

New Apparatus Marconi Attainments

NEW apparatus representing recent developments in wireless work is being exhibited by the Marconi Company at this year's exhibition of the Physical Society and the Optical Society at South Kensington. In addition to wireless receivers and transmitters in their complete state the exhibit includes such auxiliary apparatus as a signal strength measuring set, with a wave-range of from 14 to 5000 metres, and a tuning fork and thermostat unit for maintaining constant frequency in facsimile transmission.

One of the most notable features in connection with the use of maritime wireless is the remarkable extension of the use of direction finding apparatus on ships of practically all types. For some years after the introduction of the marine direction finder the use of this instrument was confined almost entirely to the large passenger liners and a few yachts. It is now to be found in both large and small cargo vessels, tug boats, cross-channel vessels, pilot craft, whalers, salvage steamers, and is also being largely made use of in trawlers. Since 1914, when the direction finder was first introduced commercially as an aid to navigation, on the S.S. Royal George on her voyage from Bristol to Montreal, the Marconi Company alone has fitted upwards of 540 mercantile vessels with this instrument, and it is noteworthy that more than half of this number has been fitted during the last 18 months. The interesting feature of this increase is the growing percentage of cargo vessels making use of this aid to navigation.

A NEW YEAR RESOLUTION---

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FIRST OF ALL

read the interesting and informative booklet, "Your Estate," obtainable from from any office or agent of the Public Trustee, or free by post from the Public Trustee, Wellington.

The latest type of direction finder is used in conjunction with a fixed frame aerial and possesses a number of important features, the chief of which are the screened valve amplifier, which is highly efficient and stable in operation, and a radio geniometer provided with two scales, one for reading bearings relative to the ship's head and the other for reading true bearings. The instrument covers a wave-range of from 400 to 1100 metres, and the circuits are easily and quickly tuned to any wavelength within this range for the reception of spark, interrupted continuous wave and telephone signals.

There is also shown a new receiver, developed for naval and military purposes with a maximum to minimum wave-range ratio of 2.5 : 1, the set being highly efficient over this range of wavelengths.

Another piece of apparatus particularly suited to shipping is the Marconi Auto-Alarm. This responds only to an alarm signal consisting of 4-second dashes with one second intervals, the alarm bells ringing on the receipt of the third consecutive dash. Working demonstrations of this apparatus are given. The extent to which this apparatus is used by British shipping is shown by the fact that 929 sets have already been installed.

An instrument of great utility for authorities allocating transmitting licenses, for research workers in wireless phenomena, and for those responsible for commercial wireless stations, is this signal strength measuring set, which has been produced by the research laboratories of the Marconi Company. A frame aerial for the reception of the desired signals is mounted on a coupling unit which also contains a means of attenuating the signals produced by a local oscillator. The local oscillator is capable of being tuned from 14 to 500 metres, and is coupled to the frame and to a receiver. By means of the attenuator unit the signal strength of the local oscillator can be measured and can be made equal to the received signal. The signals can be equalised by ear, or, in the case of rapidly varying signals, such as occur in the short wave-band, the receiver output can be calibrated on a recording device.

The local oscillator output is adjusted to be of exactly the same frequency as the signals to be measured and the current is measured by a thermomilliammeter. The receiver is a frame and the set will therefore measure primarily the magnetic field in the wave at the point considered, and the audio intensity of the signal produced is measured by comparison with the known signal strength of the local oscillator. The attenuator and coupling unit, the local oscillation generator, and the batter box, are each contained in a heavy metallic shielding case, which completely screens these units from external interference.

An Odd Antenna

A RADIO receiving set simulating an umbrella has been invented and patented. This odd receiver takes the exact form of an umbrella, including the cloth canopy, ribs and handle. It opens and closes, and when in either position it is so cleverly disguised that the head-phones, connected near the handle, are the only visible evidence to betray its real identity.

Tea with Aunt Pat 3YA Uncles and Aunts Entertained

ON Thursday afternoon, February 21, Aunt Pat of 3YA was hostess at a delightfully informal afternoon tea party at Ballantyne's. It was a happy inspiration on the part of Aunt Pat to commence the new radio year's work in that way. Scatterjoy was present, also Mother Hubbard, Cinderella (of 1YA), Big Brother, Storyman, Uncle David, Chuckle, Uncle Hal, Brother Bill, and Uncle John.

Aunt Pat took the opportunity of welcoming Cinderella, who was on a holiday visit to Christchurch, and au revoir was also said to Uncle Hal, who has been transferred by his firm to Wellington.

The afternoon was a very enjoyable one.

That evening Cinderella took part in the children's session, and 3YA radio children had the opportunity of hearing a chat by the popular Auckland aunty. When Cinderella gets back to 1YA she will have a lot of interesting things to speak about to her many radio nephews and nieces.

Suva Broadcasting

New Year's Eve Event

AN important page of Fijian history was written on the last day of last year, when, for the first time, New Year greetings and a programme of music were broadcast from Suva to listeners throughout the Pacific.

The broadcasting was in the nature of an experiment, and was arranged by Amalgamated Wireless (Australia), Ltd. The Governor (Sir Eyre Hutson), Lady Hutson, and party of representative citizens assembled at the house of Mr. R. C. Farquhar, senior radio officer of the Suva Radio Station, at Vatuwaga, where a microphone and other wireless apparatus was installed, and the land line between the house and Suva radio utilised. Throughout the colony, in Tonga, and in Samoa, hundreds of listeners were awaiting the broadcasting announcements from Suva, and reports from all over the Western Pacific show that the results were very satisfactory. Many listeners in Australia also picked up the pro-

Greatest Event in Broadcasting.

Byrd Hears Own Signals Re-broadcast.

WHAT was referred to as the "Greatest event in radio broadcasting" was carried out this afternoon by the short-wave station of KDKA, Pittsburgh, U.S.A., writes Mr. Sellens (Northland).

The announcer stated that, as signals were being received so well from WFBT, the "City of New York" at Little America, Bay of Whales, Antarctica, they had asked Commander Byrd to send a message which would be picked up by them and re-broadcast. At 12.22 a.m. Eastern Standard Time (5.22 p.m. N.Z. time) this message was commenced and was heard here very well after having travelled 11,000 miles to Pittsburgh and the same distance back again. The operator on the "City of New York" heard his own signals after they had covered a distance of about 22,000 miles.

The message was in reference to the weekly broadcasts for the expedition from KDKA, stating how well they were received and enjoyed by all the party.

At present they were having 24 hours per day daylight, but in about two months they would have continual darkness, when the weekly broadcasts would be even more appreciated.

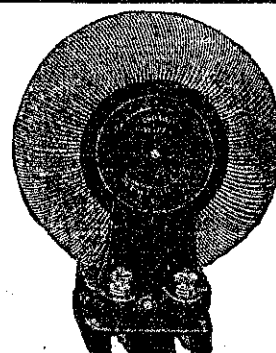
The message concluded with "Best wishes to all at home," signed, Commander Richard E. Byrd.

Both before and after this special message, personal messages were sent to residents of the Arctic and to members of the Antarctic Expedition. All was heard at good volume on the loud speaker.

gramme, which was transmitted on a wavelength of 450 metres.

The speakers referred to the prospects of a successful new year for Fiji, and also the development of wireless, special attention being given to the service broadcasting could render to Fiji in the way of disseminating market, stock, and shipping reports, and in providing musical programmes.

A little later Suva Radio came on the air, with a musical programme given voluntarily by Suva artists.



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