

BIRKENHEAD TELEPHONE EXCHANGE : PROPOSED REPLACEMENT BY AUTOMATIC SYSTEM.

To provide the residents of Birkenhead and Northcote with automatic-telephone-exchange service it was decided during the year to connect the subscribers in the area to the Ponsonby Automatic Exchange by means of submarine cable crossing the harbour, and an order was placed for the supply of two lengths of 150-pair submarine telephone-cable for the purpose. This cable will enable up to 300 subscribers in the Birkenhead-Northcote area to be connected to the Ponsonby Automatic Exchange, which will give them access to the whole of the subscribers in the Auckland metropolitan area.

Shipment of the cable is promised for April, 1930. Upon delivery in New Zealand early arrangements will be made for the laying of the cable and for the Birkenhead-Northcote subscribers to be connected with the Ponsonby Exchange as indicated.

CONVERSION OF RURAL LINES TO AUTOMATIC WORKING.

Numbers of subscribers to automatic exchanges in New Zealand are situated a considerable distance from the exchange centres, and hitherto have been beyond the range over which satisfactory automatic dialling could be accomplished. To overcome this a number of telephones have recently been adapted in the Department's workshops to allow dialling to be carried out over an increased range, and at the same time to enable subscribers on such rural party lines to be called from the exchange and to call each other by means of manual ringing. Now that such telephones are available a policy of converting rural lines to semi-automatic working has been decided upon. The first exchange to be affected is Napier, where semi-automatic telephones have been provided on a number of rural lines, together with the equipment necessary in the exchange, so enabling the rural subscribers to dial direct other subscribers connected to the Napier Exchange. Arrangements are being made for the rural lines at certain other exchanges to be fitted with semi-automatic telephones; and, as opportunity offers, the use of these telephones will be further extended.

AUTOMATIC TELEPHONES IN NEW ZEALAND.

With the conversion of the Christchurch Exchange to automatic working in September, 1929, approximately 50 per cent. of the telephones in New Zealand were of the dial type. In the United States the proportion of dial telephones to magneto telephones probably does not exceed 25 per cent. Thus, while the United States of America leads the world in the matter of telephone density, New Zealand has pride of place in regard to the percentage of dial telephones in use.

Some idea of the development that has taken place in automatic telephones in New Zealand may be gained from the fact that the proportion of dial telephones to the total number of telephones in use has risen from 17 per cent. in 1923 to 50 per cent. in 1929. The conversion of the other manual exchanges now contemplated will still further increase the number of automatic telephones in use.

RURAL AUTOMATIC EXCHANGES.

A comparatively recent advance in automatic-telephone engineering, and one which is fast developing along suitable lines, is the introduction of unattended rural automatic-telephone exchanges capable of meeting a wide range of conditions. The objective is to apply the principles of machine switching to small country exchange systems of from fifty to one hundred lines, where the cost of continuous manually operated service would be prohibitive. The ideal equipment would be small and compact, and would not call for regular attendance for maintenance, this being effected by periodical visits. Progress along these lines has been somewhat slower than was anticipated, but in order to determine how far the available rural equipment is capable of meeting the telephone conditions of New Zealand an initial order has been placed for two typical installations. This equipment has not yet come to hand, but will, upon receipt, be tested out at suitable exchange centres with a view to determining whether it can adequately meet the somewhat unique telephone requirements of our rural communities.

EXTENSIONS TO EXISTING AUTOMATIC-TELEPHONE EXCHANGES.

During the year extensions to the switching equipment of automatic exchanges have been carried out at Hamilton, Onehunga, Ponsonby, Mount Eden, Remuera, Wanganui, Palmerston North, and Courtenay Place. In all, provision was made for 4,340 additional subscribers. Good progress was also made at the four main centres with the installation of private branch exchanges of the automatic type.