

H/F D/F IN CRUISERS AND BATTLESHIPS.

There is considerable difficulty in obtaining a reasonable site in Battleships and Cruisers for any H/F D/F system, as the most suitable sites are already required for Radar or V.H/F aeriāls, etc.

It was therefore decided some time ago to investigate whether an H/F D/F system could be developed which would give reasonable results if sited much lower down, i.e. near the upper deck.

Development has now been completed of an outfit (D/F outfit RH2) working on the "spaced loop" principle, which does not necessitate the aerial being at a mast head, although the requirement to site the outfit as far away as possible from other masts and large upper deck fittings still remains.

This outfit is capable of giving useful bearings on the sky wave as well as on the ground wave and therefore would appear to be a better solution for Battleships and Cruisers than D/F outfits FH3 or FH4, which can only give reliable bearings on the ground wave, i.e. at fairly short ranges.

D/F outfit RH2 utilises a rotating aerial system with a hand wheel and receiver etc. in the office and a rotating shaft carrying the aerial system above the office.

The receiver used is a B36, which is a modified form of B21B and covers the same frequency range.

In Cruisers and Battleships, the policy is to fit this outfit aft on the quarterdeck, where good results have been obtained except for arcs about 20° on either bow. The disadvantages of such a site are quite evident from the point of view of washing down and possibility of damage and discomfort to the operator from gun blast.

In addition to the usual door to the office, there will be a hatch in the bottom of the office to enable entry or exit to be made when it is impossible to use the door.

Although it should be possible to obtain useful bearings with this outfit, results will depend to a certain extent on adequate signal strength of the transmission being observed, bearing in mind that the sensitivity of the outfit as a whole is governed by the size of the aerial system, which must clearly be restricted in size for fitting in ships.