

Stromberg-Carlson Model 345 Alignment & Schematic

I. F. Alignment

1. Set the Electric Tuning and Range Switch control knob to the manual tuning Standard Broadcast position (arrow on knob pointing in direction of letter "A"). Set the dial pointer by means of the Station Selector knobs to the extreme low frequency position on the receiver's dial. Rotate the "Off-On-Tone" control knob slightly clockwise from its most counter-clockwise position. By aid of a screw-driver rotate the slotted shaft of the Electric Tuning Set-Up Switch located at the rear of the chassis base so that the slot points in the direction of the word "Set-Up". Rotate the Volume control knob to its maximum clockwise position (maximum volume).
 2. Apply between the chassis base (or ground binding post) of the receiver and the grid of the No. 6K8 modulator-oscillator tube, a modulated signal of 465 kilocycles from the test oscillator, using a 0.1 microfarad capacitor in series with the connection between the output terminal of the test oscillator and the grid of the No. 6K8 tube. Do not remove the chassis grid lead connecting to this tube. The ground (or low side) terminal of the test oscillator should be connected to either the chassis base or the ground binding post terminal of the receiver.
 3. Now, noting from Figure 1, the aligning capacitors for the first and second I. F. transformers, align the I. F. circuits in the following manner:
 Primary of second I. F. transformer.
 Secondary of first I. F. transformer.
 Primary of first I. F. transformer.
- Adjusting the circuits to obtain maximum reading on the output meter, reducing the output of the test oscillator as required.

Radio Frequency Adjustments

Alignment of Short Wave Range, "C"

In aligning the radio frequency circuits for this range, replace the 0.1 microfarad capacitor which was placed in series with the test oscillator's output lead for the I. F. alignments, with a 400-ohm carbon type resistor. This lead should then be connected to the antenna binding post located on the rear of the receiver's chassis. The ground terminal (or low side) of the test oscillator should be connected to the ground binding post on the receiver.

1. Rotate the Electric Tuning and Range Switch control knob to the "C" Short Wave range position, and set the test oscillator's frequency and the receiver's tuning dial to 20 megacycles.
2. Adjust the receiver's oscillator "C" range H. F. aligner for maximum output.
3. Adjust the R. F. transformer "C" range H. F. aligner for maximum output and at the same time rotate the gang tuning capacitors back and forth through resonance until maximum output is obtained.
4. Adjust the antenna "C" range H. F. aligner for maximum output and at the same time rotate the gang tuning capacitors back and forth through resonance until maximum output is obtained.

Alignment of Short Wave Range, "B"

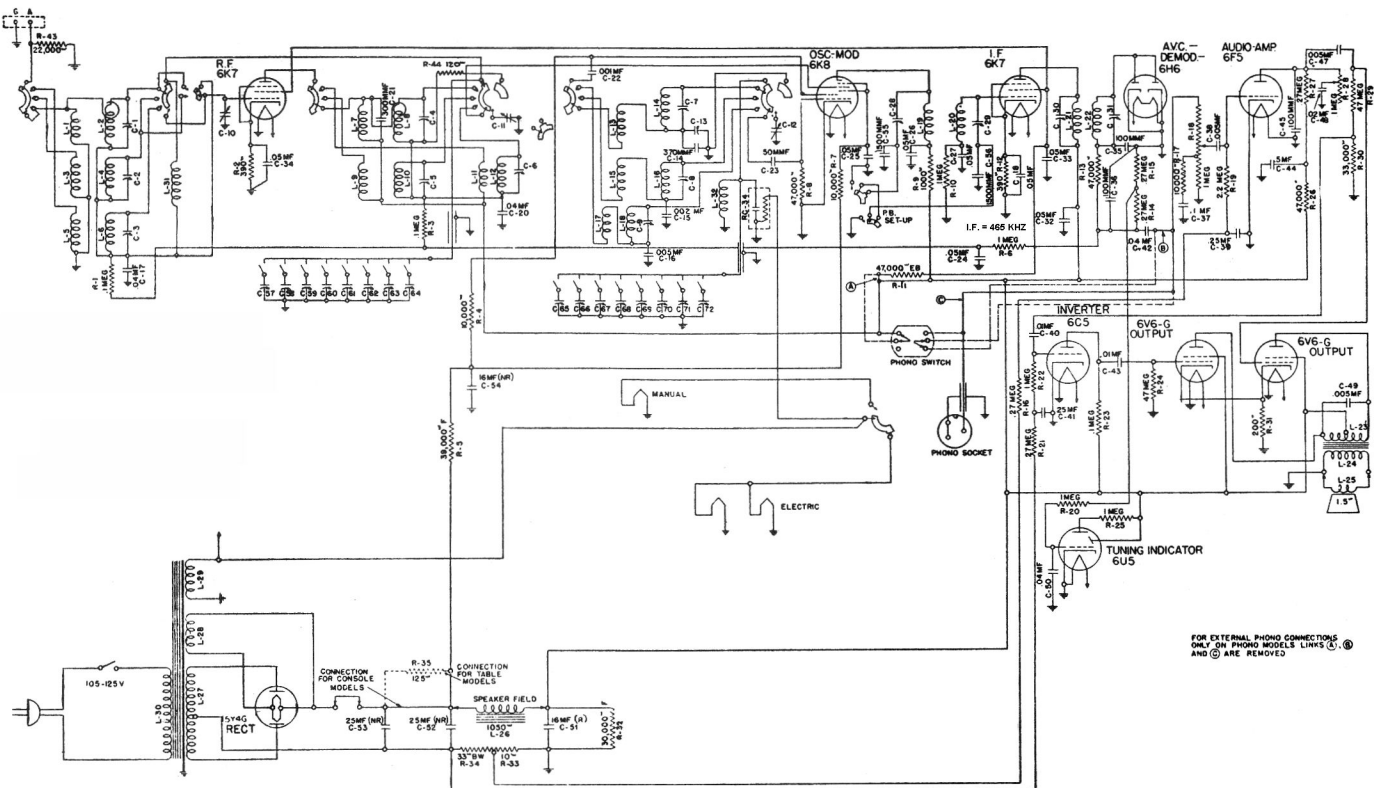
In aligning the radio frequency circuits for this range, use the same artificial antenna (400 ohm resistor) and antenna binding post as was used for aligning the "C" range, and align as follows:

1. Rotate the Electric Tuning and Range Switch control knob to the "B" Short Wave range position, and set the test oscillator's frequency and the receiver's tuning dial to 7 megacycles.
2. Adjust the receiver's oscillator "B" range H. F. aligner for maximum output.
3. Adjust the R. F. transformer's "B" range H. F. aligner for maximum output and at the same time rotate the gang tuning capacitors back and forth through resonance until maximum output is obtained.
4. Adjust the antenna "B" range H. F. aligner for maximum output and at the same time rotate the gang tuning capacitors back and forth through resonance until maximum output is obtained.

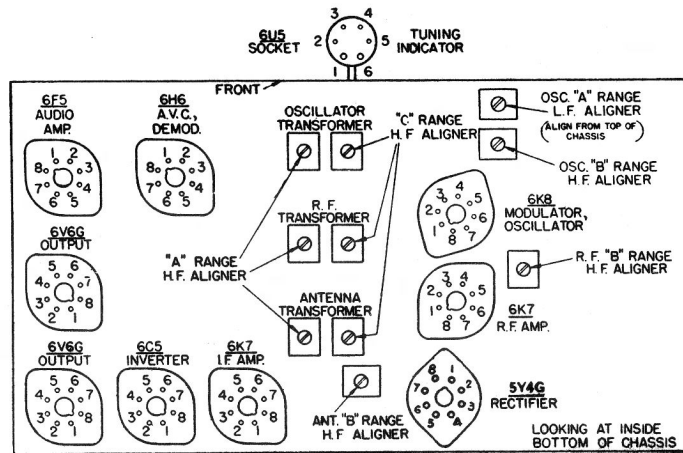
Alignment of Standard Broadcast Range, "A"

In aligning the radio frequency circuits for this range, replace the 400-ohm carbon type resistor in series with the test oscillator's output lead with a 200-micro-microfarad capacitor and align these circuits as follows:

1. Rotate the Electric Tuning and Range Switch control knob to the manual tuning Standard Broadcast range position and set the test oscillator's frequency and the receiver's tuning dial to 1.5 megacycles.
2. Adjust the receiver's oscillator "A" range H. F. aligner for maximum output.
3. Adjust the R. F. transformer's "A" range H. F. aligner for maximum output.
4. Adjust the antenna "A" range H. F. aligner for maximum output.
5. Set the test oscillator's frequency and the receiver's tuning dial to 0.6 megacycles.
6. Adjust the receiver's oscillator "A" range I. F. aligner (series aligner) for maximum output, and at the same time rotate the gang tuning capacitors slightly back and forth through resonance until maximum output is obtained.
7. Reset both the test oscillator's frequency and receiver's tuning dial to 1.5 megacycles and repeat operations Nos. 2, 3 and 4.



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Chassis Layout

Stromberg-Carlson Voltages

Tube	Circuit	Cap	Terminals of Sockets								Heater Voltages Between Heater Terminals	
			1	2	3	4	5	6	7	8	Socket Terminal Numbers	Volts A.C.
6K7	R. F. Amp.	0	0	0	+240	+81	+2.5	+240	6.3	+2.5	2-7	6.3
6K8	Mod., Osc.	0	0	0	+215	+73	-6.0	+81	6.3	0	2-7	6.3
6K7	I. F. Amp.	0	0	0	+240	+81	+2.5	0	6.3	+2.5	2-7	6.3
6H6	Dem., A. V. C.	—	0	0	0	0	0	0	6.3	0	2-7	6.3
6F5	Audio Amp.	0	0	0	0	+83*	-1.0	+190	6.3	0	2-7	6.3
6C5	Audio Inv.	—	0	0	+105	+240	+1	-5.0	6.3	0	2-7	6.3
6V6G	Audio Output	—	0	0	+235	+240	0	0	6.3	+14	2-7	6.3
6V6G	Audio Output	—	0	0	+235	+240	0	0	6.3	+14	2-7	6.3
6U5	Tuning Ind.	—	6.3	+20*	+1	+240	0	0	—	—	1-6	6.3
5Y4G	Rectifier	—	—	—	375	—	375	—	+360	+360	1-4	5.0
Speaker Socket		—	+370	0	0	+370	+370	0	+240	—	—	—

Receiver tuned manually to 1000 Kc., no signal. A. C. voltages are indicated by italics.