

Laboratory Jottings

"Colonial" Model 33 A.C.

FROM Messrs. N. R. Cunningham, Ltd., Masterton, we have received for test one of the new "Colonial" Radio Model 33 Receiver

Its distance-getting abilities certainly surprised us. Just before 10 o'clock one night, and a bad night at that, we went round the dial and counted 18 stations. Only five of these were New Zealand. They all came in fairly strongly, and could have been tuned in without any difficulty. In this respect we would like to point out that when testing receivers we do not try for the maximum number of stations we can get with careful dialing. The station must be able to be tuned in fairly easily before we can count it "logged." This result is not, of course, intended to be the criterion of the set's performance, but it gives some indication of what it should do even under most adverse conditions.

Selectivity is another strong feature of the set. We could separate 2FC and 4QG from 2YA, leaving very little background, much less than our standard, and the excessive sidebands of 2YA, which in some receivers gives objectionable buzz, are eliminated. Using the alternative aerial terminal selectivity was even sharper, but there was the concomitant drop in volume.

Another remarkable feature of this set is the volume control. Different from the usual screen-grid a.c. set, it was not necessary to remove the aerial to receive the local station; in fact, the set worked better with the aerial on. It has an almost perfect volume control, which operates on the r.f. coupling and not upon the grid-bias voltage of the screen grid valves. It is for this reason that the volume control is so smooth.

Another interesting and novel feature of the set is the automatic coupling. In the usual construction the coupling in the radio frequency stages is fixed, which frequently gives maximum sensitivity only at the lower readings of the dial. In the "Colonial," however, maximum sensitivity is obtained throughout the whole scale by means of an arrangement whereby the radio frequency coupling is automatically increased as the dial is turned to the higher wave-lengths. This is the only set we know of which incorporates this feature.

The dynamic speaker, too, is unusual in that it has a 14-watt field coil. This extremely powerful magnetic field permits the use of a heavy ridged cone with a somewhat more stiff movement than is common, and this gives exceptionally good high frequency response. Due also to its heavy construction, the speaker will handle tremendous volume without showing any signs of distress.

Pickup terminals are incorporated, and the changeover from radio to gramophone is accomplished by turning the dial round to the "phono" position. Because of this changeover switch, the pickup may be left connected when operating on radio.

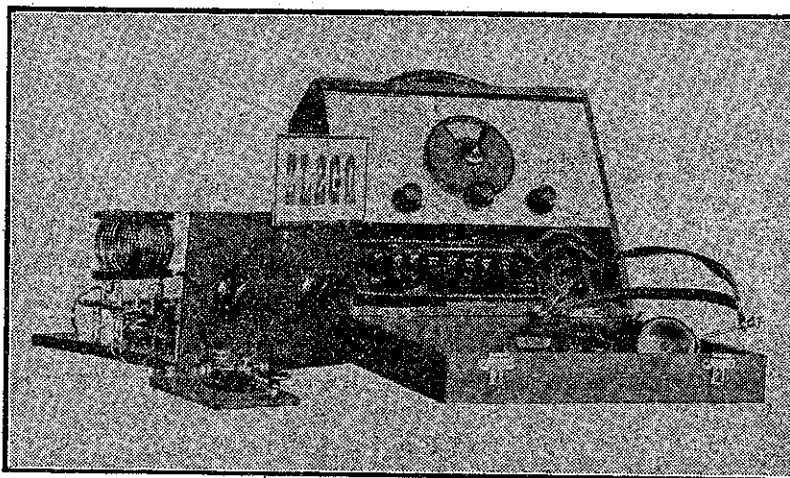
The fidelity of the set is of a very high standard. It goes right up to the high trebles and down to the low bass with a most pleasing evenness of range. A very noticeable feature, too, is that even on the very deepest notes there is not the slightest trace of boominess or cabinet resonance. As a gramophone amplifier it is recommended for use with a low impedance pickup and matching transformer.

THE Association of Radio Transmitters comes rarely before the public eye, except upon such occasions as the recent calamity in Hawke's Bay, or when, perhaps, one of its members is successful in some notable achievement—long distance work, getting unusual information by radio, and the like. But below the surface the activity is not inconsiderable.

A Live and Energetic Body

But it is in the activity on the air, in the early and late hours of the night, that the amateur is most energetic.

The throw of the switches and the throb of the brazen key tell of converse with distant lands, and the little mystic symbols spell out the calls of Siberia, Chile, Sudan, The Virgins, Guam, France, California, England,



The portable outfit taken to Napier by ZL2GQ (Mr. F. I. R. Hunt). On the left is the transmitter, on the right is the receiver.

phone amplifier it is recommended for use with a low impedance pickup and matching transformer.

Another interesting feature which was demonstrated was the remote control, an optional accessory. By means of this it is possible to completely control the set at any distance from it. The control box, measuring only 6 inches by 3½ inches, has on it ten buttons, which may be set to any ten stations. By pressing the button marked for the station required, that station is immediately tuned in automatically. In addition, any other station not preselected can be tuned in by using buttons one and ten. Two buttons control the volume. A green pilot light on the control box indicates whether the set is on or off. There is also an additional button, by pressing which the set can be temporarily silenced. When the button is released the set operates immediately. This silencing button impressed us as being most particularly useful. The remote control consists fundamentally of two low voltage motors, one of which drives the volume control and the other the station finder. This is the first remote control we have seen in this country.

The set employs two stages of screen-grid radio frequency, screen-grid detector, and an a.f. stage of 227 followed by two 245's in push-pull. In front of the first valve is a double preselector circuit. The over-all sensitivity of the set is better than 5 microvolts per metre antenna height. Its high degree of sensitivity and selectivity demands that it should be carefully tuned.

Spain, or New York.

Ever and anon he will tire of the far-off lands, and plunge into local movements again. Each month at least the Association's local branch has its meeting, and there amateur fraternises with amateur (only he calls him a "ham") and lectures, business, and news are the order for the evening.

Periodically, a field day is held in the various towns, and the "hams" depute one portable station to hide, perhaps in the local hills. With direction finders the rest seek him out, the first to reach him being declared winner, and the hero of the picnic that follows.

A while ago a unique event was enacted. The Otago Branch arranged a chess match by radio with the amateurs of Sydney. The local chess club thus enjoyed a splendid game with the Millions Club of Sydney, and from 8 p.m. till 1 a.m. the moves flitted back and forth across the seas, while the players sat in easy chairs and watched the board, the curling pipe smoke and the gleaming dials and switches of the transmitter.

N.Z.A.R.T.—Its Aims and Objects.

THE New Zealand Association of Radio Transmitters (more familiarly known as N.Z.A.R.T.) is, as its name implies, an association welding the amateur transmitters of N.Z. into an effective whole.

What the American Radio Relay League (A.R.R.L.) is in U.S.A., we are working that N.Z.A.R.T. may come to be in N.Z. Even more than this is

attempted by the Incorporated Radio Society of Great Britain (R.S.G.B.), and N.Z.A.R.T., following in the footsteps of the amateurs in the Motherland, is engrossed with the prospect of unified co-operation between amateur transmitters and those listener-enthusiasts whose interests lie wholly or mainly in the shorter waves.

The R.S.G.B., however, has sought to combine two classes which might at first appear incompatible. The hitherto passive listener can act as an official report station. It is here that he can help the transmitter, and it is here that most S.W. listeners receive their introduction to the most wonderful of all hobbies—talking across the world with apparatus one has constructed from hitherto useless components. An isolated amateur can serve only his own particular locality. As part of a national movement he can relay messages, disseminate information and keep his district in touch with the world.

The association has always opened its ranks to keen, interested S.W. listeners, but henceforth S.W. listeners are to be definitely encouraged to join and assist the transmitter—perhaps eventually to join the ranks of the full-fledged amateurs.

Our body has a Headquarters Executive, four Main District and several Sub-District Committees. It issues its own monthly magazine "Break-In," which fills its pages with notes, letters and articles of interest to amateurs and to their listener friends.

N.Z.A.R.T. also runs a bureau for keeping full and complete lists of amateur addresses (which are published in the "Radio Amateur Call Book", in "Break-In" and the "Radio Guide"). The bureau accepts inward report cards from kindred overseas organisations, and distributes them throughout N.Z. Even outward report (Q.S.L.) cards are accepted and forwarded to their destination.

The Association is affiliated with the International Amateur Radio Union (I.A.R.U.), and during the last week in June, N.Z. amateurs are to work only stations in British possessions.

British Empire Radio Week is an attempt to help amateurs to realise the bonds of Empire. Even if a N.Z. amateur does not win the world contest, special recognition is to be given to the most successful amateur in N.Z.

N.Z.A.R.T. also arranges periodical low power competitions when the plate supply is limited to 45 volts. Phenomenal contacts are made when using even such a low power, and it is this type of competition which trains the amateur to be of use in an emergency.

In these and in other ways N.Z.A.R.T. seeks to make the short waves as interesting and useful as possible, and the services of N.Z. amateurs are freely offered in time of need. Inquiries are solicited and should be addressed Box 489, Wellington.

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