

*Private Stations.*

In order to regulate in an effective manner the use of private radio-stations, Radio-Telegraph Regulations for amateur, experimental, and broadcasting stations were gazetted on the 18th January. Arrangements are now complete for the issue of licenses and the withdrawal of the provisional permits that were granted pending the issue of the regulations. It is anticipated that more than a thousand licenses will be issued during the year.

Three types of private radio-stations are recognized—viz., amateur stations, experimental stations, and broadcasting stations.

Amateur stations are defined as those which are erected and operated solely for personal interest or for experimental purposes. Licenses for three kinds of amateur stations are permitted to be issued, namely: (1) Amateur radio-stations licensed for reception only (receiving stations); (2) amateur radio transmitting and receiving stations, Grade I; (3) amateur radio transmitting and receiving stations, Grade II.

The licenses for amateur receiving stations are designed to provide for reception from radio-telephone broadcasting stations as well as for experimental reception, while the licenses for amateur transmitting stations, Grades I and II, are intended to provide experimental transmission facilities for those interested in radio science, and are issued according to the qualifications of the applicant and the object in view.

The licenses for "experimental stations" are intended to provide facilities for the work of pure research in radio science by universities and other scientific institutions and bodies.

The regulations governing radio-telephone broadcasting are designed to render the broadcasting of music, lectures, news, and other items of interest as widely available as possible, not only to the more thickly populated areas but also to scattered communities. At the same time an endeavour is made to reduce to a minimum the objectionable features of interference which have marred the success of such services in other countries.

Both the North and the South Island have been mapped out into suitable areas in which broadcasting stations of a certain power and using a certain fixed wave-length are to operate. The location of the broadcasting areas was determined by the technical conditions governing the operation of such stations, and by a careful study of such features as distribution of population, topography of the country, and the isolation of various areas from other means of communication.

## TELEPHONE-EXCHANGE SERVICE.

It is gratifying to report that in the matter of connections the telephone-exchange service has more than doubled in extent during the last ten years. In 1914 the total number of telephone-stations in the Dominion was approximately 50,000. This year there are over 100,000 stations. While it has not been possible to keep pace during recent years with all the demands that have been made for telephone service, it is interesting to note that for the third year in succession a fresh record has been established in the number of new connections, the figures for the year ended 31st March, 1923, being 10,200, as compared with 9,259 in 1922 and 8,785 in 1921. In addition to this, 1,715 extension telephones and 321 extension bells were installed, while 4,893 subscribers' instruments were removed to new premises.

Among other operations, the year's work included—

The opening of new manual exchanges at Avondale, Broadwood, Canvastown, Cave, Collingwood, Crookston, Hillersden, Hororata, Mayfield, Mokaiti, Ngatea, Ohinewai, Orini, Paekakariki, Patetonga, Pihama, Porangahau, Rahotu, Ranfurly, Waimauku.

The conversion to automatic of the Palmerston North Exchange.

The extension of the automatic equipment at nine exchanges.

The extension of the switchboard accommodation at twenty-five manual exchanges.

The installation of underground and aerial cables at a number of the smaller exchanges.

The extension of the cable system at sixty-three exchanges.

The reconstruction of the aerial system at a number of exchanges.

The prosecution of the new automatic installations at Wellesley Street, Auckland; Ponsonby; Mount Eden; Remuera; Onehunga; Devonport; Takapuna; and Wanganui.

The maintenance of 102,032 telephone stations.

The reduction of the waiting-list of prospective subscribers by 1,926.

The distribution of the new connections made during the year under the headings of city, intermediate, and country exchanges is shown in the following table:—

Engineering District.	City Exchanges (Auckland, Wellington, Christchurch, Dunedin).	Intermediate Exchanges (Examples: Hamilton, Gisborne, Wanganui, Timaru, and Oamaru).	Country Exchanges (Examples: Hawera, Otaki, Waipu, Milton, Waipukurau, Tolaga Bay).	Totals.
Auckland .. ..	780	261	2,146	3,187
Canterbury .. ..	660	128	1,040	1,828
Otago .. ..	459	165	514	1,138
Wellington .. ..	972	934	2,141	4,047
Totals .. ..	2,871	1,488	5,841	10,200