## Amateurs Are a Valuable Part of Radio Family

VEN as long ago as 1918 there was an experimental amateur radio station in New Zealand getting ready to carry out regular transmissions, contacting a well-known coastal steamer, and another amateur who had a station 30 miles away. To-day there are well over 800 amateur radio transmitters in the country, probably the highest percentage on a population basis in the

Mr. Dan Wilkinson, now of Otaki, was this pioneer, and he was the second "ham" in the whole of New Zealand to be licensed when the Government decided that it was time to effect some sort of control on amateur transmitters. That was with ordinary morse sets. But last year many of New Zealand's "hams" burst forth into radio-telephone communication on their home-built sets, and a further step had been taken in their enterprising progress. Next thing will be reports of one or two who are dabbling with television, perhaps. When the numbers of amateur transmitters grew rapidly, it was realised that these hobbyists would be of some value to the nation in the course of time, and they have therefore been given considerable encouragement by the Government. It became necessary to pass a fairly rigid examination in order to qualify for a transmitting license, and restrictions of various sorts were imposed. Consequently, those who operate their own transmitting plants in New Zealand to-day may all be considered capable radio men.

There are really three divisions among the colony of amateur transmitters: those who build a set and log as many everseas stations in two-way contact as they can; others who construct a set, work it for a while, dismantle and rebuild with improvements; and the third class, whose members are continually experimenting along some line or another. Incidentally, some of the greatest improvements in both transmitting and receiving sets in modern radio have been the result of "amateurs' flukes"—happy accidental discoveries made while an amateur has been trying out some new circuit or method of construction.

But apart from the value they have proved in this direction, "hams" are a decided asset to the country in times of natural catastrophes, such as earthquakes or other causes of isolation, and they would be of great use in the event of war It is little wonder then that the New Zealand amateurs who have clubbed together to form the New Zealand Association of Radio Transmitters (Inc.) have been for some time recognised as a semi-official body. In fact, the Government has entrusted to the N.Z.A.R.T. a considerable amount of responsibility in the way of examinations and tests, and to this body also the Post and Telegraph Department is indebted to the extent of the association's energy in disciplining its members,

Generally speaking, radio amateurs in this country are well behaved. As nearly all the "hams" are members of the association, they have become accustomed to the strict letter of the regulations governing them, and also abide by the standard of courtesy and behaviour on the air which is largely self-imposed. For instance, if someone with a shortwave broadcast receiver finds that he is getting interference from the operation of an amateur station, he will find that getting in touch with the amateur concerned is the best way to rectify the trouble; for in nearly every case it will be found that any interference was entirely unintentional, and the amateur may, in many cases, find some means in the receiver itself by which broadcast reception on shortwave is improved.

The organisation gradually developed by the forming in various centres of clubs by amateurs to pool ideas and discuss experiments under way. By 1926 some far-sighted enthusiasts in Auckland conceived the idea of an association—which in the following year became nation-wide—to protect and help the amateurs in this country. The foremost of their objects were: "To promote and safeguard the interests of amateur radio; to foster international fraternalism, and generally to assist in the development of amateur transmission." In January, 1928, a magazine of their own, "Break-in," was first published, and it has now grown from a four-page leaflet to a 32-page journal full of interest to the amateurs and those desiring to "break-in" to the science as transmitter operators. By co-operating with the P, and T. Department, with organisations in other countries



Here is the amateur transmitting plant of ZL4FK, an excellent example of a primarily experimental station. Everything is quickly available for adjustment and alteration, as opposed to the arrangement of equipment in permanent type transmitters. 4FK is owned and operated by Dr. R. B. Dodds, of Otago University.

and with business firms and power supply authorities, many privileges have been secured which amateurs would otherwise not enjoy.

This is not a "close corporation," either. Anyone who is interested enough to build a set—which can be done for £2 or more—and qualify as a transmitter is welcomed to membership of the N.Z.A.R.T., which already is made up of people in all walks of professions, occupations and trades. Some of the members have sets which cost them as much as £100, or even more. But for the beginner a five-pound note would be sufficient outlay to enable him to contact a good proportion of the civilised countries in the world. For younger men without much interest outside radio, it is an excellent opportunity to qualify for positions as ship's operators and so on.

A secondary body has been formed by the association under the title of "The Radio Emergency Corps"—one of the first of its kind to be formed in the world. Already it has provided yeoman service to the country. The idea was first put into practice in Christchurch by transmitting members of the association, and they developed a really portable receiving and transmitting station, the total weight of which, with batteries, was under 20lb., providing a range of several hundreds of miles. Their value in only one direction may be illustrated by a case of a liker lost in bush country. R.E.C. operators take their apparatus along with search parties, keeping the searchers in touch with the nearest town or base of the search operations.

Official recognition has been granted the corps. A special band of frequencies is allotted to the R.E.C., as well as special call signs for each section, both of which may be used only by certificated members. Over one hundred operators at present man the 51 stations attached to the corps. It is understood to be the only organisation of its kind in the world to receive official recognition and co-operation. New Zealand is, in fact, considered to be one of the leading countries in this respect. On many occasions the New Zealand transmitter has won trophies competed for by all the leading amateurs in the world.

It is a comparatively inexpensive hobby, and a fine boost for New Zealand The introduction of amateur radio-telephony has added further appeal to the fascination of building something worth while for oneself, and the R.E.C. represents the expression of a desire by the amateur transmitter to turn his hobby into a national asset.