



ZL2VH Newsletter – March 2025

President's Report - page 1

Repeater Report – page 3

Jock White Field Day 2025 – page 3

EME Newsletter – page 4

RSM: Repeater Fees – page 4 Meshtastic Update: Wellington Region – page 5

President's Report

A three of trips to Climie were completed over February. The 10 GHz Beacon has been installed on the GNS pole, and Simon has completed all the inside work at the South Hut. The beacon is back on the air as of 22 February 2025. The diagnostic on the 395-antenna fault has been not to be the case at all. The cracking to the 395 repeater has been identified as coming from the SDR antenna (initially). On the 6 February trip this was identified, and new rope-based connections replaced the metal connections to the egg insulators (from each pole) on 22 February. The cracking was still there after this repair, reduced in noise but clearly still there. A further trip on 24 February has identified the coaxial feedline as the next cause of the crackling noise, which will need the connectors replaced and re-terminated. The connector or termination at the balun box also needs attention or replacement once the other repair is made. After much detective work, it appears the 395 repeater is radiating noise which 860 is hearing and rebroadcasting, on the eight harmonic which is the input of 860 at 431.600 MHz. Another trip is required to replace the 395 repeater with the Mk 1 version to see if this repeater either does the same thing or not.

The Meshtastic device has been repaired and is back up and working again. A software update was also applied to fix a nasty bug causing the item to fail at times. Another issue with the coax feeder was identified and fixed.



Both huts have been sprayed with 30 Seconds, and hopefully if the weather is good paint will be applied later in March or April.

So, thanks to those that have given up their time to visit Mt Climie and carry out the work – ZL2TWS, ZL2BRG, ZL4NT, ZL2BRG, ZL2UFI, and Paul (pole climber).



Repeater Report

Repeater: Status

Climie KiwiSDR	On Air
10 m Beacon (28.229 MHz)	On Air
3 cm Beacon (10368.275 MHz)	On Air
1292 (23 cm)	On Air.
D-Star 5425, 860	5425/860 On Air
730	On Air
395 (6 m)	On Air

Jock White Field Day (JWFD) 2025



Jock White Field Day 22/23 February 2025 was done on the Saturday after the Mt Climie trip. It was decided to operate from public viewable spaces this year, and we set up in the Bridge Club car park on Riverbank Street.

Thanks to Ben ZL2BDG we operated only on 40 metres using his portable antenna setup, with the caravan and clubs ICOM IC-7300. A total of 100 contacts were made from about 3:30 pm until 8:30 pm.

Thanks to those that turned up on the day. – ZL2BDG, ZL3LAB, ZL2UGL, ZL2BRG, ZL2NSA, and ZL2UFI.

The site chosen was well within the public's view and we had only one person asking what we were doing.



EME Newsletters

Latest EME Newsletters for January and February 2025:

<https://eme.radio/images/newsletter/pdf/2025-01-vol-54-01.pdf>

http://www.df2zc.de/downloads/emenl202502_final.pdf

RSM: Repeater Fees



Feedback on Proposed Radio Spectrum Licence Fee Changes

MBIE is seeking feedback on changes to radio spectrum licence fees. These fees recover the costs of managing New Zealand's radio spectrum regulatory system, including maintaining the Register of Radio Frequencies, issuing licences, and investigating interference.

For the past eight years, fees have been set below actual costs due to a historic surplus. As the surplus is nearly depleted, MBIE is adjusting fees to ensure full cost recovery. The proposed changes shift fees from an under-recovering level to full recovery.

We are considering two fee options and want your input on:

- Your preferred option
- Alternative options you'd suggest
- How the changes may impact your business

The consultation is open until **5:00 pm on 11 April 2025**.

[More information about the Radio spectrum fees review 2025](#)

Meshtastic Update: Meshtastic in the Wellington Region



Over the past few months, use of Meshtastic across the greater Wellington region has grown dramatically, with contiguous coverage across much of the region. The total number of unique radios regularly on the mesh currently sits at around 180.

Our current longest direct (no intermediate hops) link is 254km, between Altimarloch in the South Island and ZL2VR's PRS repeater site in the Manawatu area.

There have also been some temporary experimental links between Auckland and Wellington hopping via portable nodes on Mt. Taranaki - the southern leg of this generally works brilliantly, but the northern leg up to the Waitakere's is much patchier and harder to reliably get traffic through.

Meshtastic on Mt. Climie

Some of you may recall my presentation last year regarding the possible installation of a Meshtastic node up at the ZL2VH site on Mt. Climie. This was installed on December 15th, on the old GNS pole.

While it was initially planned to be installed at the top of one of the outriggers, the wind on the day was rather sketchy for high work - so it was instead deployed at the base of the outrigger, with the antenna inverted, to avoid the higher wind, risk up the top. The radio itself is a RAK4631, mounted on the outrigger just above the antenna.

Power is fed from a float battery inside the south hut, via one of the existing unused coax cables up the pole.



Testing from around the region has shown excellent performance overall, with good connectivity though to many other key sites, and to large areas of the Upper Hutt valley floor. The Wairarapa side has not been quite as good as hoped, largely due to shadowing from terrain. I'm looking forward to getting it moved up to the top of the pole once the weather allows - hopefully the extra few metres will improve things a bit.

Unfortunately, after over a month of very solid operation, the Climie node went off-air with no apparent reason. All telemetry was nominal beforehand. Given that the software version running on it has subsequently been found to contain a major filesystem bug that can cause this symptom, I suspect that may be the reason for it vanishing. The plan is to head up on Feb 6th and flash updated software that fixes this bug (as well as address anything else with it that might need attention).

Getting Started

The easiest place to get started for most people will likely be YouTube. The channels below in particular have a lot of useful information that will get you up and running with a minimum of fuss. The Facebook groups are great for simpler queries, and then GitHub is where the more technical stuff happens. For general discussion, the NZ Meshtastic Discord (not the same as the official international one) sees a fair bit of discussion - if you're looking for

troubleshooting assistance, it's a good place to head. The international one is also useful but doesn't have a NZ-specific area.

The main frequency used in our region for Meshtastic is 918.875MHz (the default frequency for Meshtastic SHORT_FAST LoRa preset, aka slot 16). For compatibility with this band, you will need to purchase radios sold to operate in the 915MHz band (902-928MHz / ANZ). Most 868MHz radios are hardware-identical and can be configured to operate on this band without issue but will come with a stock antenna that is unsuitable.

If you buy something with Meshtastic preinstalled, please update it to the latest stable release. For nRF52-based hardware, this should be updated to v2.5.20 or higher, to ensure you have the fix for the filesystem bug mentioned above - if you run an older version, you may find your node getting stuck in a boot loop, and unable to recover without fully erasing & reflashing it. While v2.5.20 is currently an alpha release, it is the most solid of the 2.5.x releases to date for this hardware platform.

Note that Australia / New Zealand nodes will default to the LONG_FAST radio preset on channel 20. You will need to change this to SHORT_FAST to reliably communicate with the rest of the mesh. In most cases, simply changing the preset is enough, and the other settings will follow automatically. Note that radios with different LoRa settings cannot see each other, even if they are set to transmit on the same frequency.

Further Resources

- Meshtastic project website: <https://meshtastic.org/>
- Meshtastic development (GitHub): <https://github.com/meshtastic>
- Meshtastic NZ Discord: <https://discord.gg/KPfbKVDwhy>
- Meshtastic NZ Facebook group:
<https://www.facebook.com/groups/731677999061283>
- Meshtastic (official YouTube channel):
<https://www.youtube.com/@meshtastic>
- Meshtastic forum (Discourse): <https://meshtastic.discourse.group/>
- Andy Kirby (YouTube): <https://www.youtube.com/@andykirby/>
- The Comms Channel (YouTube):
https://www.youtube.com/@The_Comms_Channel

- Ringway Manchester (YouTube): <https://www.youtube.com/@RingwayManchester>
- Heltec V3 radio: <https://heltec.org/project/wifi-lora-32-v3/>
- RAK 4631 starter kit: <https://store.rakwireless.com/products/wisblock-meshtastic-starter-kit>
- Seeed T1000-E: <https://www.seeedstudio.com/SenseCAP-Card-Tracker-T1000-E-for-Meshtastic-p-5913.html>
- Node map: <https://meshtastic.liamcottle.net/>
- Me: Steve Gilberd / ZL4NT, steve@erayd.net