WAVE INDICATOR G 53 GD5

Date of design:- 1931.
Frequency range:- 4200 - 28000 kc/s.
Reference:- Admiralty Handbook of W/T (1931) paragraph 822 (b).

G53 has been designed for the H/F transmitter of Type 46 and is permanently fitted in Panel 3N Transmitting, H/F Right Upper (see figure 2, page ~~R152~~ RK20). It is used for checking the frequency of the H/F transmitter. The circuit is a closed oscillatory circuit which consists of three coils (1)(3)(6), a variable condenser (5) and a neon lamp (7). Either one, two or three coils can be connected in series by a five contact barrel switch (4). These three arrangements with the condenser (5) give the three frequency ranges. The position of the contact of the barrel switch (4) for each range is given in the table below.

The coupling coil (2) is connected to the secondary of a coupling unit (36), the primary of which is connected in the H/F transmitting aerial circuit (see figure 1, page R123). The secondary of the coupling unit (36) can be rotated inside the primary, thereby varying the degree of coupling, thus controlling the energy supplied to the G53.

Resonance with the transmitted frequency is obtained by using the range coil applicable and adjusting the variable condenser (5). When resonance is obtained the neon lamp (7) will glow. For accurate settings the least possible coupling of the coupling unit (36) should be used, so that only a very faint glow is obtained in the neon lamp (7).

Attached to the adjusting spindle of condenser (5), is a calibrated drum (8) which indicates the frequency as the condenser (5) is adjusted. The whole of the components are mounted on an aluminium panel (35) and are entirely enclosed by a copper screen. Two windows are cut in the panel to allow the neon lamp (7) and the calibrated drum (8) to be visible when adjusting the G53.

The range switch (4) and the controls of the condenser (5) and coupling unit (36) are adjustable from the receiving cabinet.

Range	Contacts.		Frequency range.
	Made.	Broken.	
1	8	9, 10, 11, 12	4,200 - 8,500
2	9, 10	8, 11, 12	8,000 - 17,000
3	9, 11, 12	8, 10	16,000 - 28,000

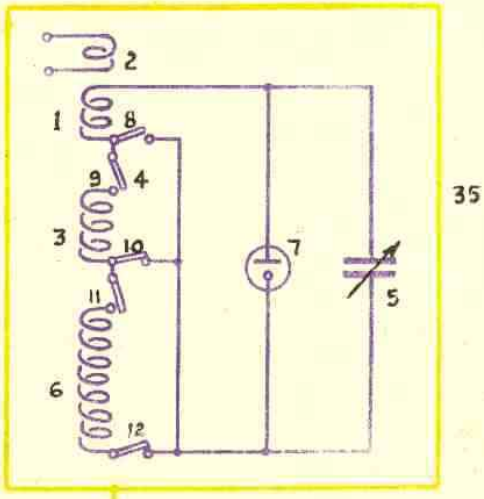

Fig. a.

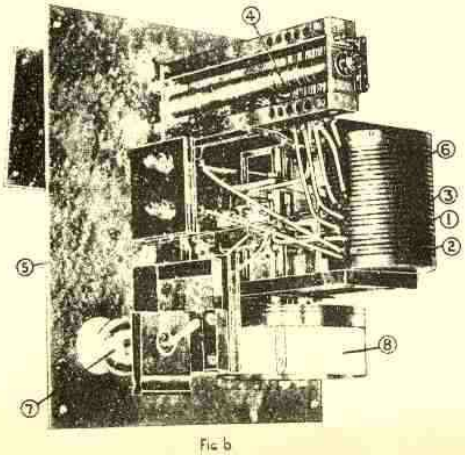

Fig b

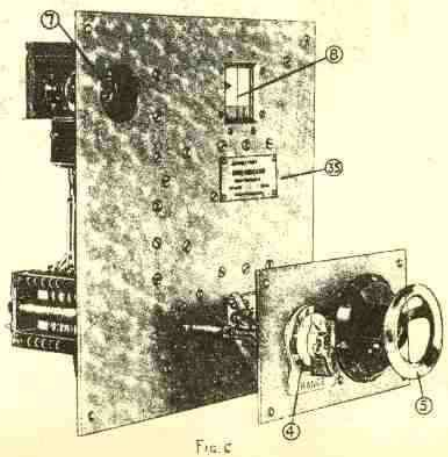

Fig. c