

Fig. 7.—Generator with switchboard in rear.

### Receiving Gear.

The receiving apparatus is shown in Fig. 8. It consists of a Bellini Tosi radio-goniometer, the signals from which are passed through a two-stage H.F. filter, amplified and rectified on a Marconi type 55 amplifier, and finally passed, if conditions permit, through a two-stage note filter. One or two extra stages of (low-frequency) magnification are available if required.

The note filter can only be employed on steady notes. In a heavy sea the ships are inclined to roll, and this, by altering the aerial capacity, causes considerable varia-

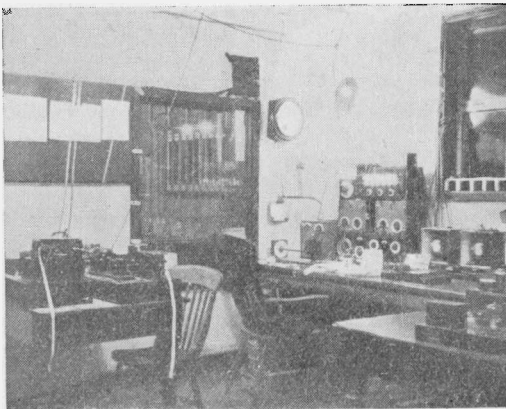


Fig. 8.—The receiver and operating room.

tions in wave-length. Modern transmitters, however, are fitted with coupled circuits or master oscillators, so rendering the wave-length independent of the aerial capacity.

Since most of the reception is from the west and south-west, the radio-goniometer is extremely useful, enabling "barrage" reception to be employed. For this arrangement a combination of frame and aerial reception is employed, the frame assisting the aerial in one direction but opposing it in the other. Hence, by suitable adjustment, reception from one direction can be suppressed over an arc of about 120 degs., which, of course, considerably minimises jamming, which very largely comes from the east.

The two aerials for the radio-goniometer are erected from the main mast, and are in

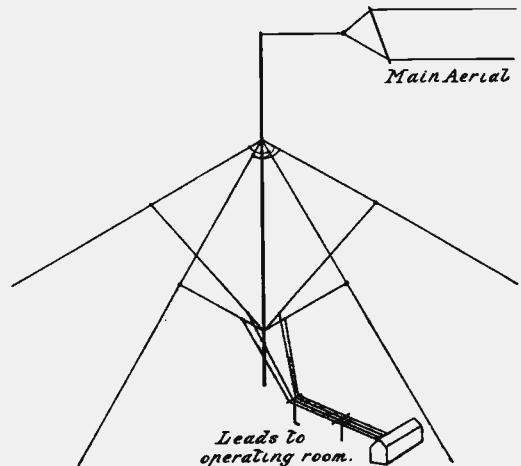


Fig. 9.—Arrangement of Bellini Tosi aerial.

the form of double triangular loops of 150 ft. side, as indicated in Fig. 9.

All operating is done from the room shown in Fig. 8. The necessary switches and key are arranged close at hand and operate the transmitter by remote control. The valve panel itself is in the next room and can be seen through the glass panel on the left of the operator. The land line instruments are not visible in Fig. 8, but are situated in a separate compartment on the right. The table on the left of the figure contains recording gear for use when conditions permit of high-speed reception.

Since its inception the traffic handled by the station has increased enormously, and it is proposed to instal a second transmitter at Devizes and to remove the reception point elsewhere, so enabling duplex working to be carried out with both transmitters by remote control from the receiving station.