

Development of Wireless in Australia



THE British Empire to-day possesses the most efficient long-distance communication in the world, and this achievement is due mainly to the development of the beam wireless service. In this triumph Australia has not only played a very great part, but in the development of many phases of wireless in general, she has led the world. To-day it is possible to enter any post office in the Commonwealth and send a message via Beam, to some of the most remote places of the world.

The Beam wireless service between Australia and Europe, owned and operated by Amalgamated Wireless (Australasia), Ltd., was opened for commercial traffic in 1927, and almost immediately leapt into public favour. Additional Beam facilities were made available in 1928, by the opening of the service between Australia and North and South America, and now by day and night messages are being flashed across oceans and continents directly and instantaneously. It is by far the most speedy method of international communication, and is operated entirely without retransmissions or relays. An interesting illustration, and one that seems almost incredible, is afforded by the fact that a message of 125 code-words could be in London one minute after transmission had commenced in Australia.

The establishment and maintenance of this nation-wide service was carried out under the supervision of Mr. E. T. Fisk, managing director of Amalgamated Wireless (Australasia), Ltd., who, for the last decade had not only visualised such an international service, but had consistently advocated and educated the powers that be to a realisation of the need for such a service. For over ten years he studied every possible phase of trans-oceanic communication, and overrode the opinions and protestations of those who believed that the only system which could be efficiently operated was one of relays. Mr. Fisk has, largely by his own efforts, built up the A.W.A. into one of the largest, up-to-date, and most efficient wireless organisations in the world to-day. This company has controlling interests in practically every phase of wireless in the Commonwealth, and a few of its activities in this sphere will now be mentioned.

A further enlargement on the situation and operation of the beam service stations would not be out of place because of the vital importance of this epoch-making achievement. The beam wireless transmitting centre is situated near Ballan, about fifty miles north-west of Melbourne, and the receiving centre is at Rockbank, eighteen miles from Melbourne, in the same direction. At Ballan there are two transmitters, one of which is used for sending messages to London, whence they are distributed through Europe, and the other of which transmits to Montreal all messages for the North and South American continents. Messages are transmitted to the beam station from the Sydney or Melbourne radio centres, both of which are owned and operated by the A.W.A. No less than eight transmitters are locat-

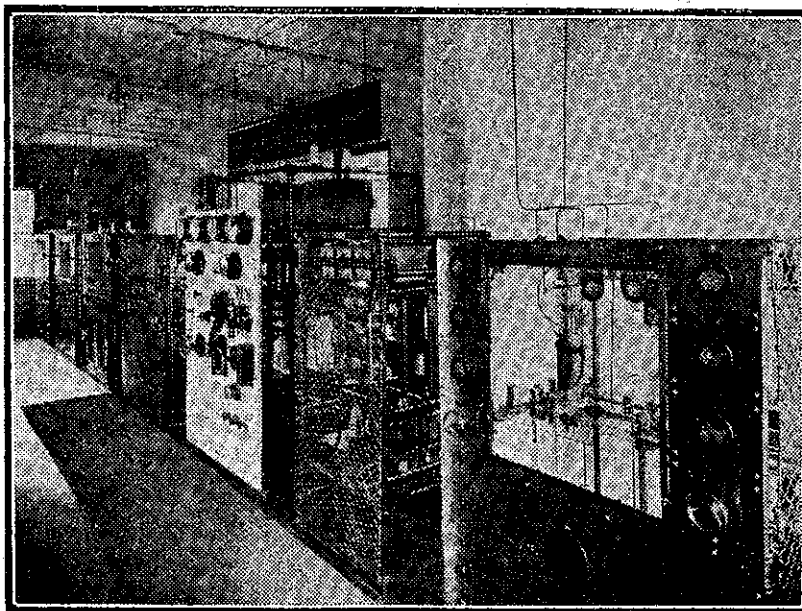
Activities of a Strong Organisation

ed in the Sydney radio centre, and they are all operated by "remote control" from the various headquarters of the organisations using them. Overlooking Botany Bay, is located the Sydney Receiving Centre of A.W.A., the largest and most important receiving station in the Southern Hemisphere. Nine separate and distinct services are maintained there, ranging from the beam feeder service from Melbourne to the trawler tele-

phony service for communicating with fishing boats off the New South Wales coast. This La Perouse station has become famous throughout the world for the many noteworthy interceptions carried out there. From the time the "Southern Cross" left San Francisco until it reached Australia, operators at La Perouse were in constant touch with the plane, and by this achievement, a record for plane to earth communication was established.



A.W.A. STATION 3EX, MELBOURNE.
Showing Control Panel, Modulator, Oscillator, and Switchboard of this 500-watt Power Station.



RADIO CENTRE, SYDNEY.
Hall containing 20 k.w. Short Wave Telegraph and Telephone Transmitter Panels. Reading from left to right:—
(1)—No. 1 Magnifier. (4)—Keying Unit.
(2)—No. 2 Magnifier. (5)—Main Rectifier Unit.
(3)—No. 3 Magnifier and Drive. (6)—Drive Rectifier Unit.
(7)—Modulator Unit.

Radio history was advanced three stages during 1928, when Mr. Fisk added still more achievements to the many brilliant pioneering demonstrations of the company. Two-way wireless telephone communication was effected with three different countries, all of them being situated at almost the most remote limits of the world. Conversation was successfully exchanged with New York, Amsterdam, and London. In the last instance Mr. Bruce, then Prime Minister of Australia, conversed for some time with Lord Passfield, Secretary of State for Dominion Affairs.

Probably the greatest benefit which wireless has conferred on mankind is its application to shipping and navigation generally, particularly as a means of ensuring the safety of life and property at sea. Ever since the company's inception, it has devoted a large proportion of its resources to the development of apparatus for the various purposes of marine communication and navigation. It is universally realised that every passenger ship is equipped with efficient wireless apparatus, but it is not generally known that through carefully planned international arrangements, it is possible to hand in a telegram at any town or village which has a telegraph office, in any part of the world; and to have that message dispatched through various land lines, cables, and wireless stations, to a person on board a ship in any part of the world.

For example, if one is for instance on board ship off the coast of South America, a message could be handed in to the wireless operator and dispatched to a person in Alaska, Italy, Australia, or elsewhere, with the assurance that it would reach its destination in a few hours.

THE Coastal Radio Service, also controlled by the A.W.A., Ltd., plays a very effective part in the inter-communication of the people of Australia and those of the adjacent islands. It is also of material benefit to ships at sea. The service comprises 29 stations, and they are so organised and controlled that at any time of the day or night messages can be exchanged with vessels within 500 miles of the coast. The night range of these stations is anything up to 3000 miles, and with a special short-wave apparatus communication with ships in European and Eastern Pacific waters is maintained.

Not the least importance of the A.W.A.'s activities has been their establishment of a network of some twenty-five or more stations in the Pacific Islands. Three large centres are established, the most important being located at Suva, Fiji. This station handles overseas traffic to Great Britain and the Continent, via the Beam Service, and its daily broadcasts of weather reports have proved of great value to shipping and to the surrounding islands, especially in the hurricane season. The development of this network of commercial wireless stations in time of peace gives assurance that they will be up to date and available for defence purposes in time of war. Should such a contingency arise, a trained personnel and a full equipment would be available on short