

design of the directional antenna system must be approved by the Department of Transport and notification sent to the signatory countries of the North American Regional Broadcasting Agreement before a new broadcasting station can be licensed or before modification can be made in an existing station. The setting of standards for the equipment, installation and operation of a station provides control for efficient use of the radio spectrum. A further control is the requirement that operating personnel be subject to examination and certification.

Eight monitoring stations are maintained at suitable points across Canada to make frequency measurements and record transmissions to ensure that radio stations are complying with the procedures set forth for their particular service, to detect non-licensed stations, to assist in the investigation of inter-station interference and to make studies of spectrum utilization.

Under the Safety of Life at Sea Convention and the Canada Shipping Act, most passenger ships and larger cargo ships must be fitted with radiotelegraph or radiotelephone equipment, primarily for distress use. Approval is given for each make and model of equipment that comes up to the required standard and, in addition, the ship station as a whole is inspected after the licence is issued and periodically thereafter. All Canadian and foreign ships are subject to inspection to ensure that they conform to the requirements of the Safety of Life at Sea Convention.

Standards have been developed for the installation of aircraft radio stations specifying the techniques and materials that may be used, and inspections of radio stations aboard civil aircraft of all operational categories are carried out at prescribed periods. Inflight inspections of the radio communications and navigational aspects of proposed new air carrier operations, encompassing both land and oceanic routes, are also made as required.

Marine and aeronautical radio operator standards and related regulations are covered by international agreement. The International Telecommunication Convention prescribes the qualifications for radio operators on mobile stations and the regulations made under the Radio Act provide for the examination and certification of operators, both professional and amateur.

Number of Radio Stations Licensed and Operated in Canada.—During the year ended Mar. 31, 1963, 98,485 licences were issued in respect of radio stations in Canada. This figure includes stations operated by departments of the federal, provincial and municipal governments, stations on ships and aircraft registered in Canada and mobile stations operating in the public and private land mobile services but does not include private commercial broadcasting licences.

<u>Item</u>	<u>Year Ended</u>	
	<u>Mar. 31, 1962</u>	<u>Mar. 31, 1963</u>
	No.	No.
New applications received.....	15,714	16,540
Authorizations granted.....	17,000	14,510
Licences cancelled.....	6,580	7,933
Licences renewed.....	61,162	71,396
Amateur licences issued.....	9,347	10,182
General radio service licences issued.....	—	13,579
Total licences issued.....	79,329	98,485
Licence amendments.....	19,851	22,832
Certificates of registration issued to U.S. licensees.....	1,630	1,831
Net increase over preceding year.....	11,487	19,156

Investigation and Suppression of Inductive Interference.—The Radio Act provides penalties for selling or using apparatus liable to cause interference to radio reception. Standards are developed and type approvals issued for certain classes of such equipment. The Telecommunications and Electronics Branch of the Department of Transport provides also a country-wide interference service using special investigation equipment for the purpose of tracing sources of interference and recommending cures for interference to broadcast, television and other radio reception.