

*Coast Radio Stations.*—The primary purpose of the coast radio station organization is to provide radiocommunication facilities whereby any ship within 500 miles of Canada's coast may establish communication with shore. Twenty stations on the East Coast and Hudson Bay and Strait, seven stations on the Great Lakes and nine stations on the West Coast broadcast information daily to navigators at advertised hours. In addition, urgent information, such as hurricane warnings, is broadcast immediately upon receipt.

Coast stations CFH Halifax and CKN Vancouver, operated jointly by the Department of Transport and the Royal Canadian Navy, participate in the British Commonwealth scheme for providing long-range communication with ships.

*Coast Radio Direction Finding Service.*—There are 14 coast radio direction finding stations in operation—eight on the East Coast, five on Hudson Bay and Strait, and one on the West Coast. These direction finding stations continue to enjoy an enviable reputation for efficiency and accuracy. During the year ended Mar. 31, 1953, 15,755 bearings were given without charge to ships and aircraft.

*Radio-beacon Service.*—Radio beacons are established for the purpose of enabling any ship or aircraft equipped with a direction finder to determine its bearing or direction in relation to the radio-beacon station. There are 54 radio beacons in operation—29 on the East Coast, 16 on the Great Lakes, and 9 on the Pacific Coast.

Generally speaking, in clear weather each station at advertised hours transmits its characteristic for three periods of one minute separated by silent intervals of two minutes. In foggy weather all stations operate continuously, maintaining a uniform time cycle of three minutes, each station transmitting in its proper sequence for one minute separated by silent intervals of two minutes.

At Flat Point, N.S., Partridge Island, N.B., Red Islet, Cap des Rosiers, Biette Island, Que., Caribou Island, Hope Island, Main Duck, Southeast Shoal, Cove Island, Burlington Bay, Michipicoten Harbour, Long Point, Port Weller, Ont., Amphitrite Point, Pachena Point and Point Atkinson, B.C., the radio-beacon signals are synchronized with the emissions of the fog alarms for distance finding at those points during foggy weather.

In addition to the above radio-beacon facilities, ships equipped with direction finding apparatus may, upon request, obtain signals for the purpose of taking bearings from any of the coast stations. During the year ended Mar. 31, 1953, 282 such requests for signals were handled.

*Loran Stations.*—Loran (long-range aid to navigation) is a system of position finding based on the difference in the time arrival of pulse type radio signals transmitted from a pair of stations. This time difference is measured on a Loran receiver and is used in conjunction with specially prepared charts or tables to establish a line of position. The intersection of two or more lines of position determined from two or more pairs of stations provides the required position.

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

*Assistance Rendered by Radio to Vessels in Emergency.*—Government radio stations rendered assistance to 277 ships and aircraft reported in danger or distress, during the fiscal year ended Mar. 31, 1953.