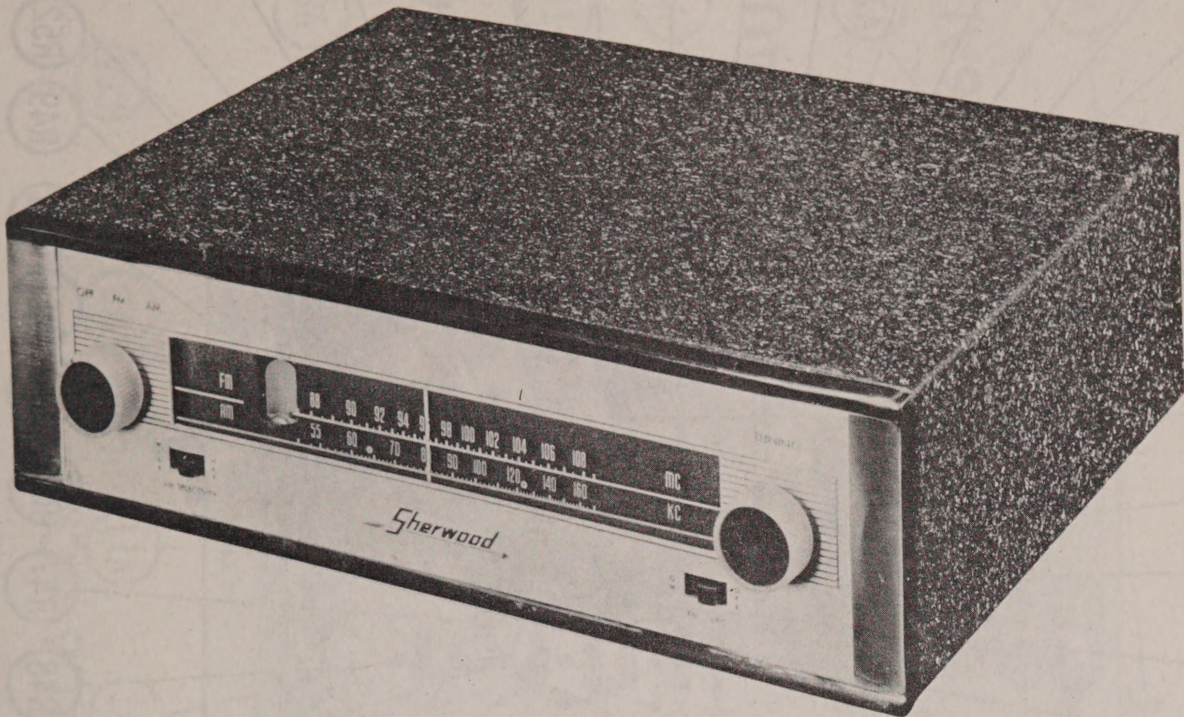


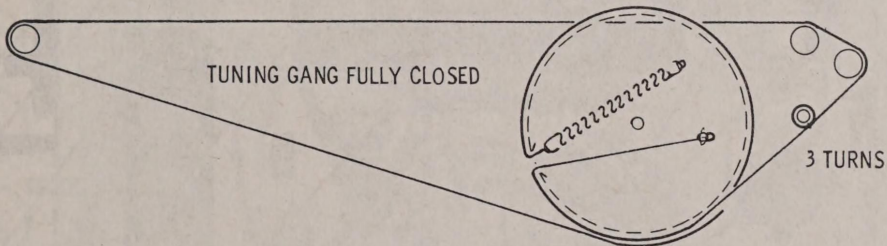


SHERWOOD MODEL
S-2000



SHERWOOD MODEL
S-2000

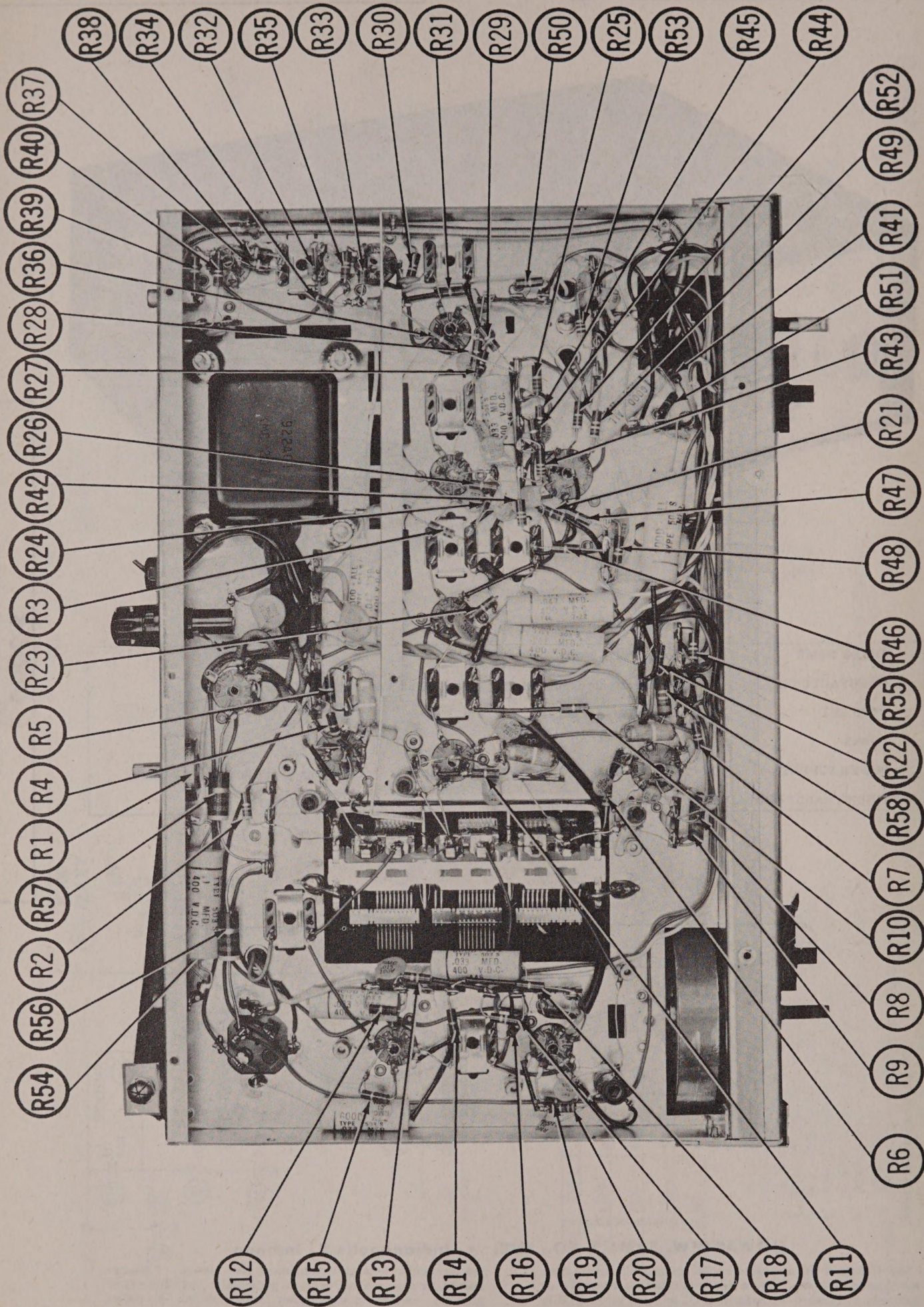
TRADE NAME	Sherwood Model S-2000		
MANUFACTURER	Sherwood Electronic Lab., Inc., 2802 W. Cullom Ave., Chicago 18, Illinois		
TYPE SET	AC Operated FM-AM Tuner		
TUBES	Thirteen		
POWER SUPPLY	110-120 Volts AC-50/60 Cycles	RATING	.45 Amp. @ 117 Volts AC (47 Watts)
TUNING RANGE—BROADCAST	530 - 1650 KC	FREQ. MOD.	87.5 - 108.5 MC



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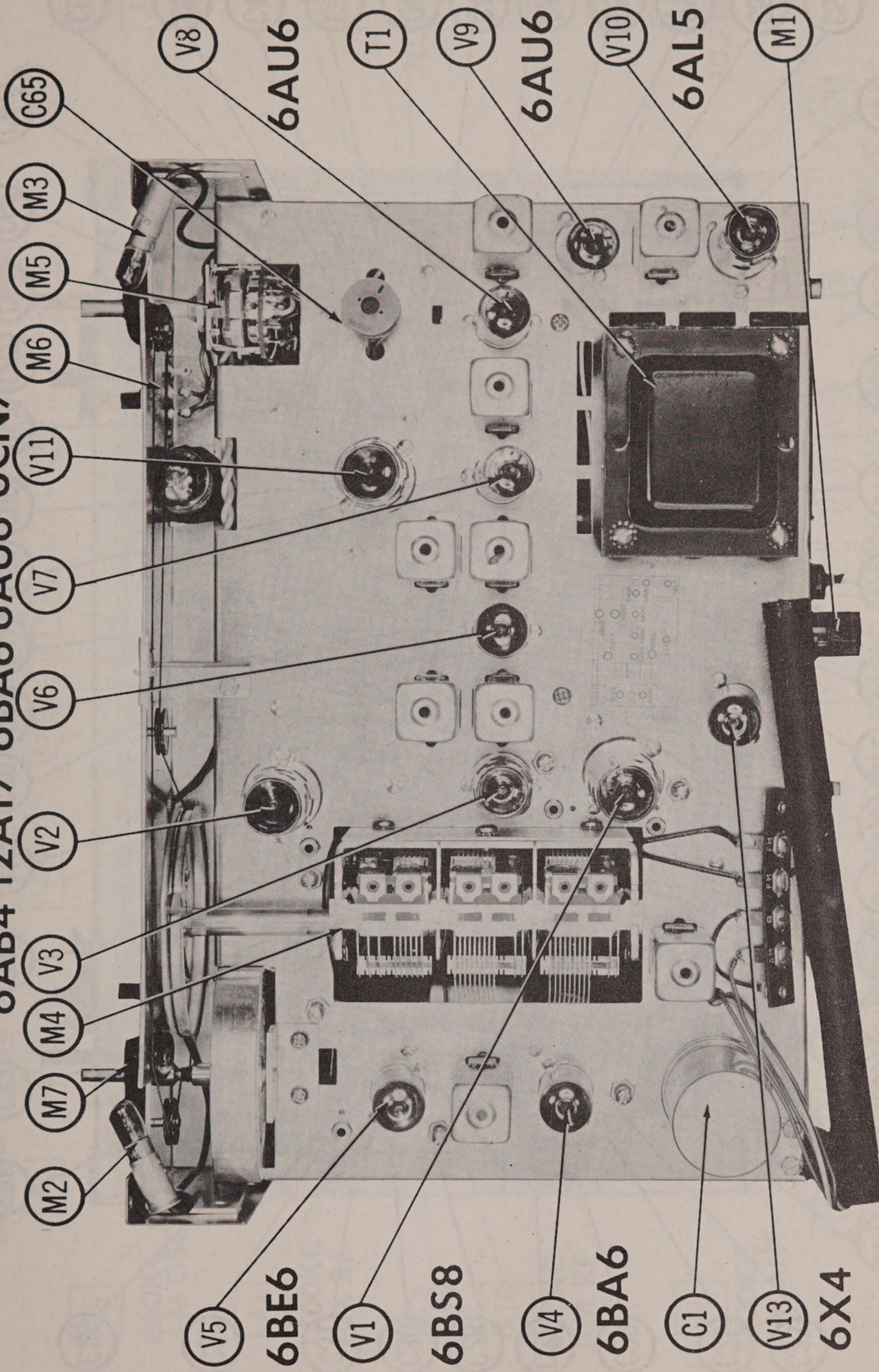
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of H276

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. © 1958 Howard W. Sams & Co., Inc., Indianapolis 5, Indiana. Printed in U.S. of America

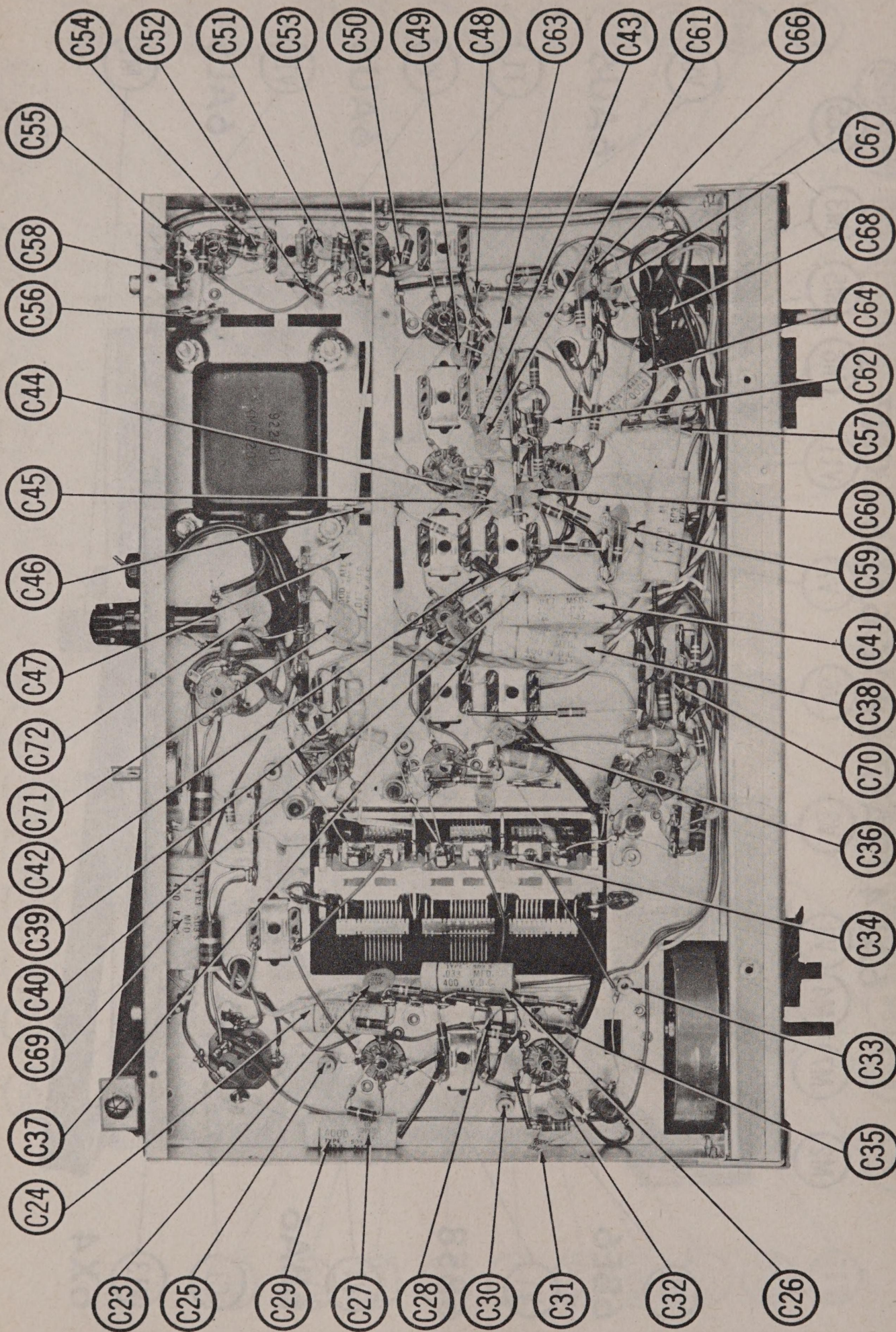


CHASSIS-BOTTOM VIEW-RESISTOR IDENTIFICATION

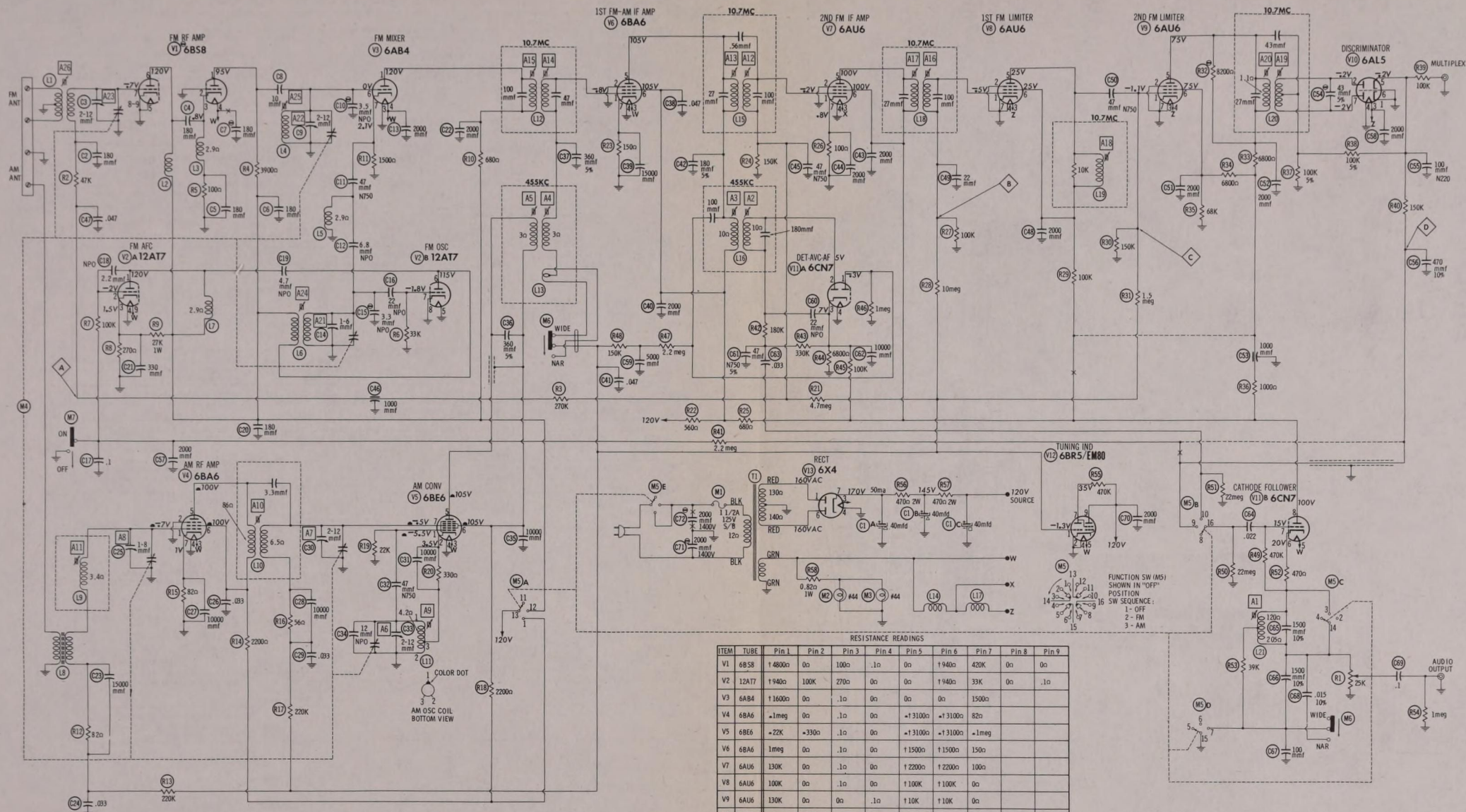
6AB4 12AT7 6BA6 6AU6 6CN7



SHERWOOD
MODEL S-2000
CHASSIS TOP VIEW



CHASSIS-BOTTOM VIEW-CAPACITOR IDENTIFICATION



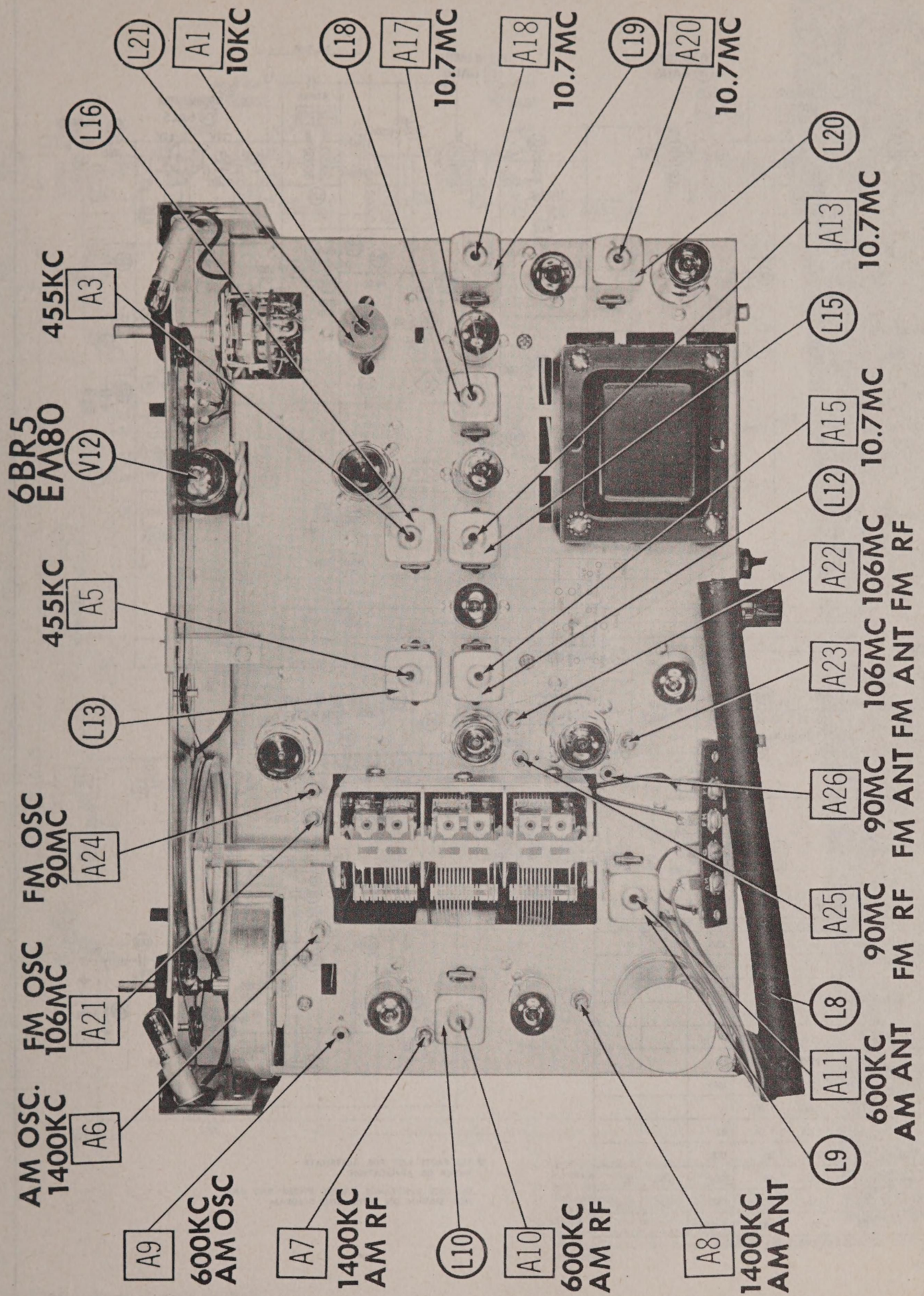
1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BS8	14800 Ω	0 Ω	100 Ω	.1 Ω	0 Ω	1940 Ω	420K	0 Ω	0 Ω
V2	12A7	1940 Ω	100K	270 Ω	0 Ω	0 Ω	1940 Ω	33K	0 Ω	.1 Ω
V3	6AB4	11600 Ω	0 Ω	.1 Ω	0 Ω	0 Ω	1500 Ω			
V4	6BA6	.1meg	0 Ω	.1 Ω	0 Ω	+13100 Ω	+13100 Ω	82 Ω		
V5	6BE6	.22K	.330 Ω	.1 Ω	0 Ω	+13100 Ω	+13100 Ω	.1meg		
V6	6BA6	1meg	0 Ω	.1 Ω	0 Ω	11500 Ω	11500 Ω	150 Ω		
V7	6AU6	130K	0 Ω	.1 Ω	0 Ω	12200 Ω	12200 Ω	100 Ω		
V8	6AU6	100K	0 Ω	.1 Ω	0 Ω	1100K	1100K	0 Ω		
V9	6AU6	130K	0 Ω	0 Ω	.1 Ω	110K	110K	0 Ω		
V10	6AL5	0 Ω	100K	.1 Ω	0 Ω	200K	0 Ω	100K		
V11	6CN7	750K	460K	6800 Ω	0 Ω	.1 Ω	14K	480K	12200 Ω	NC
V12	EM80	1meg	0 Ω	1940 Ω	0 Ω	.1 Ω	NC	1470K	1940 Ω	1940 Ω
V13	6X4	130 Ω	NC	.1 Ω	0 Ω	0 Ω	140 Ω	20K(Min)		

ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED
 † MEASURED FROM PIN 7 OF V3
 * MEASURED IN "AM" POSITION
 NC NO CONNECTION

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
 DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM



CHASSIS-TOP VIEW-ALIGNMENT IDENTIFICATION

SHERWOOD
MODEL S-2000

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

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. To set pointer, turn tuning capacitor fully closed and set pointer to last reference mark at low frequency end of dial.

AM ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1. .02mfd	High side to pin 7 (grid) of 6CN7 (V11). Low side to chassis.	10KC	AM (Wide Band)	Point of non-interference	AC probe to audio output jack. Common to chassis.	A1	Adjust for zero reading.
2. .01mfd	High side to pin 7 (grid) of 6BE6 (V5). Low side to chassis.	455KC (400v Mod)	AM (Narrow Band)	Tuning gang fully open	"	A2, A3, A4, A5	Adjust for maximum deflection.
3. 220mmf	Across AM antenna terminals.	1400KC	AM	1400KC	"	A6, A7, A8	Adjust for maximum deflection.
4. "	"	600KC	"	600KC	"	A9, A10, A11	Adjust for maximum deflection. Repeat steps 3 and 4 until no further improvement can be obtained.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR & VTVM

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5. .01mfd	High side to pin 6 (grid) of 6AB4 (V3). Low side to chassis	10.7MC (Unmod)	FM AFC off	Point of non-interference	DC probe to point (A). Common to chassis.	A12, A13, A14, A5	Adjust for maximum deflection.
6. "	"	"	"	"	DC probe to point (B). Common to chassis.	A16, A17	"
7. "	"	"	"	"	DC probe through 100K to point (C). Common to chassis	A18	"
8. "	"	"	"	"	DC probe to point (D). Common to chassis.	A19	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
9. "	"	"	"	"	"	A20	Adjust for maximum deflection.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR & OSCILLOSCOPE

Use frequency modulated signal with 60v modulation and 450KC sweep. Use 120v 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. .01mfd	High side to pin 6 (grid) of 6AB4 (V3). Low side to chassis.	10.7MC (450KC Swp)	FM AFC off	Point of non-interference	Vert. Amp. to point (A). Low side to chassis.	A12, A13, A14, A15	Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
6. "	"	"	"	"	Vert. Amp. to point (B). Low side to chassis.	A16, A17	"
7. "	"	"	"	"	Vert. Amp. to point (C). Low side to chassis.	A18	"
9. "	"	"	"	"	Vert. Amp. to point (D). Low side to chassis.	A19	Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 2.
9. "	"	"	"	"	"	A20	Adjust for maximum amplitude and straightness of crossover lines similar to Fig. 2.

FM RF ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
10. Two 120Ω Carbon Resistors	Across FM antenna terminals	106MC	FM AFC off	Point of non-interference	AC probe to audio output jack. Common to chassis	A21, A22, A23	Adjust for maximum deflection.
11. "	"	90MC	"	"	"	A24, A25, A26	Adjust for maximum deflection. Repeat steps 10 and 11 until no further improvement can be obtained.

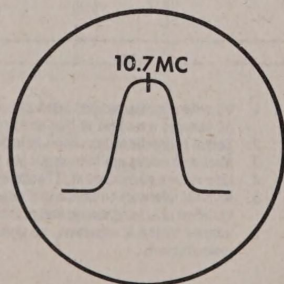


FIG. 1

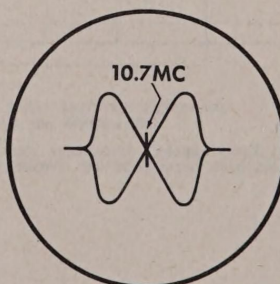
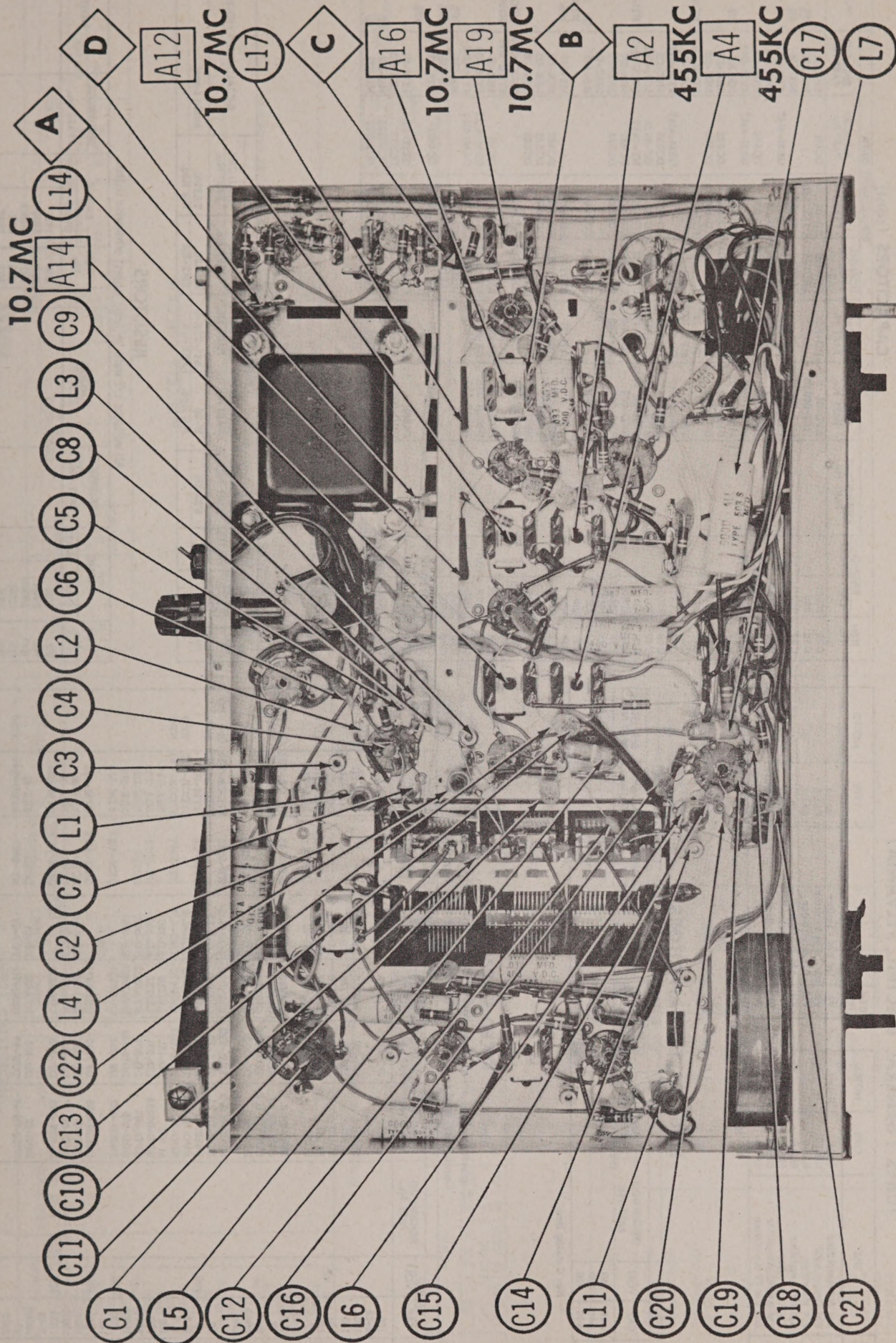


FIG. 2



CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

PARTS LIST AND DESCRIPTIONS

PARTS LIST AND DESCRIPTIONS (Continued)

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES	ITEM No.	USE	TYPE	NOTES
V1	FM RF Amplifier	6BS8	Note 1	V8	1st FM Limiter	6AU6	
V2	FM Osc. - AFC	12AT7		V9	2nd FM Limiter	6AU6	
V3	FM Mixer	6AB4		V10	Discriminator	6AL5	
V4	AM RF Amplifier	6BA6		V11	AM Det. - AVC - Cath. Follower	6CN7	
V5	AM Converter	6BE6		V12	Tuning Indicator	BBRS/EM80	
V6	FM AM IF Amplifier	6BA6		V13	Rectifier	6X4	
V7	2nd FM IF Amplifier	6AU6					

Note 1. Alternate type 6CH7/6BZ7

ELECTROLYTIC CAPACITORS

RATING				REPLACEMENT DATA			
ITEM No.	CAP.	VOLT.		SHERWOOD PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	
C1A	40	350					
B	40	350					
C	40	350					

* Non Catalog Item

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

RATING				REPLACEMENT DATA			
ITEM No.	CAP.	VOLT.		SHERWOOD PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	
C2	180	2-12			SI 180	DD-181	
C3	180	2-12			SI 180	DD-181	
C4	180	2-12			SI 180	DD-181	
C5	180	2-12			SI 180	DD-181	
C6	180	2-12			SI 180	DD-181	
C7	180	2-12			SI 180	DD-181	
C8	10	1-6			SI 10	DD-180	
C9	2-12	400			NPO-DI 3.3	TCN-47	
C10	3.5	400			N750-DI 47	TCZ-6R8	
C11	47	400			NPO-DI 6.8	TCZ-6R8	
C12	6.8	400			BPD-002	DD-202	
C13	2000	400			NPO-DI 3.3	TCZ-3R3	
C14	1-6	400			NPO-DI 2.2	TCZ-22	
C15	3.3	400			NPO-DI 2.2	TCZ-22	
C16	22	400			NPO-DI 2.2	TCZ-22	
C17	1	400			NPO-DI 2.2	TCZ-22	
C18	2.2	400			NPO-DI 2.2	TCZ-22	
C19	4.7	400			NPO-DI 2.2	TCZ-22	
C20	180	2-12			SI 180	DD-181	
C21	330	2-12			BPD-00033	DD-331	
C22	2000	400			BPD-002	DD-202	
C23	15000	400			BPD-015	DD16-153	
C24	0.33	400			P488N-033	DF-303	
C25	1-8	400			P488N-033	DF-303	
C26	0.33	400			P488N-033	DF-303	
C27	10000	400			P488N-033	DF-303	
C28	10000	400			P488N-033	DF-303	
C29	0.33	400			P488N-033	DF-303	
C30	2-12	400			P488N-033	DF-303	
C31	10000	400			P488N-033	DF-303	
C32	47	400			P488N-033	DF-303	
C33	2-12	400			P488N-033	DF-303	
C34	12	400			P488N-033	DF-303	

CAPACITORS (cont)

RATING				REPLACEMENT DATA			
ITEM No.	CAP.	VOLT.		SHERWOOD PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	
C35	10000	400			BPD-01	DD-103	
C36	360	400			1469-00036	DF-503	
C37	360	400			1469-00036	DF-503	
C38	0.047	400			P488N-047	DD16-153	
C39	15000	400			BPD-015	DD-202	
C40	2000	400			P488N-047	DD-202	
C41	0.047	400			1469-00018	TCZ-180	
C42	180	400			BPD-002	DD-202	
C43	2000	400			BPD-002	DD-202	
C44	2000	400			BPD-002	DD-202	
C45	47	400			EF-001	TCN-47	
C46	1000	400			EF-001	TCN-47	
C47	0.047	400			P488N-047	DD-202	
C48	2000	400			BPD-002	DD-202	
C49	22	400			BPD-000022	DD-220	
C50	47	400			N750-DI 47	TCN-47	
C51	2000	400			BPD-002	DD-202	
C52	2000	400			BPD-002	DD-202	
C53	1000	400			EF-001	MFT-1000	
C54	43	400			1469-000043	DD-202	
C55	100	400			BPD-001	DD-101	
C56	470	400			BPD-002	DD-202	
C57	2000	400			BPD-002	DD-202	
C58	2000	400			BPD-002	DD-202	
C59	5000	400			BPD-005	DD-202	
C60	22	400			NPO-DI 22	TCZ-22	
C61	47	400			BPD-01	DD-103	
C62	10000	400			P488N-033	DD-203	
C63	0.022	400			P488N-022	DD-203	
C64	0.022	400			BPD-001	DD-101	
C65	1500	400			BPD-001	DD-101	
C66	1500	400			BPD-001	DD-101	
C67	100	400			BPD-001	DD-101	
C68	0.015	400			P488N-1	DD-104	
C69	1	400			BPD-002	DD-202	
C70	2000	1400			DAC-3	DD30-202	
C71	2000	1400			DAC-3	DD30-202	
C72	2000	1400			DAC-3	DD30-202	

- ① Not used in some versions.
- ② Some versions use 3.9mmf in this application.
- ③ Some versions use 47mmf in this application.
- ④ Some versions use 5000mmf in this application.

CONTROLS

RATING				REPLACEMENT DATA			
ITEM No.	RESIST-ANCE	WATTS		SHERWOOD PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	
R1A	25K	1/4			B-26	A47-25K-S	
B	Shaft				Not Req.	FKS-1/4	

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

RATING				REPLACEMENT DATA			
ITEM No.	RESIST-ANCE	WATTS		SHERWOOD PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	
R2	47K				B-26	A47-25K-S	
R3	270K				Not Req.	FKS-1/4	
R4	270K				Not Req.	FKS-1/4	
R5	3900Ω				Not Req.	FKS-1/4	
R6	100Ω				Not Req.	FKS-1/4	
R7	33K				Not Req.	FKS-1/4	
R8	100K				Not Req.	FKS-1/4	
R9	27K				Not Req.	FKS-1/4	
R10	680Ω				Not Req.	FKS-1/4	
R11	1500Ω				Not Req.	FKS-1/4	
R12	82Ω				Not Req.	FKS-1/4	
R13	220K				Not Req.	FKS-1/4	
R14	220K				Not Req.	FKS-1/4	
R15	82Ω				Not Req.	FKS-1/4	

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING		SHERWOOD PART No.	NOTES	ITEM No.	RATING		SHERWOOD PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R16	560				R38	100K	5%		
R17	220K				R39	100K			
R18	22000				R40	150K			
R19	22K				R41	2.2meg			
R20	330K				R42	180K			
R21	4.7meg				R43	330K			
R22	5600				R44	68000			
R23	150K				R45	100K			
R24	150K				R46	1meg			
R25	6800				R47	2.2meg			
R26	100K				R48	150K			
R27	100K				R49	470K			
R28	10meg				R50	22meg			
R29	100K				R51	22meg			
R30	150K				R52	4700			
R31	1.5meg				R53	39K			
R32	82000				R54	1meg			
R33	68000				R55	470K	2		
R34	68000				R56	4700	2		
R35	68K				R57	4700	1		
R36	10000				R58	0.820			
R37	100K	5%							

Note 1

Note 1. Some versions may use 27K in this application.

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA				
	PRI.	SEC. 1	SEC. 2	SHERWOOD PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Thordarson PART No.
T1	117V ③ .45A	320VCT ③ .050A	6.3V ③ 4.5A	922AG1				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		SHERWOOD PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	FM Ant. Trans.						
L2	RF Choke						
L3	Cathode Choke						
L4	FM Mixer Coll						
L5	RF Choke						
L6	FM Osc. Coll						
L7	RF Choke						
L8	Loop Stick						
L9	AM Ant. Coll						
L10	AM RF Trans.						
L11	AM Osc. Coll						
L12	1st FM IF						
L13	1st AM IF						
L14	Fil. Choke						
L15	2nd FM IF						
L16	2nd AM IF						
L17	Fil. Choke						
L18	3rd FM IF						
L19	FM Limiter						
L20	FM Discriminator						
L21	10KC Filter						

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			
			SHERWOOD PART No.		LITTELFUSE PART No.	
			FUSE	HOLDER	FUSE	HOLDER
M1	3AG	1½A 125V S/B			3130L 5 3AG 1½A 125V Slo Bio)	342001 MDL 1½ HKP

MISCELLANEOUS

ITEM No.	PART NAME	SHERWOOD PART No.	NOTES
M2	Dial Lamp	#44	
M3	Dial Lamp	#44	
M4	Tuning Cap.		6 Gang (Am Sections: Ant. 10-370mmf, RF 10-362mmf, Osc. 8-150mmf)
M5	Switch		Selector (Rotary, Wafer Type)
M6	Switch		AM Wide-Narrow (Slide Type, SPDT)
M7	Switch		FM AFC (Slide Type, SPDT)

WIRING DATA

General-use Unshielded Hook-up Wire	 Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord	 Use BELDEN No. 1765-B (6 Ft. Length) 1725-K (7½ Ft. Length)
Low-Loss Shielded Lead (Interconnecting)	 Use BELDEN No. 8401
Phono Pick-up Arm Cable	 Use BELDEN No. 8430 (Two Conductor - Twisted)