

SPECIFICATIONS

Voltage Rating 105-125 Volts A.C.
 Type of Circuit Superheterodyne
 Tuning Range {A.M. 535 kc. to 1650 kc.
 F.M. 87 mc. to 109 mc.

IDENTIFICATION TABLE

Model	Chassis	Cabinet	Speaker	Phono Equip.
10142W	02823	02821	48998	148972—25 cye.
10142M	02823	02822	48998	148973—60 cye.

Stromberg-Carlson Model 10142 A.C. Receiver

Input Power Rating 170 watts at 117 line volts
 Intermediate Frequency 455 kc. A.M.—10.7 mc. F.M.
 Speaker Voice Coil Impedance 12" P.M., 6-8 ohm, 400
 cycles, 18 watts maximum
 Power Output 13.5 watts, 10% distortion

Stromberg-Carlson Model 10142 Alignment

ALIGNMENT PROCEDURE 10142

A.M.-I.F. ALIGNMENT

Band and Pointer Setting	Generator Setting	Input and Dummy	Meter Connections	Trimmer Adjustment and Notes
Band switch in broadcast position. Pointer setting lower end of dial.	455 kc.	Signal generator through .1 mfd. capacitor to pin No. 1 of 6BA6 I.F. amplifier socket.	Output meter across voice coil.	1. Adjust the iron cores (top and bottom) of the 2nd A.M.-I.F. transformer for maximum output with minimum input signal. Input should be approximately 2000 microvolts.
Band switch in broadcast position. Pointer setting lower end of dial.	455 kc.	Signal generator through .1 mfd. capacitor to pin No. 7 of 6BE6 A.M. converter socket.	Output meter across voice coil.	2. Adjust the iron cores (top and bottom) of the 1st A.M.-I.F. transformer for maximum output with minimum input signal. 3. Return to the second I.F. transformer and adjust the bottom core to attain maximum overall sensitivity and correct tracking. After this adjustment is made do not touch any of the other A.M.-I.F. cores. Sensitivity should be 20 to 30 microvolts.

F.M.-I.F. ALIGNMENT

Band switch in F.M. position.	10.7 mc.	Signal generator through .1 mfd. capacitor to pin No. 1 of 6BA6 2nd I.F. amplifier socket.	Connect the "ground" terminal of a high resistance DC voltmeter (Sylvania Polymeter or equivalent) to the chassis base. The hot terminal is connected to the AVC lead (junction of R-22 and range switch). Set the meter to read negative voltage.	1. Adjust the iron core of L-10 and the bottom core of the ratio detector transformer for maximum output with minimum input. The maximum reading on the DC voltmeter should be held under 3 volts by reducing the input from the signal generator.
		Signal generator through .1 mfd. capacitor to pin No. 1 6BA6 1st I.F. socket.	Connect the "ground" terminal of a high resistance DC voltmeter (Sylvania Polymeter or equivalent) to the chassis base. The hot terminal is connected to the AVC lead (junction of R-22 and range switch). Set the meter to read negative voltage.	2. Adjust the cores (top and bottom) of the 2nd F.M.-I.F. transformer T3 for maximum output with minimum input. For a 1.1 volt reading on the voltmeter the input should be approx. 180 microvolts.
		Signal generator through .1 mfd. capacitor to pin No. 2 of 12AT7 F.M. converter socket.	Connect the "ground" terminal of a high resistance DC voltmeter (Sylvania Polymeter or equivalent) to the chassis base. The hot terminal is connected to the AVC lead (junction of R-22 and range switch). Set the meter to read negative voltage.	3. Adjust the cores (top and bottom) of the 1st F.M.-I.F. transformer T1 for maximum output with minimum input. For a 1.1 volt reading on the voltmeter the input should be approx. 300 microvolts. (The comparatively low input reading here is due to the low impedance in the converter grid circuit).
		Shift the input back to No. 1 pin of the 6BA6 3rd I.F. socket and feed in a 10.7 mc. signal of .1 volt.	Remove the "low" voltmeter lead from the chassis base and place it on No. 7 terminal of the ratio detector transformer (junction of C35 and C56).	4. Adjust the iron core on the top of the ratio detector transformer for zero centre reading on the voltmeter. This is important and the zero reading should be carefully checked. IMPORTANT NOTE: When aligning the F.M.-I.F., care must be used in locating grounds and placing test leads or uncontrollable oscillation will result due to coupling between the test leads.

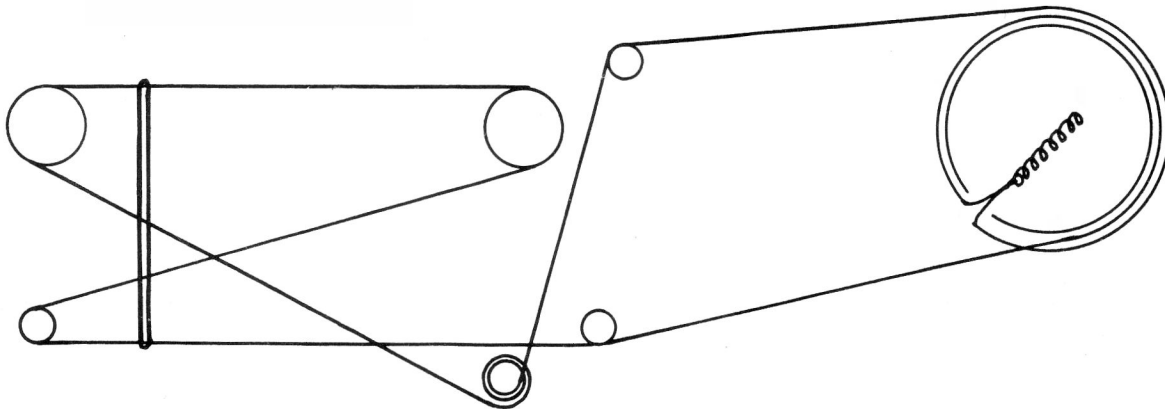
Stromberg-Carlson Model 10142 Alignment & Dial Cord Stringing

F.M.-I.F. ALIGNMENT—(Continued)

Band and Pointer Setting	Generator Setting	Input and Dummy	Meter Connections	Trimmer Adjustment and Notes
A.M.-R.F. ALIGNMENT				
<p>Note: Input for this alignment should be applied through a standard Hazeltine Loop. With the gang condenser plates fully meshed, the pointer should be adjusted to coincide with the reference mark appearing at the lower left-hand end of the dial plate. The pointer must be exactly vertical when set in this position.</p>				
Band switch B.C. position. Set pointer to 1400 kc. (Calibration mark appears at lower right edge of dial plate).	1400 kc. at high level to antenna connection.		Output meter across voice coil.	<ol style="list-style-type: none"> 1. Adjust the oscillator trimmer C22 for correct calibration and maximum output with minimum input. 2. Check calibration at the low frequency end of the scale against the 600 kc. mark. Go back to the 1400 kc. point and readjust so that the percentage error is equal at 1400 kc. and 600 kc. 3. With the signal generator set at 1400 kc. and the receiver turned to 1400 kc. adjust R.F. trimmer C21 and antenna trimmer C27 for maximum output with minimum input. Rock the gang during these adjustments to attain correct tracking. Sensitivity should be approx. 20 to 30 microvolts per meter.
<p>Note: If wave trap is used, adjust as follows: Still using the Hazeltine Loop input, feed a strong 455 kc. signal into the receiver, enough to produce standard output (500 mw.). Adjust the trimmer capacitor (or the iron core of the 455 kc. wave trap, depending on which type is used) for minimum reading on the output meter. It will probably be necessary to increase the input signal until the proper null point is reached and maximum rejection of the 455 kc. signal is obtained.</p>				

F.M.-R.F. ALIGNMENT

Band switch F.M. position. Pointer to 100 mc. (centre mark of the three along upper edge of dial plate).	Connect generator to antenna strip marked "D-D". The "hot" lead is connected through 250 ohm carbon resistor.	Output meter across voice coil.	<ol style="list-style-type: none"> 1. Adjust the oscillator trimmer C17 for maximum output with minimum input. 2. Check calibration at the low frequency (88 mc.) and high frequency (108 mc.) ends of the scale. (Two outside marks along the upper edge of the dial plate). If calibration is slightly off at the extremes, readjust C17 so that the percentage error is equally divided at 88 and 108 mc. 3. With the signal generator and the receiver pointer set at 100 mc., adjust C8 and C2, the R.F. and antenna trimmers, for maximum output with minimum input. Rock the gang during these adjustments to attain correct tracking. Sensitivity for 1/2 watt output should be 5 to 10 microvolts. 4. Since there is some "pulling" effect between the R.F. oscillator adjustments, it may be necessary to repeat steps 1 and 2 until no improvement is noted.
<p>Note: DIAL CALIBRATION—The pointer shall fall on the mark at the alignment points of each band. At any of the other calibrated points, the edge of the pointer should at least touch either edge of the calibration mark on both B.C. and F.M. bands.</p>			



Stromberg-Carlson Model 10142 A. C. Receiver Voltage Chart & Tube Location

VOLTAGE CHART FOR MODEL 10142

TUBE	FUNCTION	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8
6BA6	A.M.-R.F.	0	0	0	(6.3)	195	90	.55	—
6BE6	A.M. Converter	-.9	0	0	(6.3)	235	90	-.05	—
°6BA6	F.M.-R.F.	-.25	0	0	(6.3)	210	80	.9	—
°12AT7	F.M. Converter	135	0	2.5	(6.3)	210	-.2	0	0
6BA6	1st I.F.-A.M.-F.M.	-.05	0	0	(6.3)	220	130	.9	—
6BA6	2nd I.F.-F.M.	0	0	0	(6.3)	225	80	.75	—
6BA6	3rd I.F.-F.M.	0	0	0	(6.3)	223	80	.8	—
6AL5	Ratio Detector				Socket not accessible				
6AV6	1st Audio AVC, A.M. Demodulator	-.15	0	0	(6.3)	-.25	-.2	70	—
6AV6	Phase Inverter	-.25	0	0	(6.3)	0	0	70	—
6V6GT	Output	0	(6.3)	330	270	0	0	0	15
6V6GT	Output	0	(6.3)	330	270	0	0	0	15
5U4G	Rectifier	0	330	0	(300)	0	(300)	0	330
6U5G	Tuning Indicator	(6.3)	10	-.2	235	0	0	—	—

Readings taken from chassis base to various socket terminals.

Range switch in BC position except where otherwise indicated.

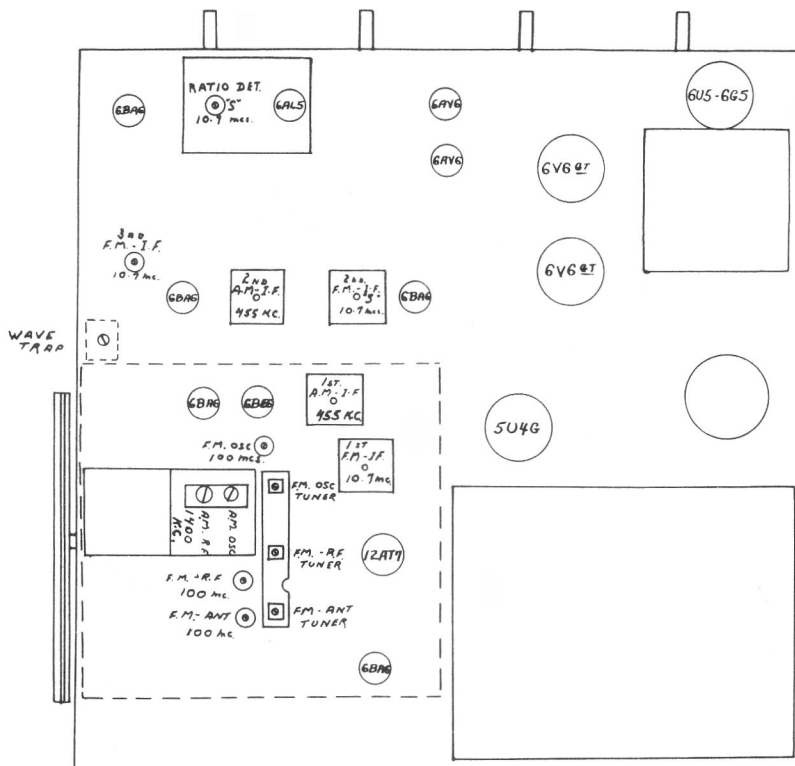
Readings in parenthesis are AC volts.

° Range Switch of receiver in F.M. position.

Voltages read on a Weston Model 779 using 1000 ohm per volt DC meter.

Line 117V 25 cycle.

Alignment and Tube Location Chart



- 1—6BA6 F.M. R.F. Amplifier
- 1—12AT7 F.M. Converter
- 1—6AB6 A.M. R.F. Amplifier
- 1—6BE6 A.M. Converter
- 1—6BA6 1st I.F. Amplifier (455 kc. and 10.7 mc.)
- 1—6BA6 2nd I.F. Amplifier (10.7 mc.)
- 1—6BA6 3rd I.F. Amplifier (10.7 mc.)
- 1—6AL5 Ratio Detector (F.M.)
- 1—6AV6 A.M. Demodulator, AVC, 1st Audio
- 1—6AV6 Phase Inverter
- 2—6V6GT Power Output
- 1—5U4G Rectifier
- 1—6U5G Tuning Indicator

