

RECEIVER OUTFIT SA

Date of design:- 1918.
Frequency range:- 30 .. 667 kc/s.
Components:- S1, M9, Board I, M3B, S25, 8000 mic inductance, N9, K5.

Receiver Outfit SA is used in certain cases for D/F reception but its primary use is for other reception.

The aerial system consists of four frame coils (5)(6)(7)(8) S1 built into the bridge structure of the vessel and fitted at right angles to each other. They may be fore and aft and athwartships, in which case the fore and aft coils form one pair and the athwartship coils form a second pair; or they may be at 45° to the centre line, in which case the starboard forward and port after coils form one pair, and the port forward and starboard after coils the other pair. The coils of each pair are connected in parallel. For D/F reception both pairs must be used, but for other reception it is generally better to use one pair only. The direction of the transmitting station determines which pair should be used.

The leads from each pair of frame coils (5)(6) and (7)(8) are taken through copper tubes for screening purposes to change over switches (120)(121) each marked "S.A." and "D.F." D/F Reception. From the "D.F." side of the switches (120)(121) leads go to a radiogoniometer S25 (see page LB2). The search coil (21) of the S25, an 8000 mic inductance (117) and three condensers in parallel, a number 7 (113), a number 13 (114) and a number 39 (115), form the tuned circuit whence the output is taken through a C.O.S. (109) to Amplifier M9. The reaction coil (116) of the M9 is coupled to the 8000 mic inductance (117).

From M9 the leads pass through:- two C.O.S. (105)(104), note magnifier N9, telephone condenser (101) and transformer (102) to the telephones.

C.O.S.'s (110)(109) are provided to enable amplifier M9 to be used instead of M3B with the normal receiving set, and C.O.S. (105) so that the output from M9 can be taken to telephones thus cutting out M9 and leaving it for use on the ship's normal reception line (see figure a.) when C.O.S. (104) is changed over.

Other Reception. For other reception the radiogoniometer is disconnected when the C.O.S.'s (120)(121)(118) are put to "S.A." and the frame coils connected to the 8000 mic inductance (117). The tuned circuit now consists of the frame coils (5)(6)(7)(8), the 8000 mic inductance (117) and the three condensers (113)(114)(115).

Calibration. No satisfactory calibration has been carried out with Receiver Outfit SA, and the set is no longer considered as suitable for D/F except to give very approximate bearings.

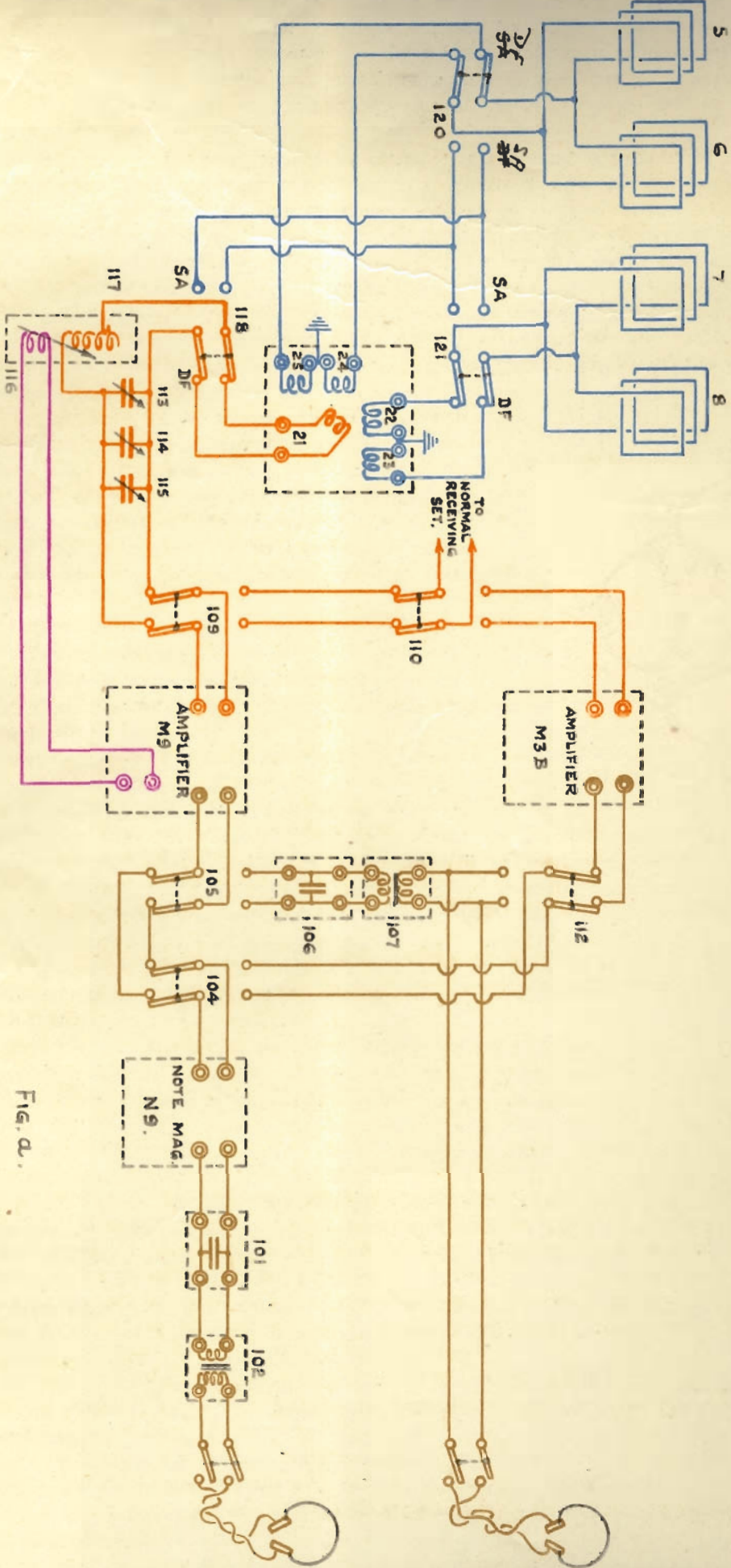


Fig. d.