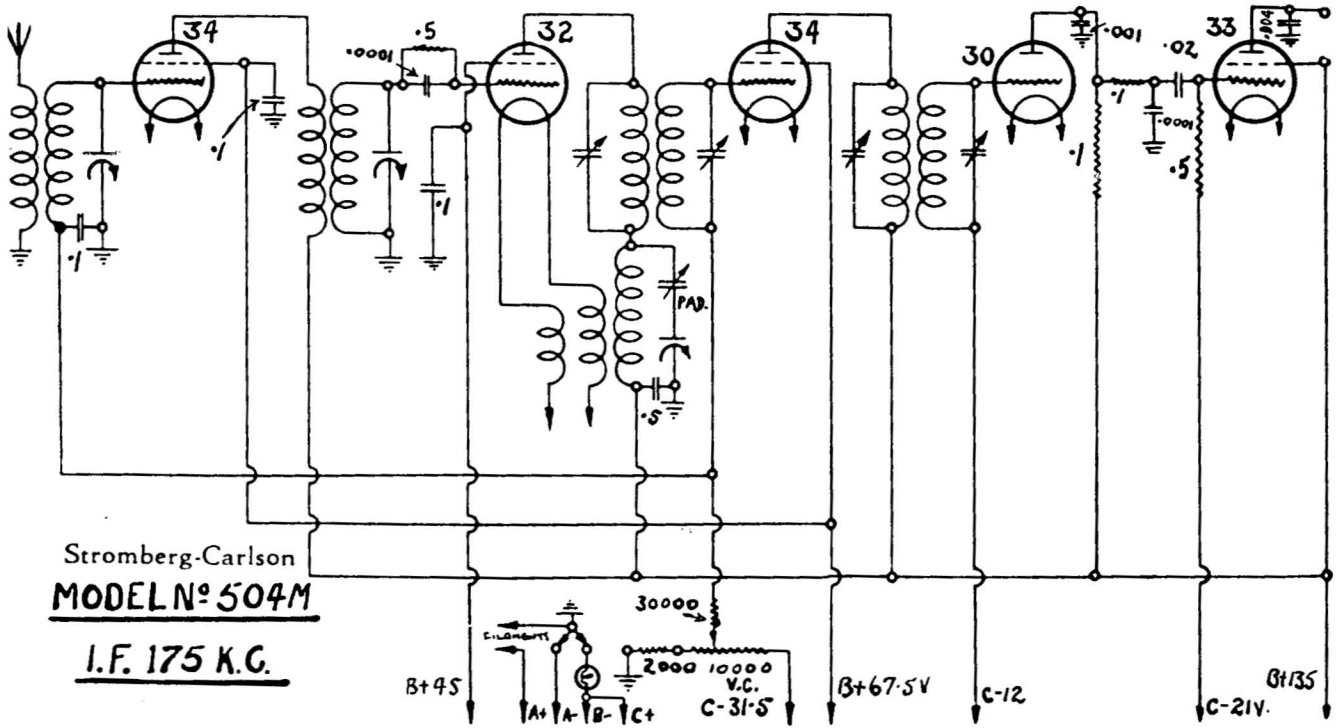
"Stromberg-Carlson" Battery Broadcast Model 504-M



STROMBERG-CARLSON "504-M"

(Continued from page 351)

The circuit arrangement is fairly straightforward, a grid-leak detector "autodyne" frequency converter being used, as well as an "anode-bend" second-detector. It should be noted that volume control is effected by varying the R.F. and I.F. valve grid bias—restriction of the minimum bias being provided by a 2,000 ohms resistor on the positive side of the volume control. As a final point of interest, it should be noted that the output pentode in this receiver is operated with a considerable over-bias. This is in the interests of B-battery economy and, if desirable, an appreciable improvement in reproduction and general performance can be achieved by reducing the bias to somewhere around the rated value (13.5 v.) for the valve type in use.

COMPONENT MOUNTING

To facilitate assembly, many of the smaller components in this receiver are mounted on a numbered terminal panel. The components and their corresponding numbers are as follow:—

1—0.1 mfd., paper; **2**—30,000 ohms; **3**—2,000 ohms; **4**—0.1 mfd., paper; **5**—0.1 mfd., paper; **6**—blank; **7**—0.5 mfd., paper; **8**—0.001 mfd., mica; **9**—0.1 meg.; **10**—0.1 meg.; **11**—0.0001 mfd., mica; **12**—0.02 mfd., mica; **13**—0.5 meg.; **14**—0.004 mfd., mica.

STROMBERG-CARLSON "504-M"

(Circuit diagram at foot of facing page)

Stromberg-Carlson model "504-M" is a five-valve receiver designed for broadcast coverage and operation from battery power supplies. This receiver is of the console type and is fitted with three controls, these being for volume, tuning and battery switching (2-circuit). This model uses an 8-inch diameter permag. loudspeaker and was marketed during 1934.

Power supply for this receiver is obtained from a 2-volt accumulator ("A"), three series-connected 45 v. dry batteries ("B") and a 31.5 v. dry battery ("C"). B-battery tappings are made at 45 v. and 67.5 v., while the C-battery is tapped at 12 v. and 21 v. Note that the bias battery is intended to mount on the receiver chassis.

STROMBERG CARLSON "59" M[illegible]

[illegible]

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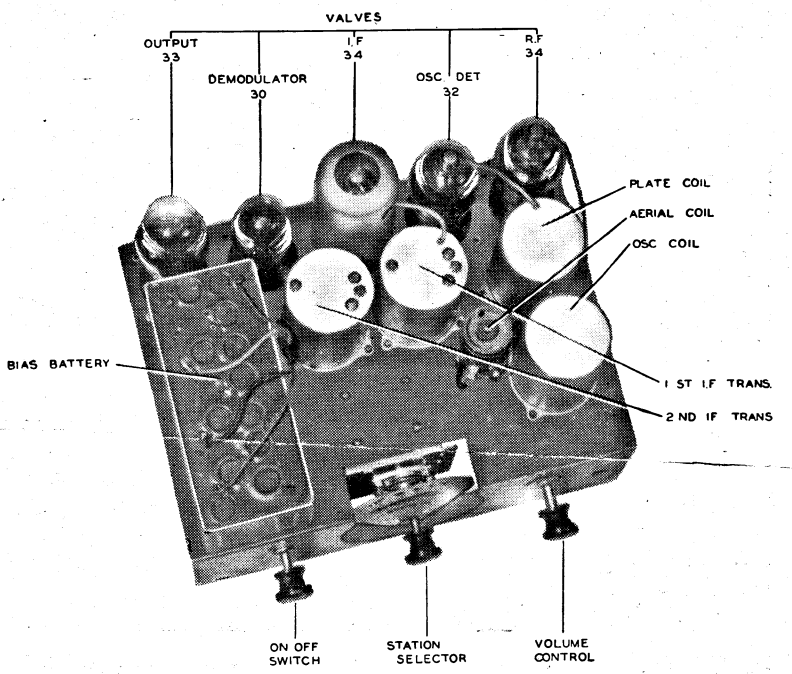
Stromberg-Carlson

STROMBERG-CARLSON
SERVICE BULLETIN No. 504-M

Radio Receiver Model 504-M

FIVE VALVE BATTERY-OPERATED SUPERHETERODYNE



Chassis of Model 504-M

This Service Bulletin 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) 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.

SERVICE BULLETIN No. 504-M *(Continued)*

Improper tuning will affect the quality of reproduction. Care should be taken to keep the volume control well down, then adjust the tuning control to the point of maximum undistorted signal, thereafter adjusting the volume to the desired level. Judicious use of the volume and tuning controls in the Model 504-M will assist in the economy of battery consumption.

4. COMPONENTS.

The following list of components is given to facilitate the servicing of the Receiver and as a guide to replacements.

The numbers refer to the position of the component on the assembly panel.

1. .1 microfarad.
2. 30,000 ohms.
3. 1,000 ohms.
4. .1 microfarad.
5. .1 microfarad.
6.
7. .5 microfarad.
8. .001 microfarad.
9. 100,000 ohms.
10. 100,000 ohms.
11. .0001 microfarad.
12. .02 microfarad.
13. .5 megohm.
14. .004 microfarad.

5. VOLTAGES.

Valve	Function	Screen Volts	Plate Volts
234	Radio Frequency	67.5	135
232	Det.-Oscillator	45	135
234	I.F.	67.5	135
230	2nd Detector	—	70
233	Pentode Output	135	135

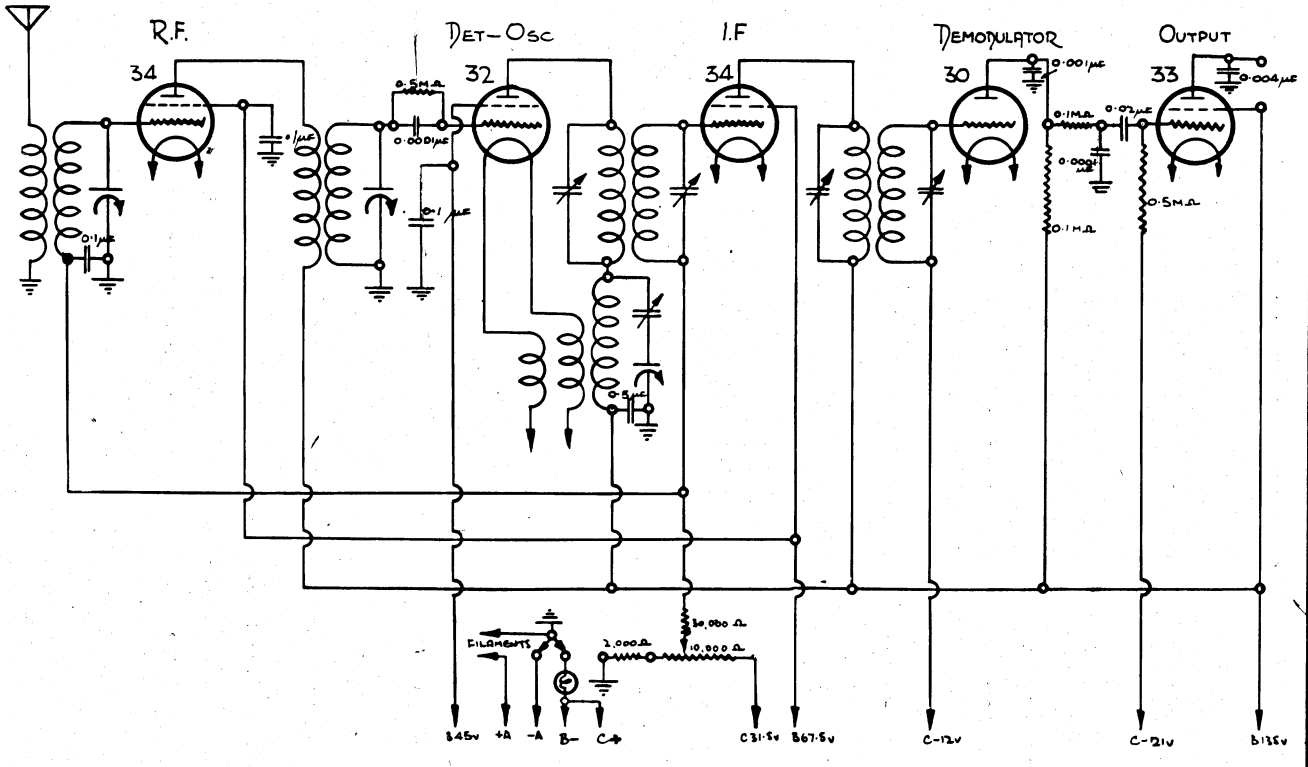
All voltages are measured from the above designated valve prongs to chassis base, with volume control at full "on" position.

The voltmeter used should have a resistance of 1000 ohms per volt.

N.B.—BEFORE LEAVING THE STROMBERG-CARLSON RADIO RECEIVER IN A CUSTOMER'S HOME, SEE THAT EVERYBODY WHO IS LIKELY TO HANDLE THE RECEIVER FULLY UNDERSTANDS ITS OPERATION. BY SO DOING MANY UNNECESSARY SERVICE CALLS MAY BE AVOIDED.

W. A. PEPPERDAY & CO. LTD.,
757a George Street, Sydney

Radio Receiver Model 504 M — Battery



CHANGES.

STROMBERG – CARLSON (AUSTRALASIA) LIMITED
SYDNEY
BY AUSTRALASIA

DRAWING No 234

DRAWN J.W.S.
EXAMINED
APPROVED
DATE 7-6-34
MGN DIRECTOR

SERVICE BULLETIN No. 504-M *(Continued)*

Radio Receiver Model 504-M

FIVE VALVE BATTERY-OPERATED, SUPERHETERODYNE

1. GENERAL DESCRIPTION OF RECEIVER.

The Model 504-M Battery-operated Receiver has been designed with a view to obtaining the maximum in sensitivity, selectivity and quality, consistent with a minimum consumpton of both the A and B batteries.

The tuning adjustments on the gang capacitor (variable tuning condenser) and the trimmer capacitors on the Intermediate Frequency Transformers (tuned to 175 k.c.) are adjusted and sealed at the factory at the time of calibration. These adjustments should on no account be touched or the seals broken unless a specially calibrated oscillator and indicating instrument are to hand whereby such adjustments can be successfully carried out. In any repairs or adjustments the above remarks in regard to the gang capacitor and intermediate transformers should be carefully noted.

2. BATTERIES.

(i.) *A Battery*—This is a 2-volt storage battery or equivalent 2-volt battery, having a (recommended) capacity of at least 80 ampere-hours. The A Battery drain is 0.5 ampere.

(ii.) *B Batteries*—These comprise three heavy duty, super, or (recommended) "Superdyne" 45-volt batteries.

The B Battery consumption varies with the adjustment of the volume control, averaging about 12 M.A.

(iii.) *C Battery*—This consists of a small 31.5-volt C type battery.

To connect the battery leads correctly, reference should be made to the designation tabs on the leads, and to the colour code as shown on the circuit diagram on page 2.

The A battery and the three B batteries may be placed on the lower shelf of the speaker compartment of the cabinet. The C battery rests on the chassis as shown in the instruction card.

3. OPERATION.

The more sensitive and selective the receiver is, the greater the care to be taken in the operation and tuning to obtain the best results. In this model the left-hand knob is the "on-off" switch, the right-hand knob is the volume control, and the centre knob is the tuning control.