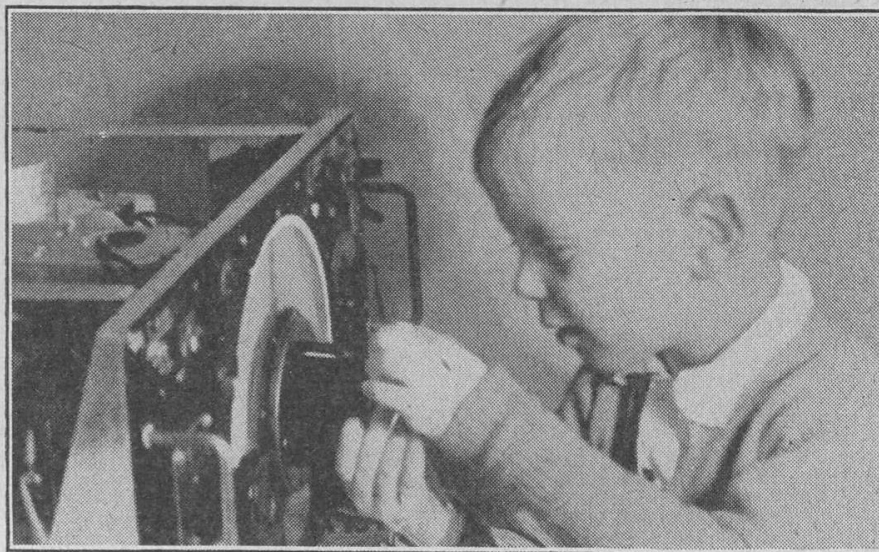


The junior op. tries his hand at pulling in some DX on the modified receiver.



The modifications are based on the circuit, published in the July, 1946 issue of *Wireless World*, of the communications section of the R1155. When referring to the sketches in this article it should be noted that where a component value is given this indicates that the particular component is an additional one to be fitted. Existing components are not given values, though in some cases a reference number appears (this indicates the reference number as used in the *Wireless World* circuit). Now follows a stage-by-stage description of the modifications.

Aerial Circuit.

AVC circuit modified to shunt feed in order to prevent pick-up of audio on aerial from modulating AVC line. All coils earthy. Aerial

switches are shorted as shown and a 0.001 μ F capacitor inserted for safety purposes. R1, C1, C2 and C3 are removed from the receiver. See Fig. 1.

Mixer Stage.

No modifications have been carried out on this stage.

First IF.

The screen-divider network has been modified to sliding screen, the object being to reduce HT consumption. This also slightly reduced the effect of AVC and gives greater "S" meter deflection. The "S" meter itself is inserted in the anode circuit across the existing anode decoupling resistor. Full AVC is applied to this stage and gives largest deflection. R12 and R13 are removed. See Fig. 2.

Second IF.

The only modification to this stage is the alteration of the screen divider network as in the First IF stage; R16 and R17 are removed. See Fig. 3.

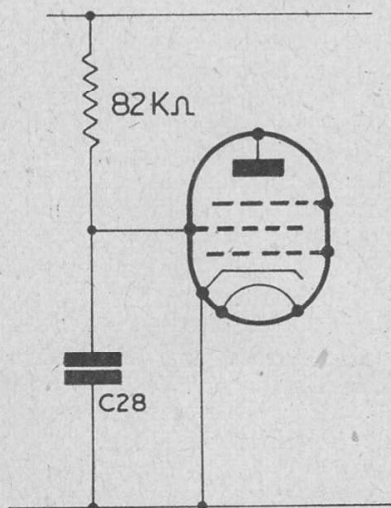


Fig. 3. Second IF stage screen divider network is modified.

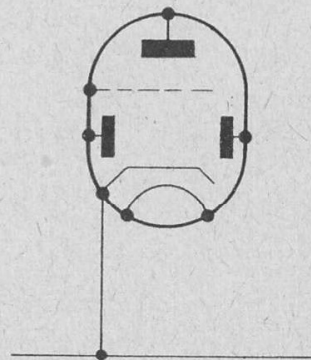


Fig. 5. BFO cathode is earthed and three resistors are removed.

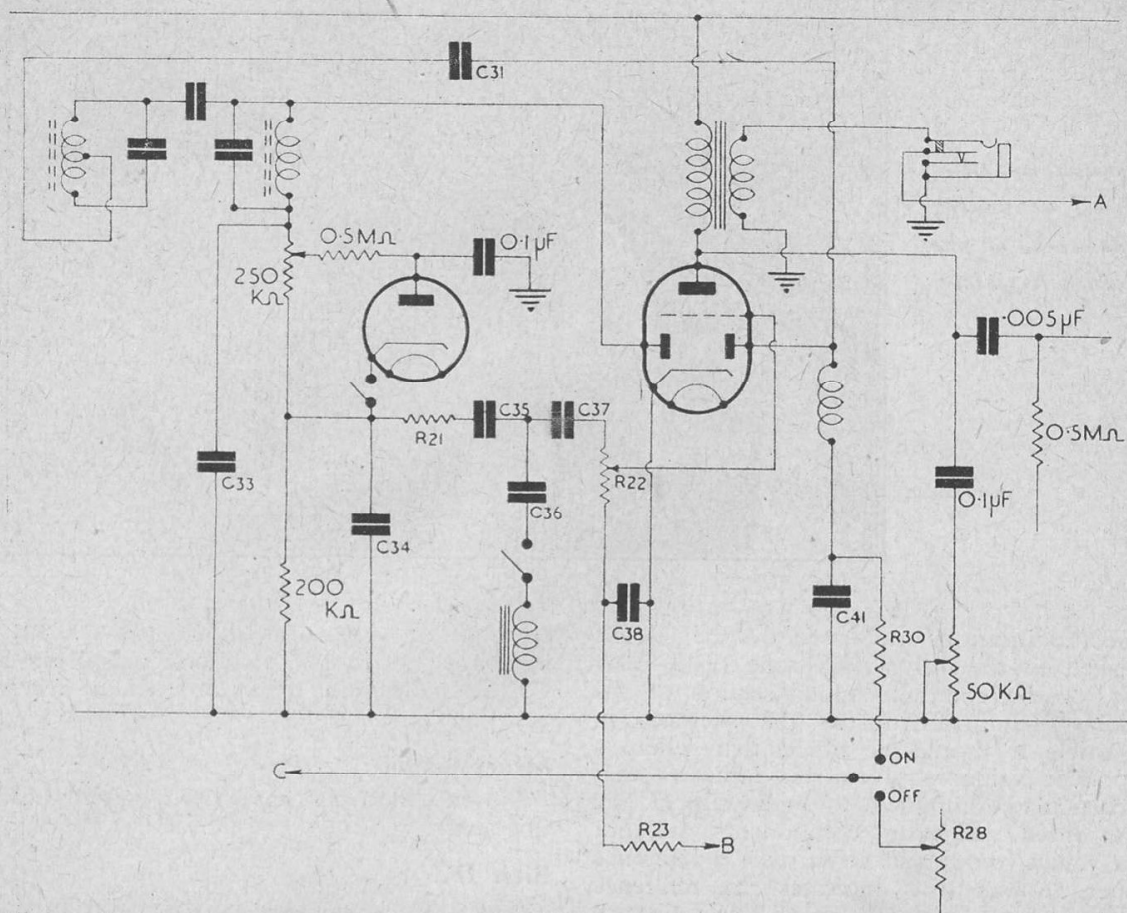


Fig. 4. Detector stage noise limiter is added. Point 'A' goes to earthy heater connection of output valve. Point 'B' goes to junction of R28/R33. Point 'C' is the lead normally taken to wiper of S10.

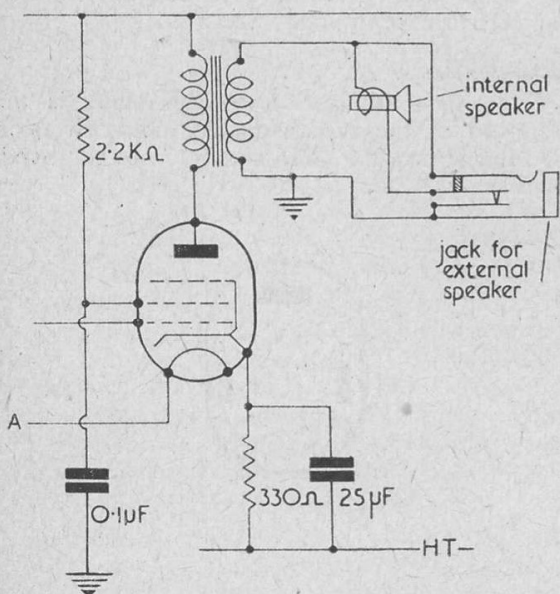


Fig. 6. Output stage. Point 'A' goes to jack terminal 'A' on detector stage (see Fig. 4).

Detector Stage.

Noise limiter diode, an EA50, is inserted with level control and in/out switch. (R19, R20 and R24 are removed). The AVC is brought on to the spare diode of V5, the delay is now reduced to make the "S" meter effective on lower signal inputs. Biasing circuits are modified to suit. A toggle switch is installed to replace S10 for AVC on/off. A phone jack is inserted in the anode circuit of V5 and cuts off heater voltage of output valve with plug inserted. See Fig. 4.

BFO.

Cathode is earthed and R32, R38 and R39 are removed. In economy operation, for telephony, this valve can now be entirely removed. See Fig. 5.

Magic Eye.

This valve and its complementary circuit is completely removed.

Output Stage.

A 6G6G economy output stage installed with internal speaker and output transformer. A jack is inserted for operation of external speaker—mutes internal speaker. See Fig. 6.

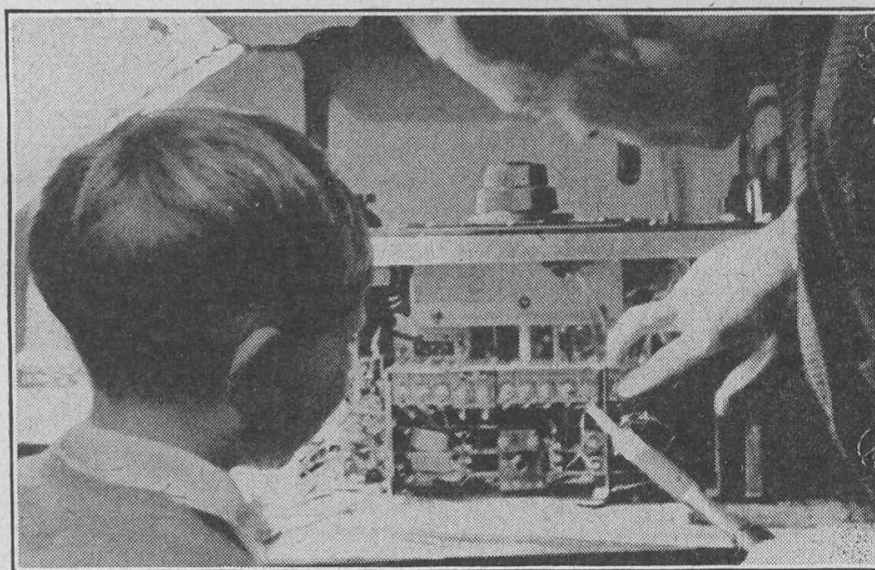
Structural.

1. All DF components are removed, with DF wiring, etc.
2. Power sockets are removed.
3. Plate installed over space left by power socket and then fitted with octal holder, for power input, and two phone jack sockets.
4. Magic eye removed.
5. Plate covering magic eye hole holds "S" meter zero control (wire-wound potentiometer with isolated spindle).
6. EA50 diode is fitted under cover in rear section of BFO box. Noise limiter components

fitted on small panel attached to this cover. Noise limiter controls are fitted on front panel, adjacent, so making all noise limiter connections as short as possible and away from any source of pick-up.

7. Other panel controls to be fitted to suit individual taste.
8. 6G6 installed in vacant socket at rear of chassis in place of one of the redundant DF valves.
9. Small half-inch ceramic stand-off insulator fitted in coil unit near aerial switch for aerial connection, with hole in coil box and receiver dust-cover for stand-off to project through. A 0.001 μ F mica capacitor also fitted inside coil box next to the stand-off.
10. Miniature $2\frac{1}{2}$ Ω speaker fitted internally with output transformer.

At work on the
"innards" of the
R1155.



COMPONENT DENOMINATIONS

referred to in the text, as used in the *Wireless World* circuit diagram of the R1155 receiver.

R14	2,200 Ω	C26	0.1 μ F
R21	22,000 Ω	C28	0.1 μ F
R22	500,000 Ω	C31	4 μ μ F
R23	100,000 Ω	C33	100 μ μ F
R25	150,000 Ω	C34	0.1 μ F
R26	150,000 Ω	C35	0.001 μ F
R28	50,000 Ω pot.	C36	0.004 μ F
R30	56,000 Ω	C37	0.001 μ F
R33	120 Ω	C38	0.1 μ F
C22	0.1 μ F	C41	200 μ μ F