

APIA RADIO.

This station is controlled by the External Affairs Department, for which the Post and Telegraph Department acts in a consultative capacity.

Removal of Station.—It is proposed in the near future to move the Apia radio-station into the township of Apia, where power from the hydro-electric system will shortly be available. The change of location will also enable other economies to be effected.

Short-wave Working.—Consideration is now being given to the installation of a short-wave transmitter of higher power than that at present used, with a view to improving the already high-grade service between Samoa and New Zealand.

RAROTONGA RADIO.

This station is under the control of the Cook Islands Department, for which the Post and Telegraph Department acts in a consultative capacity.

Mast and Aerials.—The stability of the aerial system has been increased by the erection of supporting-stays.

Battery.—The battery has been fitted throughout with new plates, and is now in first-class order.

LOW-POWER STATIONS.

The radio-station at Salailua, Samoa, was closed on the 4th October, 1928, owing to staff difficulties. In view of the small amount of traffic handled, it is probable that the station will not be reopened in the near future.

Owing to the death of the Native operator, the Fakaofu Station, in the Tokelau Islands, has been closed since the 9th September, 1928. Another Native has now been trained, and the station will be re-opened shortly.

With the foregoing exceptions, the low-power stations engaged in fixed point-to-point working have given almost uninterrupted service throughout the year. Although these stations are operated by comparatively inexperienced personnel, particularly in the outer Pacific islands where they are manned by Natives, a very satisfactory service has been maintained.

BRITISH OFFICIAL WIRELESS NEWS.

The British official press news transmitted from the radio-station at Rugby, England, continues to be received daily in New Zealand.

The news is transmitted simultaneously on short and long waves, thus affording distant stations an opportunity of receiving on one wave signals which through atmospheric or other causes might be lost on the other. By this means almost the whole of the news transmitted has been successfully received.

A noticeable improvement in reception was occasioned by the adoption during the last three months of the frequency of 16,840 kilocycles (wave-length of 17·81 metres), in place of 13,465 kilocycles (22·28 metres) previously used for the short-wave transmission at 11.30 p.m. New Zealand standard time. The total number of words received direct from Rugby during the year reached over 270,000.

RADIO COMMUNICATION BETWEEN NEW ZEALAND AND PACIFIC ISLANDS.

For a number of years past the only method of telegraphic communication between New Zealand, Samoa, and the Cook Islands has been by means of long-wave radio transmission via Apia and Rarotonga. The technical developments that have taken place in recent years in radio communication have enabled arrangements to be made to replace the costly long-wave system by modern short-wave apparatus. During the past year the whole of the traffic between New Zealand and Samoa has been handled on short-waves direct from Wellington to Apia by the use of experimental apparatus. As a result the heavy maintenance expenditure on the high-power spark stations has been very considerably reduced. Now that the technical features of the short-wave service have been fully investigated, commercial short-wave apparatus of standard and improved design and having a suitable reliability factor will be permanently installed at Wellington. The new transmitter will have an output of 1,000 watts, and this increased power will be of value in overcoming atmospheric and inductive interference, which under the existing low-power conditions occasionally results in periods of unreliable service. Certain Pacific island Administrations are giving consideration to the question of installing similar apparatus, and when the stations concerned are so equipped they will have reliable and direct communication with Wellington at any hour of the day or night.

EXPERIMENTS IN RADIO TELEPHONY FROM ORDINARY TELEPHONE-STATIONS.

The possibility of establishing a telephone service by radio between the mainland of New Zealand and adjacent islands which cannot be economically served by submarine cable has been the subject of investigation during the year. By means of an experimental radio-telephone plant connected with a city automatic-telephone-exchange system it was demonstrated that good-quality radio-telephone communication, involving simultaneous transmission and reception, was possible between any local telephone subscriber's station and a radio-station established on one of the islands. The experiments also illustrated that the necessary apparatus can be made automatic in its operation.