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NEW ZEALAND ASSOCIATION OF RADIO TRANSMITTERS - BRANCH 63 UPPER HUTT
Branch 63 Clubrooms
Park Street, Upper Hutt

ZL2VH Newsletter – June 2026

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President's Report

The NZART Centennial Conference has come and gone. A once in a lifetime event to attend and be apart of. I was glad to be there, to represent Branch 63. I was also asked to do a talk on DSTAR, which having not done so for a number of years wondered if the interest was there – it was! I had about 35 attendees at the forum, which over ran into afternoon teatime, which many wanted me to continue, as long as possible before the next forum. I had many questions afterwards and not doubt many will follow up with emails in the future. The interest is stronger than I expected.

The next Conference is being hosted By Blenheim and Nelson branches for 2027, again over Kings Birthday Weekend – 5-7 June 2027.

The Conference went well and wasn't as controversial as I expected, given the issues over the last 12 months, with AREC, resignation of the NZART President and the more recent resignation of a NZART Councillor.

Remits as published in the March/April edition of Break-In on pages 38-39.

Remit 1: Lost on voices.
Remit 2: Passed on voices.
Remit 3: Lost on voices.
Remit 4: Passed on voices.
Remit 5: Passed on voices.

Also announced was the new membership options to receive a digital only version of Break-In, when that is produced. Membership subscriptions will remain as is with no increase. More information will be available from NZART in due course.

Repeater Report

Repeater: Status

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

Why radio fans must respect spaces of 3 to 5 seconds between change and change when using digital systems

Leaving a space of **3 to 5 seconds** between change and change (what we call in radioaffition "leave airspace") is one of the most important operating rules in digital systems (DMR, D-Star, C4FM/YSF) and especially, in **multi-protocol links** (where networks like EchoLink, AllStarLink cross, XLX and DMR).

Although in traditional analogue radio a brief space is left out of courtesy, in the digital world this interval is **critical for strictly technical reasons**. Here I give you the main reasons:

1. Data spreading time (Delay or Latency)

Unlike direct radio, in digital systems your voice becomes data packets that travel over the Internet.

* When you press the PTT, the signal goes from your radio to the repeater or hotspot, from there to the local server, then goes through bridges to international servers and finally goes down to the hotspots of other users.
* This whole journey generates a **Delay (Latency)**. If your correspondent drops PTT and you immediately press yours, it's very likely that the network servers are still processing the colleague's "end of transmission." When you "step on" the switch, the system gets confused and **your transmission will cut off** or won't reach the network.

2. Enable Dynamic Talkgroups to "Unplug"

On networks such as Brandmeister or HBLink servers, repeaters often have static (always active) and **dynamic** Talkgroups (TG) (enabled by the user by pressing PTT).

* A dynamic TG remains active on the repeater while there is activity. In order for the repeater to "free" that channel and return to its normal state (or allow another user to use a different TG), you need to detect **continuous silence** (usually 10 to 15 seconds).
* If users chain changes instantly without leaving space, the repeater is "hijacked" in that Talkgroup indefinitely, preventing other colleagues from using the repeater for their own communications.

3. Synchronization of Runways and Multi-Protocol Linkages

This is the most critical point when managing or using interconnected networks (for example, a link that binds a DMR room to an AllStarLink or EchoLink node).

* Voice over analogue IP systems (such as AllStarLink or EchoLink) handle response times and queue squelch very different than purely digital protocols.
* When a digital transmission ends, the software *bridge* needs a couple of seconds to send "end of transmission" (EOT) commands to the analogue network and vice versa. If those 3 to 5 seconds are not respected, systems cross, software modules freeze and **audio loops** that hang the reflectors can be generated.

4. Priority for Emergencies or Mobile Stations

In the radio fans, safety and mutual aid are fundamental.

* If two stations maintain a QSO continuously and "glued", they close the channel completely.
* Letting 4 or 5 seconds free is the only chance a station with an **emergency**, a **mobile** station with limited coverage, or a third colleague who wants to call for a "Break" to enter the communication in an orderly manner.

5. Breath for the Teams (Repeaters and Hotspots)

Although modern repeaters are designed for heavy work, household hotspots and some low-power nodes generate heat quickly. Those seconds of space allow the end amplifiers and processors in hotspot have a brief thermal break between transmissions.

Digital Golden Rule: ** When you hear your correspondent dropping PTT, look at your radio screen. Wait for the digital signal to drop completely, count **1... 2... 3... 4... **mentally, and just there presses your PTT. Wait another second to talk, and your QSO will be technically perfect!

EME Newsletter

June 2026 Edition is out: https://eme.radio/432-and-above-newsletter

HamClock V4.24

With the release of HamClock V4.24 on OHB a new important feature was included. HamClock now remembers the server it was connected to when started with the "-b' option from OHB.
Follow the step-by-step instructions which you can find here -->
This documents also has instructions on how to update your factory restore card if your card is on V4.21 or later. No need to buy a new one.
For any questions about HamCLock or the Quadras visit also the Inovato Forum. It will continue to exist even so Inovato.com sadly closed their doors.

73,
Udo N0LSR

CTCSS Changes for 5425/860 and 1292 Repeaters

Proposal-1

Mount Climie D-Star/FM repeaters have CTCSS access currently enabled on 5425 and 860 with open access on 1292. Trustees propose that both 5425 and 860 be open access so that anyone wanting an alternative to 730 FM-N can use 5425 FM or 860 FM without CTCSS.

5425 and 860 are set up as wide band FM with a 10 kHz RX bandwidth.
These users who don't have a modern rig or unable to work out how to get CTCSS working should be able to use either repeater.

173.8 Hz CTCSS will continue on the transmitter of both 5425 and 860 so that those FM users, who enable CTCSS on receive only, can mute the D-Star DV digital modulation.

Proposal-2

1292 FM enable 88.5 Hz CTCSS on the transmitter only to mute D-Star DV digital modulation for FM only users. (88.5 Hz was what our old 1292 used and is a default for older radios)

Increase the CW ID modulation from 1% to 10% modulation level or remove the beacon function altogether. Users have previously wanted to beacon to operate so they knew there was power on at Climie. Absence of the beacon would be noticed and hence why the modulation increase has been requested. "Goldilocks" setting for this level.

Feedback to trustees would be appreciated.
If no feedback is received trustees will implement the changes at next site visit.

73, John ZL2TWS