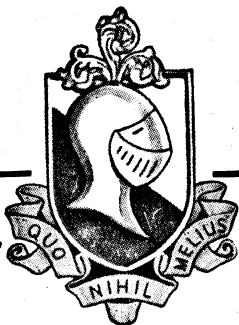


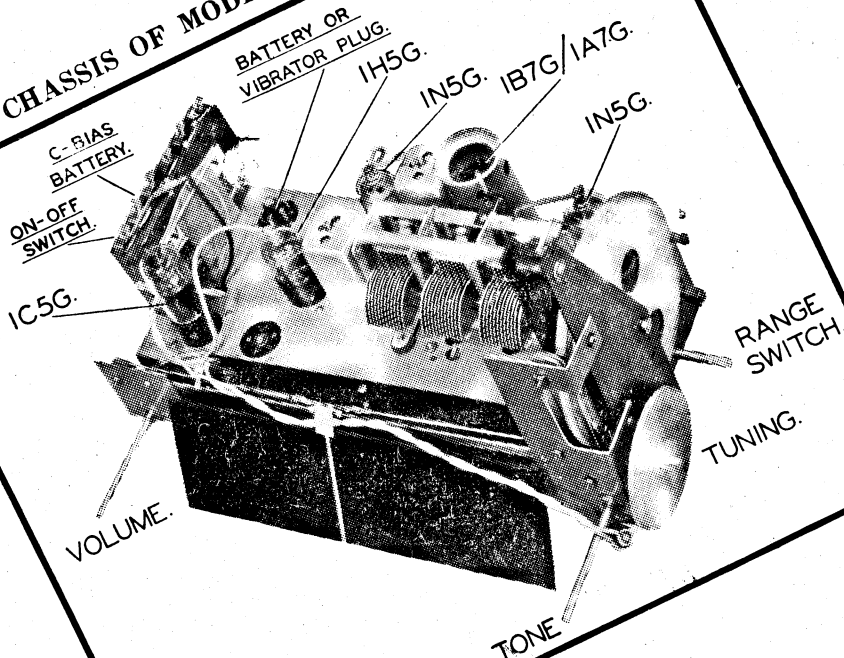
Stromberg- Carlson



SERVICE MANUAL

Stromberg-Carlson Model M60 5 Valve Superheterodyne BATTERY DUAL-WAVE RECEIVER

CHASSIS OF MODEL M.60.



This Service Manual is issued free of charge to all Authorised Stromberg-Carlson Dealers. Applications for additional copies should be made direct to the nearest Distributor.

Stromberg-Carlson (Australasia) Pty. Ltd. reserves the right to make changes in design details at any time without incurring any obligations to install same on radio receivers previously sold.

S T R O M B E R G - C A R L S O N

BROADCAST BAND: First make sure that when the gang condenser plates are fully meshed the dial pointer is on the line at the 550 kc. end of the dial scale.

Connect the test oscillator to the aerial terminal on the receiver by a standard dummy aerial, or else a .0002 mfd. condenser.

(a) Turn the receiver and test oscillator both to 600 kc. While rocking the gang back and forth through resonance adjust the iron core (1) in the oscillator coil by means of the brass screw under the chassis.

(b) Turn the test oscillator to 1400 kc., and set the receiver dial pointer to 1400 kc. Adjust the oscillator trimmer (2) to resonance. Then adjust the aerial trimmer (3) and R.F. trimmer (4) for maximum signal.

Repeat operations (a) and (b).

SHORTWAVE BAND: Turn the wave band switch to the S.W. position. Replace the .0002 mfd. condenser joining the test oscillator to the aerial terminal by a 400 or 500 ohm carbon resistor.

Set the test oscillator to 14 metres. tune it in on the receiver and adjust the S.W. R.F. (5) and S.W. aerial trimmer (6) for maximum gain while rotating the gang through resonance. The test oscillator will be picked up in two adjacent spots near 14 metres. The correct one is nearer 15 metres, the other being the "image."

No S.W. oscillator trimmer or variable padder is employed, so this completes the alignment.

CIRCUIT CODE M.60

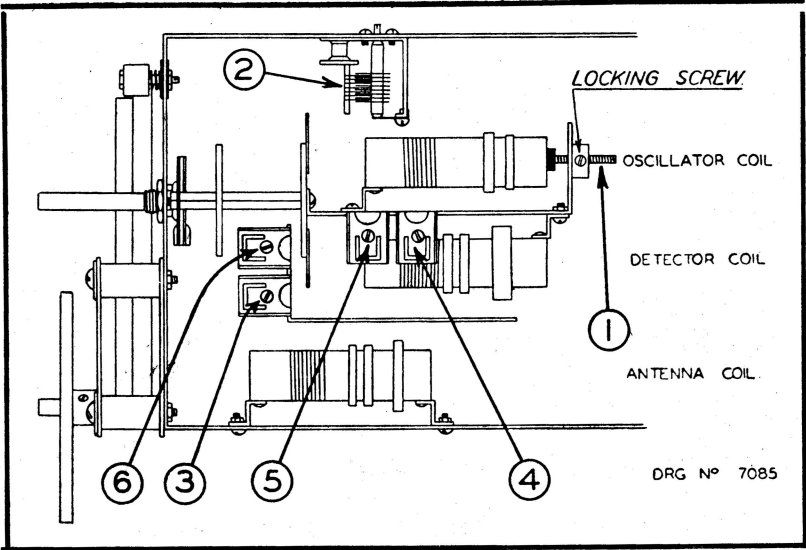
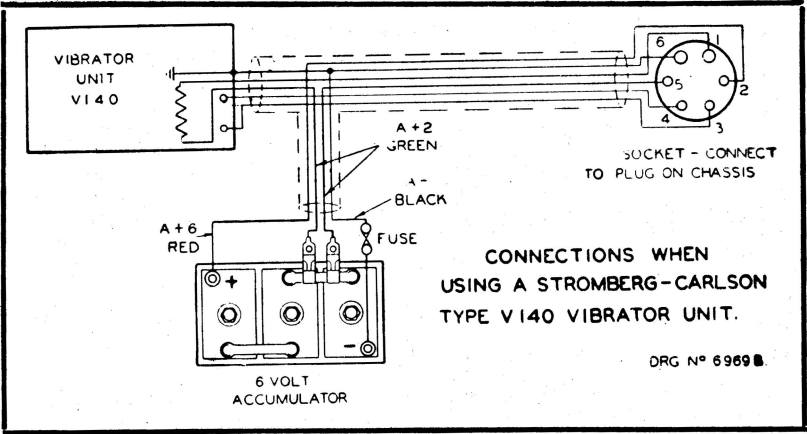
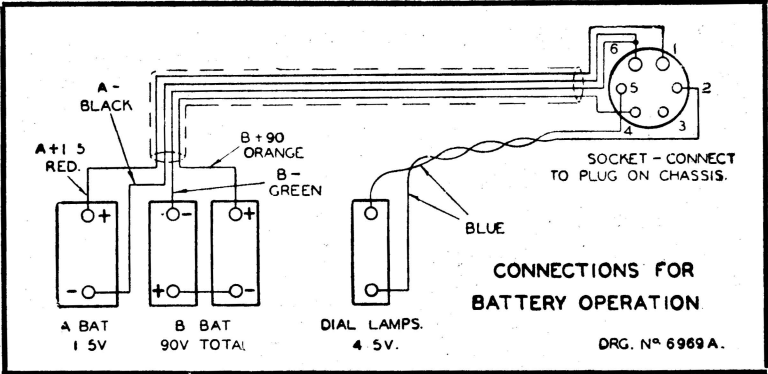
No.	Part No.	DESCRIPTION.	No.	Part No.	DESCRIPTION.
CAPACITORS.			RESISTORS.		
1.	2515	5 mmF.	30.	2550	0.1 Mw. 1/3W.
2.	2543	Air Trimmer.	31.	2550	0.1 Mw. 1/3W.
3.	2667	0.05 mF. 200v.	32.	2550	0.1 Mw. 1/3W.
4.	6786	Gang Condenser HS3— C.	33.	2612	50w. 1/3W.
5.	2543	Air Trimmer.	34.	2614	0.15 Mw. 1/3W.
6.	2676	0.004 mF.	35.	2549	0.05 Mw. 1/3W.
7.	2306	0.1 mF. 200v.	36.	6136	5 Mw. 1/3W.
8.	4176	8mF. 350P.V.	37.	6499	2 Mw. 1/3W.
9.	2676	0.004 mF.	38.	6499	2 Mw. 1/3W.
10.	2667	0.05mF. 200v.	39.	2571	1 Mw. 1/3W.
11.	2543	Air Trimmer.	40.	6499	2 Mw. 1/3W.
12.	6786	Gang Condenser HS3— C.	41.	5710	0.3w. Wire wound.
13.	2543	Air Trimmer.	42.	6900	1 Meg. Volume Control.
14.	2306	0.1 mF. 200v.	MISCELLANEOUS.		
15.	2583	250 mmF.			
16.	6567	0.001 mF. 200v.			
17.	2582	100 mmF.			
18.	2676	0.004 mF.	50.	6843	BC Antenna Coil.
19.	2581	0.002 mF. 200v.	51.	6843	SW Antenna Coil.
20.	2696	0.02mF. 200v.	52.	6927	BC Detector Coil.
21.	2582	100mmF.	53.	6927	SW Detector Coil.
22.	6786	Gang Condenser HS3— C.	54.	6854	BC Oscillator Coil
23.	2543	Air Trimmer.	55.	6854	SW Oscillator Coil.
24.	2515	5 mmF.	56.	6544	1st I.F. Transformer.
25.	2974	440 mmF $\pm 2\frac{1}{2}\%$	57.	6545	2nd. I.F. Transformer.
			58.	6840	Speaker 15000w. P.M.
			59.	6849	Glass Dial Scale.

VALVES AND VOLTAGES: The location of the valves is shown in the photograph on page 1.

VALVE.	PLATE.	SCREEN.	BIAS.
1N5GT R.F.	90	90	—
1B7GT Mixer	90	35	—
Triode Section	90	—	—
1N5GT I.F.	90	90	—
1H5GT Dem. A.V.C. Audio	30	—	—
1C5G Output	90	90	-9

All voltages were measured with a voltmeter having a resistance of 1000 ohms per volt between the point indicated and chassis.

STROMBERG-CARLSON



S T R O M B E R G - C A R L S O N

VIBRATOR OPERATION: This receiver is readily adaptable to Vibrator operation, in which case the "A," "B" and Dial Lamp batteries may be dispensed with for all time... The "C" bias battery, however, is still required. The Stromberg-Carlson Vibrator Unit V.140 has been specially designed to permit this conversion, and operates entirely from a 6-volt storage battery.

Conversion to vibrator operation involves merely the unplugging of the battery cable from the chassis and the substitution of a similar cable from the Vibrator Unit. The normal battery switch on the receiver is already wired to control the V.140 unit, and so no extra switches are required.

Circuit diagrams reproduced herewith show the correct methods of connection for either battery or vibrator operation. Care should be taken not to touch the 2-volt clips on the wrong battery terminals in the case of vibrator operation.

BATTERY OPERATION: The following batteries are recommended:—

"A" Battery: 1.5-volt Type X250 Eveready or equivalent

"B" Battery: Two 45-volt Type SD45 Eveready or equivalent.

"C" Battery: 9-volt Type W9S Eveready or equivalent.

Dial Lamp Battery: 4.5-volt Type 126 or equivalent, or alternatively three 1½-volt cells wired in series.

ALIGNMENT INSTRUCTIONS: This should only be undertaken by a competent service man equipped with a calibrated test oscillator. Refer to the underchassis layout drawing showing the location of all trimming screws, which will be referred to by numbers corresponding to those on the drawing.

I.F. TRANSFORMERS: Turn the volume and tone controls fully clockwise. Set the test oscillator to 458 kc. and connect it to the grid of the 1B7G, through a condenser of about 0.05 mfd. capacity. With a thin screwdriver (preferably insulated), adjust the four screws located at the top of the I.F. Transformer for maximum gain.

STROMBERG - CARLSON

OPERATION: There are two controls on the front of the chassis, namely, Volume Control on the left, and Tone Monitor on the right, as viewed from the front. Two other controls appear on the right-hand end of the chassis, that nearer the front being the Station Selector, and the other the Range Switch. At the opposite end of the chassis is the On/Off Switch.

TONE MONITOR: Turn to the right to increase the high frequency response of the receiver.

RANGE SWITCH: This has two positions—counter-clockwise, for reception of shortwave stations between 13 and 35 metres, and clockwise, for the regular broadcast band 1600 to 550 kc.

ON/OFF SWITCH: This has three positions, as follows—

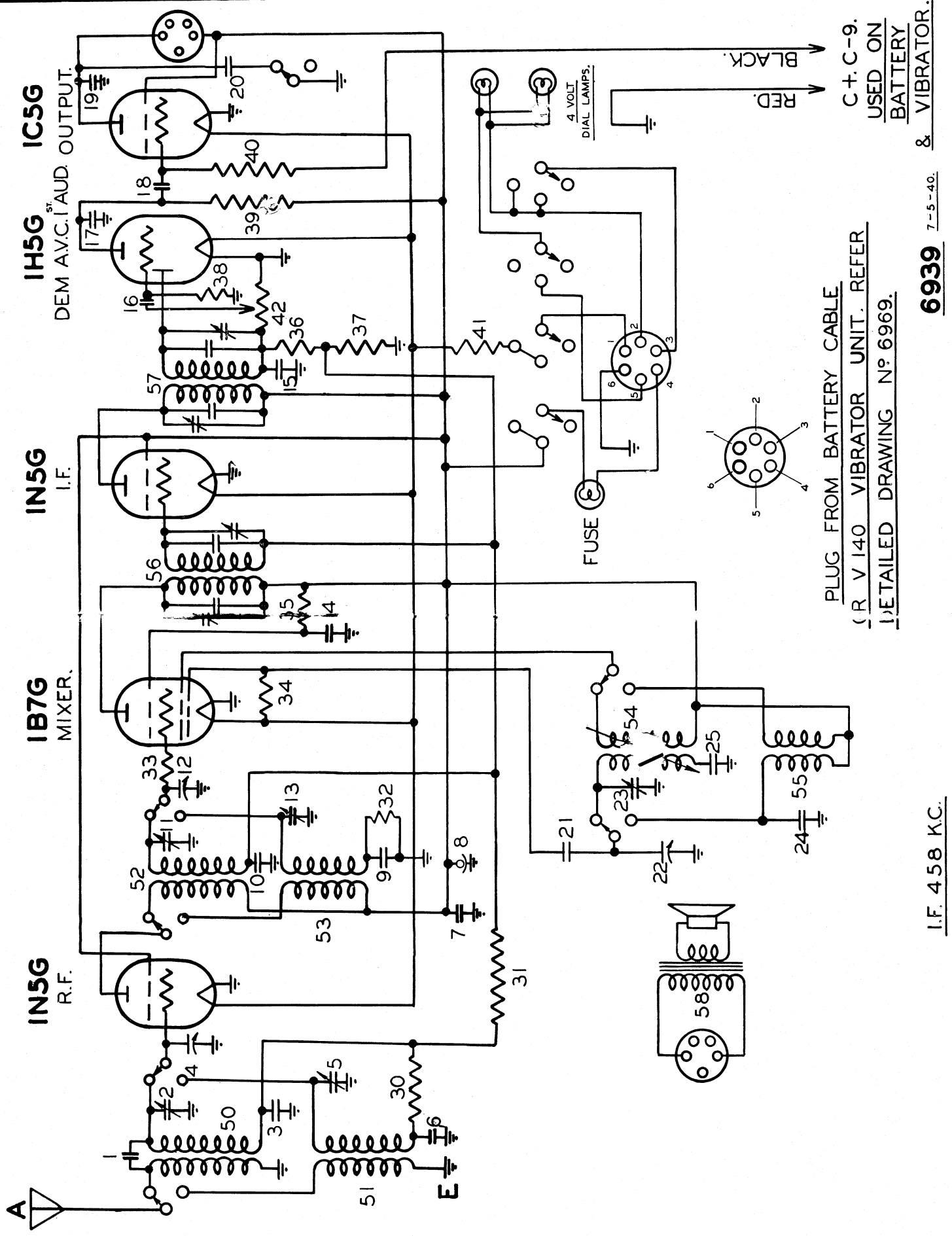
- (a) Fully anti-clockwise—Receiver off.
- (b) Mid-position—Receiver on, dial lights on.
- (c) Fully clockwise—Receiver on, dial lights off.

DIAL LAMP BATTERY: In order to reduce the “A” Battery drain as much as possible, the Dial Lamps are arranged to draw their energy from an entirely separate source. This takes the form of a 4.5-volt battery (Eveready No. 126 or equivalent). If longer life is required, three larger capacity 1½-volt cells may be wired in series and used instead. The Dial Lamp Battery leads are the two twisted blue leads emerging from the battery cable assembly.

“C” (BIAS) BATTERY: This is accommodated in a special clip easily accessible above the chassis, and is connected to the circuit by two wires. The Red wire goes to the positive terminal and the Black to the -9 volt terminal. The battery type is Eveready W9S or its equivalent.

Care should be exercised whenever replacing this battery to ensure that the connections are correct. If these are reversed, the “B” battery drain will be considerably increased, to the detriment of the life of both batteries and valves.

The Bias Battery should be changed whenever a “B” Battery replacement occurs.



IN5G
R.F.

1B7G
MIXER.

IN5G
I.F.

IH5G
DEM. AVC. & AUD.

IC5G
AUD. OUTPUT.

PLUG FROM BATTERY CABLE

(R V 140 VIBRATOR UNIT. REFER

TO DETAILED DRAWING N° 6969.

C + C - 9.
USED ON
BATTERY

& VIBRATOR.

I.F. 458 KC.

6939 7-5-40.