

As indicated in the latter report, New Zealand has the distinction of being the only country having “wireless-signallers” (mate-operators) in sole charge of its small-ship installations, and the success of this movement will no doubt be watched with interest by other administrations.

INTERNATIONAL RADIO-TELEGRAPH COMMUNICATION IN RELATION TO NEW ZEALAND.

Considerable interest was evinced in various quarters regarding the attitude of New Zealand towards long-distance radio-telegraph communication, which, by means of beam wireless and other systems, has quite recently received considerable application in other parts of the world. It was generally recognized that any development of this kind would immediately prove to be a serious competitor to the existing cable systems, in one of which the Government of New Zealand, in common with certain other Dominions and the United Kingdom, is financially interested. It was also appreciated that with a population of approximately a million and a half there could not exist sufficient traffic to keep fully employed a high-speed system of directive radio communication confined in its operations to two terminal points. Until the population, and hence the point-to-point international telegraph traffic, is considerably augmented, it is admittedly a difficult problem to demonstrate the purely economic advantages to be derived from such a system.

Experimental work is being done upon providing, in addition to telegraph channels, a radio-telephone system of communication. The progress of these experiments will be watched with interest, as the simultaneous use of both telegraph and telephone would no doubt be a factor that would play a large part in the ultimate decision regarding the establishment of an international radio-station. Further, the possibility of the successful working, at certain hours of the day, of intermediate in addition to the terminal stations would greatly enhance to this country the value of such a means of communication. It has been arranged that we shall be kept in touch with developments of this nature which may have a bearing on the future policy of the Government.

TRANSOCEANIC SPEECH.

The possibility of New Zealand telephone communication with other countries by means of specially-designed submarine cables was discussed with cable-manufacturers and authorities on telephone transmission engineering. There are at present unsolved electrical and mechanical difficulties in the way of the manufacture of a submarine cable to give telephone speech over any considerable distance. For telephone speech it would be necessary to insulate such a cable with specially prepared paper, which would at any time be subject to damage by the ingress of moisture. Modern paper-insulated cables are invariably sheathed with lead, but with the depth-pressure that would be experienced lead sheathing would be mechanically impracticable. Even if such a telephone-cable were practicable, the subsequent multiplication of the available channels by modern radio-frequency methods would present still greater difficulties.

It may therefore be safely assumed that unless radical developments in transoceanic-cable design are brought to light, telephonic speech with other countries will be possible only by advances in the art of radio-telephony.

BROADCASTING : STATISTICAL.

Attached hereto is a schedule giving certain data and some unique comparisons with respect to broadcasting developments in a number of English-speaking countries, where broadcasting has undergone most rapid development. The figures should prove of value in demonstrating from various angles the position of New Zealand broadcasting in relation to other countries. To those able to analyse the same they should furnish data for much useful speculation. Such subjects, for example, as the effect of population-density and distribution, license fees, and signal intensity upon development may, within certain limits, be deduced.

Comparative Statistics relating to Radio Broadcasting.

Country.	(1.) Radio Sets in Use.	(2.) Total Population.	(3.) Radio Sets per 100 of Popula- tion.	(4.) Radio Sets per 100 of Population, based on N.Z. Development (2·7 per Cent.) and Relative Population Densities (Col. 6).	(5.) Area of Populated Territory, in Square Miles.	(6.) Population Density per Square Mile.	(7.) Radio Sets per Square Mile of Populated Territory.	(8.) Radio Sets per Square Mile based on N.Z. Development (0·4 per Cent.) and Relative Population Densities (Col. 6).	(9.) Telephones per 100 of Popula- tion.	(10.) Percentage Ratio of Radio-set Develop- ment to Telephone.	(11.) License Fee.
New Zealand ..	40,000	1,500,000	2·7	2·7	100,000	15	0·4	0·4	9·2	29·3	£ s. d. 1 10 0
Australia ..	150,000	6,000,000	2·5	1·1	1,000,000	6	0·15	0·16	6·1	41·0	1 8 0*
Canada ..	140,000	9,000,000	1·5	1·2	1,250,000	7	0·112	0·18	12·2	12·3	0 4 2
British Isles ..	3,000,000	48,000,000	6·2	7·2	120,000	400	25·0	11·0	3·0	206·6	0 10 0
United States of America	5,500,000	114,000,000	4·8	6·8	3,026,000	38	1·8	1·1	14·8	32·4	..

Country.	Number of Broadcasting Stations.	Total Antenna Power in Watts.	Average Power in Watts per 1,000 Square Miles.	License Fee.
New Zealand	11	6,900	69·0	£ s. d. 1 10 0
Australia	21	8,690	8·6	1 8 0*
Canada	48	21,500	17·2	0 4 2
British Isles	21	36,000	300·0	0 10 0
United States of America	700	510,000	168·0	..

* Average.