

Engineering Data

Stromberg-Carlson No. 80 Radio Receiver

STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY
Rochester, New York

ELECTRICAL SPECIFICATIONS

Type of Circuit.....	Superheterodyne
Tuning Ranges.....	A—.54 to 1.7 megacycles; B—1.7 to 5.4 megacycles; C—5.4 to 18 megacycles
Number and Types of Tubes.....	3 No. 6K7, 1 No. 6A8, 1 No. 6J7, 1 No. 6H6, 2 No. 6F6, 1 No. 5Z3
Voltage Rating.....	105 to 125 Volts
Frequency Rating.....	50-60 Cycles
Wattage Rating.....	105 Watts
Intermediate Frequency.....	465 Kc.

APPARATUS SPECIFICATIONS

No. 80 Receiver.....	50-60 Cycles.....	P-25908 Chassis; P-25687 Loud Speaker
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CIRCUIT DESCRIPTION

Nine tubes, A. C. operated, Superheterodyne receiver employing metal tubes and having three tuning ranges. These three tuning ranges cover all the important broadcasts and special service bands of both American and Foreign stations. These receivers are also equipped with a high fidelity control providing high fidelity reception by means of a special band widener device and a Carpinhoc high fidelity speaker. See P-25924 Installation and Operating Instructions, for properly installing and operating the No. 80 Receiver.

The various tubes in this receiver are used as follows: One of the No. 6K7 tubes functions as an R. F. Amplifier, another No. 6K7 tube is used in the I. F. Amplifier Stage, and the other No. 6K7 tube operates as an Audio Driver tube. The No. 6A8 tube is used as a Modulator. The No. 6J7 tube is used as the Oscillator tube. The No. 6H6 tube is used as a Demodulator-Automatic Volume Control tube. The audio power output stage uses the two No. 6F6 tubes, and the No. 5Z3 tube is used as the rectifier in the power supply unit.

NORMAL VOLTAGE READINGS

The various values of voltages listed in the following table are obtained by measuring between the various tube socket contacts and the chassis base, with the tubes in their respective sockets. The receiver is, therefore, in operation when the measurements are made. Figure 1, shows the terminal layout of the sockets with the proper terminal numbers.

Voltages are given for a line voltage of 120 volts, and allowance should be made for differences when the line voltage is higher or lower. A meter having a resistance of 1000 ohms per volt should be used for measuring the D. C. voltages. Voltage values shown are those obtained on the lowest possible scale of a meter having the following ranges: 0-2.5, 0-10, 0-100, 0-250, 0-500, 0-1000 volts.

VOLTAGE TABLE NO. 80 RADIO RECEIVER

Tube	Circuit	Cap	Terminals of Sockets								Heater Voltages Between Terminal Nos. at 120 Volts
			1	2	3	4	5	6	7	8	
6K7	R. F. Amp.	0	0	—	+242	+ 96	+3.4	—	—	+ 3.4	2-7, 6.3 Volts
6A8	Mod.	0	0	—	+245	+ 96	— 13	+ 96	—	+ 1.6	2-7, 6.3 Volts
6J7	Osc.	0	0	—	+165	+125	0	—	—	—	2-7, 6.3 Volts
6K7	I. F. Amp.	0	0	—	+244	+ 95	+3.2	—	—	—	2-7, 6.3 Volts
6H6	Dem.—A. V. C.	—	0	—	0	0	0	0	—	—	2-7, 6.3 Volts
6K7	A. F. Amp.	0	0	—	+ 35	+ 25	+1.5	—	—	+ 1.5	2-7, 6.3 Volts
6F6	Output	—	0	—	+260	+270	—	—	0	+16	2-7, 6.3 Volts
5Z3	Rectifier	—	+426	<i>405</i>	<i>405</i>	+426					1-4, 4.8 Volts
Speaker Socket			+260	+403	+425	+425	+265	+260			

Set tuned to 1000 kc., no signal. A. C. voltages are indicated by italics.

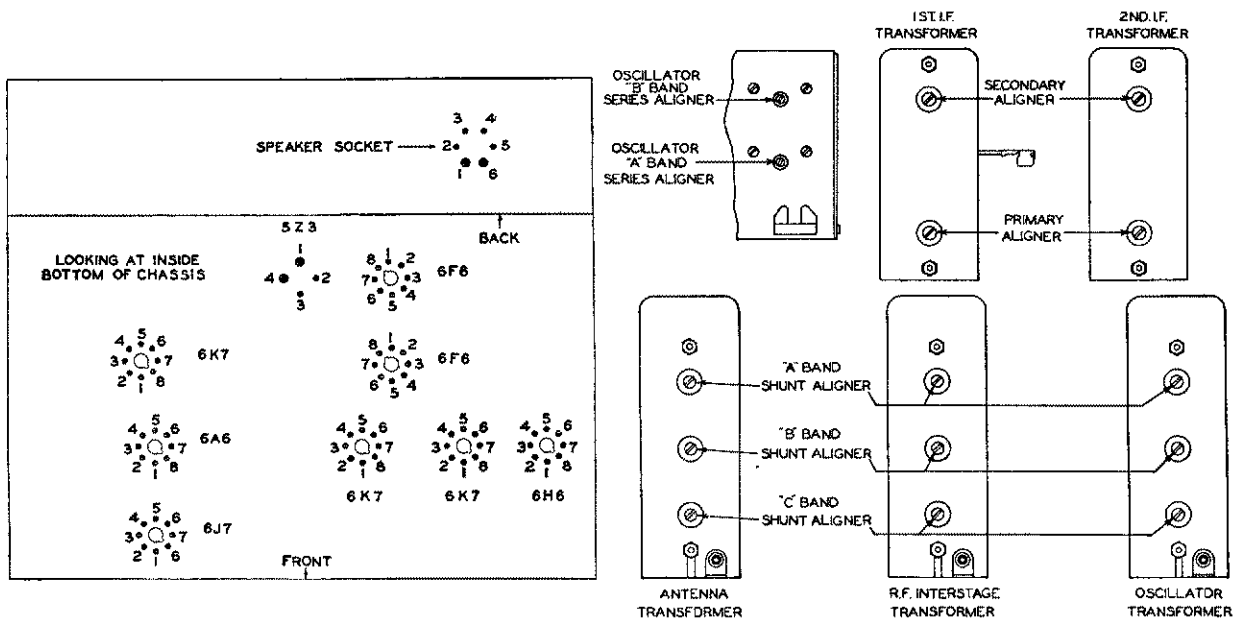


Fig. 1. Terminal Layout for Voltage Measurement Chart and Location of the Various Aligning Capacitors.
CAUTION—Never Attempt to Align Receiver with Fidelity Control Set At Any Position Other Than the Maximum Counter-Clockwise Position.

REPLACEMENT PARTS

Piece Number	Part	Description	Required Per Receiver
P-24465	Binding Post	Antenna and Ground	1
P-25746	Bracket	Fidelity Control	1
P-25454	Capacitor	Aligning	1
P-25819	Capacitor	Aligning	1
P-24287	Capacitor	Aligning	1
P-25375	Capacitor	Aligning	1
P-25046	Capacitor	Aligning	1
P-22752	Capacitor	Aligning	1
P-22757	Capacitor	Electrolytic	1
P-25457	Capacitor	Electrolytic	1
P-25458	Capacitor	Electrolytic	1
P-25459	Capacitor	Electrolytic	1
P-24207	Capacitor	Electrolytic	1
P-25788	Capacitor	Electrolytic	1
P-21535	Capacitor	Two, .01 MF.	1
P-24402	Capacitor	.1 MF.	8
P-24405	Capacitor	.04 MF.	6
P-24094	Capacitor	.05 MF.	8
P-25149	Capacitor	.01 MF.	1
P-25155	Capacitor	.0035 MF.	1
P-25535	Capacitor	.008 MF.	1
P-24561	Capacitor	5 MMF.	1
P-24560	Capacitor	50 MMF.	1
P-24559	Capacitor	100 MMF.	1
P-25376	Capacitor	250 MMF.	1
P-25654	Capacitor	150 MMF.	2
P-25785	Coil	2.3 MH.	1
P-25900	Coil	Antenna	1
P-25910	Coil	R. F.	1
P-25939	Coil	Oscillator	1
P-25915	Coil	.5 MH.	1
P-25445	Coil	Choke	1
P-24268	Cord	A.C.	1
P-25582	Dial and Drive		1
P-24856	Filter Assembly	Audio Cut-Off Filter	1
P-25590	Filter Assembly	Antenna Wave Trap	1
P-24416	Knob	Large	1
P-22391	Knob	Small	1
P-18630	Lamp	Pilot	1
P-25747	Lever	Fidelity Control	1
P-24376	Meter	Visual Tuning	1
P-25570	Potentiometer	Volume Control	1
P-25571	Potentiometer	Tone Control and "On-Off" Switch	1
P-25609	Resistor	18,000 ohms Type C	1
P-22333	Resistor	.1 megohm Type D	4
P-25610	Resistor	.27 megohm Type D	1
P-23570	Resistor	500 ohms Type D	3
P-25611	Resistor	47,000 ohms Type D	6
P-25561	Resistor	1 megohm Type D	1
P-22831	Resistor	15,000 ohms Type C	1
P-25613	Resistor	22,000 ohms Type F	1
P-24318	Resistor	1,000 ohms Type D	1
P-24099	Resistor	250 ohms Type D	1
P-24073	Resistor	25,000 ohms Type B	1
P-25437	Resistor	"B" Voltage Divider	1
P-25687	Speaker Assembly	High Fidelity Loud Speaker	1
P-25539	Socket	Tube—8 Prong	8
P-23040	Socket	Tube—6 Prong	1
P-22988	Socket	Tube—4 Prong	1
P-25748	Shaft Assembly	Fidelity Control	1
P-25745	Shoulder Screw	Fidelity Control	1
P-21808	Shoulder Screw	Fidelity Control	1
P-25472	Switch Assembly	Frequency Range	1
P-25434	Transformer	Power, 50-60 Cycles, 110 Volts	1
P-25447	Transformer	Audio Power	1
P-25688	Transformer	Audio Power Output	1
P-25594	Transformer	Audio 1st I. F.	1
P-25585	Transformer	Audio 2nd I. F.	1

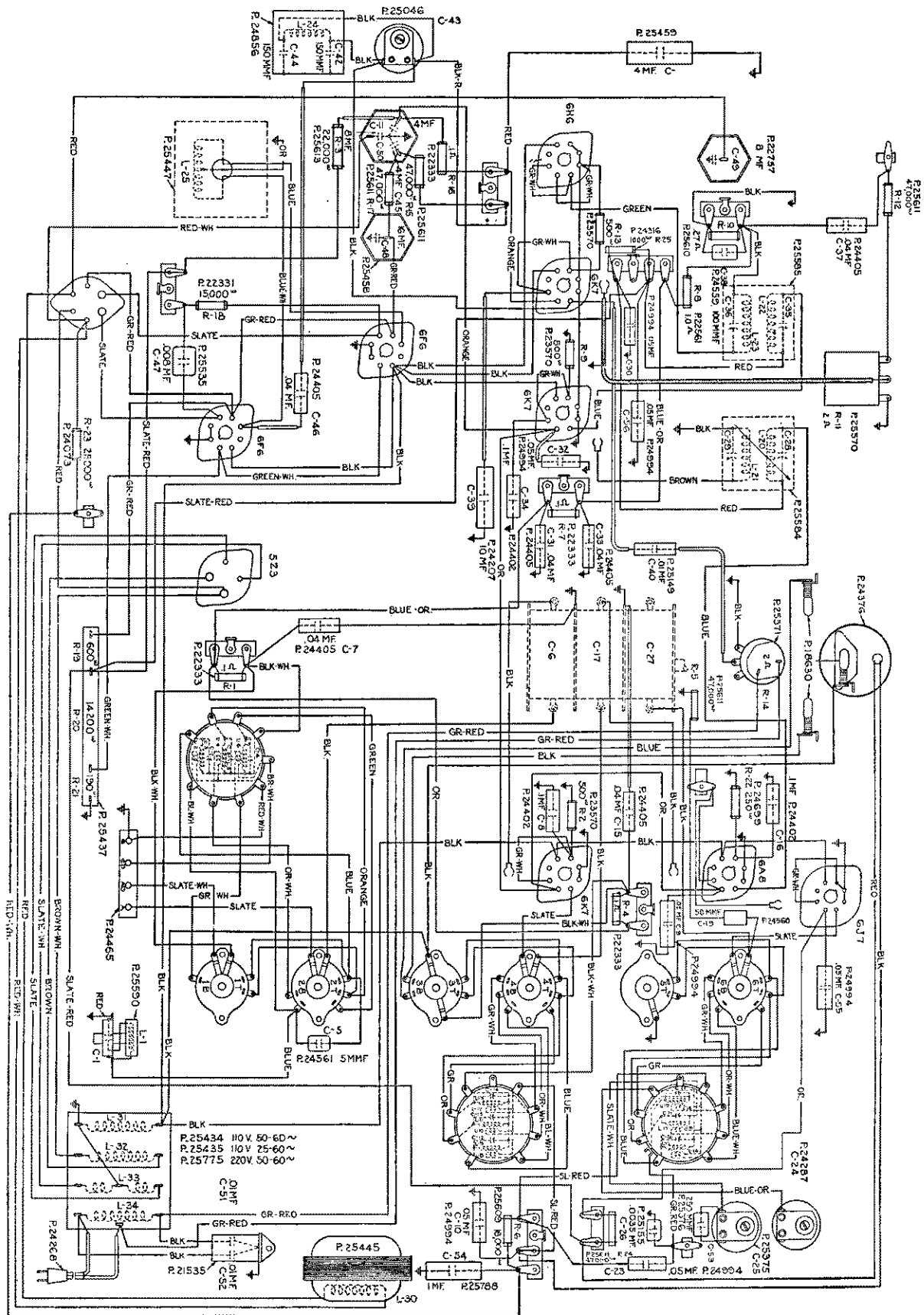


Fig. 4. Wiring Diagram of Chassis.