

Messages received from international stations increased by 25·13 per cent., and there was a decrease of 12·34 per cent. in the traffic received from Australia.

492 Press telegrams were sent via Pacific and 1,423 via Eastern, compared with 963 and 1,542 respectively last year.

The number of cables sent as “deferred” during the year shows an increase of 10·77 per cent. over the previous year’s figures.

The number of week-end and Expeditionary Force messages forwarded from New Zealand shows a slight decrease of 0·39 per cent.; the total number of messages for the years 1916–17 and 1915–16 was 28,277 and 28,387 respectively.

For 1915–16, the first time since the opening of the Pacific cable, the revenue exceeded the expenditure, the profit for the year being £17,924 10s. 3d., consequently no subsidy is payable.

WIRELESS TELEGRAPHY.

The working of the wireless stations continues to be satisfactory. Improved methods of detecting signals by means of the ultraudion were introduced at Awarua, Wellington, and Auckland a few months ago, and apparatus for the other stations has been procured and will shortly be brought into use. The results obtained at Awarua, where the apparatus has been extensively experimented with, have been particularly gratifying. The signals of stations using damped and undamped waves invariably come in of readable strength from American, Asiatic, and European stations. The use of this detecting-apparatus with a particular combination of the receiving-circuits has demonstrated that daylight signals from stations using the ordinary wave-lengths can be rendered plainly audible, which by the ordinary methods and the use of the crystal detector could not be heard.

The wireless apparatus of the “Aurora” was overhauled and varied prior to her departure for the relief of the men who had been left in McMurdo Sound. A quantity of wireless apparatus was loaned for use on the vessel.

The volume of wireless traffic is still being kept restricted, owing to requirements arising out of the state of war.

Twenty-one ship-stations are registered in New Zealand.

The erection of a residence at the Awanui wireless station for the use of the engineer was completed during the year.

As indicating collateral uses which wireless stations may serve, “time” was transmitted on one evening from the Observatory clock, Wellington, to Tahiti. The clock was arranged to make contacts at intervals of a minute, and worked a relay at Awanui over a land-line about 600 miles long, the relay in turn operating a sounder which served as a key to work the high-power transmitting-apparatus. Ten separate signals which were sent were reported as having been received in an entirely satisfactory manner at Tahiti, the distance covered being 2,245 nauts.

The wireless working with Apia, Samoa, is being satisfactorily maintained.

TELEPHONE EXCHANGES.

The expansion of the telephone-exchange system continued steadily throughout the year. Ten new exchanges were opened and two closed, and the number of subscribers increased by 4,250 and connections by 3,547. The total number of exchanges is 267, of which 62 are central exchanges—i.e., self-contained—and 205 sub-exchanges.

The total number of connections of all kinds amounts to 62,523, of which 49,086 are direct-paying connections, 9,537 extensions, and 3,900 bureau and service connections. The increase in the connections during the year amounted to 6·01 per cent.

The telephone-exchange system includes 3,897 miles of line and 142,469 miles of wire.

The total revenue received was £317,275, an increase of £29,728 on last year’s figures.

The conversion of earth-working exchanges to metallic circuit is steadily proceeding, and 5 exchanges have been changed to the latter system during the year. Of the existing exchanges, 208 are on the metallic-circuit system, 38 on the single-line system, and 21 are in course of conversion from single line to metallic.

The party-line system has been effective in greatly extending the radius of subscribers’ lines and in reaching country settlers. Its popularity and success have been maintained, and resulted in the opening of several new exchanges and the extension of others. There are now 3,149 party-line circuits, with a total of 10,661 subscribers, an increase in this particular branch of exchange work of 608 lines and 2,156 subscribers.

The work of laying the telephone cables underground is still proceeding, and during the year three miles of pipes and fifteen miles of armoured cable were thus laid.

The adoption of a superior type of repeating-coil has increased the working range of several trunk exchange lines. Code-ringing has been superseded in favour of divided circuits on these lines. This system has proved its efficiency, and will be extended.

The proportion of exchange connections of all kinds to the population of the Dominion on the 31st March, 1917, was slightly over 5 per cent. The percentages in each of the four principal centres are as follows: Wellington, 10·28; Auckland, 6·58; Christchurch, 6·66; Dunedin, 7·22.

The number of telephone connections at the ten principal telephone exchanges on the 31st March, 1917, was as follows: Auckland, 7,766; Wellington, 7,724; Christchurch, 5,913; Dunedin, 4,934; Wanganui, 1,658; Gisborne, 1,651; Napier, 1,549; Hastings, 1,455; Invercargill, 1,451; Palmerston North, 1,329.

SLOT TELEPHONES.

During the year thirty-nine new slot-telephone installations have been made, bringing the total number in the Dominion up to 237. It is found that wherever these instruments are erected in business centres the revenue pays the expenses of management and upkeep, while the reverse is usually the case in purely residential areas.