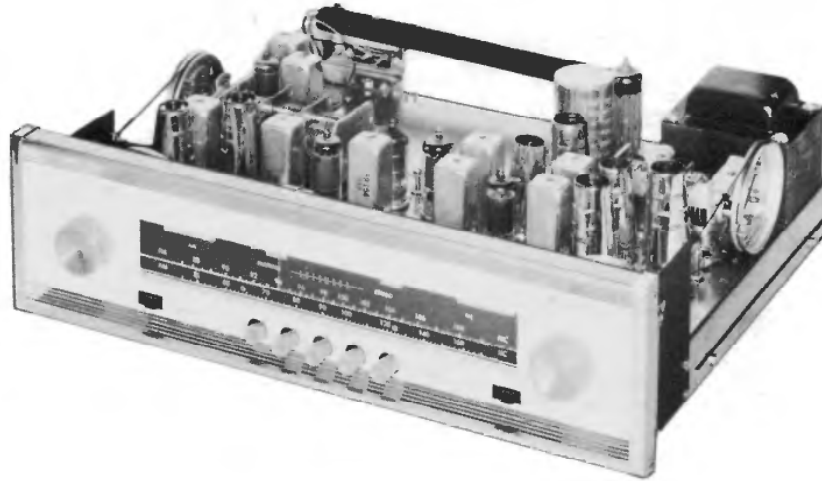




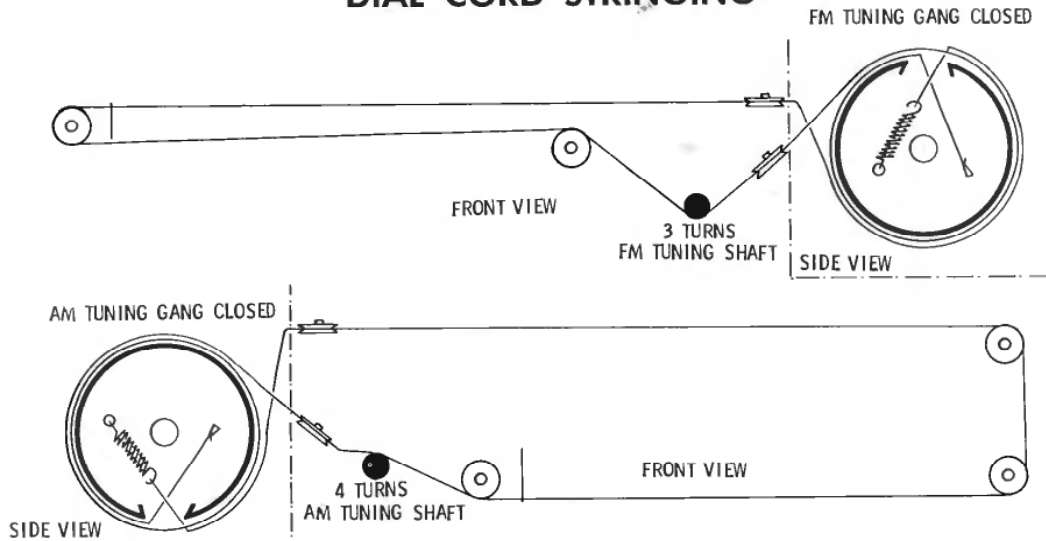
SHERWOOD
MODEL S-2200



SHERWOOD
MODEL S-2200

TRADE NAME	Sherwood Model S-2200 (Serial #0223001 and up)		
MANUFACTURER	Sherwood Electronic Laboratories, Inc., 4300 N. California Ave., Chicago 18, Illinois		
TYPE SET	AC Operated 15 Tube FM-AM Tuner		
POWER SUPPLY	110-120 Volts AC, 50-60 Cycles	RATING	76 Watts, .73 Amp. @117 Volts AC
TUNING RANGE - BROADCAST	530-1650KC	FREQ. MOD.	88 - 108MC

DIAL CORD STRINGING

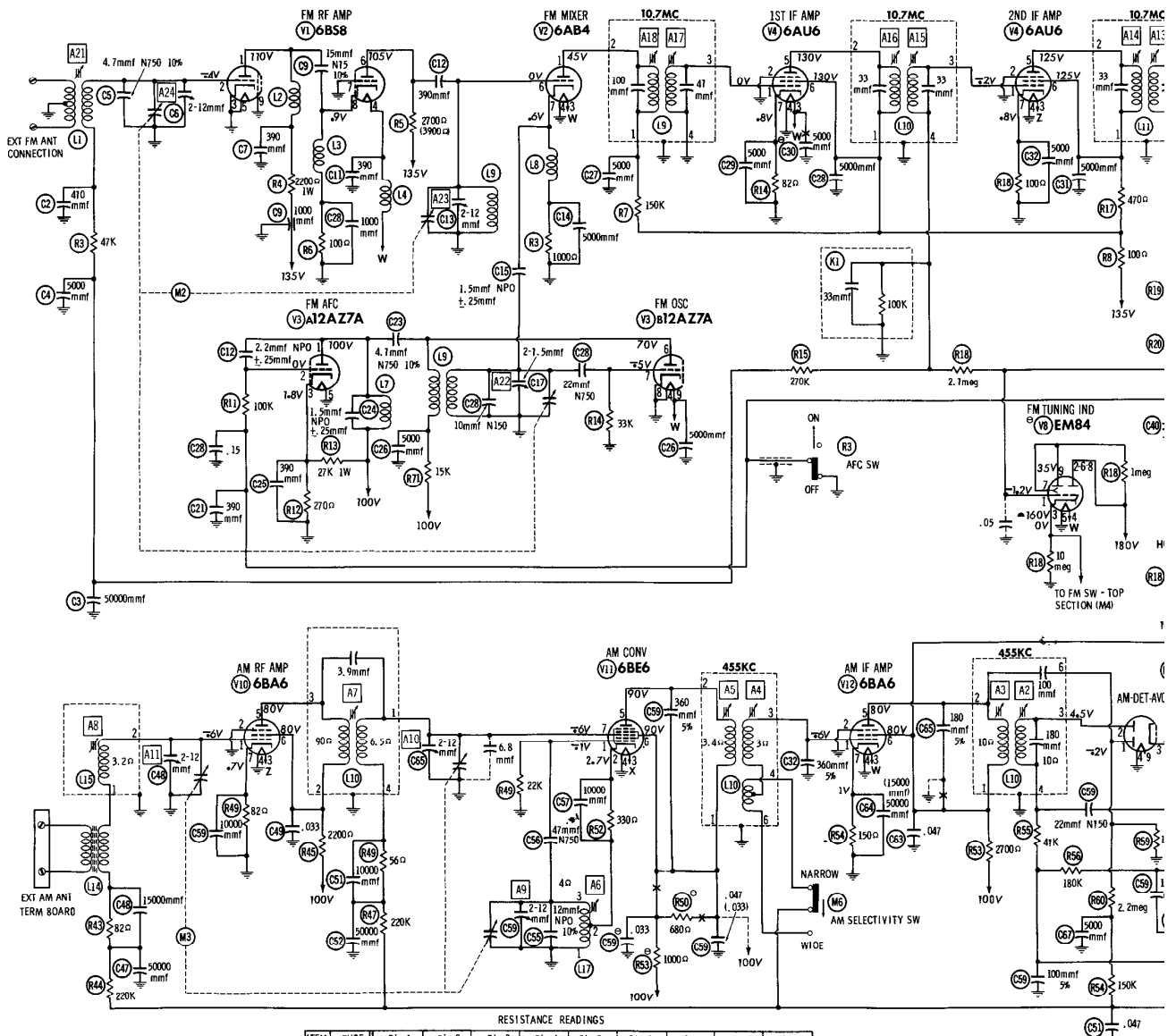


HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



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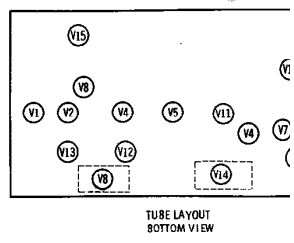
the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1961 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 111 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

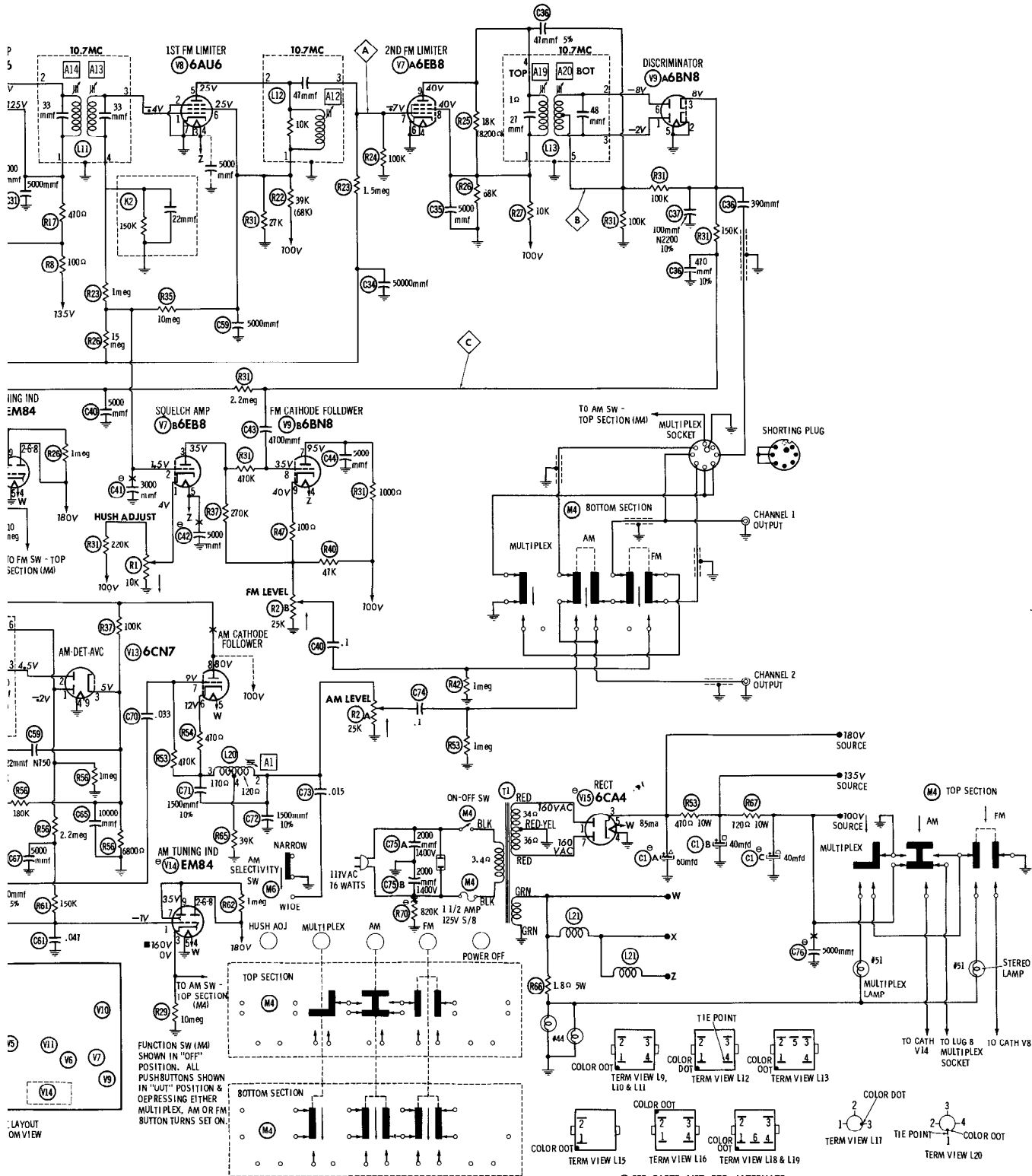
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BS8	±2100K	420K	0Ω	.1Ω	0Ω	+3100Ω	0Ω	100Ω	0Ω
V2	6AB4	±150K	0Ω	.1Ω	0Ω	0Ω	0Ω	1000Ω		
V3	12AZ7A	±1200Ω	2.6meg ±100K	270Ω	0Ω	0Ω	+16K	33K	0Ω	.1Ω
V4	6AU6	0Ω	0Ω	.1Ω	0Ω	+570Ω	+570Ω	82Ω		
V5	6AU6	100K	0Ω	.1Ω	0Ω	+1000Ω	+1000Ω	100Ω		
V6	6AU6	150K	0Ω	0Ω	.1Ω	+30K	+30K	0Ω		
V7	6E8	+3000Ω	1.1meg	+300K	0Ω	.1Ω	0Ω	100K	+10K	+10K
V8	EM84	1meg	NC	±10meg	.1Ω	0Ω	+0Ω	+1meg	NC	+1meg
V9	6BN8	100K	0Ω	200K	.1Ω	0Ω	100K	+1000Ω	+150K	15K
V10	6BA6	3.5meg	0Ω	.1Ω	0Ω	+3400Ω	+3400Ω	82Ω		
V11	6BE6	22K	330Ω	.1Ω	0Ω	+2900Ω	+2200Ω	3.5meg		
V12	6BA6	3.3meg	0Ω	.1Ω	0Ω	+3900Ω	+3900Ω	150Ω		
V13	6CA1	1meg	235K	6800Ω	0Ω	.1Ω	18K	490K	+3900Ω	NC
V14	EM84	3.3meg	NC	±10meg	.1Ω	0Ω	+0Ω	+1meg	NC	+1meg
V15	6CA4	34Ω	NC	1	0Ω	.1Ω	NC	36Ω	NC	NC



ALL MEASUREMENTS MADE IN "AM-FM STEREO" POSITION UNLESS OTHERWISE NOTED.
 1 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE IFT.
 ■ MEASURED IN "FM" POSITION. ▲ MEASURED W/1000 OHM PER VOLT VOLTAGE.
 □ MEASURED IN "AM" POSITION. † MEASURED FROM COMMON GROUND.
 ● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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POSITION UNLESS OTHERWISE DESIGNATED.
 THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
 MEASURED WITH AFC SW IN "OFF" POSITION.
 MEASURED FROM PIN 3 OF V15.
 OR NORMAL OPERATION. NC NO CONNECTION

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
 DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM
 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

**SHERWOOD
 MODEL S-2200**

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
Use only enough generator output to provide a usable indication.	
Suggested Alignment Tools:	A1..... GENERAL CEMENT #8721, 8722 WALSCO #2519 A2 Thru A5, A7, A8, A12 Thru A20.... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440 WALSCO #2526, 2543, 2544, 2545 A6, A21..... GENERAL CEMENT #8282, 8606, 8606-L, 9091 WALSCO #2526, 2541, 2542, 2543, 2544 A9, A10, A11, A22, A23, A24..... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291 WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538

AM ALIGNMENT—SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	High side thru .02mfd to pin 7 (grid) of AM Cathode Follower (V13). Low side to chassis.	10KC	AM(Wide) Point of non-interference.	AC probe across Output jack.	A1	Adjust for MINIMUM deflection.
2.	High side thru .01mfd to pin 7 (grid) of AM Converter. Low side to chassis.	455KC (400v 30% AM.)	AM (Narrow) Point of non-interference.	"	A2, A3, A4, A5	Adjust for maximum deflection.
3.	"	455KC (50KC Swp)	AM (Wide) Point of non-interference.	Vert. amp of SCOPE to Output jack. Low side to chassis.	A2, A3, A4, A5	Retouch for maximum gain and symmetry of response.
4.	Loop	800KC (400v 30% AM.)	AM (Narrow) 600KC	AC probe across Output jack.	A6, A7, A8	Adjust for maximum deflection.
5.	"	1400KC	AM (Narrow) 1400KC	"	A9, A10, A11	Adjust for maximum deflection. Repeat Steps 4 and 5.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM—SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
6.	High side to ungrounded tube shield floating over FM Mixer. Low side to chassis.	10.7MC (Unmod.)	(FM) Point of non-interference.	DC probe thru Imeg to point \diamond . Common to chassis.	A12, A13, A14, A15, A16, A17, A18	Adjust for maximum deflection.
7.	"	"	"	DC probe thru Imeg to point \diamond . Common to chassis.	A19	"
8.	"	"	"	DC probe to point \diamond . Common to chassis.	A20	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE—SELECTOR IN FM POSITION

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
6.	High side to ungrounded tube shield floating over FM Mixer. Low side to chassis.	10.7MC (450KC Swp)	(FM) Point of non-interference.	Vert. amp. thru 47K to point \diamond . Low side to chassis.	A12, A13, A14, A15, A16, A17, A18	Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown.
7.	"	"	"	Vert. amp. thru 47K to point \diamond . Low side to chassis.	A19	"
8.	"	"	"	Vert. amp. to point \diamond . Low side to chassis.	A20	Adjust to place marker at the center of crossover lines similar to Fig. 2. SLIGHTLY retouch A19 for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT—SELECTOR IN FM POSITION

AFC Off

Coils not containing adjustable cores are adjusted by expanding or compressing coil turns.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
9.	Across FM antenna terminals with 120Ω in each lead.	90MC (Unmod.)	(FM) 90MC	DC probe to point \diamond . Common to chassis.	L6, L5, A21	Adjust for maximum deflection.
10.	"	106MC	106MC	"	A22, A23, A24	Adjust for maximum deflection. Repeat Steps 9 and 10.

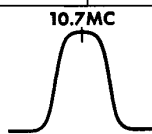


FIG. 1

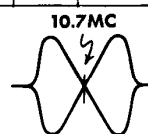


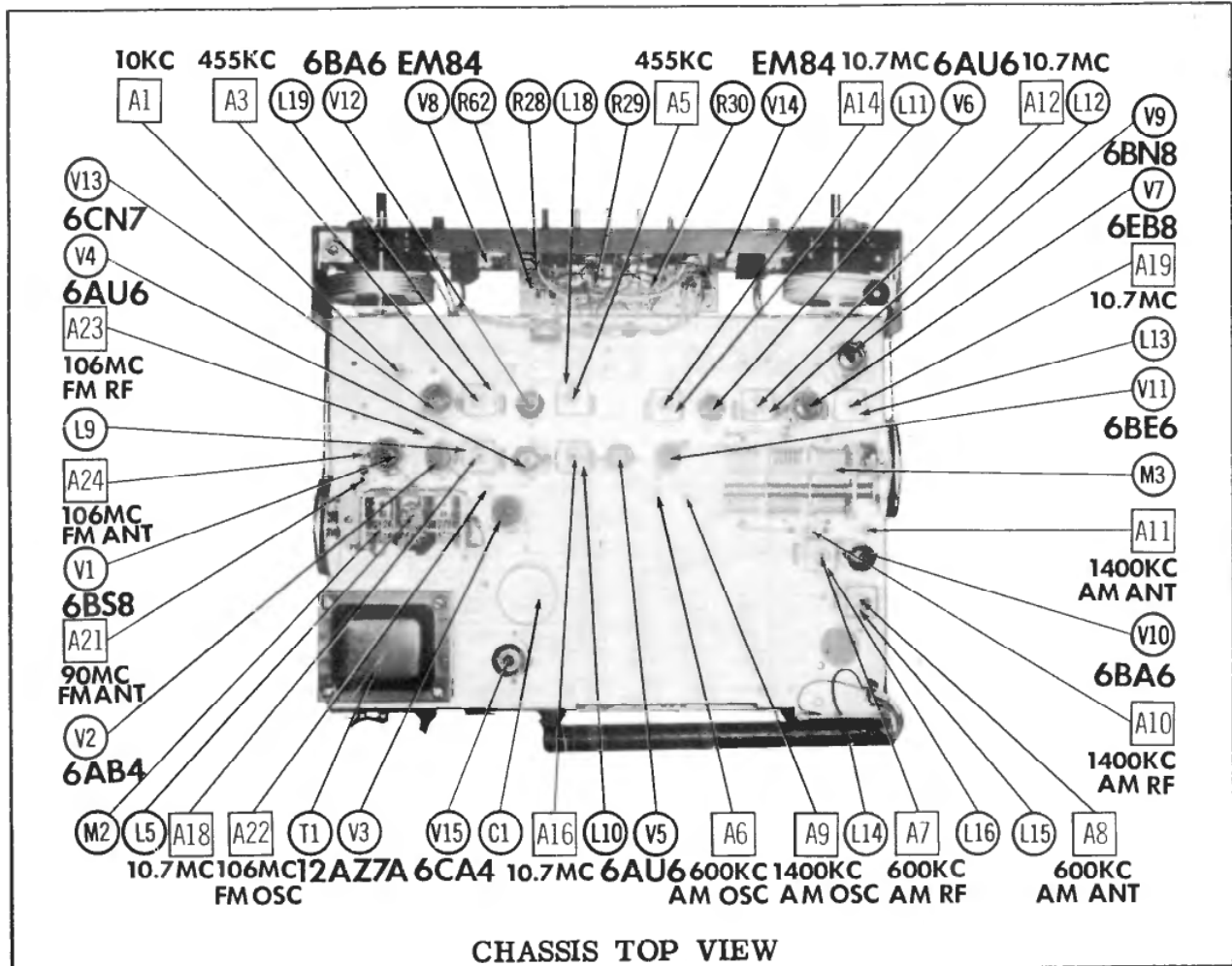
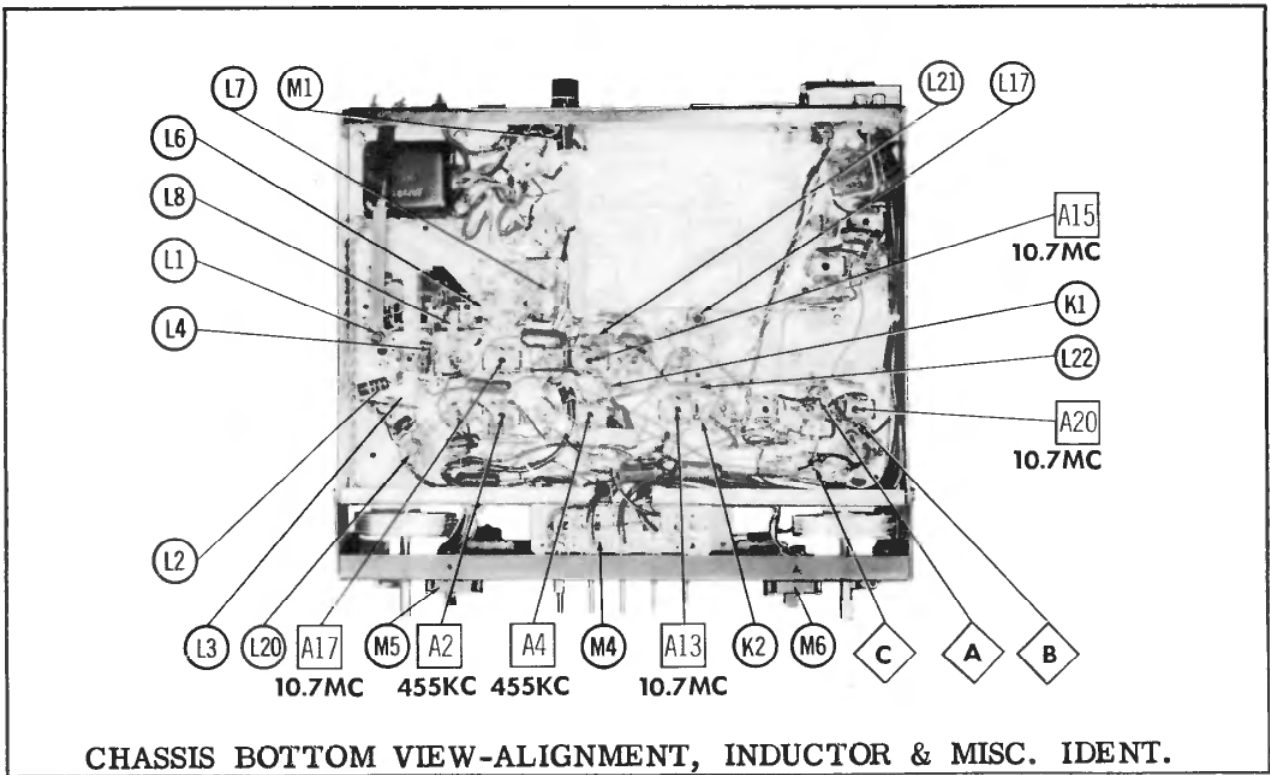
FIG. 2

SET 533

FOLDER 10

SHERWOOD
MODEL S-2200

FOLDER 10



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	REPLACEMENT DATA		REMARKS	RATING	REPLACEMENT DATA		REMARKS
	IRC PART No.	WORKMAN TV PART No.			IRC PART No.	WORKMAN TV PART No.	
R13				27K 1W			
R14				B20			
R15				220K			
R16				220000			
R17				B20			
R18				220K			
R19				560			
R20				22K			
R21				5600			
R22				10000			Note 1
R23				27000			Note 1
R24				1500			
R25				47K			
R26				100K			
R27				100K			
R28				68000			
R29				1meg			
R30				10meg			
R31				2.2meg			
R32				150K			
R33				100K			
R34				150K			
R35				2.2meg			
R36				470K			
R37				270K			
R38				220K			
R39				47K			
R40				1000			
R41				1000			
R42				1meg			

Note 1. Not used in some versions.
* Alternate Value.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	SHERWOOD PART No.	REPLACEMENT DATA
K1	2nd FM IF Grid Bias	33mmf, 100K		
K2	3rd FM IF Grid Bias	22mmf, 150K		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA		Workman TV PART No.	NOTES
		SHERWOOD PART No.	Miller PART No.		
L1	FM Ant.				
L2	RF Choke (1.2uh)	BC-561	4602	T855	
L3	RF Choke (1.2uh)	BC-561	4602	T855	
L4	FM RF Choke (2.6uh)	8W-630	4606	T857	
L5	FM RF Choke (1.2uh)	BC-561	4602	T855	
L6	FM Osc.	BC-564	4608	T858	
L7	RF Choke (1.2uh)	BC-564	4608	T858	
L8	Cathode Choke (3.9uh)	FM-254	1463	T633	
L9	1st FM IF	FM-254	1463	T633	
L10	2nd FM IF	FM-254	1463	T633	
L11	3rd FM IF	FM-254	1463	T633	
L12	FM Limiter	FM-253	1464	T634	
L13	Discriminator	BC-418	705-A	T532	
L14	Loopstick	BC-390	A-121-A	T506	
L15	AM Ant.				
L16	AM RF				

① IRC Part #CLA

COILS (RF-IF) (cont)

ITEM No.	USE	REPLACEMENT DATA			Workman TV PART No.	NOTES
		SHERWOOD PART No.	Miller PART No.	Stencor PART No.		
L17	AM Osc.	BC-393	70-OSC	RTC-8647	T502	
L18	1st AM IF	BC-353 A	12-C2 A	RTC-8633 A	T502 A	
L19	2nd AM IF	8W-630	4606	RTC-8515	T857	
L20	10KC Filter	8W-630	4606	RTC-8515	T857	
L21	FIL Choke (2.6uh)	8W-630	4606	RTC-8515	T857	
L22	FIL Choke (2.2uh)	8W-630	4606	RTC-8515	T857	▲ Connect 100mmf capacitor externally

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA			NOTES
		SHERWOOD PART No.	Miller PART No.	Stencor PART No.	
T1	320V CT 6.3V @ .73A 5.6A DC	A922D2-3		Thornderson PART No.	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA		
			SHERWOOD PART No.	LITTER FUSE PART No.	BUSS PART No.
M1	3AG	1 1/4 125V S/B		31301.5 (9AG 1 1/4 125V S/B)	MDL 1 1/2 RKP

MISCELLANEOUS

ITEM No.	PART NAME	SHERWOOD PART No.	NOTES
M2	Tuning Cap.		FM, 3 Gang
M3	Tuning Cap.		AM, 3 Gang
M4	Switch		Function Selector (Pushbutton Type, Includes Power Off, FM, AM, MX)
M5	Switch		FM AFC-Off (SDDT, Slide Type)
M6	Switch		AM Wide, AM Narrow (DPDT, Slide Type)

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. B530 (Solid) Available in Ten Colors
Power Cord Use BELDEN No. 1785-B (6 Ft. Length)
..... Use BELDEN No. 1785-K (7 1/2 Ft. Length)