

Cars equipped for measuring and locating sources of interference operate from offices located in 30 cities throughout Canada; 29,526 cases were dealt with during the fiscal year 1962-63. Sources include power lines, auto ignitions, heavy electrical equipment, domestic appliances, electro-medical apparatus, industrial radio frequency generators and TV receivers.

Regulations specifying the limits to be met by particular types of apparatus are contained in the Radio Noise Limits Order. Certain low-powered radio transmitting and receiving equipment is exempt from the operation of the Radio Act, e.g., garage door radio controls for a number of models have been exempted and consequently may be operated without the radio station licence otherwise required.

Radio Aids to Marine and Aeronautical Navigation.—The services of the Telecommunications and Electronics Branch of the Department of Transport in aid of marine and aeronautical navigation are outlined in the 1962 Year Book, at pp. 848-850. Details may be obtained on request from the Department of Transport, Ottawa.

Subsection 7.—Public and Private Commercial Microwave Facilities

Because of its population distribution and the vast areas served by microwave communication links, Canada ranks second highest among the world's users of microwave communication systems on a per capita/per mile basis. This subsection gives a summary of the facilities existing or under construction at mid-1963.

Railways.—As already stated on pp. 825-828, the Canadian National and Canadian Pacific Telecommunications Departments' existing microwave system links Ontario, Quebec and parts of the Maritimes and Newfoundland. A major expansion under way will provide communication services from coast to coast for television, telephone and data relay purposes. In addition, Canadian National Telecommunications has installed a microwave system between Alberta and the Yukon Territory which carries telephone and data traffic, and serves both civil and military organizations in these areas. In co-operation with Alberta Government Telephones, a combination microwave and tropospheric-scatter system connects Alberta and the Northwest Territories, also intended to provide communication for civil and military use in Far North areas. The Quebec North Shore-Labrador Railways have developed a microwave system extending into northern Quebec to provide communication for mining operations and to serve some civil communication purposes. Ontario Northland Railway is in the process of completing a microwave installation connecting northern Ontario and James Bay for purposes of military and civil communication. The Pacific and Great Eastern Railway has made use of an extensive 6,000 Mc/s microwave system linking Vancouver with Prince George and Dawson Creek, B.C.

Telephones.—The Trans-Canada Telephone System consists of eight provincial and private communication companies serving the various provinces and collectively providing an extensive trans-Canada microwave system for the purpose of carrying telephone, television and data transmissions from coast to coast (see also p. 821). This organization utilizes the portions of the radio spectrum in the 450, 900, 4,000, 6,000 and 10,000 Mc/s bands. Member companies individually operate microwave systems into northern British Columbia, Alberta, Saskatchewan, Manitoba and Ontario, in addition to the main TD-2 cross-country radio systems. These routes provide service to civil and military organizations throughout the various provinces. Tropospheric-scatter systems in British Columbia, Manitoba and Quebec are necessary for communications beyond the reach of existing microwave systems. Numerous microwave television feeds are located in areas not served by the trans-Canada system for the purpose of interconnecting outlying areas with the television networks.