

Air Traffic Control.—The primary functions of the Air Traffic Control Division of the Department of Transport are to expedite and maintain an orderly flow of air traffic and to prevent collision between aircraft operating within controlled air space, and between aircraft and obstructions on the movement area of controlled airports. This is accomplished through airport control, terminal control and area control services, together with flight information, alerting for search and rescue, customs notification and aircraft identification. These services are described below.

Airport Control is designed particularly to provide air traffic control service in the vicinity of major civil airports where the volume and type of aircraft operations, weather conditions and other factors indicate its need in the interests of safety. The service includes the control of pedestrians and vehicles on the manoeuvring area of the airport. Control is effected by means of direct radiotelephone communication or visual signals to aircraft and surface vehicles on and in the vicinity of controlled airports. The control towers are located at Whitehorse, Y.T., Victoria (International), Port Hardy and Vancouver, B.C.; Lethbridge, Calgary, Edmonton (Municipal) and Edmonton (International), Alta.; Saskatoon and Regina, Sask.; Winnipeg (International), Man.; Lakehead, Windsor, London, Toronto Island, Toronto (International), Ottawa and North Bay, Ont.; Montreal (International), Cartierville, Quebec, Val d'Or, Baie Comeau and Sept Îles, Que.; Moncton, Fredericton and Saint John, N.B.; Halifax (International) and Sydney, N.S.; Gander, Nfld.; and Frobisher, N.W.T. Most of the control towers are in continuous operation but a few provide 16-hour daily service only.

Terminal Control service consists of the provision of standard IFR separation to aircraft operating in accordance with Instrument Flight Rules within the local terminal control area, (which is generally within a 30-mile to 40-mile radius of the airport). Such service is provided by approach control units at Vancouver, B.C.; Edmonton and Calgary, Alta.; Saskatoon and Regina, Sask.; Winnipeg, Man.; the Lakehead, Toronto, Ottawa and North Bay, Ont.; Quebec and Montreal, Que.; Halifax (International), N.S.; Gander, Nfld.; and Frobisher, N.W.T.

Area Control is designed particularly to provide air traffic control service to aircraft operating within controlled airspace during weather conditions which prevent a pilot from seeing other aircraft or obstructions and necessitate his reliance on instruments to conduct the flight. Control centres are located at Vancouver, B.C.; Edmonton, Alta.; Winnipeg, Man.; Toronto, Ont.; Montreal, Que.; Moncton, N.B.; and Goose Bay and Gander, Nfld. Each centre is connected with the control towers, radio range stations and operations offices within its area by means of an extensive system of local and long-line interphone or radio circuits, and through the radio communication facilities available at these offices to all aircraft requiring area control service. Each area control centre is similarly connected with the adjacent centres, including centres in the United States, for the purpose of co-ordinating the control of aircraft operating through more than one control area. This communications system permits each centre to maintain a continuous detailed record of the movements of all aircraft operating in accordance with the Instrument Flight Rules, and a general record of the movements of all aircraft operating in accordance with the Visual Flight Rules within its control area. In addition to providing area control service to aircraft operating within the controlled airspace over Newfoundland, the Goose Bay and Gander control centres provide this service within the airspace over approximately one-half of the North Atlantic Ocean. The Vancouver area control centre also provides control service over the Pacific Ocean within the Vancouver Oceanic Control Area. Area control service is provided for approximately 16,000 miles of airways and control channels.

Radar Service aids in the control of both terminal and en route IFR traffic at certain locations. Radar terminal service is provided by the following terminal control units: Vancouver, B.C.; Calgary, Alta.; Saskatoon, Sask.; Regina, Sask.; Winnipeg (International), Man.; Toronto (International) and Ottawa, Ont.; Quebec and Montreal (International), Que.; Moncton, N.B.; Halifax (International), N.S.; Gander, Nfld. En route radar control service is being provided by the Winnipeg, Montreal, Gander and Goose area control centres.

Flight Information provides advice and information useful for the safe and efficient conduct of flight, including weather reports and forecasts, field condition reports, data concerning aids to navigation, traffic information, refuelling and transportation facilities and other related data of assistance to the pilot in planning or conducting a flight. Such service is provided by all air traffic control units but particularly by the eight area control centres.

Alerting for Search and Rescue is designed to ensure that the appropriate organizations are notified of aircraft in need of search and rescue aid and otherwise to assist such organizations promptly of non-arrival at destination of any aircraft for which a flight plan or flight notification has been received. This requires the maintenance and constant supervision of a continuous record of active flights to ensure that non-arrival of any aircraft is detected immediately. The service is available to any pilot who files either a flight plan or a flight notification with any communications agency of the Air Services of the Department or directly with one of the area control centres or control towers.