

### COSSOR MODEL 364 (Contd.)

in the positive H.T. lead, and electrolytic condensers.

**Pilot Lamps.**—These are the 6.5 volt .3 amp type, No. 365, and are clipped on to brackets.

**Quick Tests.**—Between the terminals on the speaker transformer and chassis, counting from the bottom:—

- (1) Yellow lead, H.T. smoothed, 235 volts.
- (2) Blue lead, H.T. unsmoothed, 340 volts.
- (3) Red lead, V4 anode.
- (4) Blank, 210 volts.

**Removing Chassis.**—Remove the knobs (grub screw; two in tuning knob). Remove holding screws from underneath, and then release the speaker baffle by undoing the cleat holding the pilot lamps' cable, the pilot

lamps, and the six screws round the edge of the baffle (two are holding the speaker lead clips).

Remove the screw in the horizontal top of the tuning indicator frame and the screws holding the white dial covers. (In some models these are fastened by screws at the edges and in others by wood screws in the middle.)

Ease the chassis back a little, and then tilt it upwards from behind, and while sliding it out lift the front to clear the supports at the sides of the cabinet.

**General Notes.**—The mechanism of the "Thermometer" tuning system is simple.

The condensers C29 and C30 are in one block, of which the black or green lead is negative and the yellow and red leads are positive. It is immaterial which of these latter are used for H.T. unsmoothed.

The connections to the mains transformer (looking from underneath and in order from the left) are:—

- (1) R, junction of R10 and R15.
- (2) P, to on-off switch.
- (3) N, set heater.
- (4) To cable (mains adjustment).
- (5) M, H.T. unsmoothed (to C30 tag),
- (6) To cable.
- (7) L, other end of set heater winding.
- (8) To cable.

**Replacing Chassis.**—Ease the chassis inside the cabinet, holding it at an angle of 45 degrees.

Replace the dial frame screws and distance pieces (if any).

Replace the speaker baffle and cleat the leads. Replace the holding screws and the knobs.

## ORR "FISHERMAN'S" RECEIVER

**Circuit.**—An H.F. valve, PM12A met. (V1), is preceded by a tuned secondary aerial transformer with a variable selectivity condenser in the aerial lead. The secondary coil is in three sections providing for wavelengths from 100-200 m., 200-550 m. and 1,000-2,000 m. The switching is between the low potential of the long-wave winding and each of the junctions of the windings.

Coupling to the next valve is by tuned anode coil, also with three sections. The anode circuit is decoupled.

The detector valve, PM1HL met. (V2), operates as a leaky-grid detector with differential reaction.

The last valve, PM22A met. (V3), has a grid stabilising resistance, and is tone-com-

pensated by a condenser between the anode and chassis

The speaker is a permanent-magnet moving-coil type.

Switching is between the negative side of the filament circuit and chassis, this being the common H.T.—, L.T.— and G.B.+ connection.

The pilot lamp is a 2.5-volt .2-amp type.

**Batteries.**—A 120-volt H.T. unit with a 72-volt tapping is provided.

Tappings are: H.T. + 1, 72v.; H.T. + 2, 120v.; G.B., 6v. or 9v.

**Quick Tests.**—These are best carried out by testing the valves.

**Removing Chassis.**—Remove two wood screws from flanges at the back of the chassis, remove the knobs (grub-screw), and lift the chassis out.

**General Notes.**—The construction of this set is particularly simple and the switch contacts are all accessible, so that no difficulty should be experienced.

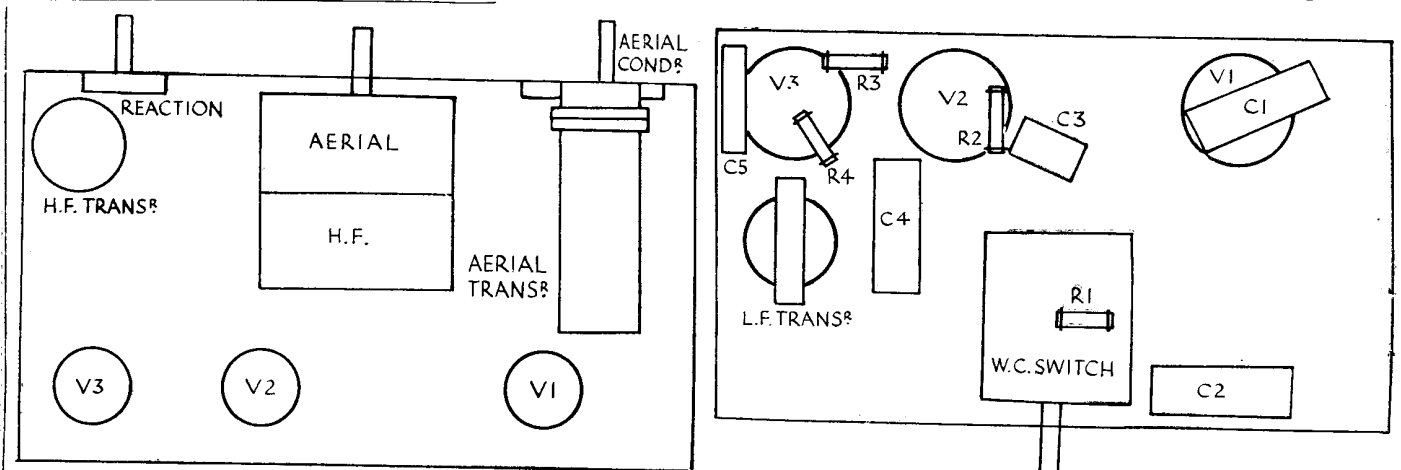
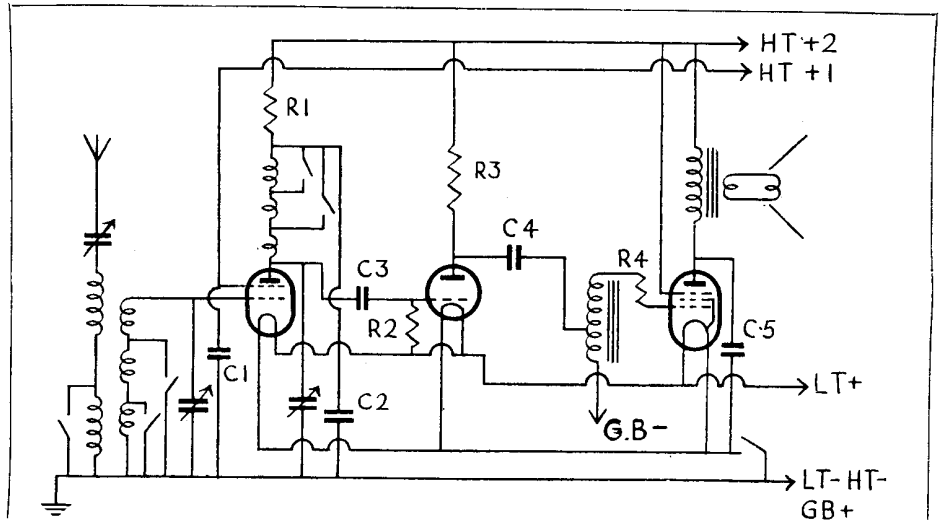
The connections to the L.F. transformer are:—

- Red lead, G.B.—, 6 volts;
- Yellow and green leads, joined, to C4;
- Black lead, to R4.

**Replacing Chassis.**—Lay the chassis inside the cabinet, replace the two wood screws and the knobs.

VALVE READINGS				
Valve.	Type.	Electrode.	Volts	M.A.
1	PM 12A met. (4)	anode ..	113	1.7
		screen ..	72	
2	PM 1HL met (4)	anode ..	117	2.2
3	PM 22A (5)	anode ..	117	
		aux. grid	120	

COMPONENTS			
R1	V1 anode decoupling	..	5,000 ohms
R2	V2 grid leak	..	1 megohm
R3	V2 anode L.F. coupling	..	40,000 ohms
R4	V3 grid stabiliser	..	300,000 ohms
C1	V1 screen by-pass	..	.1 mfd.
C2	V1 anode decoupling	..	.2 mfd.
C3	V2 grid reservoir	..	.00011 mfd.
C4	L.F. filter to auto-trans-	..	.1 mfd.
C5	V3 tone compensating	..	.005 mfd.



The Fishermen's set has a useful circuit for the shipping, medium and long wavebands and the construction is straightforward.