

WAVEMETER W3

Date of design:- 1918.

Frequency range:- 75 - 1000 kc/s in four ranges.

The wavemeter is supplied for use with aircraft M/F sets T21C and T22. It is unshielded and uses a directly connected pea lamp (7) as indicating device.

The tuning inductance, wound as a variometer is made in two halves (1) and (2) which may be connected either in series (Range 2) or in parallel (Range 1) by means of the range switch (5). When using Range 2 the dial readings must be doubled to give the correct wavelength.

The tuning capacity consists of two fixed condensers, one of these (3) is always in circuit while the other (14) is added in parallel when plug (8) is inserted in socket holes (9). The plug carries the reading off scale (6); this scale is graduated in two separate parts and dummy sockets (10) are provided for the plug (8) when the condenser (4) is not required. In this way the reading off arrow is always opposite the correct part of the scale.

In order to render the indicating device more delicate a dry cell (16) is connected across the pea lamp (7) which is thus heated to a point approaching incandescence when the push (14) is made. Spare cells (17) and (18) are stowed in the transit case (24), in the lid of which are sockets for five spare pea lamps (19) to (23).

Terminals (15) marked "Alternative Battery" are provided so that it is possible to connect up an external cell.

A choke coil (13) is fitted in series in the battery circuit to prevent R/F oscillations being set up in it and thus damping the tuned circuit. A three way switch (11) connects the battery either to the pea lamp, buzzer circuit or to off. The buzzer (12) is provided to enable the instrument to be used as a wave tester for adjusting the receiver (Tf). The pea lamp is still required to complete the L.C. circuit.

Operation. To facilitate accurate tuning the dial scale (6) now marked in metres is generally covered and the instrument recalibrated to the required frequencies from a ship transmitter.

A coupling coil (58) page Y6, figure e. is secured to the face of the transmitter and joined in series with tuned circuit of the wavemeter.

If the angle of the coupling coil is carefully adjusted it will be found that the transmitter can be accurately tuned; at the same time, an indication is provided of the constancy of frequency during transmission.

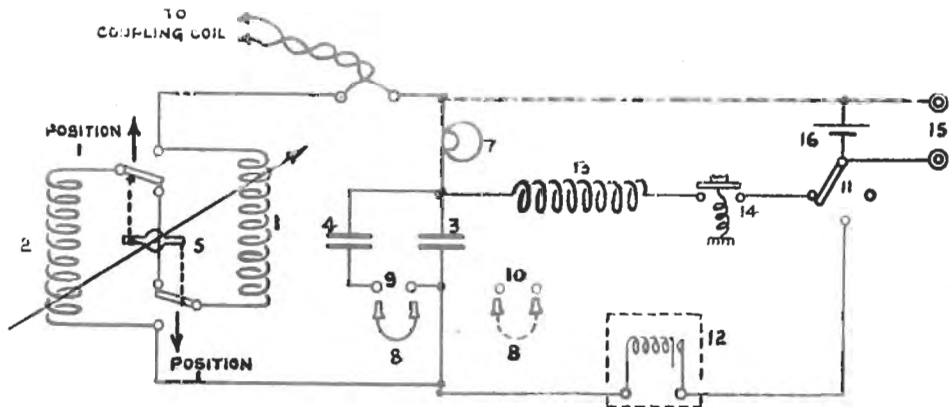


Fig. a.

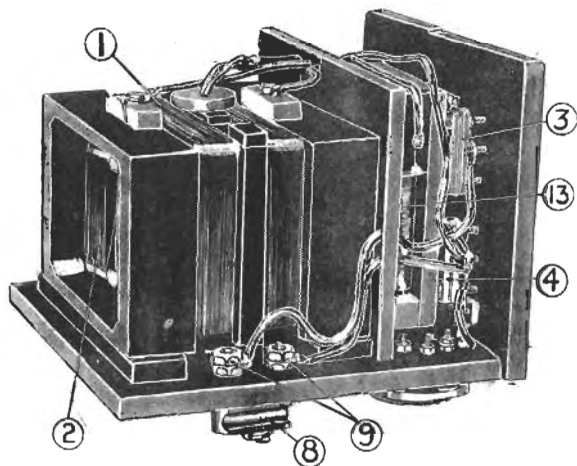


Fig. b.

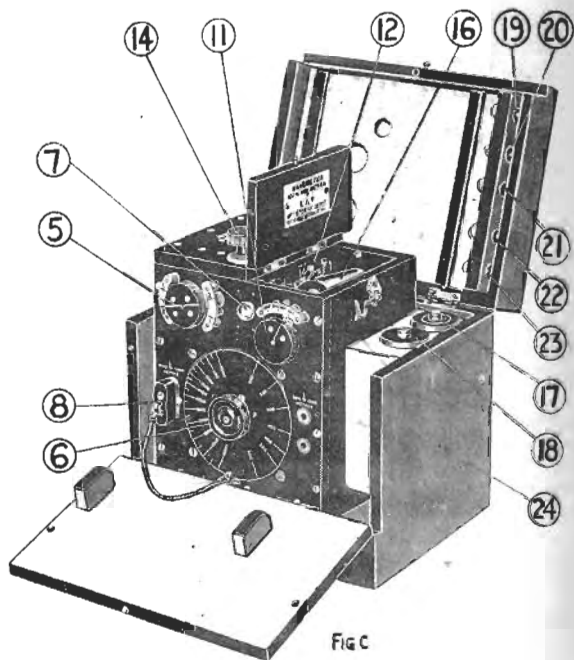


Fig. c.