

Date of design:- 1924.
 Frequency:- 540 cycles/sec.

This set has been designed in line with modern practice. One motor-alternator (15) with automatic starter (14), Y or Z size (see pages MA7 or MA9) according to the motor-alternator fitted, as well as motor and alternator field regulators (37)(38), is fitted, controlled from the silent cabinet. Magnetic keys are used and in order to maintain the load as constant as possible so as to prevent variation of frequency a back shunt circuit (7)(8) is fitted. A.C. output 240 volts at 12 amps.

Power is taken from the ring mains to the main supply board through a D.P. switch (33) and from there it is distributed to the main and auxiliary circuits. The A.C. output is also taken to this board where it passes through an ammeter (11), pair of fuses (9) and magnetic key (6) and thence to the magnetic key board. It is this magnetic key (6) in the main supply board that connects the A.C. supply to the back shunt circuit (7) and (8) when the key (22) is not pressed. The back shunt consists of a resistance (8) across a portion of which is placed a magnetic switch (7) which makes when both oscillators are in use, short circuiting this portion of the back shunt resistance.

The control switch (21) (see figure b.), fitted in the silent cabinet, operates the bobbins of the magnetic switches (3)(4) situated in the magnetic key board which supply the A.C. circuits to the oscillators and the magnetic switch (7). Indicating lamps (16)(17)(18) are in series with the bobbins of these switches and turn on making the control switch on a lamp board in the silent cabinet above tallies showing "Port", "Starboard" and "Both".

There is a magnetic listening-through switch (5) in the magnetic key board which connects the oscillators to the special telephones for oscillator reception when the key is not pressed. There is also a magnetic switch (35) which short circuits or shunts the hydrophone telephones when the key (23) is pressed, otherwise the noise would be deafening. The resistance (32) can be adjusted so that own transmission may be read.

D.C. supply to the oscillator field coils is taken from the main supply board through a pair of fuses (36), a D.P. switch (19), across an auxiliary contact of which is fitted the kick coil (20), and an ammeter (25). There is a pair of fuses (26)(27) in the leads of each oscillator. The oscillators (1)(2) are the usual Fessenden type (see page UA2) and if two are fitted on opposite sides of the ship care should be taken that:-

- The oscillators are symmetrically disposed to facilitate direction finding when receiving.
- The displacement of the diaphragm is not more than 40° from the vertical.
- The horizontal angle between the plane of the diaphragm and the fore and aft line must not exceed 20°.
- The inclination of both diaphragms vertically and horizontally must be the same.

DETAILS OF CONTROL SWITCH (19)

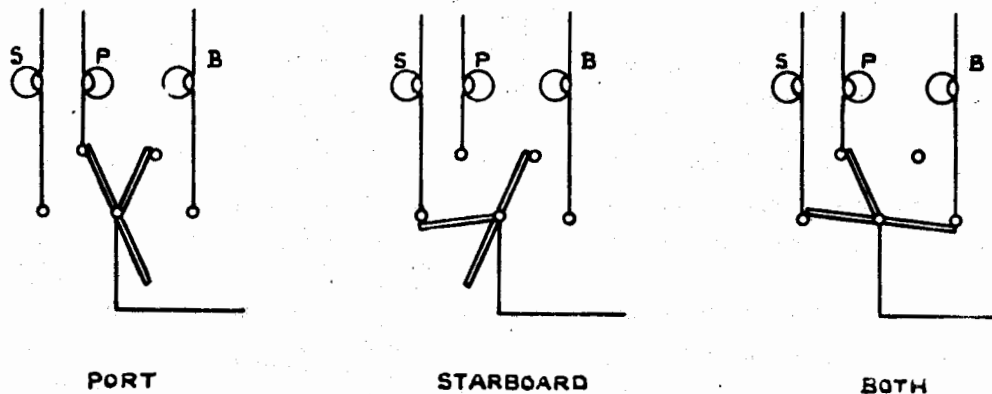


Fig. b.

UB4

TYPE 104

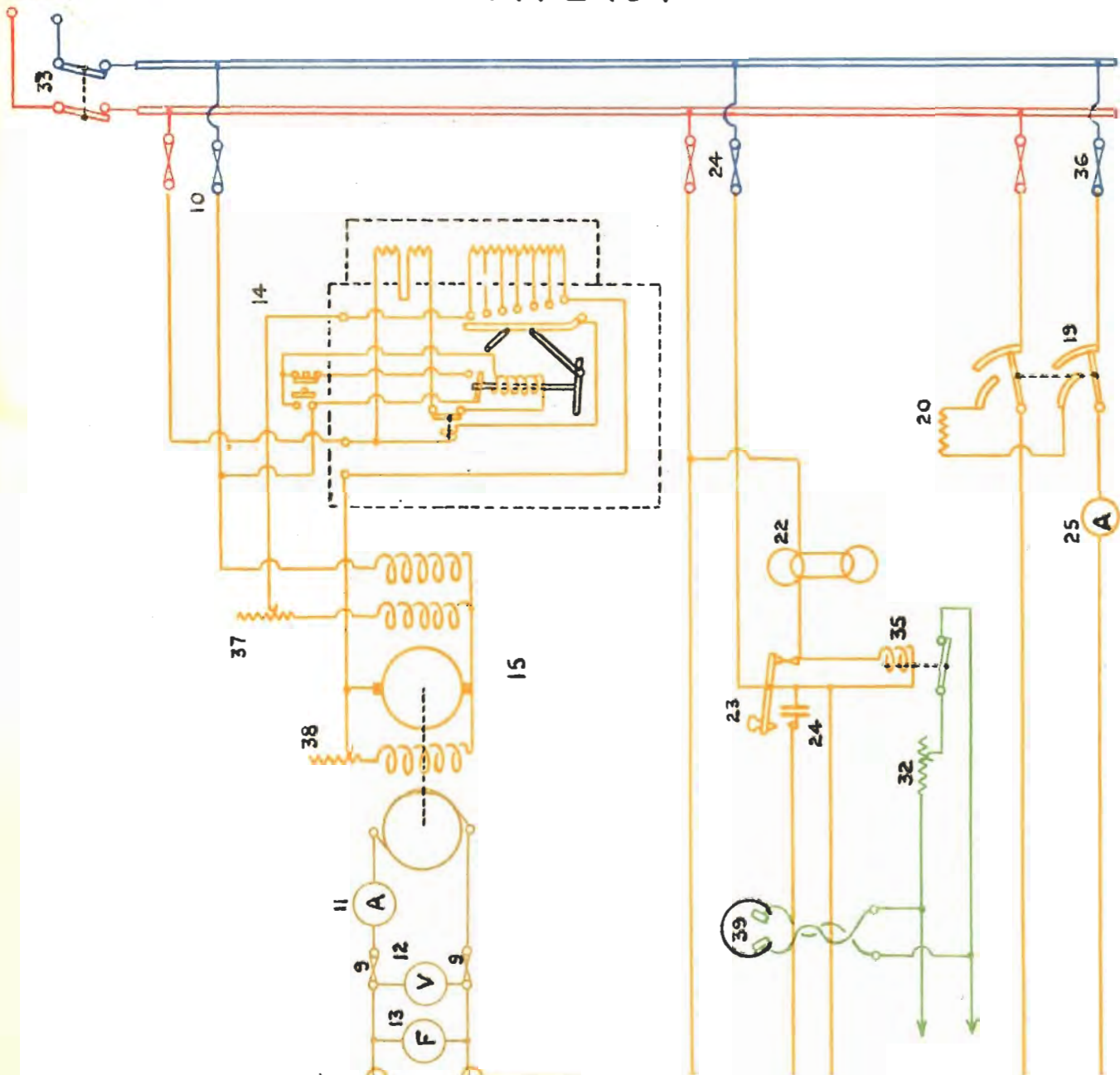


Fig. 6.

