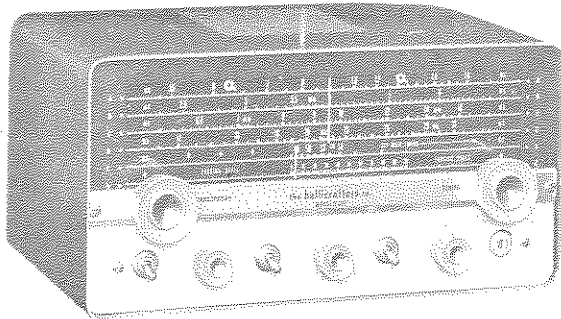


SERVICE DATA FOR MODEL S-107, MARK II

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:

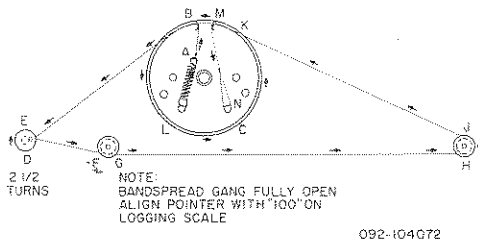
Model S-107..... 105-125 volts, 50-60 cycles
 POWER CONSUMPTION..... 50 watts
 FREQUENCY COVERAGE

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.

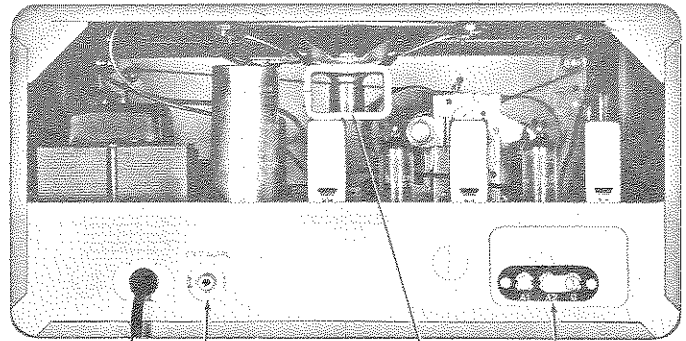
For complete access to the tubes and dial lamps, remove the receiver from the cabinet. See "CHASSIS REMOVAL". The tube and lamp locations are shown in Fig. 5.

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.



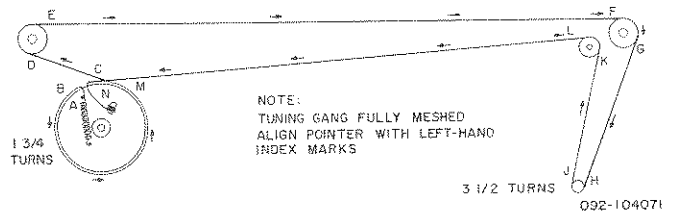
POWER CORD SOI SPEAKER (LS-1) TS-1

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.

the hallicrafters co.

MANUFACTURERS OF RADIO, TELEVISION AND ELECTRONIC EQUIPMENT, CHICAGO 24, U. S. A.

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.

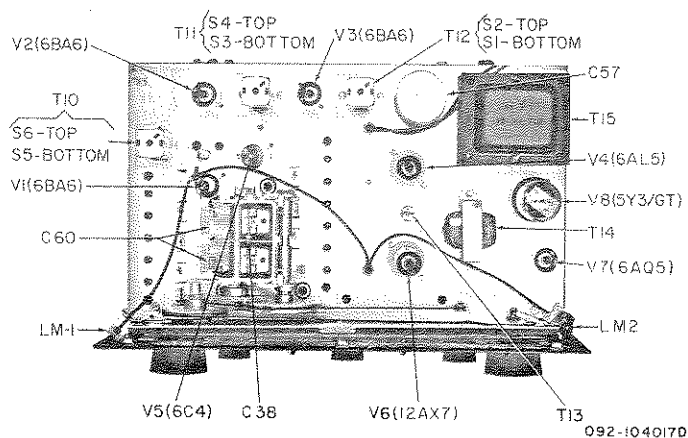


Figure 5. Top View of Chassis.

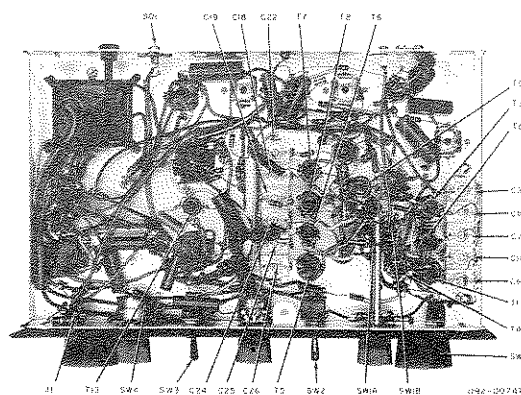
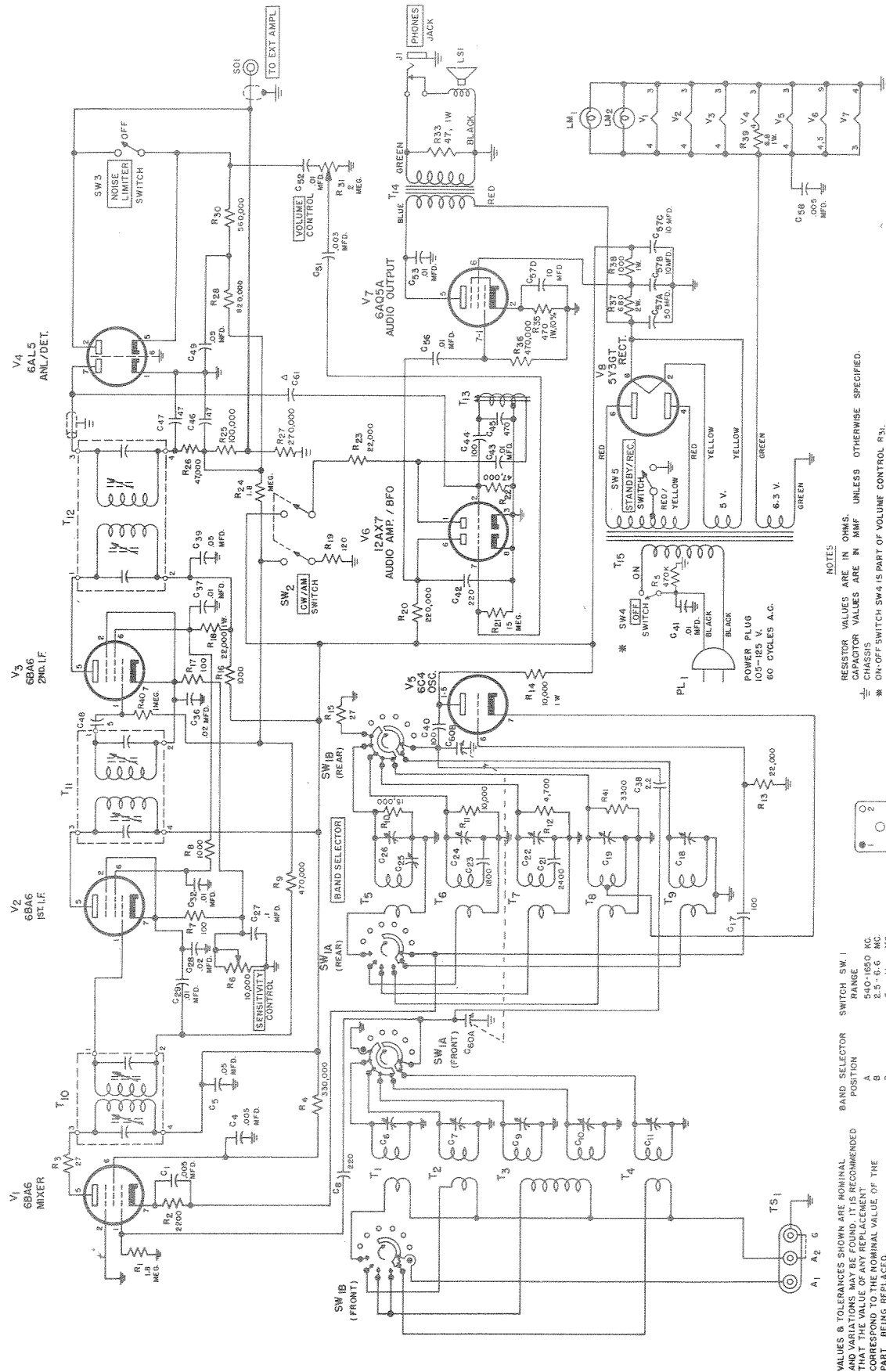
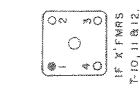


Figure 6. Bottom View of Chassis.



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	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.

NOTES
RESISTOR VALUES ARE IN OHMS.
CAPACITOR VALUES ARE IN MMF UNLESS OTHERWISE SPECIFIED.
— CHASSIS
* ON-OFF SWITCH SW4 IS PART OF VOLUME CONTROL R31.
Δ WIRE GIMMICK

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, 600V; molded paper	499-032503	R18	22K ohm, 1W	451-353223	V4	Socket, Tube (Noval)	066-100459																																																																																										
C6, 7, 9, 10, 11	Trimmer assembly, 5 sections; antenna stage	044-200508	R19	120 ohm	451-253121	V5	Socket, Tube (Min)	006-100858																																																																																										
C8, 42	220 mmf, 500V, 10%; mica	470-213221	R20	220K ohm, 10%	451-252224	V6	Socket, Connector	006-100859																																																																																										
C17, 40, 44	100 mmf, 500V, 10%; ceramic	491-126101	R21	15 megohm, 10%	451-253156	V7	Socket, Tube; octal	006-100296																																																																																										
C18, 19, 22, 34, 25, 26	Trimmer assembly, 6 sections; oscillator stage	044-200508	R22, 26	47K ohm	451-253473	V8	Socket, Tube; 7 pin min.	006-100297																																																																																										
C21	2400 mmf, 600V; 5%; silver mica	470-422242	R25	100K ohm, 10%	451-252104	V6	6BA6; mixer, 1st IF amplifier and 2nd IF amplifier	090-901112																																																																																										
C23	1800 mmf, 500V; 2%; silver mica	470-421132	R27	270K ohm	451-253274	V5	6AL5; detector and ANL	090-900830																																																																																										
C27	.1 mfd, 200V; molded paper	499-012104	R28	300K ohm	451-253824	V6	6C4; oscillator	090-900838																																																																																										
C28, 36	.02 mfd, 600V; molded paper	499-032203	R30	560K ohm	451-253564	V7	12AX7; audio amplifier and BFO	090-900336																																																																																										
C29, 32, 37, 43, 52, 53, 56	.01 mfd, 600V, +20-10%; tubular	499-032103	R31	2 megohm, VOLUME control; includes switch SW4	025-200608	V8	6AQ5; audio output	090-901331																																																																																										
C38	2.2 mmf, 500V; Bakelite	047-100160-04	R33	47 ohm, 1W, 10%	451-352470	LM1, 2	5Y3/GT; rectifier	090-901111																																																																																										
C41	.01 mfd, 1400V; cer. disc	047-001309	R35	470 ohm, 1W, 10%	451-352471		Lamp, pilot; 6-8 volt, 250 ma, Mazda #44	039-100063																																																																																										
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																																																																																													
C48	5 mmf, 500V, 10%; ceramic	491-002050-95	R39	6.8 ohm, 1W, 10%	451-352066																																																																																													
C51	.005 mfd, 600V; molded paper	499-032302	R40	1 megohm	451-253105																																																																																													
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																																																																																																
*RESISTORS																																																																																																		
R1, 24	1.8 megohm	451-253185	<table border="0" style="width: 100%;"> <tr> <td colspan="9" style="text-align: center;">COILS AND TRANSFORMERS</td> </tr> <tr> <td>T1</td> <td>Coil, antenna; band 1</td> <td>051-202599</td> </tr> <tr> <td>T2</td> <td>Coil, antenna; band 2</td> <td>051-201244</td> </tr> <tr> <td>T3</td> <td>Coil, antenna; bands 3 and 4</td> <td>051-201026</td> </tr> <tr> <td>T4</td> <td>Coil, antenna; band 5</td> <td>051-201030</td> </tr> <tr> <td>T5</td> <td>Coil, oscillator; band 1</td> <td>051-202615</td> </tr> <tr> <td>T6</td> <td>Coil, oscillator; band 2</td> <td>051-202610</td> </tr> <tr> <td>T7</td> <td>Coil, oscillator; band 3</td> <td>051-201237</td> </tr> <tr> <td>T8</td> <td>Coil, oscillator; band 4</td> <td>051-201238</td> </tr> <tr> <td>T9</td> <td>Coil, oscillator; band 5</td> <td>051-201239</td> </tr> <tr> <td>T10, 11</td> <td>Transformer, 1st and 2nd IF</td> <td>050-300241</td> </tr> <tr> <td>T12</td> <td>Transformer, 3rd IF</td> <td>050-300242</td> </tr> <tr> <td>T13</td> <td>Coil, BFO</td> <td>054-200043</td> </tr> <tr> <td>T14</td> <td>Transformer, audio output</td> <td>055-200439</td> </tr> <tr> <td>T15</td> <td>Transformer, power</td> <td>052-300164</td> </tr> <tr> <td colspan="9" style="text-align: center;">SWITCHES</td> </tr> <tr> <td>SW1</td> <td>BAND SELECTOR switch assembly</td> <td>060-202022</td> </tr> <tr> <td>SW2</td> <td>Switch, DPST; CW/AM</td> <td>060-100285</td> </tr> <tr> <td>SW3, 5</td> <td>Switch, SPST; NOISE LIMITER and STANDBY/RECEIVE</td> <td>060-100138</td> </tr> <tr> <td>SW4</td> <td>Switch, OFF-ON; part of VOLUME control R31</td> <td>-----</td> </tr> <tr> <td colspan="9" style="text-align: center;">PLUGS AND SOCKETS</td> </tr> <tr> <td>PL1</td> <td>Line cord and plug</td> <td>087-100078</td> </tr> <tr> <td>SO1</td> <td>EXT. AMPL. jack</td> <td>036-100041</td> </tr> <tr> <td>J1</td> <td>PHONES jack</td> <td>036-100243</td> </tr> </table>						COILS AND TRANSFORMERS									T1	Coil, antenna; band 1	051-202599	T2	Coil, antenna; band 2	051-201244	T3	Coil, antenna; bands 3 and 4	051-201026	T4	Coil, antenna; band 5	051-201030	T5	Coil, oscillator; band 1	051-202615	T6	Coil, oscillator; band 2	051-202610	T7	Coil, oscillator; band 3	051-201237	T8	Coil, oscillator; band 4	051-201238	T9	Coil, oscillator; band 5	051-201239	T10, 11	Transformer, 1st and 2nd IF	050-300241	T12	Transformer, 3rd IF	050-300242	T13	Coil, BFO	054-200043	T14	Transformer, audio output	055-200439	T15	Transformer, power	052-300164	SWITCHES									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
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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																																																																																																
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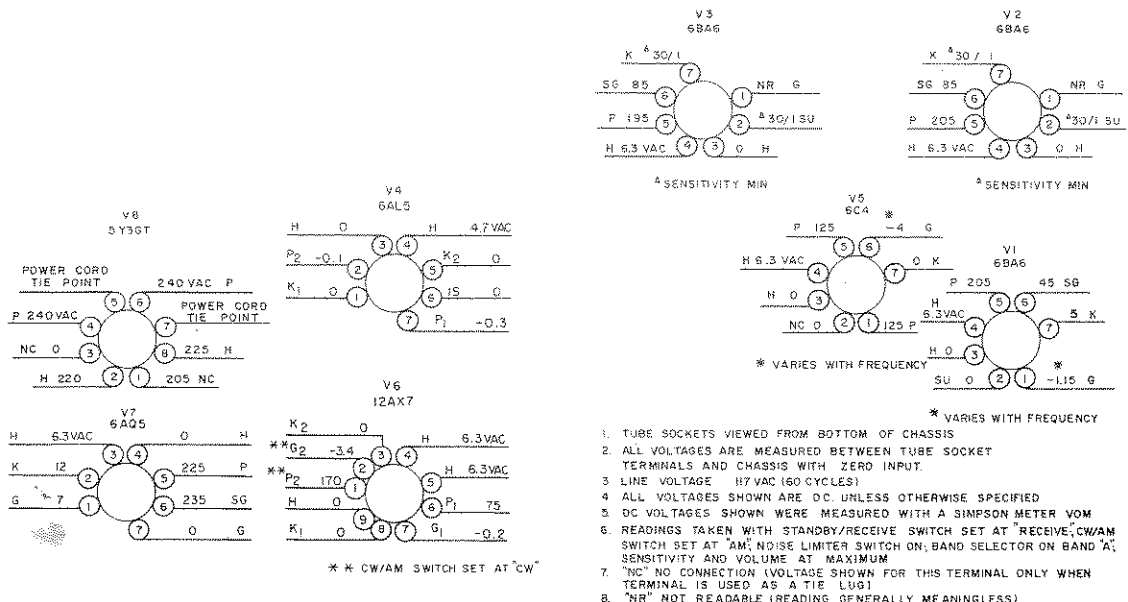


Figure 8. Voltage Chart.