

New Zealand towns (as at 30th November, 1935) :—

Town.	Percentage of Licenses to Population.	Percentage Increase since 30th November, 1934.
Masterton	19·10	3·36
Whangarei	17·51	4·77
Wellington	16·86	2·31
Hamilton	16·72	3·51
Blenheim	16·70	Nil.
Ashburton	16·30	3·09
Palmerston North ..	16·05	4·76
Oamaru	15·06	2·27
Christchurch	14·96	2·84
Hastings	14·94	3·91
New Plymouth	14·38	2·41
Rotorua	13·71	3·71
Bluff	13·71	3·36
Wanganui	13·29	2·12
Napier	12·92	2·24
Auckland	12·91	2·60
Dunedin	12·87	2·36
Nelson	12·29	2·21
Timaru	12·17	2·69
Greymouth	11·92	1·78
Gisborne	11·32	1·81
Invercargill	11·27	2·09
Westport	10·34	No previous figures.

TECHNICAL.

The Board's coverage plan, which aims at providing a first-class service from the national stations all over the Dominion, was considerably advanced during the year.

In the autumn the power of Station 3YA was increased from $2\frac{1}{2}$ to 10 kilowatts, and resulted in a marked improvement in the service. In many areas where signal strength was previously barely sufficient to over-ride the noise-level, the increase in power has had the effect of providing listeners with a trouble-free service.

In November the new 10 kilowatt transmitter at Highcliff, on the Otago Peninsula, commenced test transmissions which took the form of actual programmes normally radiated by the old 4YA transmitter. This procedure was adopted so that the station equipment and aerial system could be thoroughly tested and adjusted under working-conditions. After complete tests and necessary adjustments, the new station was officially opened on 2nd December last. The transmitter and associated equipment were supplied and erected by Amalgamated Wireless (Australasia), Ltd. The aerial system is similar to that of 1YA, Auckland, there being a single 500 ft. insulated mast suspending a modified half-wave umbrella type aerial. The comprehensive tests which have been conducted indicate that the whole equipment is of a high standard, and conforms to the specification which embraced all modern requirements. The radiation efficiency of the aerial system is particularly good. Both field-strength measurements and reports from listeners have been very satisfactory, and have clearly demonstrated that the time spent on site-testing is well worth while.

With three modern and efficient 10 kilowatt transmitters in operation, there are few localities in the Dominion where two of them are not received at reasonable strength.

The next important work is the erection at Titahi Bay, near Wellington, of a transmitter having a power of 60 kilowatts unmodulated aerial energy. The order for the equipment was placed some months ago, Amalgamated Wireless (Australasia), Ltd., being the successful tenderers. It is anticipated that the new transmitter will be brought into service towards the end of the present year. The aerial system will be similar to the new 4YA, but the mast will be 700 ft. high. A mast of this height is being erected because the wave-length of the new transmitter will be longer than that of 4YA, and a higher mast is necessary in order to obtain the same efficient radiation. It is confidently predicted that the new 2YA transmitter will give a coverage of a national character. It will be possible to hear the new station night and day with modern receivers in all reasonably quiet localities.

The incidental technical equipment required in a modern broadcasting service, such as outside relay equipment, microphones, studio and microphone amplifiers, testing apparatus (including cathode ray oscillographs), has been brought up to date during the year.

As opportunity offers, further field-strength measurements are being made in order to complete the survey of reception conditions throughout the Dominion.

Recording equipment is now in use in the studio at 2YA, Wellington, and is proving a most useful adjunct. Many important events occurring at times unsuitable for broadcasting are being recorded and transmitted at an hour suitable to the majority of listeners. A library of special recordings of noteworthy events and talks by prominent people is also being built up, not only with a view to future programmes, but also with the object of preserving a permanent record for the Dominion.