

Radio for Airplanes

Affected by Mountains

As the result of experiments carried on last summer by the United States Government Bureau of Standards, in directing planes in flight between Cleveland and New York, using the directive radio beacon at Bellefonte, Pa., it was announced that shifts or variations in the course were found to exist during the night which introduced such serious errors that the beacon indications were not considered dependable for distances greater than fifty miles at night in mountainous territory.

The Bureau of Standards now considers that this problem has been solved.

The shifting was due to a distortion that was introduced in radio waves as they travel through the upper atmosphere. The nature of this distortion was studied, and scientists were able to analyse it satisfactorily. By using special aerial arrangements for receiving, it was found that the shifts could be practically eliminated.

Aeroplanes heretofore have found it necessary to use long trailing wires for radio aeriels in order to collect enough power to operate a radio receiving set. Such aeriels by reason of their hanging down at a slanting angle, do not have the necessary characteristics to eliminate the effect of false radio course indications.

A new type of aerial consisting of a vertical ten-foot metal pole, has been developed by the Bureau of Standards. The use of so short an aerial has been made possible by the development of a new and specialised type of aircraft receiving set.

Australia's Problem

New Relay Stations

WHILE general satisfaction has been given by the recent announcement of the Commonwealth Prime Minister (Mr. Bruce) that the change in the broadcasting control policy of the Federal Ministry will be accompanied by the provision of an elective relaying service for country districts, it is disquieting to note (says the Melbourne "Argus") that the proposal that relaying stations should be connected with the main broadcasting stations by short-wave wireless services is still being considered favourably. Complete failure to provide adequately for country districts and provincial cities is undoubtedly the weakest feature of the existing Australian broadcasting system. This failure can be corrected easily and effectively by the installation of relay stations, but if those stations are to depend on a wireless, instead of a land line, service to obtain

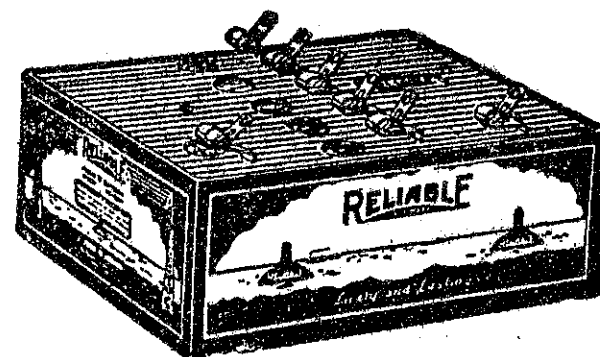
the programmes they will relay, it is to be feared that the position of country listeners will be little better than it is now. The use of short-wave wireless stations as a substitute for telephone lines for the purpose of transmitting programmes to relaying stations is so obvious an economy that it has been subject to full investigation both in Europe and the United States. In every trial the wireless service has been found much inferior, even under the best possible conditions, to an efficient land line. While few doubt that short-wave wireless circuits will undoubtedly play an important part in the future in supplementing, and probably even replacing, trunk telephone lines, they will require to be greatly improved before they can compete with land lines. At present no impartial

engineer understanding the problems to be faced, would recommend the use of short-wave wireless stations for relaying purposes. It is to be hoped that the proposal will be abandoned by the postal authorities, and that they will concentrate on the preparation of land lines for the relay stations.

A unique item during the children's session on Saturday evening at 3YA was a reel danced by four Scottish lassies to a bagpipe accompaniment. This was the first time such an item has been attempted in a New Zealand studio, and it broadcast very well. Scottish items were a feature of this evening's entertainment.

IF there is one place in all the world where wireless is appreciated, it is surely the leper island of Makogai, one of the most beautiful but lonely of the Pacific Islands. The island is nine miles from Levuka, Fiji, but until the installation of a wireless set there last year it was practically cut off from the outside world. During August, 1927, a five-valve set costing nearly £70 was presented to the island which has made the lives of the 450 leper patients, including Fijians, Samoans, Tongans, Indians, Chinese, Solomon Islanders, Cook Islanders, Maoris, and some Europeans less dreary. The set is named "He Reo Tawhiti," meaning "Voice from a distance," and on four valves it can easily pick up all Australian and New Zealand stations.

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In the case of 2YA the Eucharistic Congress was broadcast from 5 o'clock to 6 o'clock on Sunday, when, owing to arrangements made earlier, it was necessary to transfer to the local studio for the special children's session.