

which communication has been established, and this information is supplemented by reports of ships sighted by the visual signal stations which are organized to tie in with the East Coast radio service.

There are 9 visual signal stations on the East Coast located at Aspy Bay, Scatari Island, Point Tupper, Sydney, Halifax, Camperdown, Saint John, Partridge Island, and Point Lepreau. In addition, the Lurcher Lightship reports by radio to the nearest coast station all ships spoken and sighted.

**Time Signals.**—Time signals are transmitted by Halifax (CFH) daily at 0300 G.M.T. simultaneously on 115 and 5502.5 kc/s and at 1500 G.M.T. simultaneously on 115 and 9040 kc/s; also by Camperdown (VCS) daily, except Sunday at 1400 G.M.T. on 417 kc/s.

The Dominion Observatory of the Department of Mines and Resources, Ottawa, operates a continuous night and day time signal transmission over its Radio Station (CHU) on the frequencies of 3,330, 7,335 and 14,670 kc/s. They are also carried over domestic telegraph circuits to Port Churchill, Manitoba, and transmitted over Station VAP daily at 1500 G.M.T. These signals are of value to survey parties and prospectors in providing facilities for determining their exact geographical positions.

**Radar.**—The use of radar as a marine aid to navigation continues to gain favour with navigators. In 1947-48 approximately 140 Canadian ships had this aid to navigation aboard and its intelligent use permits a ship to proceed with greater safety during inclement or foggy weather. Several Departmental ships have these radar equipments and one is installed for demonstration and instructional purposes in each of the Departmental quarters at Vancouver, Ottawa, and Halifax. Ship-board installations on Canadian ships, except Government ships, are serviced by private companies.

The Department is co-operating with the National Research Council in the development of a shore-based radar aid to shipping for use at harbour entrances. An experimental installation of this type is now in operation at Camperdown Direction Finding Station at the entrance to Halifax Harbour and it is expected to go into operation on an official basis within a reasonable time.

**Medical Advice to Ships at Sea.**—Ships at sea may obtain medical advice through any of the Department's coast stations. Messages from ships in this connection are forwarded to the nearest medical officer of the Department of Pensions and National Health and a reply is transmitted to the ship.

**Radio Assistance Rendered to Vessels in Emergency.**—Government radio stations rendered assistance to 50 ships and aircraft reported in danger or distress during 1947-48.

**Marine Casualty Reporting Stations.**—Seven marine casualty reporting stations on the Atlantic Coast and 10 on the Pacific Coast are fitted with radio-telephony to assist in promoting the safety of life at sea.

### **Subsection 3.—Federal Government Aeronautical Radio Stations**

Construction and Maintenance Engineers and Technicians are located at six Radio Aviation District offices, at Moncton, N.B.; Montreal, Que.; Toronto, Ont.; Winnipeg, Man.; Edmonton, Alta.; and Vancouver, B.C.