

Radio Aids to Air Navigation.*—These are provided along the routes used by Trans-Canada Air Lines, Canadian Pacific Air Lines, Maritime Central Airways, United States Airlines flying over Canadian territory, and a number of Canadian and United States military aircraft. There are now 90 radio range stations completed and in operation. There are 10 fan markers at Goose Bay, Labrador, and 6 stations providing weather information from isolated localities, and 4 homing beacons.

Radio Ranges.—During the fiscal year 1947-48, 2 new radio ranges were completed, namely, Gore Bay and Wiarton, Ont. The radio range at Coral Harbour, N.W.T., was recommissioned and considerable progress was made towards the completion of a new radio range at Sandspit, B.C., to serve the only landing strip on the Queen Charlotte Islands.

Problems associated with the provision of very high frequency omni-directional ranges continued to receive study, and a development contract was let for the construction of an engineering model of this equipment.

Instrument Landing Equipment.—During 1947-48 much work was done towards equipping Montreal, Que., Toronto, Ont., Winnipeg, Man., Saskatoon, Sask., Lethbridge, Alta., Calgary, Alta., and Vancouver, B.C., with instrument landing equipment. Sites were checked and finally settled and plans prepared for the letting of contracts for the required buildings. A study was made of proposals to increase these installations to 16 airports in future.

Station Location Markers.—Station location markers are now located on 77 radio range sites and serve to indicate to pilots when their aircraft are vertically over the range station.

Conversion to Simultaneous Operation.—Preparations were made in 1944-45 to convert 26 ranges, in addition to those already converted, to simultaneous operation; this would permit voice communication between the ground stations and aircraft without shutting off the course signals. During 1946-47, 10 stations were converted: Armstrong, Kenora, and London, in Ont.; Buchans, Nfld.; Dartmouth, N.S.; Charlottetown, P.E.I.; Megantic, Que.; Saskatoon, Sask.; Whitecourt, Alta.; and Goose Bay, Labrador.

Point to point radiocommunication facilities are established in conjunction with 52 range stations and high frequency air-ground facilities are provided at 17 ranges, in addition to the normal voice facility of the range. The Montreal station also provides transatlantic communications for the intercontinental exchange of meteorological data, and communicates meteorological data to Goose Bay, Labrador, and other points.

During the year 1946-47, frequency modulation stations were taken over from the R.C.A.F. at Sandspit, Massett, and Mount Hayes on the West Coast, and 3 similar stations on the East Coast at Cape Ray, Nfld., Cape North, and New Waterford, N.S. The west coast stations permit teletype communication between Queen Charlotte Islands and the mainland, and the east coast stations permit a similar service and a scheduled inter-phone service between Canada and Newfoundland.

* Detailed information concerning radio aids to air navigation is contained in "Air Navigation Radio Aids" and is published at 2-month intervals. This publication may be obtained from the Radio Division, Department of Transport, Ottawa.