

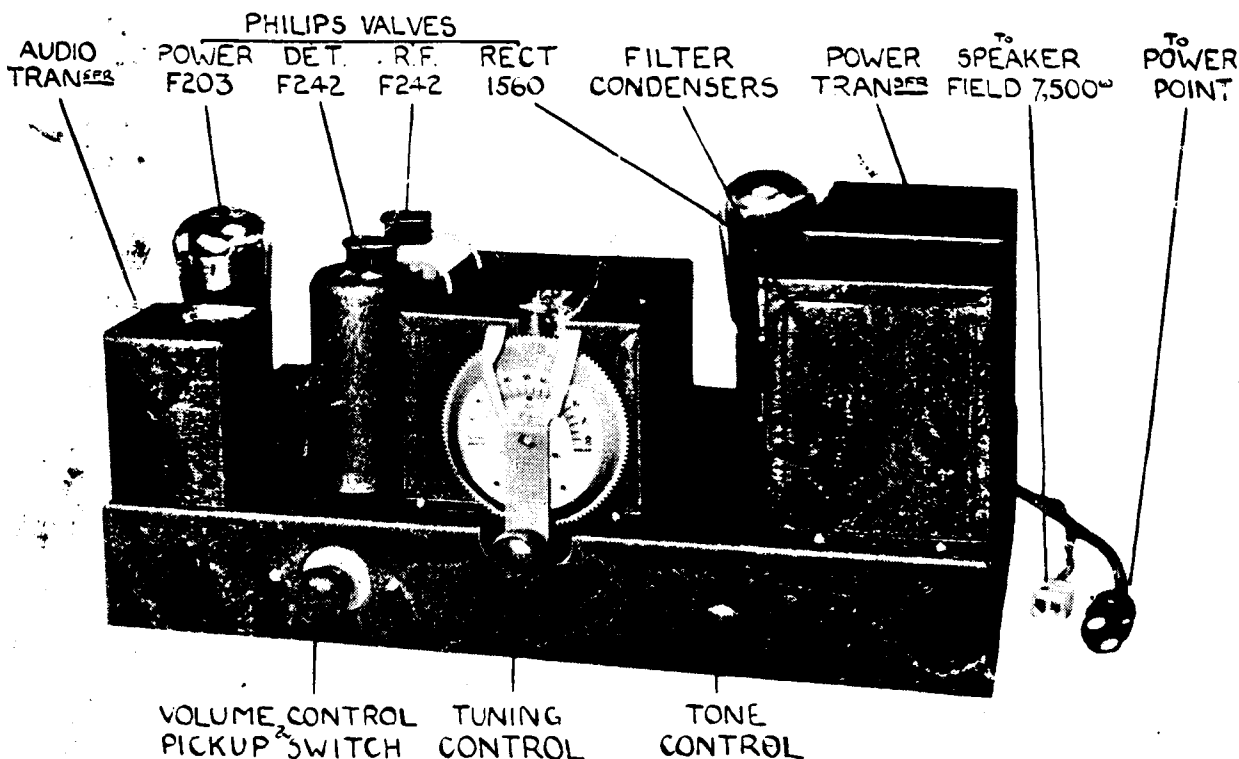
Stromberg-Carlson

SERVICE BULLETIN No. 36A

Radio Receiver Model 36

ALL-ELECTRIC, SCREEN-GRID, THREE VALVES
AND RECTIFIER

For all Receivers of this Model with Serial Numbers over 5000—
(for Serial Numbers under 5000 see Service Manual No. 36.)
(Serial Numbers over 5000)



Chassis of 36 Model

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CHANGES

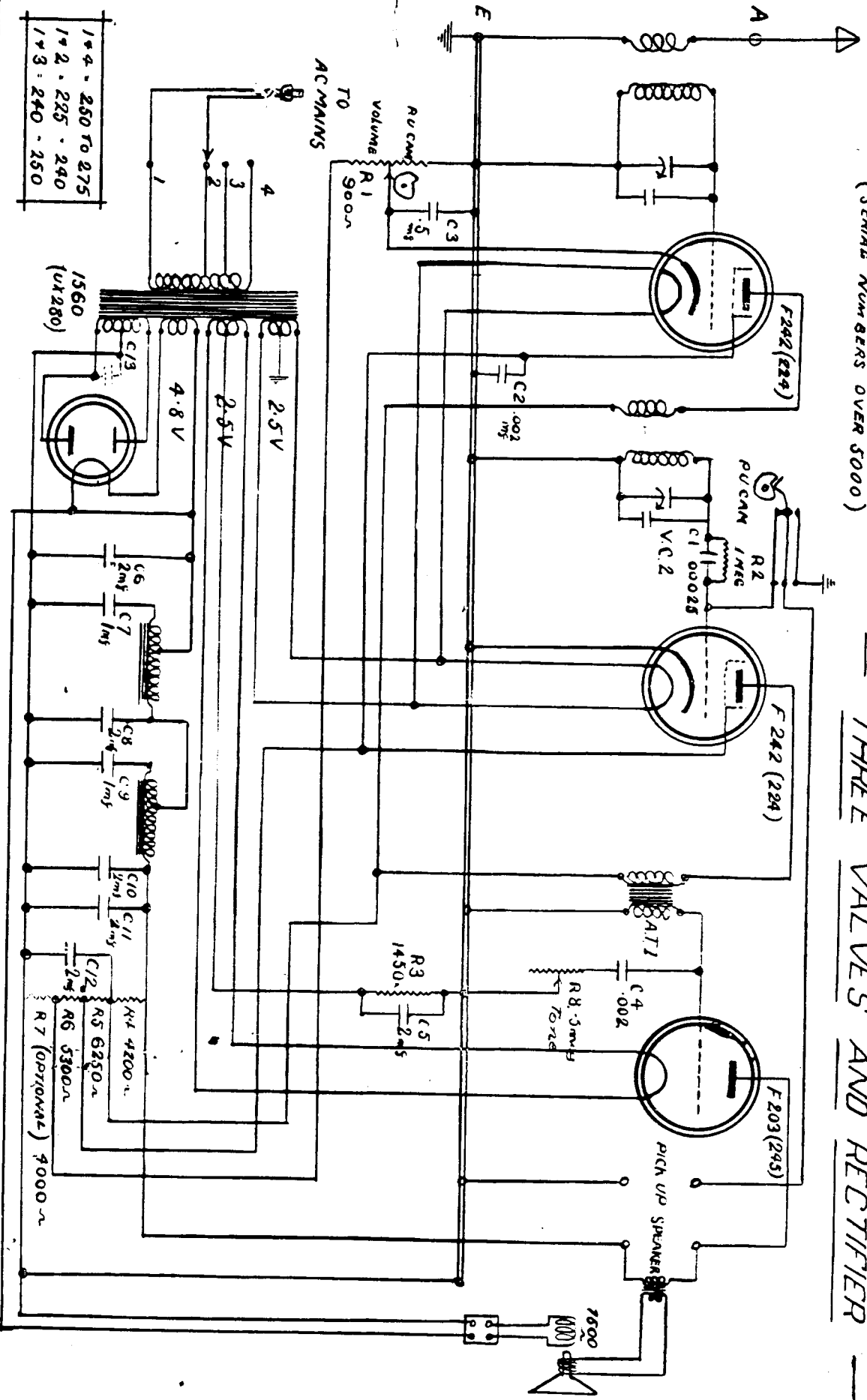
STROMBERG CARLSON AUSTRALASIA
SYDNEY LIMITED

DRAWING
No 15

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ALL ELECTRIC RADIO RECEIVER MODEL 36
(SERIAL NUMBERS OVER 5000) — THREE VALVES AND RECTIFIER —



- 1w4 - 250 to 275
- 1w2 - 225 - 240
- 1w3 - 240 - 250

STROMBERG - CARLSON

SERVICE BULLETIN No. 36A (Continued)

Radio Receiver Model 36

ALL-ELECTRIC, SCREEN-GRID, THREE VALVES AND RECTIFIER.

This Receiver utilises substantially the same circuit as the same Model No. 36, with serial numbers under 5000, but is built up on our standard deep chassis and equipped with our new standard Power Plant, which has been designed with sufficient margin for our quality 3, 4, 5, and 6 valve Receivers. It is also equipped with our new type straight line frequency Gang Condenser and individual valve shield on the Detector.

Circuits

One stage of screen-grid radio frequency, screen-grid detector, and one power audio (type 245).

General.

Install in accordance with the instructions in the General Service Bulletin, taking care to check up the A.C. Line Voltage. Except in special cases, the Receiver is ~~is~~ designed for use on 240 volt circuits. If the locality is a different voltage supply or is subject to high voltage fluctuations, refer to the diagram, and alterappings accordingly. The Receiver should be connected up in accordance with the instructions accompanying it, and particular attention should be paid to making the earth connection as short and direct as possible, whilst the aerial should be of such length (generally twenty-five to forty feet) as will give the most satisfactory results for selectivity.

Valves.

Philips Valves are tested, matched and supplied in sealed standard Stromberg-Carlson cartons for each Model. When testing the Receiver before issue to the customer, the actual valves to be supplied with the Receiver should be used for the test.

Rectifier: Philips 1560 (Type 280).

R.F. Stage: Philips F.242 (Type 224).

Detector: Philips F.242 (Type 224).

Power Audio: Philips F.203 (Type 245).

Dial Lamp: 2.5 volt circuit, but 3.8 or 4 volt lamp is utilized to ensure long service.

Speaker.

This Model is designed for a Dynamic Type Speaker, with 7500 ohms D.C. Field coil and lead wires are furnished to supply the field coil.

Operation.

This Receiver is not of the regenerative type but the facilities provided allow for such fine tuning that it may be brought to oscillation point when it is desired to get maximum selectivity and sensitivity. The centre control knob is the station selector. The knob on the left is the volume control which, when turned right off, automatically switches on the pick-up. The knob on the right is the tone control.

TECHNICAL DESCRIPTION.

(To be read in conjunction with Drawing No. 15.)

The power Transformer is of the layer wound type with tapped primary to suit various line voltages from 225-275 volts. If voltages less than 225 a special transformer is provided.

The Core of laminated stalloy is oversize. The windings are brought out by means of high-grade insulated flexible wires, and the Transformer is sealed in a steel container with the highest grade insulating compound with a high melting point. The wires from the Transformer terminate on a double terminal strip beneath the chassis, and facilitate testing. The colour code for the wires leading from the Transformer are as under, but service men are warned that this colour code may be slightly changed from time to time, owing to wire manufacturers being unable to furnish the necessary colours when required.

COLOUR CODE.

Black, start of primary; Green, No. 2 tap; Blue, No. 3 tap; Red, No. 4 tap; Whites (2), start and finish of high tension; Maroon, centre tap of high tension. All of the above are taped together in one cable. The

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taped together are as follows:—*Yellows* (2), Rectifier Filament; *Reds* (2), Power Valve Filament; *Maroon*, centre tap of Power Valve Filament; *Spaghetti* (2), A.C. Valve Filaments; *Black*, centre tap of A.C. Valve Filaments.

NOTE.—In some Transformers an extra tap is furnished on the primary (orange with blue tracer) for use on 200/220 volt circuits.

Power Filter Chokes are layer wound on two cores, each choke being tapped. These are located beneath the chasses. Each coil terminates on a strip marked "S" (Start), "T" (Tap), "F" (Finish).

The **Filter Condensers** and main by-pass Condensers are grouped and sealed with a special preparation in the smaller steel can on top of the Chassis. One side of all of the Condensers in the Pack is commoned and brought out by means of one red lead. Each blue lead represents 1 m.f., and each black lead represents 2 m.f. By-pass Condensers other than those in the Condenser Pack Can are located beneath the Chassis.

NOTE.—Condensers C.2, C.3, C.4, and C.13 are located beneath the Chassis. C.13 is to prevent modulation hum, which is more noticeable in some localities than in others, and which is aggravated usually by a long earth wire. These Receivers are tested on a long earth wire, and Condenser C.13 is connected in the most effective way in each particular Receiver. In some cases it is connected between the primary and earth. It is of course a mica Condenser.

Tuning Coils are specially shielded in solid drawn copper cans, and are easily removable. To remove coil, unsolder wires, take out the central single screw from the plate, and the coil immediately comes clear.

Pick-Up Switch. As will be seen from the drawing, a cam on the Volume Control Spindle causes the Pick-Up lead to be connected to the Grid. When radio is in use the cam disconnects this Pick-Up lead and connects it to earth.

Audio Transformer is a special 4-1 heavy core type with a high impedance layer wound primary to suit the screen-grid detector.

Tuning Condensers (2 gang) are of the straight line frequency type. Should it be necessary to reline the aerial condenser to suit any particular aerial, this should be done by means of a fibre tube through the hole nearest the back of the covering can. If a tube is not available use a screw driver very carefully. Do not line up on any station below 25 on the dial.

Volume Control is a wire wound potentiometer, 900 ohms, controlling the grid bias on the radio frequency valve.

Volts—R.F.—A. 2.35 to 2.5 volts.

B. 180/200 volts.

C. 1-12 volts according to position of volume control.

D. (Screen) 80-85 volts.

Detector—A. 2.35 to 2.5 volts.

B. 180/200 volts.

C. Nil.

D. 80/85.

Power Audio—A. 2.35 to 2.5 volts.

B. 240/250 volts.

C. 45/50 volts.

Rectifier—A. 4.8 volts to 5 volts.

B. 700/750 volts across plates.

NOTE.—At the request of certain Distributors some of these Receivers were issued with the Detector voltage increased to 290 volts with the screen at 95, but all these Receivers will in future be issued with the standard voltage shown above, which is what we recommend.

Faults.

Refer to General Service Bulletin, pages 7-10, for general faults which may occur, but this Receiver is built with apparatus having a good factor of safety, and little trouble should be experienced. As we frequently meet with cases where faulty or unreliable rectifier valves are used, and so cause serious damage to the Power Unit, particular care should be taken to see that the valves we supply or recommend are used with the Receiver.

Replacement Parts.

When ordering replacement parts, mention, whenever possible, the indicating letter and number shown on the drawing for the particular part you require.