

Air traffic control. The primary functions of air traffic control in the Ministry of Transport are to prevent collisions between aircraft operating within controlled airspace and between aircraft and obstructions on the manoeuvring area of controlled airports, and to expedite and maintain a safe, orderly flow of air traffic. These functions are carried out by air traffic controllers in airport control towers, terminal control units and area control centres.

Airport control service is provided to aircraft operating on the manoeuvring area or in the close vicinity (five to 10 nautical-mile radius) of civil airports where the volume and complexity of air traffic indicate its need in the interest of flight safety. Service is also provided to other traffic, such as vehicles and maintenance equipment, on the manoeuvring area of an airport. Radio is the prime means of communication, although light signals may be used where radio is not available. Airport control towers are in operation at: Gander International, St. John's, and Wabush (Labrador), Nfld.; Halifax International and Sydney, NS; Charlottetown, PEI; Fredericton, Moncton and Saint John, NB; Baie Comeau, Montreal International, Quebec, Saint-Honoré, Saint-Hubert, Saint-Jean, Sept Îles, and Victoria Stolport, Que.; Buttonville, Hamilton, Kenora, Kitchener, London, North Bay, Oshawa, Ottawa International, Ottawa Stolport, Sault Ste Marie, St. Catharines, Sudbury, Thunder Bay, Toronto International, Toronto Island, Waterloo-Wellington, and Windsor, Ont.; Brandon, St. Andrew's, Thompson and Winnipeg International, Man.; Regina and Saskatoon, Sask.; Calgary International, Edmonton International, Edmonton Industrial, Grande Prairie, Lethbridge, Red Deer and Springbank, Alta.; Abbotsford, Fort St. John, Kamloops, Kelowna, Langley, Penticton, Pitt Meadows, Port Hardy, Prince George, Vancouver International and Victoria International, BC; Whitehorse, YT; Inuvik and Yellowknife, NWT. A transportable tower has been purchased for use where required in the North, and is in storage in Edmonton. Each region has a mobile control tower for use with air shows.

Terminal control service is provided to aircraft which are "climbing out", after departure from, or "letting down" for a landing at an airport. It is a service provided to flights operating in accordance with the instrument flight rules in order to separate them from one another and from en route aircraft operating through the terminal area which normally is an airspace within 30-50 nautical miles of an airport and which, in some cases, may encompass more than one airport. Radar is normally used, in conjunction with direct controller-pilot radio communication. Procedural means are used at some remote locations where radar is not yet available. The service is provided from all area control centres but separate terminal control units are installed at high-traffic-density airports where no area control centre is located. Such separate units have been established at Halifax, Quebec City, North Bay, Ottawa, Thunder Bay, Regina, Saskatoon and Calgary.

Area control service is essentially an aircraft separation and flight-following service provided to aircraft operating en route between airports. All flights that elect to file flight plans are given flight-following service and separation is provided to all aircraft operating according to the rules for instrument flight or controlled visual flight within designated controlled airspace. Designated controlled airspace consists of (1) high level airspace, i.e. the Southern Control Area, at and above 1,800 ft above sea level (asl); the Northern Control Area, at and above flight level 230; and the Arctic Control Area, at and above flight level 290; and (2) low level airspace, i.e. all airways, terminal control areas and control area extensions in airspace below the high level airspace. In addition, separation is provided to aircraft operating above 5,500 ft asl over almost all of the western half of the North Atlantic Ocean. Separation is provided using both radar and procedural means, with direct and indirect communication between controller and pilot. An extensive land line communication system links an area control centre with all affiliated airport control towers, terminal control units and communication stations and with adjacent area control centres in Canada and adjoining states, as well as with other agencies providing supporting and auxiliary services or having a need to deal directly with the centre, such as air-carrier operations agencies and military operations agencies. Area control centres provide several additional services. The Aircraft Movement Information Service assists the Department of National Defence in identifying all aircraft operating in specified areas. The Customs Notification Service facilitates the notification of appropriate customs agencies by pilots planning to cross the Canada-United States border. When necessary, appropriate search and rescue organizations are notified by the Alerting Service. Pilots en route may receive current information such as weather reports and field condition reports from the Flight Information Service. Area control centres are located at