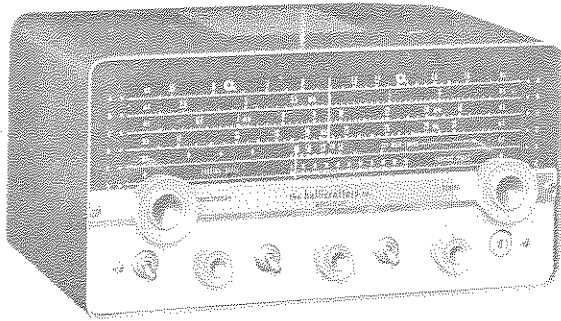


SERVICE DATA FOR MODEL S-107, MARK II

CHASSIS REMOVAL.



092-007166

Figure 1. Hallicrafters Model S-107.

TECHNICAL SPECIFICATIONS

TUBES..... 8 including rectifier
 SPEAKER 4" x 6" PM, 3.2-ohm voice coil
 HEADPHONE OUTPUT IMPEDANCE.....15 ohms
 ANTENNA INPUT IMPEDANCE..... 52 to 600 ohms
 EXT. AMPL. OUTPUT IMPEDANCE.. High impedance
 INTERMEDIATE FREQUENCY..... 455 KC
 POWER SOURCE:

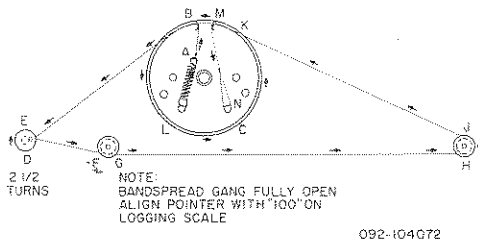
Model S-107..... 105-125 volts, 50-60 cycles
 POWER CONSUMPTION..... 50 watts
 FREQUENCY COVERAGE

BAND	FREQUENCY RANGE
A	540 KC - 1630 KC
B	2.5 MC - 6.3 MC
C	6.3 MC - 16 MC
D	14 MC - 31 MC
E	48 MC - 54.5 MC

TUBE AND DIAL LAMP REPLACEMENT.

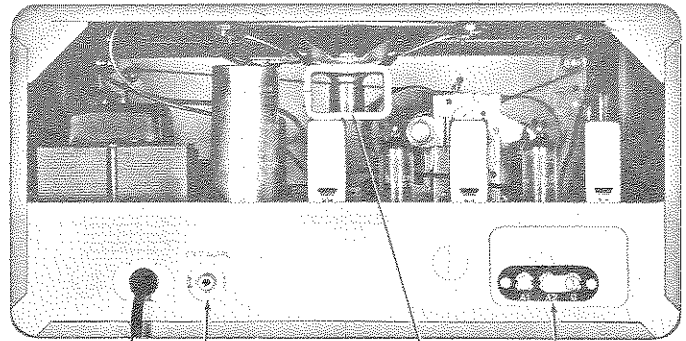
For complete access to the tubes and dial lamps, remove the receiver from the cabinet. See "CHASSIS REMOVAL". The tube and lamp locations are shown in Fig. 5.

CAUTION: Before attempting to make any replacement, rotate the Bandsread control and the Tuning control fully counterclockwise to prevent damage to the tuning gang.



092-104072

Figure 3. Bandsread Dial Cord Stringing Diagram.



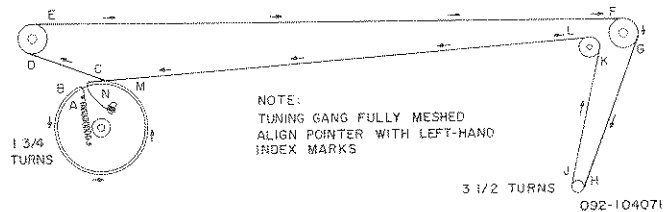
POWER CORD SOI SPEAKER (LS-1) TS-1

092-104019B

Figure 2. Rear Panel View.

DIAL CORD RESTRINGING.

To restring the tuning or bandsread dials, first remove the chassis and front panel assembly from the cabinet. See "CHASSIS REMOVAL". Remove the front panel from the cabinet by removing the control knobs, the toggle switch mounting nuts, the screw at each side of the front panel trim strip, and the two screws near the bottom of the front panel. Then remove the four screws which secure the dial plate to the dial plate mounting brackets. Lift the main tuning dial pointer up by its base until it just clears the dial plate, then tilt the main tuning dial pointer back so that it points straight up, allowing the dial plate to be raised up and off of the bandsread dial pointer. Removal of the dial plate provides complete access to the drive pulleys. Exercise care to prevent damaging the dial pointers. For stringing details, see Figs. 3 and 4.



092-104071

Figure 4. Tuning Dial Cord Stringing Diagram.

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ALIGNMENT PROCEDURE

- Remove chassis from cabinet for alignment by using procedure given in "CHASSIS REMOVAL".
- Use signal generator with modulated output covering 455 KC to 52 MC.
- Use a non-metallic alignment tool.
- Connect output meter across speaker voice coil terminals.
- Control settings: STANDBY/RECEIVE at RECEIVE, CW/AM at AM, NOISE LIMITER at OFF, TONE at HIGH, SPEAKER/PHONES at SPEAKER and SENSITIVITY, VOLUME and BANDSPREAD fully clockwise.
- See Figs. 5 and 6 for location of alignment adjustments.

STEP	SIGNAL GENERATOR CONNECTIONS	SIGNAL GENERATOR FREQUENCY	BAND SELECTOR SETTING	RECEIVER DIAL SETTING	ADJUST	INSTRUCTIONS
1	High side to stator plates of front section of tuning gang through a .1 mfd. capacitor. Low side to chassis.	455 KC	A	TUNING gang fully open.	S1, S2, S3, S4, S5, S6	Adjust for maximum audio output at the speaker voice coil. Use just enough signal generator output to obtain a 50 milliwatt reading on the output meter.
2	Same as STEP 1.	455 KC	A	Same as STEP 1.	T13	Set the CW/AM switch at CW. (Reset the switch to AM when STEP 2 is completed.) Adjust T13 for a zero beat.
3	High side to A1 on antenna terminal strip through a 330 ohm resistor. Low side to chassis. Connect the jumper between A2 and G.	1500 KC 600 KC	A A	1.5 MC .6 MC	C26, C6 C25	Maximum output as in STEP 1.
4	Same as STEP 3.	6 MC	B	6 MC	C24, C7	Maximum output as in STEP 1.
5	Same as STEP 3.	15 MC	C	15 MC	C22, C9	Maximum output as in STEP 1.
6	Same as STEP 3.	30 MC	D	30 MC	C19, C10	Maximum output as in STEP 1.
7	Same as STEP 3.	52 MC	E	52 MC	C18, C11	Maximum output as in STEP 1.

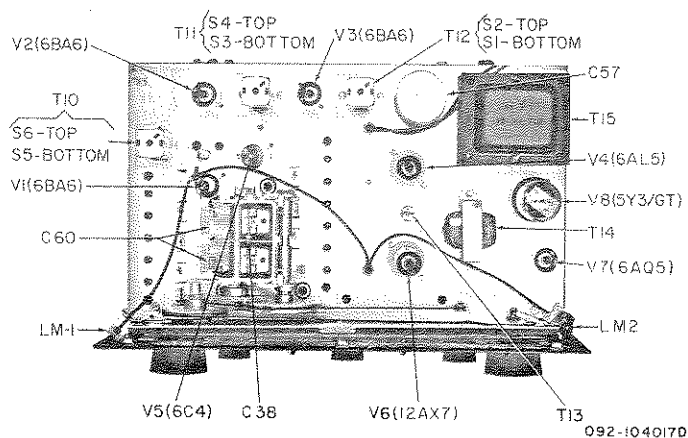


Figure 5. Top View of Chassis.

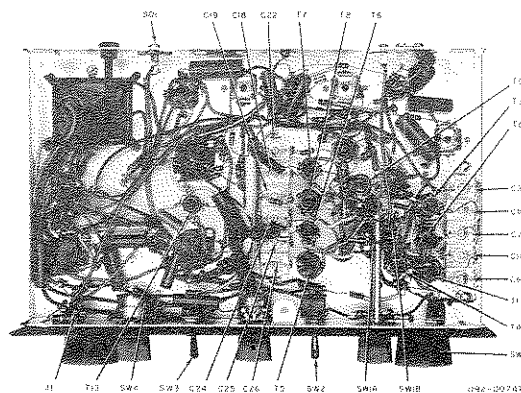
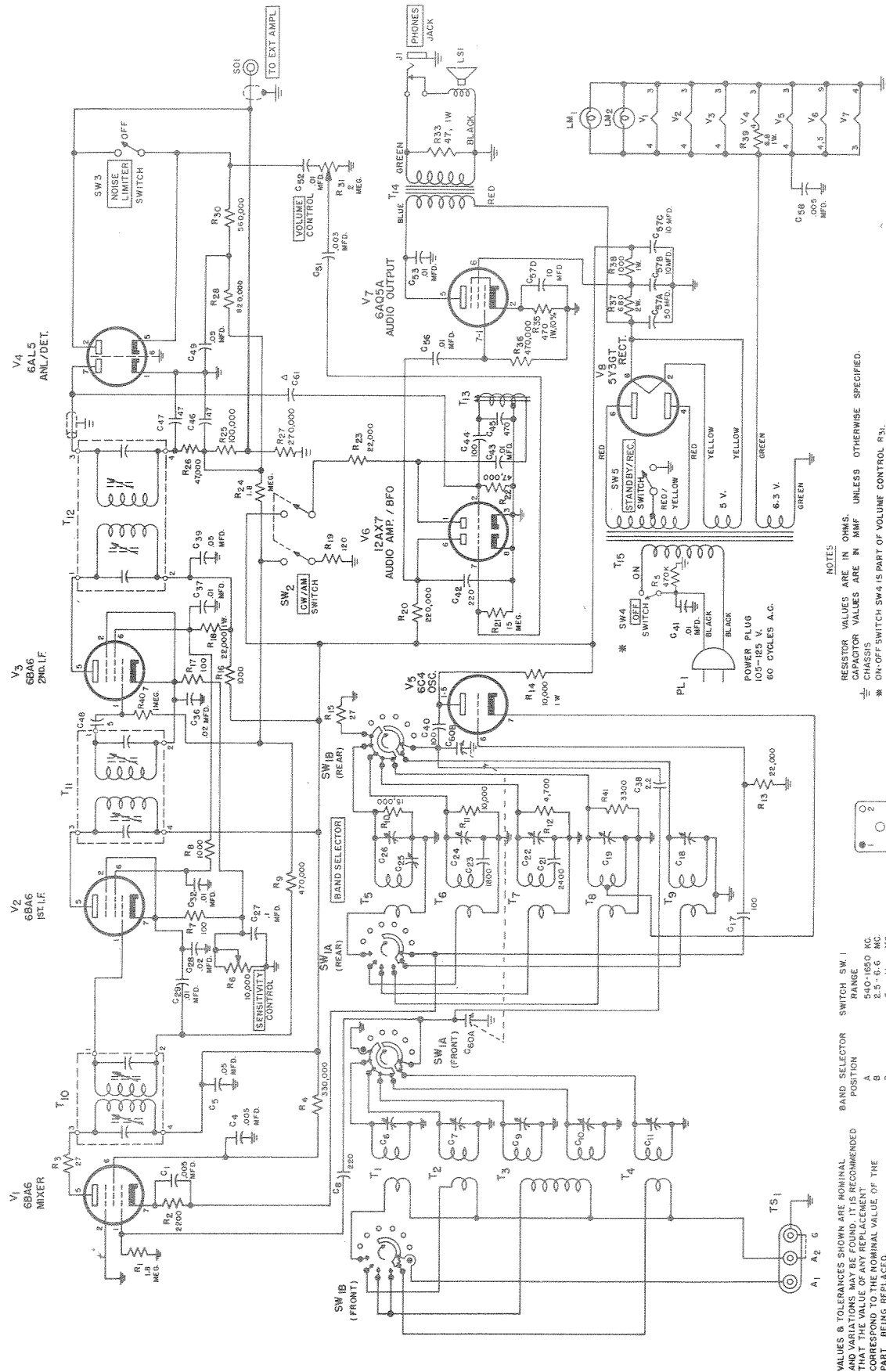
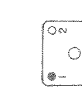


Figure 6. Bottom View of Chassis.



VALUES & TOLERANCES SHOWN ARE NOMINAL AND VARIATIONS MAY BE FOUND. IT IS RECOMMENDED THAT THE VALUE OF ANY REPLACEMENT CORRESPOND TO THE NOMINAL VALUE OF THE PART BEING REPLACED.

BAND SELECTOR POSITION	SWITCH SW 1 RANGE
A	540-1650 KC.
B	2.5-6.5 MC.
C	6-11 MC.
D	13.5-32 MC.
E	47-95 MC.



NOTE: SWITCH SHOWN IN POSITION E.

RESISTOR VALUES ARE IN OHMS UNLESS OTHERWISE SPECIFIED.
CAPACITOR VALUES ARE IN MMF UNLESS OTHERWISE SPECIFIED.
CHASSIS
ON-OFF SWITCH SW 4 IS PART OF VOLUME CONTROL R 31.
WIRE GIMMICK

089-00189

Figure 7. Schematic Diagram.

SERVICE PARTS LIST

Schematic Symbol	Description	Hallcrafters Part Number	Schematic Symbol	Description	Hallcrafters Part Number	Schematic Symbol	Description	Hallcrafters Part Number
CAPACITORS								
C1, 4, 56	.005 mfd, 450V; ceramic	047-100168	R14	10K ohm, 1W, 10%	451-352103	V1, 2, 3	Socket, dial lamp; includes lead	066-200663
C5, 39, 49	.05 mfd, 500V; molded paper	499-032503	R18	22K ohm, 1W	451-353223	V4	6BA6; mixer, 1st IF amplifier and 2nd IF amplifier	006-100858
C6, 7, 9, 10, 11	Trimmer assembly, 5 sections; antenna stage	044-200508	R19	120 ohm	451-253121	V5	6C4; oscillator	090-900830
C8, 42	220 mmf, 500V, 10%; mica	470-213221	R20	220K ohm, 10%	451-252224	V6	12AX7; audio amplifier and BFO	090-900338
C17, 40, 44	100 mmf, 500V, 10%; ceramic	491-126101	R21	15 megohm, 10%	451-253158	V7	6AQ5; audio output	090-901331
C18, 19, 22, 34, 25, 26	Trimmer assembly, 6 sections; oscillator stage	044-200508	R22, 26	47K ohm	451-253473	V8	5Y3/GT; rectifier	090-901111
C21	2400 mmf, 500V; 5%; silver mica	470-422242	R25	100K ohm, 10%	451-252104	LM1, 2	Lamp, pilot; 6-8 volt, 250 ma, Mazda #44	039-100063
C23	1800 mmf, 500V; 2%; silver mica	470-421132	R27	270K ohm	451-253274	KNOBES		
C27	.1 mfd, 200V; molded paper	499-012104	R28	300K ohm	451-253824	Knob, Band Selector, Sensitivity and Volume		
C28, 36	.02 mfd, 600V; molded paper	499-032203	R30	560K ohm	451-253564			
C29, 32, 37, 43, 52, 53, 56	.01 mfd, 500V, +20-10%; tubular	499-032103	R31	2 megohm, VOLUME control; includes switch SW4	025-200608	MISCELLANEOUS PARTS		
C38	2.2 mmf, 500V; Bakelite	047-100160-04	R33	47 ohm, 1W, 10%	451-352470			
C41	.01 mfd, 1400V; cer. disc	047-001309	R35	470 ohm, 1W, 10%	451-352471	Bushing, Tuning		
C45	470 mmf, 500V; 5%; mica	470-212471	R37	800 ohm, 2W	451-653681			
C46, 47	47 mmf, 500V, 10%; ceramic	491-106470-95	R38	1K ohm, 1W	451-353102	Channel, Rubber		
C48	5 mmf, 500V, 10%; ceramic	491-002050-95	R39	6.8 ohm, 1W, 10%	451-352068			
C51	.005 mfd, 600V; molded paper	499-032302	R40	1 megohm	451-253105	Cord, Dial		
C57A, B, C & D	50-10-10 mfd, 350V; 10 mfd, 25V; electrolytic	045-200122	R41	3.3K ohm, 10%	451-252332			
C60A, B	Tuning capacitor, 2 section	048-400432	*All Resistors are 20%, 1/2W, carbon type unless otherwise specified.			Foot, Mtg.		
			COILS AND TRANSFORMERS					
			T1	Coil, antenna; band 1	051-202599	Gasket, Speaker		
			T2	Coil, antenna; band 2	051-201244			
			T3	Coil, antenna; bands 3 and 4	051-201026	Line Cord Lock (Male)		
			T4	Coil, antenna; band 5	051-201030			
			T5	Coil, oscillator; band 1	051-202615	Plate, IF Mtg.		
			T6	Coil, oscillator; band 2	051-202610			
			T7	Coil, oscillator; band 3	051-201237	Pointer, Tuning		
			T8	Coil, oscillator; band 4	051-201238			
			T9	Coil, oscillator; band 5	051-201239	Retainer, Glass		
			T10, 11	Transformer, 1st and 2nd IF	050-300241			
			T12	Transformer, 3rd IF	050-300242	Speaker (4" x 6")		
			T13	Coil, BFO	054-200043			
			T14	Transformer, audio output	055-200439	Spring, Pulley		
			T15	Transformer, power	052-300164			
			SWITCHES			Terminal Strip, Antenna		
			SW1	BAND SELECTOR switch assembly	060-202022			
			SW2	Switch, DPST; CW/AM	060-100285			
			SW3, 5	Switch, SPST; NOISE LIMITER and STANDBY/RECEIVE	060-100138			
			SW4	Switch, OFF-ON; part of VOLUME control R31	-----			
			PLUGS AND SOCKETS					
			PL1	Line cord and plug	087-100078			
			SO1	EXT. AMPL. jack	036-100041			
			J1	PHONES jack	036-100243			
			*RESISTORS					
R1, 24	1.8 megohm	451-253185						
R2	2.2K ohm	451-253222						
R3, 15	27 ohm	451-253270						
R4	330K ohm, 10%	451-252334						
R5, 9, 36	470K ohm	451-253474						
R6	10K ohm, SENSITIVITY control	025-201836						
R7, 17	100 ohm, 10%	451-252101						
R8, 16	1K ohm	451-253102						
R10	15K ohm, 10%	451-252153						
R11	10K ohm, 10%	451-252103						
R12	4.7K ohm, 10%	451-252472						
R13, 23	22K ohm	451-253223						

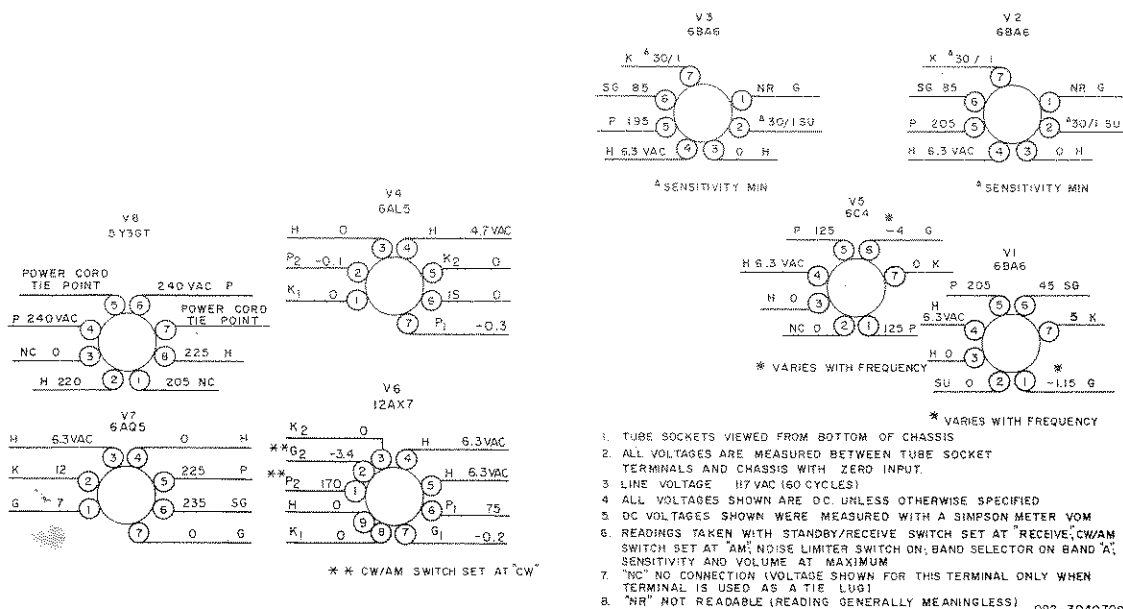


Figure 8. Voltage Chart.