

Very High Frequency (VHF) Program.—Due to the overcrowded condition of the high frequency band and the fact that communication in the very high frequency spectrum is relatively free from static interference, progress is rapidly being made in providing communication between the ground and aircraft on the latter frequencies. The greatest drawback to the VHF spectrum is that communication is restricted to line of sight, thus making necessary more frequent installations than are required in the HF band.

Very high frequency transmitting and receiving facilities for the frequency 126·18 Mc/s were installed at range stations and towers during the year. There are now 69 installations on this frequency.

Meteorological Communications Stations.—Weather reporting stations are distributed at strategic points throughout the uninhabited areas of the country as well as throughout the populated areas. Reports from these stations enable the weather forecasters to make more accurate forecasts of great importance to both domestic and transatlantic flying operations.

Four meteorological radio stations located at Fort MacKenzie, Que., Nitchequon, Que.; Dore Lake, Que., and Dease Lake, B.C., were maintained and operated throughout 1949 and during the year the station at Indian House Lake was taken over from the United States Air Force. The purpose of these stations is to forward to the meteorological office the weather observations taken at the above points. The Meteorological Station at Port Harrison, Que., performs similar functions and in addition provides a restricted coast station service during the season of navigation in Hudson Bay.

Ionosphere Measurement Stations.—The purpose of ionosphere measurements is to determine virtual height of the ionized layer in the earth's upper atmosphere and to determine the amount of absorption which radio waves experience in passing through and in being reflected by this layer. The information gained is of great importance in predicting short-wave communication coverage and in determining the reliability and deviation of bearings from short-wave direction finders. There are approximately 70 ionosphere measurement stations located in different parts of the world. Five new ionosphere measurement stations at Ottawa, Ont., Churchill, Man., Portage La Prairie, Man., The Pas, Man., and at Prince Rupert, B.C., were established and placed in operation during 1949-50. In addition, stations are maintained at Clyde River, Baffin Island; St. John's, Nfld.; Resolute Bay, Cornwallis Island and Baker Lake, N.W.T.; and at Fort Chimo, Que.

Other Federal Government Radio Stations

Department of National Defence.—In addition to stations established for military purposes, Militia Services (Royal Canadian Corps of Signals) operates 11 permanent stations and two summer stations situated along the Mackenzie River and in Yukon on behalf of the Department of Mines and Technical Surveys.

Department of Public Works.—The Chief Engineers' Branch of the Department of Public Works operates 2 stations.

Department of Mines and Technical Surveys.—The Mines, Forests and Scientific Services of this Department operate 1 fixed station, 35 portable stations, 6 experimental stations and 1 commercial receiving station. These stations are used to provide communication and time signal service for survey parties and for the protection and administration of National Parks.