Radio Coast Stations.—The primary purpose of the coast station organization is to provide radiocommunication facilities whereby any ship within 500 miles of the Canadian coast may establish communication with shore.

On the East Coast and the Hudson Bay and Strait there are 16 stations. There are 7 on the Great Lakes and 7 more on the West Coast. All of these broadcast information to navigators twice daily at advertised hours. Urgent information such as hurricane warnings, etc., is broadcast immediately upon receipt.

The Vancouver Coast Station (VAI) maintains long range radiocommunication with ships of any nationality at sea. Halifax (CFH) and Vancouver (CKN) Coast Stations participate in the British Empire scheme for providing similar radiocommunication services with ships, and are operated jointly by the Department of Transport and the Royal Canadian Navy.

Radio Direction Finding Service.—There are 13 marine radio direction finding stations in operation—7 on the East Coast, 5 on the Hudson Bay and Strait, and 1 on the Pacific Coast. These direction finding stations have an enviable reputation for efficiency and accuracy. During 1947-48, 14,950 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 radiobeacon station. There are 45 radiobeacons in operation—23 on the East Coast, 15 on the Great Lakes and 7 on the Pacific Coast.

"Loran" (Long range aid to navigation) is a system of position finding based on the difference in the time of arrival of pulse type radio signals transmitted from a pair of stations. This time difference is measured in 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.

There are three standard Loran stations in Canada, at Deming and Baccaro, N.S., and Spring Island, B.C., which operate in conjunction with Port Aux Basques, Nfld., Siasconset, U.S.A. and Point Grenville, U.S.A., respectively.

In clear weather each station, at advertised hours, transmits its characteristic for three periods of one minute separated by silent intervals of 2 minutes. In foggy weather all stations operate continuously, maintaining a uniform time cycle of 3 minutes, each station transmitting in its proper sequence for one minute separated by silent intervals of 2 minutes.

At Flat Point, N.S., Partridge Island, N.B., Red Islet, Que., Caribou Island, Gros Cap Lightship, Hope Island, Main Duck, Southeast Shoal, Cove Island, Michipicoten Harbour, Long Point, Ont., and Point Atkinson, B.C., the radiobeacon signals are synchronized with the emissions of the fog alarms at those points during foggy weather for distance finding.

Ships equipped with direction finding apparatus may, upon request, obtain signals for the purpose of taking bearings from any of the coast stations. During 1947-48, 204 such requests for signals were handled.

East Coast Visual Signal Service.—The chief function of the visual signal stations on the East Coast, located at strategic points, is to report the movements of vessels not equipped with radio. All radio coast stations report ships with