H F COMMON AERIAL WORKING

HMS "SHEFFIELD" PROJECT

GENERAL

(a) The main objective is to overcome the widely differing performance of transmitting and receiving aerials for frequency and relative bearing (i.e. unsymmetrical horizontal Polar diagrams).

(b) Calibration is impossible as the effect of H F transmitter aerials, other than that in use, depends on the settings of the aerial tuning circuits of their associated transmitters.

(c) The chief requirement of transmitter aerials is to ensure H F ship-shore communication at 3000 miles with an output of 50 watts.

TRANSMITTER COMMON AERIAL WORKING PRINCIPLES

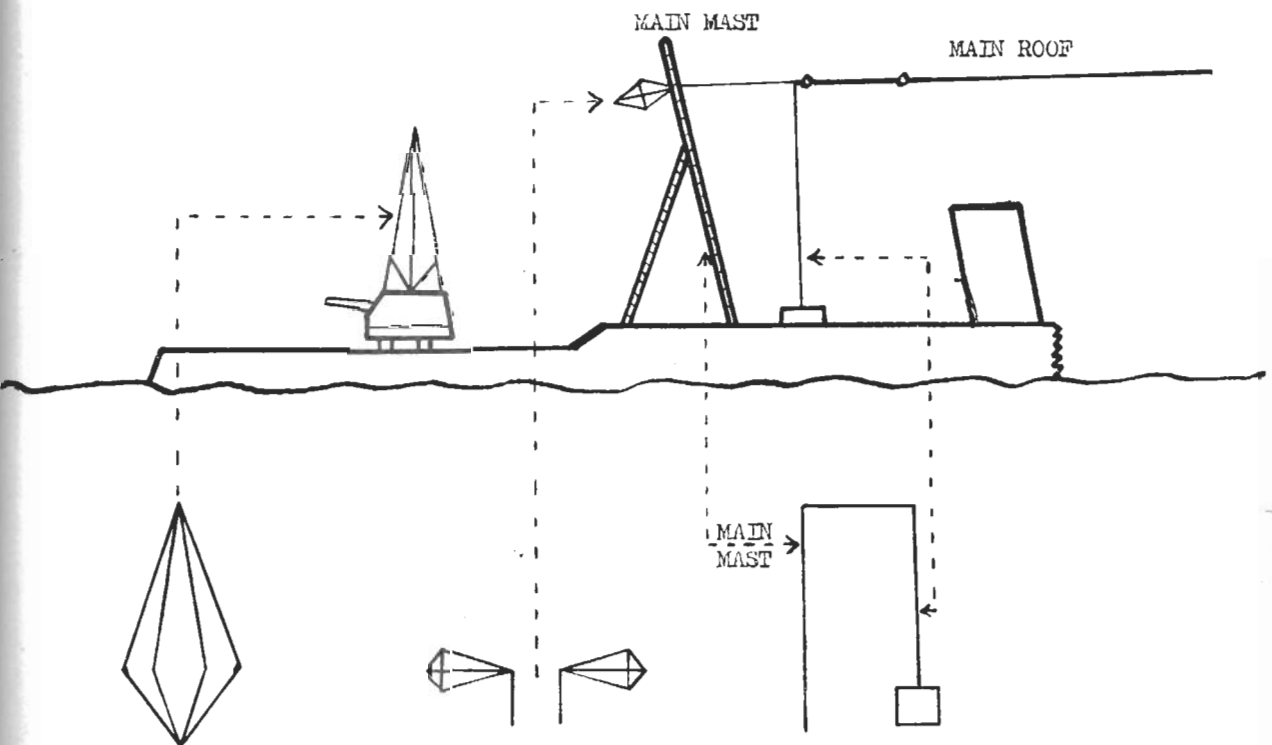
(a) The reduction of the number of H F aerials, as single wire H F aerials are the worst parasitic re-radiators.

(b) The utilisation of large fixed structures such as the masts, funnels etc as radiators.

(c) The use of better aerial sites.

(d) The consideration of aerial vertical Polar diagrams.

(e) The elimination of aerial trunks to improve damage control and ship safety.



WIDE BAND UNIPOLE
4.5 - 17 Mc/s.

WIDE BAND DIPOLE
17 - 24 Mc/s.

FOLDED UNIPOLE
1.5 - 4.5 Mc/s.