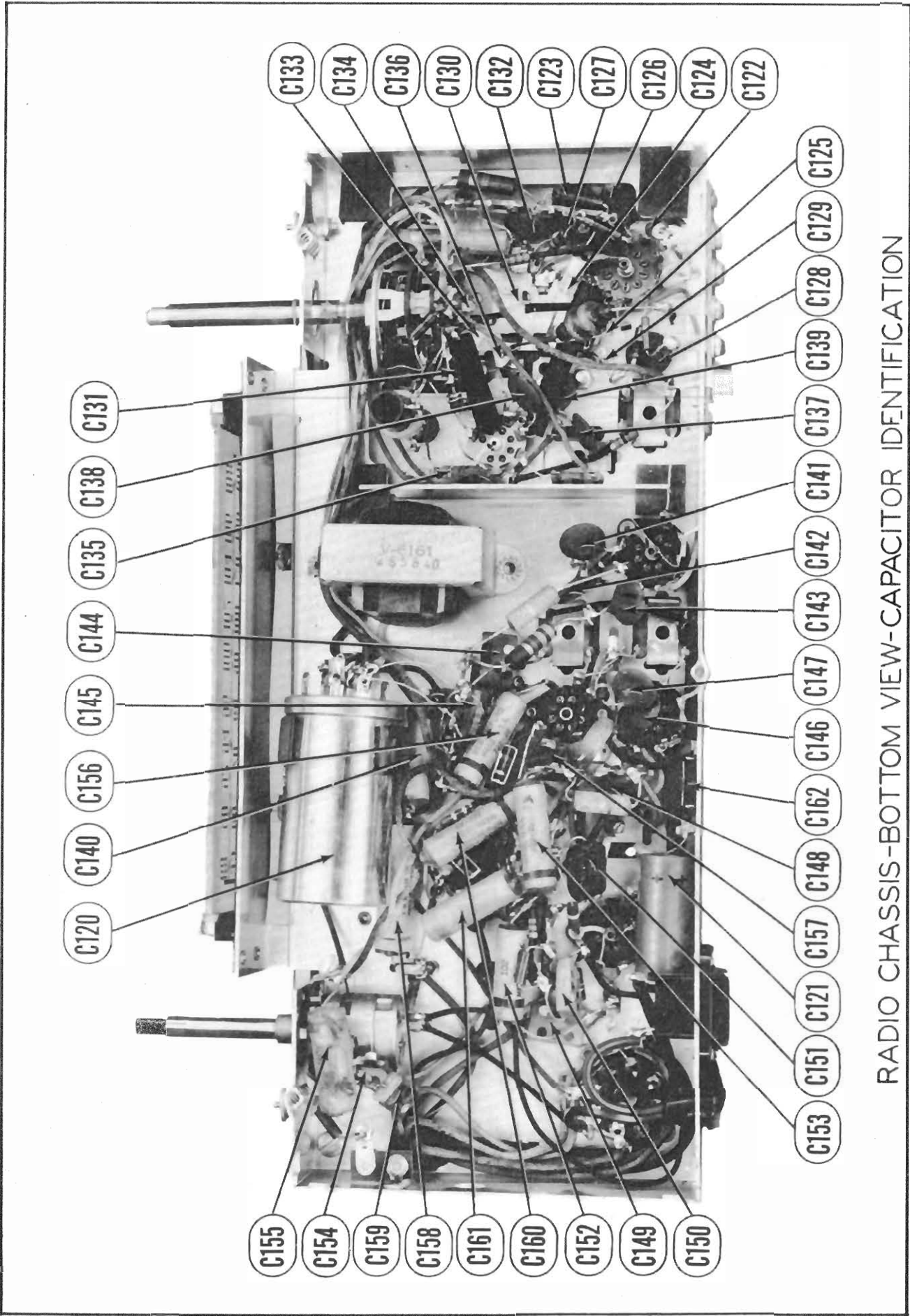
ITEM No.	REPLACEMENT DATA		REMARKS
	Westinghouse PART No.	ASTATIC PART No.	
M6		LQD-1	

MISCELLANEOUS

ITEM No.	PART NAME	WESTINGHOUSE PART No.	NOTES
M8	Switch	V-6140	Band
M9	Tuning Cap.	V-6137	AM Two Gang (48-552MMF, 37-212MMF)
	Dial	V-6123	
	Dial Pointer	V-6125	



CHASSIS-TOP VIEW



RADIO CHASSIS-BOTTOM VIEW-CAPACITOR IDENTIFICATION

WESTINGHOUSE MODELS H-196A (DX),
H-207A (DX), H-207B (EX), H-225 (DX)

TV PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		WESTINGHOUSE PART No.	STANDARD REPLACEMENT		
V1	RF Amp.	6AG5	6AG5	7BD	
V2	Mixer	6AG5	6AG5	7BD	
V3	Oscillator	6C4	6C4	6BG	
V4	1st Video IF	6BH6	6BH6	7CM	
V5	2nd Video IF	6BH6	6BH6	7CM	
V6	3rd Video IF	6BH6	6BH6	7CM	
V7	4th Video IF	6BH6	6BH6	7CM	
V8	Video Det. -AGC Rectifier	6AL5	6AL5	6BT	
V9	Video Amp. -1st Sync. Amp.	12AT7	12AT7	9A	
V10	Video Output	6AQ5	6AQ5	7BZ	
V11	DC Restorer - Hor. Disch.	12AU7	12AU7	9A	
V12	Noise Clipper - Sync. Sep.	12AX7	12AX7	9A	
V13	AGC Amp.	6AT6	6AT6	7BT	
V14	1st Sound IF	6BJ6	6BJ6	7CM	
V15	2nd Sound IF	6BH6	6BH6	7CM	
V16	Ratio Det. -AF App.	6T8	6T8	9E	
V17	Audio Output	6AQ5	6AQ5	7BZ	
V18	2nd Sync. Amp.	12AT7	12AT7	9A	
V19	Vert. Osc. -Vert. Amp.	12AU7	12AU7	9A	
V20	Hor. Sync. Disc.	6AL5	6AL5	6BT	
V21	Hor. AFC	6AC7	6AC7	8N	
V22	Hor. Osc.	6AQ5	6AQ5	7BZ	
V23	Hor. Output	6BG6G	6BG6G	5BT	
V24	Damper	5V4G	5V4G	5L	
V25	HV Rectifier	1B3GT	1B3GT	3C	
V26	LV Rectifier	5U4G	5U4G	5T	
V27	LV Rectifier	5V4G	5V4G	5L	
V28	Picture Tube	10BP4	10BP4	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
		Westinghouse PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	
C1A	40	V-5894	AF88K	UP4450		TVL-20
B	40					
C2A	500	V-5893	PRS6/500	UP7B1934		TVL-10
B	1000		PRS6/1000			
C3A	80	V-5892	AF168130B	UP11C1046		TVL-24
B	40					
C	150					
C4A	80	V-5891	AF16222H	UP11D1047		TVL-47
B	10					TVA-25
C	10					
D	10					
C5A	10	V-5897	AF333J	UP3145		TVL-15
B	30					
C6	2	V-4880	E26A90	BBR2-50T		TVA-12
C7	30	V-6570	PRS450/30	BR3045A		TVA-23
C8	20	V-3236	PRS25/25	BR202A		TVA-6
C9	10	V-5885	PRS350/12	BR1235A		TVA-21
C10	220		1468-00025	5W5T25	GP2K-220	IFM-325
C11	220		1468-00025	5W5T25	GP2K-220	IFM-325
C12	25				GP2K-220	
C13	680				GP2K-680	
C14	680				GP2K-680	
C15	680				GP2K-680	
C16	680				GP2K-680	
C17	25				GP2K-680	
C18	.47				GP2K-680	
C19	.47				GP2K-680	
C20	1.5				GP2K-680	
C21	15				GP2K-680	
C22	5000				GP2K-680	
C23	.68				GP2K-680	
C24	680				GP2K-680	
C25	3				GP2K-680	
C26	680				GP2K-680	
C27	680				GP2K-680	
C28	5000	V-5596	1467-005	ID5D5	811-005	29C1
C29	5000	V-5596	1467-005	ID5D5	811-005	29C1
C30	270	RCM20B27IM	1468-00025	5W5T25	GP2K-270	IFM-325
C31	5000	V-5596	1467-005	ID5D5	811-005	29C1
C32	50		1469-00005	5R5Q5	N750L-47	MS-45
C33	5000	V-5596	1467-005	ID5D5	811-005	29C1
C34	5000	V-5596	1467-005	ID5D5	811-005	29C1
C35	5000	V-5596	1467-005	ID5D5	811-005	29C1
C36	5000	V-5596	1467-005	ID5D5	811-005	29C1
C37	5000	V-5596	1467-005	ID5D5	811-005	29C1
C38	5000	V-5596	1467-005	ID5D5	811-005	29C1
C39	270	RCM20B27IM	1468-00025	5W5T25	GP2K-270	IFM-325
C40	5000	V-5596	1467-005	ID5D5	811-005	29C1
C41	5000	V-5596	1467-005	ID5D5	811-005	29C1
C42	5000	V-5596	1467-005	ID5D5	811-005	29C1
C43	5000	V-5596	1467-005	ID5D5	811-005	29C1
C44	5000	V-5596	1467-005	ID5D5	811-005	29C1
C45	.5	V-6066-4504M	484-5	GT4P5		68P23
C46	82					
C47	270	RCM20B27IM	1468-00025	5W5T25	GP2K-270	IFM-325
C48	5000	V-5596	1467-005	ID5D5	811-005	29C1
C49	5000	V-5596	1467-005	ID5D5	811-005	29C1
C50	5000	V-5596	1467-005	ID5D5	811-005	29C1
C51	5000	V-5596	1467-005	ID5D5	811-005	29C1

RADIO PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	WESTINGHOUSE PART No.	IRC PART No.	
R132	82Ω		RC10AE20K		FM RF Cathode
R133	15Ω		RC10AE150M		Parasitic Supp.
R134	470KΩ		RC10AE474M	BTS-470K	FM RF Grid
R135	2.2 Meg.		RC10AE225M	BTS-2.2 Meg.	AVC Network
R136	5600Ω	1	RC30AE562K	BTA-5600	FM RF Plate
R137	470KΩ		RC10AE474M	BTS-470K	Mixer Grid
R138	1000Ω		RC10AE102M	BTS-1000	Mixer Plate Decoupling
R139	4700Ω		RC10AE472M	BTS-4700	Conv. Plate Decoupling
R140	12KΩ	2	RC41AE123K	BT-2-12K	Osc. Anode
R141	22KΩ		RC10AE223K	BTS-22K	Osc. Grid
R142	1 Meg.		RC10AE105M	BTS-1 Meg.	AVC Network
R143	1 Meg.		RC10AE105M	BTS-1 Meg.	AVC Network
R144	2200Ω		RC10AE222K	BTS-2200	Ant. Loading
R145	68Ω		RC10AE680K		1st IF Cathode
R146	33KΩ	1	RC30AE333K	BTA-33K	1st IF Screen
R147	3300Ω	1	RC30AE332K	BTA-3300	1st IF Plate Decoupling
R148	47KΩ		RC10AE473M	BTS-47K	Diode Filter
R149	2.2 Meg.		RC10AE225M	BTS-2.2 Meg.	Diode Load
R150	68Ω		RC10AE680K		2nd FM IF Cathode
R151	33KΩ	1	RC30AE333K	BTA-33K	2nd FM IF Screen
R152	3300Ω	1	RC30AE332K	BTA-3300	2nd FM IF Plate Decoupling
R153	220Ω		RC10AE221M	BW-1-220	Balancing
R154	15KΩ		RC10AE153K	BTS-15K	Ratio Det. Diode Load
R155	47KΩ		RC10AE473M	BTS-47K	De-emphasis
R156	220KΩ		RC10AE224M	BTS-220K	AVC Network
R157	3.3 Meg.		RC10AE335M	BTS-3.3 Meg.	Delayed AVC
R158	1500Ω		RC10AE152M	BTS-1500	Tone Compensation
R159	10 Meg.		RC10AE106M	BTS-10 Meg.	AF Grid
R160	470KΩ		RC10AE474M	BTS-470K	AF Plate
R161	150KΩ		RC10AE154M	BTS-150K	AF Plate Decoupling
R162	470KΩ		RC10AE474M	BTS-470K	Output Grid
R163	270Ω	1	RC30AE271K	BW-1-270	Output Cathode

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	WESTINGHOUSE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T9	117VAC at .76A	590VCT at .114 ADC	5VAC at 2A	6.3VAC at 2.5A	V-6131	P-6312 ⑧	P-2952 ⑧ ⑩	PV-120

⑧ Mount vertically with universal mounting brackets.
⑩ Add series resistor to reduce plate voltage.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE	DC RES.	PRI.	SEC.	WESTINGHOUSE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
T10	4.8KΩ	3.6Ω	400Ω	.4Ω	V-5798	A-3823	A-2930	RO-9 ⑧	⑧ Drill one new mounting hole.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 μ)	WESTINGHOUSE PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L28	114ADC	240Ω	5.5 Henries	V-6161				

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	WESTINGHOUSE PART No.	MEISSNER PART No.	
L29	Loop Ant.	0Ω		V-5982-2		Three Turns Around Cabinet
L30	Loop Loading	2Ω		V-6157		
L31	FM Dipole Ant.	0Ω		V-5986-3		
L32	RF Choke	0Ω		V-4886-10		Wound on resistor
L33	FM Ant.	0Ω		V-6139		
L34	FM Osc.	0Ω		V-6138		
L35	AM Osc.	0Ω		V-6164		Wound on 820Ω resistor.
L36	Parasitic Supp.	0Ω		V-4886-6		
L37	RF Choke	1.5Ω		V-4886-4		
L38	Parasitic Supp.	0Ω		V-4886-7		Wound on 22Ω resistor
L39	RF Choke	.5Ω		V-4886-2		
L40	1st FM IF	.5Ω	.5Ω	V-6142		
L41	1st AM IF	16Ω	16Ω	V-6130		
L42	2nd FM IF	.5Ω	.5Ω	V-6129		
L43	2nd AM IF	16Ω	16Ω	V-6130		
L44	Ratio Det.					
L45	Transformer	1Ω	0Ω	V-6128		
L46	1st Choke	.5Ω		V-4886-2		
L47	1st Choke	.5Ω		V-4886-2		
L47	1st Choke	8Ω		V-4886-1		

WESTINGHOUSE MODELS H-196A (DX), H-207A (DX), H-207B (DX), H-225 (DX)

RADIO PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		WESTINGHOUSE PART No.	STANDARD REPLACEMENT		
V29	FM RF Amp. - Mixer	12AT7	12AT7	9A	
V30	FM Osc. -AM Conv.	6BE6	6BE6	7CH	
V31	1st IF Amp.	6BA6	6BA6	7BK	
V32	FM 2nd IF Amp.	6BA6	6BA6	7BK	
V33	Ratio Det.	6AL5	6AL5	6BT	
V34	DET. -AVC-AF Amp.	6AV6	6AV6	7BT	
V35	Power Output Rectifier	6V6GT	6V6GT	7AC	
V36		5Y3GT	5Y3GT	5T	

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
		WESTINGHOUSE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.
C120A	20 400	V-6121	AF444J4A	UP22245C		EL-442
B	20 400					
C	10 350					
D	25 25					
C121	4 450	V-4885	PRS150/4	BR445		UT-4
C122	100	R3CC30SL101M	1468-0001	5W5T1	811-005	29C1
C123	5000	V-5596	1467-005	1D5D5	811-005	29C1
C124	33	R3CC26CK330M	1468-00004	5W5Q4	811-005	29C1
C125	33	R3CC26CK330M	1468-00004	5W5Q4	811-005	29C1
C126	5000	V-5596	1467-005	1D5D5	811-005	29C1
C127	470	R5CC21ZY471M	1468-0005	5W5T5	811-005	29C1
C128	5000	V-5596	1467-005	1D5D5	811-005	29C1
C129	100	R3CC30SL101T	1469-0001	5R5T1	NPOM-100	MS-31
C130	2	R2CC30CK020D				
C131	470	R5CC21ZY471M	1468-0005	5W5T5	811-005	29C1
C132	5000	V-5596	1467-005	1D5D5	811-005	29C1
C133	27	R3CC30CK270K	1468-000025	5W5Q25	811-005	29C1
C134	5	R2CC30CK050D	1469-000005	5R5V5	NPOM-5	MS-55
C135	470	R5CC21ZY471M	1468-0005	5W5T5	811-005	29C1
C136	2	R2CC30UK020D				
C137	5000	V-5596	1467-005	1D5D5	811-005	29C1
C138	5000	V-5596	1467-005	1D5D5	811-005	29C1
C139	5000	V-5596	1467-005	1D5D5	811-005	29C1
C140	.02 200	RCPI0W2203A	P488-02	GT2S2	TM-12	
C141	5000	V-5596	1467-005	1D5D5	811-005	29C1
C142	5000	V-5596	1467-005	1D5D5	811-005	29C1
C143	5000	V-5596	1467-005	1D5D5	811-005	29C1
C144	100 500	RCM20A101M	1468-0001	5W5T1	811-005	29C1
C145	100 500	RCM20A101M	1468-0001	5W5T1	811-005	29C1
C146	5000	V-5596	1467-005	1D5D5	811-005	29C1
C147	5000	V-5596	1467-005	1D5D5	811-005	29C1
C148	5000	V-5596	1467-005	1D5D5	811-005	29C1
C149	150 500	RCM20A151J	1468-00015	5W5T15	811-005	29C1
C150	150 500	RCM20A151J	1468-00015	5W5T15	811-005	29C1
C151	.01 200	V-5040-13	P488-01	GT2S1	TM-11	
C152	.002 600	RCPI0W6202A	P488-002	GT6D2	TM-22	
C153	.01 400	RCPI0W4103A	P488-01	GT4S1	TM-11	
C154	470 500	RCM20A471M	1468-0005	5W5T5	811-005	29C1
C155	.05 200	RCPI0W2503A	P488-05	GT2S5	TM-15	
C156	.01 400	RCPI0W4103A	P488-01	GT4S1	TM-11	
C157	150 500	RCM20A151M	1468-00015	5W5T15	811-005	29C1
C158	.03 400	RCPI0W4303A	P488-03	GT4S3	TM-13	
C159	680 500	RCM20A681M	1468-00075	1W5T7	811-005	29C1
C160	.01 400	RCPI0W4103A	P488-01	GT4S1	TM-11	
C161	.005 600	RCPI0M6502A	P488-005	GT6D5	TM-25	
C162	.01 200	V-5040-13	P488-01	GT2S1	TM-11	

* When either item C149 or C150 are replaced, replace both with capacitors of equal value.

CONTROLS

ITEM No.	RATING RESIST-ANCE WATTS	REPLACEMENT DATA			INSTALLATION NOTES
		WESTINGHOUSE PART No.	IRC PART No.	CLAROSTAT PART No.	
R131A	500KΩ	V-6122	B18-133X *	V-6122	Volume control, front, tapped at 500KΩ
B	2 Meg.		B11-137 *		Tone control, rear
C	Shaft End Switch		E202 *		Attach per instructions in "Concentrikit"
D	Switch		76-1 *		Attach per instructions in "Concentrikit"

* Additional parts to be used with "Concentrikit"

TV PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (CONT.)

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		WESTINGHOUSE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.
C52	82					
C53	270	500	RCM20B271M	1468-00025	5W5T25	811-005
C54	5000		V-5596	1467-005	1D5D5	811-005
C55	5000		V-5596	1467-005	1D5D5	811-005
C56	5000		V-5596	1467-005	1D5D5	811-005
C57	270	500	RCM20B271M	1468-00025	5W5T25	811-005
C58	5		R2CC30CK050D	1469-000005	5W5V5	NPOM-5
C59	10	500	RCM20B100M	1468-00001	5W5Q1	811-005
C60	.001	600	V-6023-6102M	P488-001	GT6D1	TM-21
C61	22	500	RCM20B220M	1468-000025	5W5Q25	811-005
C62	.1	400	V-6023-4104M	P488-1	GT4P1	TM-1
C63	.047	400	V-6023-4503M	P488-047	GT4S5	TM-15
C64	.047	400	V-6023-4503M	P488-047	GT4S5	TM-15
C65	.047	400	V-6023-4503M	P488-047	GT4S5	TM-15
C66	470	500	RCM20B471M	1468-0005	5W5T5	811-005
C67	.047	400	V-6023-4503M	P488-047	GT4S5	TM-15
C68	.047	400	V-6023-4503M	P488-047	GT4S5	TM-15
C69	.01	400	V-6023-4108M	P488-01	GT4S1	TM-11
C70	220	500	RCM20B221M			
C71	5000		V-5596	1467-005	1D5D5	811-005
C72	1500		R5CC26ZY152M	1467-0015	1W5D15	811-005
C73	47	500	RCM20B470K	1468-00005	5W5Q5	811-005
C74	1500		R5CC26ZY152M	1467-0015	1W5D15	811-005
C75	1500		R5CC26ZY152M	1467-0015	1W5D15	811-005
C76	47	500	RCM20B470K	1468-00005	5W5Q5	811-005
C77	47	500	RCM20B470K	1468-00005	5W5Q5	811-005
C78	5000		V-5596	1467-005	1D5D5	811-005
C79	.001	600	V-6023-6102M	P488-001	GT6D1	TM-21
C80	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C81	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C82	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C83	470	500	RCM20B471M	1468-0005	5W5T5	811-005
C84	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C85	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C86	470		R5CC21ZY471M	1468-0005	5W5T5	811-005
C87	47		R2CC21ZY470K	1468-00005	5W5Q5	811-005
C88	0022	600	V-6023-6102M	P488-0022	GT6D2	TM-22
C89	270	500	RCM20B271M	1468-00025	5W5T25	811-005
C90	270	500	RCM20B271M	1468-00025	5W5T25	811-005
C91	.047	400	V-6023-4103M	P488-047	GT4S5	TM-15
C92	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C93	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C94 A	2000		V-6060-1	P488-002	GT6D2	TM-22
B	5000			P488-005	GT6D5	TM-25
C	5000			P488-005	GT6D5	TM-25
C95	4700	500	RCM30B472J	1467-005	1D5D5	811-005
C96	.068	400	V-6023-4683M	P488-068		
C97	.25	400	V-6066-4254M	P488-25	GT4P25	TM-25
C98	.68	500	RCM20B680M	1469-00007	5W5Q7	811-005
C99	.015	200	V-6023-2153K	P288-015	GT6S15	TM-15
C100	.0047	400	V-6023-4402M	P488-0047	GT6D5	TM-25
C101	.047	400	V-6023-4103M	P488-047	GT4S5	TM-15
C102	.015	200	V-6023-2153K	P288-015	GT6S15	TM-15
C103	.0047	400	V-6023-4402M	P488-0047	GT6D5	TM-25
C104	.047	400	V-6023-4103M	P488-047	GT4S5	TM-15
C105	.0047	400	V-6023-4402M	P488-0047	GT6D5	TM-25
C106	.047	400	V-6023-4103M	P488-047	GT4S5	TM-15
C107	390	500	RCM20B391M	1468-0004	5W5T4	811-005
C108	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C109	.01	400	V-6023-4103M	P488-01	GT4S1	TM-11
C110	680	500	RCM20B681M		1W5T7	811-005
C111	.001	600	V-6023-6102M	P488-001	GT6D1	TM-21
C112	.047	600	V-6023-6503M	P488-047	GT6S5	TM-15
C113	.1	400	V-6023-4104M	P488-1	GT4P1	TM-1
C114	.033	600	V-6023-6333M	P488-033	GT6S3	TM-15
C115	.047	600	V-6023-6503M	P488-047	GT6S5	TM-15
C116	500 10000		V-5895			
C117	.1	400	V-6023-4104M	P488-1	GT4P1	TM-1
C118	.01	600	V-5040-15	P488-01	GT6S1	TM-11
C119	.01	600	V-5040-15	P488-01	GT6S1	TM-11

† When either item C76 or C77 are replaced, replace both with capacitors of equal value.

‡ Some models use .004MFD in this application.

CONTROLS

ITEM No.	RATING RESIST-ANCE WATTS	REPLACEMENT DATA			INSTALLATION NOTES
		WESTINGHOUSE PART No.	IRC PART No.	CLAROSTAT PART No.	
R1A	2 Meg.		B13-139X *	V-6305	Volume control, front, tapped at 500KΩ
B	1 Meg.		B11-137 *		Tone control, rear
C	Shaft End Switch		E202 *		Attach per instructions in "Concentrikit"
D	Switch		76-1 *		Attach per instructions in "Concentrikit"
R2A	2 Meg.		B11-139 *	V-6304	Vert. hold control, front
B	1 Meg.		B11-137 *		Horiz. hold control, rear
C	Shaft End Switch		E202 *		Attach per instructions in "Concentrikit"
R3	50KΩ		Q11-123	M-44-S	Brightness control
R4	2500Ω		V-5915		Contrast control
R5 A	25KΩ		V-5910		Horiz. linearity control
B	Shaft	Not Req.	SQ	KSS-3 #	Attach to R5A per instructions
R6	50Ω		V-5911	43-50 #	Horiz. centering control, Wire Wound
R7	50Ω		V-5913	43-50 CT #	Vert. centering control tapped at 25Ω
R8 A	2.5 Meg.		V-5909	AM-84-S	Height control
B	Shaft	Not Req.	SQ	KSS-3 #	Attach to R8A per instructions
R9 A	3000Ω		V-5908	AM-15-S	Vert. linearity control
B	Shaft	Not Req.	SQ	KSS-3 #	Attach to R9A per instructions
R10	250Ω		V-5906	10-250	Focus control, Wire Wound
R11 A	5000Ω		V-5907	AM-19-S	Sensitivity control
B	Shaft	Not Req.	SQ	KSS-3 #	Attach to R11A per instructions

* File slot in shaft to duplicate original.

* Additional parts to be used with "Concentrikit"

WESTINGHOUSE MODELS H-196A (DX),
H-207A (DX), H-207B (DX), H-225 (DX)

TV PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		WESTINGHOUSE	IRC	
RESISTANCE	WATTS	PART No.	PART No.	ALL RESISTORS ARE ± 20% UNLESS OTHERWISE STATED.
R12 100KΩ	1	RC20AE104M	BTS-1000	Ant. Shunt
R13 100KΩ	1	RC20AE104M	BTS-1000	Ant. Shunt
R14 100KΩ	1	RC20AE104M	BTS-1000	AGC Filter
R15 33KΩ	1	RC20AE104M	BTS-1000	RF Screen
R16 10KΩ	1	RC20AE104M	BTS-1000	RF Plate
R17 18KΩ 10%	1	RC20AE104M	BTS-1000	RF Coil Shunt
R18 4700Ω	1	RC20AE104M	BTS-1000	Mixer Coil Shunt
R19 1 Meg.	1	RC20AE104M	BTS-1000	Mixer Grid
R20 82KΩ	1	RC20AE104M	BTS-1000	Mixer Screen
R21 6800Ω	1	RC20AE104M	BTS-1000	Osc. Plate
R22 22KΩ	1	RC20AE104M	BTS-1000	Osc. Grid
R23 470Ω	1	RC20AE104M	BTS-1000	Osc. Cathode
R24 1000Ω	1	RC20AE104M	BTS-1000	Osc. Plate Decoupling
R25 8200Ω 10%	1	RC20AE104M	BTS-1000	1st Video IF Grid
R26 82Ω 10%	1	RC20AE104M	BTS-1000	1st Video IF Cathode
R27 2200Ω 10%	1	RC20AE104M	BTS-1000	1st Video IF Plate
R28 1000Ω	1	RC20AE104M	BTS-1000	1st Video IF Plate Decoupling
R29 33KΩ	1	RC20AE104M	BTS-1000	1st Video IF Screen
R30 10KΩ	1	RC20AE104M	BTS-1000	AGC Network
R31 8200Ω 10%	1	RC20AE104M	BTS-1000	2nd Video IF Grid
R32 82Ω 10%	1	RC20AE104M	BTS-1000	2nd Video IF Cathode
R33 33KΩ	1	RC20AE104M	BTS-1000	2nd Video IF Screen
R34 1000Ω	1	RC20AE104M	BTS-1000	2nd Video IF Decoupling
R35 10KΩ	1	RC20AE104M	BTS-1000	AGC Network
R36 6800Ω 10%	1	RC20AE104M	BTS-1000	3rd Video IF Grid
R37 68Ω 10%	1	RC20AE104M	BTS-1000	3rd Video IF Cathode
R38 33KΩ	1	RC20AE104M	BTS-1000	3rd Video IF Screen
R39 1000Ω	1	RC20AE104M	BTS-1000	3rd Video IF Decoupling
R40 3900Ω 10%	1	RC20AE104M	BTS-1000	4th Video IF Grid
R41 68Ω 10%	1	RC20AE104M	BTS-1000	4th Video IF Cathode
R42 5600Ω 10%	1	RC20AE104M	BTS-1000	4th Video IF Plate
R43 33KΩ	1	RC20AE104M	BTS-1000	4th Video IF Screen
R44 1000Ω	1	RC20AE104M	BTS-1000	4th Video IF Decoupling
R45 82KΩ 10%	1	RC20AE104M	BTS-1000	AGC Rect. Diode Load
R46 470KΩ	1	RC20AE104M	BTS-1000	AGC Filter
R47 1 Meg.	1	RC20AE104M	BTS-1000	Voltage Divider
R48 1 Meg.	1	RC20AE104M	BTS-1000	AGC Amp. Grid
R49 470KΩ	1	RC20AE104M	BTS-1000	Video Amp. Grid
R50 4700Ω 5%	1	RC20AE104M	BTS-1000	Video Amp. Plate
R51 470KΩ	1	RC20AE104M	BTS-1000	Video Output Grid
R52 220Ω 10%	1	RC20AE104M	BTS-1000	Video Output Cathode
R53 10KΩ 10%	1	RC20AE104M	BTS-1000	Peaking Coil Shunt
R54 3300Ω	1	RC20AE104M	BTS-1000	Video Output Plate, Wire Wound
R55 22KΩ	1	RC20AE104M	BTS-1000	Video Output Screen
R56 10KΩ	1	RC20AE104M	BTS-1000	Sync. Isolation
R57 1 Meg.	1	RC20AE104M	BTS-1000	DC Restorer Load
R58 470KΩ	1	RC20AE104M	BTS-1000	Picture Tube Grid
R59 47KΩ	1	RC20AE104M	BTS-1000	1st Sync. Amp. Grid
R60 470KΩ	1	RC20AE104M	BTS-1000	Noise Clipper Load
R61 1 Meg.	1	RC20AE104M	BTS-1000	AGC Network
R62 1 Meg.	1	RC20AE104M	BTS-1000	AGC Network
R63 220KΩ	1	RC20AE104M	BTS-1000	AGC Amp. Plate
R64 82KΩ 10%	1	RC20AE104M	BTS-1000	AGC Amp. Cathode
R65 1000Ω	1	RC20AE104M	BTS-1000	Voltage Divider
R66 470Ω	1	RC20AE104M	BTS-1000	Decoupling
R67 68KΩ	1	RC20AE104M	BTS-1000	Voltage Divider
R68 68Ω 10%	1	RC20AE104M	BTS-1000	1st Sound IF Cathode
R69 10KΩ 10%	1	RC20AE104M	BTS-1000	1st Sound IF Decoupling
R70 47KΩ	1	RC20AE104M	BTS-1000	2nd Sound IF Grid
R71 47KΩ	1	RC20AE104M	BTS-1000	2nd Sound IF Decoupling
R72 10KΩ 5%	1	RC20AE104M	BTS-1000	Ratio Det. Diode Load
R73 10KΩ 5%	1	RC20AE104M	BTS-1000	Ratio Det. Diode Load
R74 68KΩ	1	RC20AE104M	BTS-1000	De-emphasis
R75 47KΩ	1	RC20AE104M	BTS-1000	Tone Compensation
R76 15 Meg.	1	RC20AE104M	BTS-1000	AF Grid
R77 220KΩ	1	RC20AE104M	BTS-1000	AF Plate
R78 470KΩ	1	RC20AE104M	BTS-1000	Output Grid
R79 270Ω 10%	1	RC20AE104M	BTS-1000	Output Cathode
R80 33Ω	1	RC20AE104M	BTS-1000	Parasitic Supp.
R81 1000Ω	1	RC20AE104M	BTS-1000	Filter
R82 10KΩ 10%	1	RC20AE104M	BTS-1000	1st Sync. Amp. Plate
R83 1 Meg.	1	RC20AE104M	BTS-1000	Sync. Sep. Grid
R84 68KΩ 10%	1	RC20AE104M	BTS-1000	Sync. Sep. Plate
R85 47KΩ	1	RC20AE104M	BTS-1000	Voltage Divider
R86 100KΩ	1	RC20AE104M	BTS-1000	2nd Sync. Amp. Grid
R87 4.7 Meg.	1	RC20AE104M	BTS-1000	2nd Sync. Amp. Grid
R88 10KΩ 10%	1	RC20AE104M	BTS-1000	2nd Sync. Amp. Plate
R89 39KΩ 10%	1	RC20AE104M	BTS-1000	Voltage Divider
R90 27KΩ 10%	1	RC20AE104M	BTS-1000	Voltage Divider
R91 10KΩ 10%	1	RC20AE104M	BTS-1000	Voltage Divider
R92 22KΩ	1	RC20AE104M	BTS-1000	Integrator
R93 8200Ω 10%	1	RC20AE104M	BTS-1000	Integrator
R94 8200Ω 10%	1	RC20AE104M	BTS-1000	Integrator
R95 1 Meg.	1	RC20AE104M	BTS-1000	Vert. Osc. Grid
R96 6.8 Meg.	1	RC20AE104M	BTS-1000	Voltage Divider
R97 100KΩ	1	RC20AE104M	BTS-1000	Voltage Divider
R98 1.5 Meg. 10%	1	RC20AE104M	BTS-1000	Vert. Osc. Plate
R99 470Ω	1	RC20AE104M	BTS-1000	Vert. Output Cathode
R100 2.2 Meg.	1	RC20AE104M	BTS-1000	Vert. Output Grid
R101 3300Ω	1	RC20AE104M	BTS-1000	Vert. Peaking
R102 2200Ω	1	RC20AE104M	BTS-1000	Vert. Output Decoupling
R103 68KΩ	1	RC20AE104M	BTS-1000	Vert. Osc. Plate Decoupling
R104 250Ω	1	RC20AE104M	BTS-1000	Bias Network-Wire Wound
R105 100Ω	1	RC20AE104M	BTS-1000	Focus Coil Shunt
R106 100Ω 10%	1	RC20AE104M	BTS-1000	Bias Network
R107 470KΩ	1	RC20AE104M	BTS-1000	Horiz. Sync. Disc. Load
R108 470KΩ	1	RC20AE104M	BTS-1000	Horiz. Sync. Disc. Load
R109 1 Meg.	1	RC20AE104M	BTS-1000	Horiz. Sync. Disc. Load
R110 470KΩ	1	RC20AE104M	BTS-1000	Horiz. AFC Filter Network
R111 560Ω 10%	1	RC20AE104M	BTS-1000	Horiz. AFC Grid

RESISTORS (CONT.)

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		WESTINGHOUSE	IRC	
RESISTANCE	WATTS	PART No.	PART No.	
R112 100Ω 10%	1	RC20AE100K	BTA-47K	Horiz. AFC Cathode
R113 47KΩ	1	RC20AE100K	BTA-47K	Horiz. AFC Plate
R114 39KΩ 10%	1	RC20AE100K	BTA-47K	Horiz. AFC Plate
R115 39KΩ 10%	1	RC20AE100K	BTA-47K	Horiz. AFC Screen
R116 27KΩ 10%	1	RC20AE100K	BTA-47K	Voltage Divider
R117 27KΩ 10%	1	RC20AE100K	BTA-47K	Horiz. Osc. Grid
R118 5000Ω	5	V-5925	AB-5000	Horiz. Osc. Plate-Wire Wound
R119 10KΩ	1	RC20AE103M	BTS-10K	Horiz. Osc. Screen
R120 6800Ω	1	RC20AE103M	BTS-10K	Differentiator
R121 560Ω 10%	1	RC20AE103M	BTS-10K	Horiz. Discharge Grid
R122 220KΩ	1	RC20AE103M	BTS-10K	Horiz. Discharge Plate
R123 680KΩ	1	RC20AE103M	BTS-10K	Horiz. Peaking
R124 3900Ω 10%	1	RC20AE103M	BTS-10K	Horiz. Output Grid
R125 220KΩ	1	RC20AE103M	BTS-10K	Horiz. Output Cathode
R126 100Ω	2	RC20AE103M	BW-2-100	Horiz. Output Screen
R127 4700Ω 10%	2	RC20AE103M	BW-2-100	Damper Filter, Wire Wound, tapped at 1000Ω, 2000Ω and 3000Ω
R128 7800Ω	50	V-5963		
R129 470KΩ	1	RC20AE103M	BW-2-100	HF Filter
R130 8200Ω	1	RC20AE103M	BW-2-100	1st Video IF Coil Shunt

TRANSFORMER (POWER)

ITEM No.	RATING		REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	PART No.	NOTES
T1	117VAC at 2.25A	650VCT .325ADC	5VAC at 3A	5VAC at 2A	V-5936	

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	DC RESISTANCE	SEC.	WESTINGHOUSE	STANCOR	MERIT	CHICAGO	
T2	420 CT	360 Tap. at 90	V-5935				Hor. Sync. Disc. Trans.
T3	178Ω	910Ω	V-5937	A-8121	A-4000	TBO-1	Vert. Block Osc. Trans.
T4	330Ω	SEC. 1 Tap. at 180Ω	V-5934	A-8117	TFB-1		Hor. Output Trans.
T5	560Ω	SEC. 2 8.5Ω	V-5938	A-8115	A-3035	TSO-1	Vert. Output Trans.
T6A	13.8Ω		V-5946	DY-1			Hor. Deflection Coil
T6C	63Ω		V-6073				Vert. Deflection Coil
T6E			V-6612				Hor. Deflection Coil
T7	240Ω		V-5900	FC-10			Vert. Deflection Coil

- ⑤ Used in chassis V-2130-1IDX
 ⑥ Used in chassis #V-2130-1
 ⑦ Used in chassis V-2130-3IDX, V-2130-32DX

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE	DC RES.	WESTINGHOUSE	STANCOR	MERIT	CHICAGO	
T8A	5.2KΩ	4Ω	560Ω 8Ω	V-6480	A-3849	A-2902	RO-9 ⑧
B	5.9KΩ	3.6Ω	440Ω 1.8Ω	A-3877	A-2930	RO-9	⑧ Used in models having PM speakers. ⑨ Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	WESTINGHOUSE	JENSEN	QUAM	
SP1A	100Ω	4Ω	V-6268		10E	① Supplied on order. State field current and resistance.
B	PM		②			② Used in chassis # V-2130-1IDX and V-2130-12DX
SP2A	9 1/2"	3/4"	③			③ Used in chassis #V-2130-2IDX, V-2130-22DX, V-2130-31DX and V-2130-32DX
B			④			

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (10 CURRENT 1000 μH)	WESTINGHOUSE	STANCOR	MERIT	
L1	.119A	260Ω	8.5 Henries	V-5921	C-1001	C-2993	R-8120
L2				V-6516			

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	WESTINGHOUSE	MEISSNER	
L3	Ant. Input	.2Ω CT				Part of tuner.
L4	Fl. Choke	0Ω				Part of tuner.
L5	Fl. Choke	0Ω				Part of tuner.
L6	Fl. Choke	0Ω				Part of tuner.
L7	1st Video IF	.1Ω	0Ω	V-5905-1		
L8	Fl. Choke	1Ω		V-4886-1		
L9	2nd Video IF and Sound	.1Ω		V-5903-2		
L10	Take-Off	.1Ω		V-4886-1		
L11	Fl. Choke	1Ω	0Ω	V-5905-2		
L12	3rd Video IF	.1Ω	0Ω	V-4886-1		
L13	Fl. Choke	.1Ω	0Ω	V-5905-3		
L14	Fl. Choke	.1Ω	0Ω	V-4886-1		
L15	Cath. Trap	0Ω	0Ω	V-5899		
L16	5th Video IF	.1Ω	0Ω	V-5903-2		
L17	Peaking	4.8Ω		V-5902-2		Inductance-115 microhenries
L18	Peaking	5.5Ω		V-5902-1		Inductance-140 microhenries
L19	Peaking	4.8Ω		V-5902-2		Inductance-115 microhenries
L20	Peaking	4.8Ω		V-5902-2		Inductance-115 microhenries
L21	Peaking	5.5Ω		V-5902-1		Inductance-140 microhenries
L22	1st Sound IF	.2Ω		V-5932		
L23	2nd Sound IF	.2Ω	.2Ω	V-5933		
L24	Ratio Det.	.2Ω	0Ω	V-5939		
L25	Transformer	.2Ω	0Ω	V-5904		
L26	RF Choke	.3Ω		V-5904		
L27	Width Cont.	.3Ω		V-5904		
	Hor. Linearity	.3Ω		V-5901		

MISCELLANEOUS

ITEM No.	PART NAME	WESTINGHOUSE	NOTES
		PART No.	
M1	RF Tuner	V-5941-1	Less tubes
M2	Ion Trap	V-5940	Permanent magnet type
M3	Fuse	V-6171-3	25A 250V
	Knob	V-4362-4	On-Off Tone, Hor. Hold
	Knob	V-5028-3	Volume, Vert. Hold
	Knob Assembly	V-5039-2	Brightness, Contrast
	Knob Assembly	V-7878	Fine Tuning
	Knob Assembly	V-7879	Channel Selector
	Knob	V-6146-1	On-Off Tone, Hor. Hold
	Knob	V-6146-5	Brightness, Contrast, Front
	Knob	V-6147-1	Volume, Vert. Hold, Rear
	Knob	V-6245-1	Brightness, Contrast, Rear
	Knob Assembly	V-7892	Fine Tuning
	Knob Assembly	V-7893	Channel Selector
	Channel Indicator	V-6037	Used on sets having brown rear knobs
	Channel Indicator	V-6306-1	Used on sets having brass rear knobs
	Cabinet	V-1166-1	Mahogany
	Cabinet	V-1166-2	Blonde