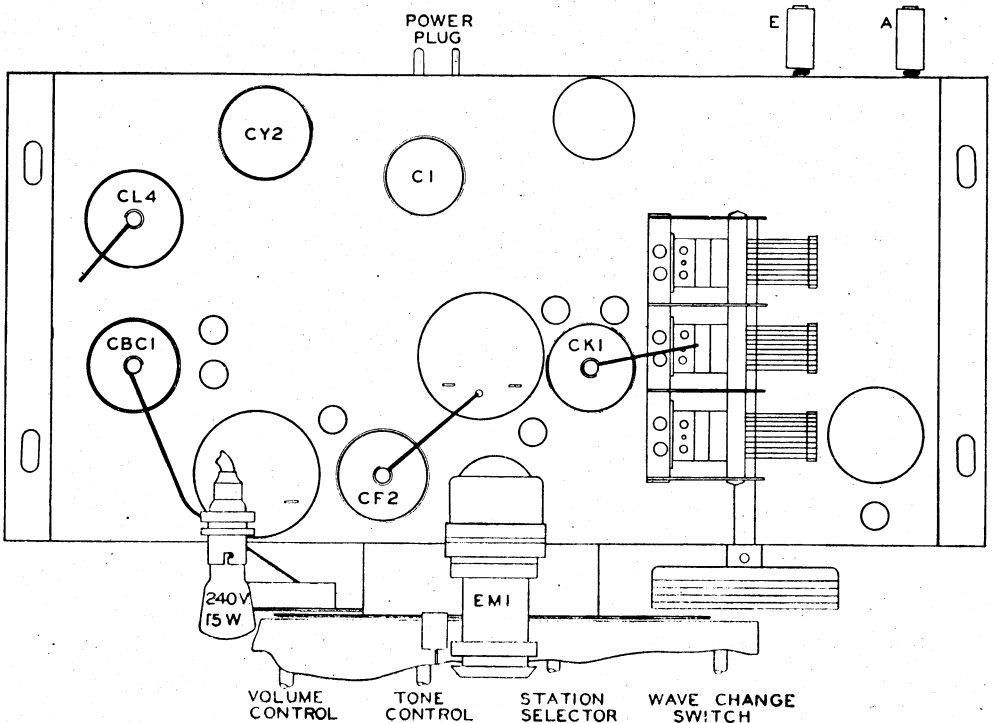


Stromberg-Carlson

STROMBERG-CARLSON
SERVICE BULLETIN, No. 688

Stromberg-Carlson Model 688 Superheterodyne

AC-DC DUAL WAVE RECEIVER



Chassis of Model 688

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IF Alignment: Turn the volume control full on and the wave change switch to position 3. Set the test oscillator to 458 KC and connect to grid of the CKI valve. Adjust the four IF trimmers for maximum gain.

Broadcast Band: First align the receiver for local Broadcast reception. Turn the WC switch to position 3 and connect the oscillator to the aerial terminal.

1. Adjust test oscillator to 1500 KC, turn receiver dial to 1500 KC and adjust trimmer A (see drawing) for maximum output.
2. Set test oscillator to 1400 KC, tune it on the receiver and adjust trimmers D and F for maximum gain.
3. Set test oscillator to 600 KC, tune it in on the receiver and adjust the padder G whilst rocking the gang to and fro about 600 KC.
Repeat the three operations.

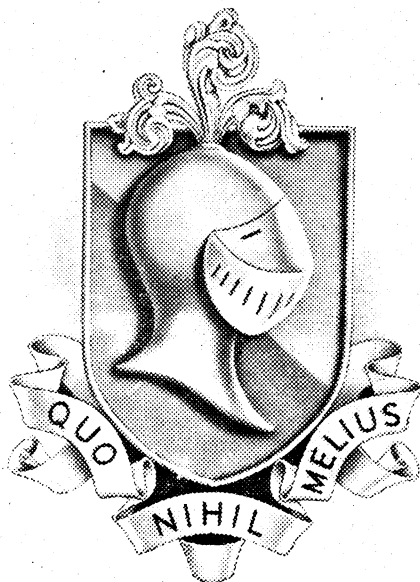
Next align the receiver for distant broadcast reception. Turn the WC switch to position 2.

1. Put test oscillator on 1400 KC, tune it in on the receiver and without adjusting trimmers A, D, and F, adjust E for maximum gain. This completes the broadcast aligning.

Short Wave Band:

Note: On the Short Wave Band the oscillator operates at a lower frequency than the incoming station, hence the "image" will always be found on the high frequency side of the station.

1. Turn the WC Switch to position 1. Set the test oscillator on 13 metres and turn the gang condenser right out (minimum capacity). Line up the SW oscillator trimmer B.
2. Set test oscillator to 14 metres, tune this in on the receiver and adjust trimmer C. It may be necessary to move the gang slightly whilst adjusting C. The padder is non-adjustable so this completes the SW aligning.



CIRCUIT CODE MODEL 688

No.	Part No.	DESCRIPTION.	No.	Part No.	DESCRIPTION.
CAPACITORS.			RESISTORS.		
1.	4251	.01 mF 2000V.	50.	2570	.5 Mw. 1/3W.
2.	4251	.01 mF 2000V.	51.	2612	50 w. 1/3W.
3.	2676	.004 mF.	52.	2700	300 w. 1/3W.
4.	2543	Air Trimmer 15P.	53.	2549	.05 Mw. 1/3W.
5.	2515	5 mmf.	54.	2612	50 w. 1/3W.
6.	1870	3 Gang Type F. C-C.	55.	6210	1000 w. 1/3W.
7.	2543	Air Trimmer 15P.	56.	5707	1 Mw. Volume Control
8.	2543	Air Trimmer 15P.	57.	2550	.1 Mw. 1/3W.
9.	2543	Air Trimmer 15P.	58.	2571	1 Mw. 1/3W.
10.	1870	3 Gang Type F. C-C.	59.	2571	1 Mw. 1/3W.
11.	2578	.1 mF. 400V.	60.	2571	1 Mw. 1/3W.
12.	2578	.1 mF. 400V.	61.	4485	.1 Mw. 1W.
13.	2582	100 mmf.	62.	4481	.01 Mw. 1W.
14.	1870	3 Gang Type F. C-C.	63.	2550	.1 Mw. 1/3W.
15.	2543	Air Trimmer 15P.	64.	2268	.5 Mw. Tone Control
16.	2543	Air Trimmer 15P.	65.	4481	.01 Mw. 1W.
17.	2608	425 mmf. $\pm 2\frac{1}{2}\%$.	66.	2571	1 Mw. 1/3W.
18.	2543	Air Trimmer 15P.	67.	2549	.05 Mw. 1/3W.
19.	2578	.1 mF. 400V.	68.	2571	1 Mw. 1/3W.
20.	6373	4 mF. 350V.	69.		150 w.
21.	2578	.1 mF. 400V.	70.		150 w.
22.	2659	250 mmf. $\pm 2\frac{1}{2}\%$.	71.	2192	150 w.
23.	2659	250 mmf. $\pm 2\frac{1}{2}\%$.	72.		15000 w.
24.	2578	.1 mF. 400V.	73.		10000 w.
25.	2659	250 mmf. $\pm 2\frac{1}{2}\%$.	74.	2570	.5 Mw. 1/3W.
26.	2659	250 mmf. $\pm 2\frac{1}{2}\%$.			
27.	2696	.02 mF. 400V.			
28.	2582	100 mmf.	91.	2200	BC. Aerial Coil.
29.	2582	100 mmf.	92.	2200	S.W. Aerial Coil.
30.	2576	10 mF. 25V.	93.	1853	B.C. Preselector Coil.
31.	2597	.001 mF.	94.	2201	B.C. Oscillator Coil.
32.	2580	.01 mF. 400V.	95.	2201	S.W. Oscillator Coil.
33.	3077	.005 mF. 600V.	96.	2954	1st I.F. Transformer.
34.	2578	.1 mF. 400V.	97.	2673	2nd I.F. Transformer.
35.	2576	10 mF. 25V.	98.		H.T. Choke.
36.	6373	4 mF. 350V.	99.		Line Filter.
37.	2578	.1 mF. 400V.	100.		Speaker, P.M. 4000 w.
38.	2574	16 mF. 500V.			
39.	2574	16 mF. 500V.			
40.	2696	.02 mF. 400V.			

VOLTAGES: This receiver will operate on alternating or direct current power supplies between 180 and 250 volts. No adjustment to the chassis is necessary. When used on D.C. the plug must be connected in the correct polarity. If reversed, the receiver will not operate.

WHEN MAKING ADJUSTMENTS SEE THAT THE POWER PLUG IS COMPLETELY REMOVED FROM THE SOCKET OF THE POWER SUPPLY.

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VOLTAGES: These were measured with a line voltage of 240 A.C. and a voltmeter having a resistance of 1000 ohms per volt. All readings were measured between the points indicated, and chassis. On D.C. they will be lower.

The location of all valves is shown on the front page.

	VALVE	PLATE	SCREEN	CATHODE
*CK1	Mixer	230	75	3
	Oscillator Section	75	—	—
CF2	I.F.	230	75	2.5
CBC1	Dem. A.V.C. 1st Audio	80	—	2.5
CL4	Output	200	180	8

*Some receivers use an EK2-G in place of the CK1, in which case the following voltage changes are made.

EK2G	Mixer	230	50	3
	Oscillator Section	200	—	—
CF2	I.F.	230	90	2.5

OPERATION: Looking at the front of the chassis and reading from left to right, the four controls are as follows:—Volume — Tone — Station Selector — Wave Change Switch.

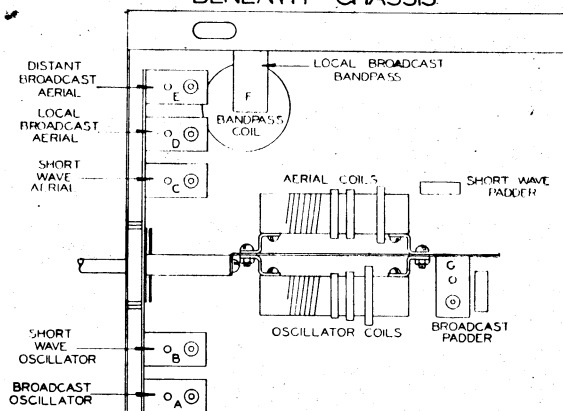
Wave Change Switch: This has three positions. The extreme left (anti-clockwise) position is for local broadcast reception 1500 to 550 KC'S, the centre position for distant broadcast reception and the right hand position a short wave band 13 to 38 metres.

Tone Control: Turn the knob clockwise to increase the high frequency response of the Receiver.

RECEIVER ALIGNMENT INSTRUCTIONS

Refer to the drawings of chassis and coil unit for the location of all trimming screws. There are two on each IF transformer and seven on the coil assembly. No attempt should be made to adjust these unless a competent service man equipped with a calibrated test oscillator is available.

LOCATION OF COILS & TRIMMERS BENEATH CHASSIS



The wave change switch has three positions, which will be referred to as position 1, 2, and 3. Position 1 is in an extreme clockwise direction, 2 in the centre, and 3 in an anti-clockwise direction.

