



An operator sets up a radiotelephone call between a ship and a subscriber.

transmitters at the Leafield fixed-service station for maritime radiotelephone and teleprinter operation. Other requirements will probably be met by transmitters at the Ongar or Rugby transmitting stations. In any event it will be necessary to replace the existing aerial systems associated with these transmitters, which were designed essentially for working to one destination, with types more suited for working to ships whose location might be anywhere in the world. Both high-performance omni-directional aerials and rotatable directional types (the latter remotely controlled by the op-

erator at the receiving station) will be used. Remote control of basic transmitter functions will also be extended to the operating position at the receiving station.

Selective calling facilities, similar to those being installed at the medium-range stations and which allow the long-range station to contact a selected ship on demand in much the same way as a telephone number is dialled, will be provided. Calling procedures will be somewhat more complex and it will be necessary to transmit the calls simultaneously in several frequency bands to ensure reliable contact regardless of the location of ships. Ships will be fitted with special receivers having facilities for monitoring several calling frequencies simultaneously.

Phase 3: Reconstruction of the receiving station. This final part of the reconstruction programme is the most complex and is still in the planning stage. The present facilities available at the Burnham long-range station have to be considerably expanded to meet the growing requirements of the service. In view of the age of the equipment and poor accommodation standards of the existing station, both a new building and new equipment will be required.

At the same time the site at Burnham is restricted and its value as a receiving station is being threatened by housing development in the vicinity. Plans are therefore being considered to transfer the whole operation to Somerton Radio—a receiving station in the fixed services—some 25 miles away which has ample accommodation for expansion and is not threatened by housing development. Somerton already has a highly effi-

cient aerial system that with very little modification will provide improved performance for the maritime services.

In the new station it is proposed to take advantage of computerised message handling techniques, and an in-depth feasibility study is at present being carried out. It will still be necessary for radio operators to send and receive Morse transmissions to and from ships. The initial proposals envisage the use of a visual display unit (VDU) at each operating position linked to a central computer store which will hold messages, shipping position information, etc, as required and which will also route automatically incoming messages into the inland network. The present use of conveyor belts and messengers for cross-office movement of hand telegram copy to the radio operators in contact with ships would be discontinued.

The new station would have a total of some 70 positions of which about 60 would be for wireless telegraphy and fitted with VDUs. Ultimately the service would probably make use of a central computer, in London or elsewhere, as part of a national telegraph switching system. Accounting data for the automatic preparation of customers' bills would be a feature of the proposed system.

An attempt has been made in this survey to give an indication of how the Post Office International and Maritime Telecommunications Region's services will develop in the decade or so before satellite systems make a significant impact in ship communications.

During this period it seems likely that radiotelephone working followed by radioteleprinter operation will increase significantly. Nevertheless a significant demand for Morse operation is almost certain to remain as long as the Safety and Distress services use this form of transmission and it is obligatory for ships of over 1,600 tons gross weight to carry qualified Morse operators.

● *Modernisation of the medium-range maritime radio services, which serve ships and offshore oil rigs within 200 to 300 miles of the British Isles, was described in the Autumn 1972 issue.*

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A radiotelegram is received at Burnham from a ship which could be anywhere in the world.

