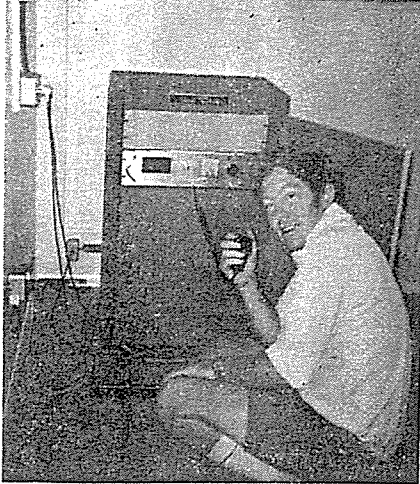


(Break-In -probably late 1970s)



The final repeater installation. Operating the local micro phone is ZL2TPQ, now a visitor to the district, but previously on the committee to set up the repeater.

In 1973, the Marlborough Branch started using 2 metre FM for branch communications. This made the branch aware of the advantages of an FM repeater.

Tentative requests were made around, and some suggested that our district was adequately covered by existing, North Island repeaters. This was partly true, in that base stations in Blenheim could access these repeaters, but general coverage was non-existent, and the AREC section queried the use by our branch of a repeater serving a large population area, during a widespread emergency.

By 1974, applications were made, but the availability of a channel for Marlborough was in question. With apologies perhaps to Auckland, we were in the most concentrated area for repeaters in New Zealand. Nelson had just been shifted to the newly created channel A, a repeater was proposed at Kapiti on channel B, Mount Climie at Upper Hutt had C, Channel D Manawatu was not far away, and channel E Egmont not much further. Channel F Wellington was putting reasonable signals into the district.

After much discussion, channel D was decided on, as being the least likely to cause co-channel interference.

The next problem was to choose a good site. The problem of channel allocation demanded a lower-altitude (hence smaller secondary-coverage area) site, however, the mountainous terrain of the province required a reasonably

## A SHORT HISTORY OF CHANNEL D MALBOROUGH or HOW TO SET UP A REPEATER IN SEVERAL HARD STEPS

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by ALAN WALLACE, ZL2TRU  
IAN McKENZIE, ZL2TPH

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high station for a good primary coverage area. Blenheim has three main arteries, State Highway 6 to Nelson, and State Highway 1, north to Picton, and south to Christchurch, this being a very busy highway, carrying most North Island-South Island traffic. We wished to cover these routes as far as possible. It would be very desirable to use an existing building, thus eliminating the worries of providing and maintaining housing and power supply. A few sites were available, and the one selected as having the most of the wanted attributes was 'Jamies Knob' NZPO Microwave Repeater station. This is on the highest point (900ft ASL) of the hills immediately south of Blenheim.

One disadvantage of the site was its line-of-sight to the North Island. The possibility of co-channel interference again occurred to us, so it was suggested directional aerials be used, nulling out the North Island direction.

A site test was carried out, using a two element yagi and some equipment, calibrated in received signal strength, with the rest of the branch 2 metre men travelling about the district. Results were pleasing, but with a few patchy spots.

All the information to hand was assembled together and formal application for a 'permit to construct' the repeater was made in May, 1975. This permit was granted, and received in late July 1975, and, within a week, a temporary repeater was set up at the Blenheim CD Headquarters (the branch clubrooms).

Equipment for the repeater was ordered, and construction begun. Permission to use the site was negotiated, and plans made for the installation.

As equipment was finished, it was set going at the temporary site. When the aerials, filters and the repeater were finished, work started at the site.

In May 1976 a working bee was held at the repeater site, a trench had to be dug between a 50 foot wooden aerial pole and the building, the co-axial cables laid, and the aerials installed on the pole. This was a long, hot day for the few hard workers. One branch member was very welcome; he arrived with a petrol driven 'Kanga Hammer'. The ground was typical of most hill tops — very dry and hard, so this speeded up the trenching work a lot.

On the 3rd April 1976 the repeater was installed in the station. Unfortunately the transistorised power amplifier stage proved to be unstable, and the repeater was performing very unsatisfactorily. The transmitter was then replaced with the temporary transmitter which had been used at the CD Headquarters.

The repeater's transmitter was removed for re-building, and new cavity filters ordered from overseas.

Since that time the repeater has operated with few faults. In December, (the ordered goods having not arrived) the transmitter was removed and modified to improve audio response, then re-installed a week later. Since then no faults have occurred and the performance has been good.

Coverage has been as expected with the location chosen, mobiles arriving off the Cook Strait ferries can access channel D soon after leaving Picton, and can work continuously to Blenheim. To the south, the main highway travels through hilly country, so coverage is a bit patchy, but reliable access can be expected for about 40 miles. To the west coverage is not as good as would be desirable, with the highway to Nelson being covered for about 20 miles, but the mountainous country in this area makes any improvement for this direction unlikely.

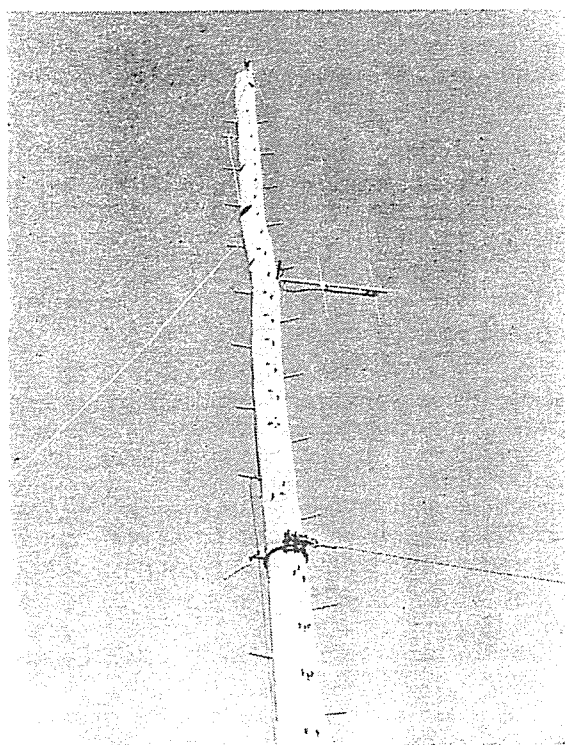
All members responsible for maintenance and faults on the repeater have learnt a lot in this time — a few trips up hills in the dark after work to adjust a control on the repeater makes one much less critical of the 'Funnies' noticeable in other branch's repeaters, and we recommend a person 'knocking' any repeater be given the job of setting up one himself.

Finally, the branch has come out well. This is a tremendous undertaking for a small

branch, and, without the great quantities of donated equipment, (e.g., All co-axial cable runs, two aerials, the standby battery, and many more items, which add up to most of the cost of the installation), this would not have been possible.

To finish off this article, we hope that most amateurs are aware that Marlborough has a repeater. We have heard many stories of operators turning their sets off between Wellington and Christchurch, as "There's no-one around there." On a recent field day, a branch member answered a call on channel D from a well known station hill-topping in Wellington, who stated he was surprised at the signal strength from the Manawatu repeater. When he was told he was working channel D Marlborough, he admitted he had forgotten our repeater existed — what a blow to our egos!

This is an open invitation to any amateurs travelling North or South, who are now forced to use the Picton ferries instead of the Rangitira, to put a call out on channel D and we will give you conversation for some of the long drive.



The site test aerial, a 2 element yagi, with a ground-plane on the top of the pole for talk-back to the mobiles if communication was lost on the test aerial.