

THE WORLD BELOW

400 GHz

The Periodical Newsletter of the
WAIKATO VHF GROUP Inc.,
ZL1IS,
Secretary: C/- 14 Acacia Crescent,
Glenview,
Hamilton 3206



NZART
BRANCH 81

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JUNE 2026 ISSUE

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Annual General Meeting March 2026

The next General Meeting of the Waikato VHF Group will be held on

Sunday, 5th July 2026, 1:30pm

at the Silver Fern Farms Event Centre, (aka Te Aroha Events Centre),
44 Stanley Ave, Te Aroha (Ballance Room, our usual venue)

this meeting is later than anticipated due to unavailability of the venue in June.

**Presentation will be two videos showing how Google mapped the world,
and their progressively advancing technology used.**

The "WaiPlenty" 2m repeater on **145.575MHz** will be monitored prior to the meeting for anyone requiring directions.

***Supporting amateur radio on VHF and higher frequencies
across the Waikato & Bay of Plenty since 1963***

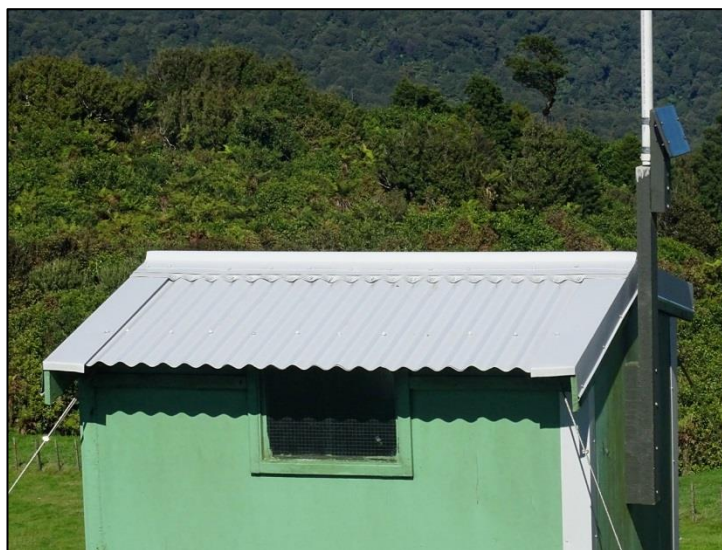
Read our history at https://www.zl1is.info/docs/WVHF_Group_History.pdf

Our Kaimai hut has a New Roof:

On a fine but windy Friday morning on 24th April, a new roof plus barge and corner flashings were installed on our Kaimai radio hut which accommodates the '485 National System repeater, '144.575MHz APRS repeater, and MeshCore repeater. This has significantly improved the hut's weather tightness.



Contractors installing our new ColourSteel roofing iron over (white) synthetic underlay.
Observe snow visible on Mt Ruapehu 159km away (circled) to left of the tower.



The newly finished roof.
Plywood walls to be cleaned and repainted over next summer.



During an earlier site visit by Dennis ZL1UET and Ian ZL1TAT, the rusted door hinges were replaced with 316 grade stainless steel hinges, and the rusted tower footings (installed 1991) were cleaned up and protected (RH photo below). This site is impacted by salt laden air from the east coast 35km away.



Rusted N/E tower footing, photographed May 2024



South tower footing following first treatment, March 2026, Rust Converter having darkened the steel.

When the tower footings were found to be rusting seriously in May 2024, they were temporarily coated in LanoCote to exclude oxygen while a more permanent treatment was researched. Each of the three footings is buried in 307kg of concrete (the tower foundations), so removing them wasn't practical.

Treatment commenced in March 2026 consisted of:

1. Removing loose rust scale with a cold chisel,
2. Cleaning unprotected steel using a rotary wire brush, leaving a thin layer of surface level rust for the Rust Converter to operate on (ie; not polishing down to bare steel),
3. Degreasing the steel to remove remnants of LanoCote by brushing on Acetone, and after that had evaporated off,
4. While wearing protective gloves, decant a small amount of Rust Converter into a separate container¹, then brush² on the first coat working it into the surface, before allowing it at least 24hrs to chemically cure,
5. After the second coat of Rust Converter has cured, a coat of Epoxy Enamel paint will be applied - a job for when the weather improves next summer.
6. This treatment is unlikely to provide a permanent fix, so treated footings will need to be monitored over time and the process possibly repeated in the future.

A Rust Converter's primary function is to chemically neutralize active rust (iron oxide) and transform it into an inert, dark, protective layer. It cannot seal or bind porous, loosely adhering rust on steel, hence that needs to be removed first. Its correct functioning is confirmed by colour change, white to black.

"Rust converters" are acidic solutions (usually tannic acid and/or phosphoric acid based) that are applied directly to rusty steel to convert the rust (hydrated ferric oxide) into an inert, insoluble (black) film sealing the underlying steel away from oxygen and moisture while acting as a primer for subsequent painting.

¹ It's important to not contaminate the original container of Rust Converter, hence why it is applied from a separate container. Any left over is disposed of (must not be returned to the original container).

² While Rust Converter is available in spray cans, research revealed brushing it on is more effective. Two coats of Black Guard Rust Converter, a white water-based paint like liquid, were applied on separate days.

Past Newsletters:

Copies of our newsletters going back to 2005 can be viewed at <https://www.zl1is.info/newsletters.html>

Under the 'Resources' tab on our web site are links to a range of useful web sites. Members are also welcome to submit items for listing on our web site.

History Update:

Our history document published at https://www.zl1is.info/docs/WVHF_Group_History.pdf has been updated to include three previously omitted 1990s entries, plus one new one for 2026.

Establishment of VHF Groups around New Zealand: The Auckland VHF Group was established in 1956 and became a branch of NZART in 1967. Its magazine "Spectrum" began in 1968, and the group opened its own clubrooms in 1972.

The Waikato VHF Group was formed in 1963, and the Wellington VHF Group followed in 1970. Christchurch also had a VHF Group as part of Branch 05.

Subscriptions:

Our financial year aligns with the calendar year, so **subscriptions fall due on 1st January each year**. Each subscription payment is acknowledged with a receipt emailed to the member – check your inbox, or if not sure, ask our Treasurer. Receipt of this newsletter demonstrates your sub is up to date. Can you encourage someone else to join? The value returned far exceeds the subs we collect.

Subscription rates for 2026 are unchanged from 2025 as follows:

Member or Associate	\$35.00
Family or Club Member ¹	\$40.00
Student Member ²	\$20.00

1. Family members = two or more members residing permanently at the same address, please provide all names & callsigns.
2. Student member = currently enrolled at NZ secondary school or tertiary educational institution.

Subscriptions can be paid by Direct Credit to our Westpac account 03 1555 0091289 00 Please enter your name/callsign in the transaction description so we can identify who payment is from.

Contact details etc should be updated using our subscription form available on our web site at https://www.zl1is.info/docs/MEMBERSHIP_FORM-A5_V26-1.pdf

Our Meetings & Minutes:

The Waikato VHF Group Inc holds **four general meetings each year**, with our Committee meeting on-line approximately one month prior. Our quarterly newsletter which includes notification of our upcoming general meeting, to which all members and visitors are invited, is published after our Committee meets (and determines that meeting date which is also dependent on venue availability). **Minutes** of the previous meeting (Annual or General) are now published at the end of that newsletter for members to read prior to attending the meeting rather than enduring them being read out at the meeting.

Month	Meeting Type	Meeting scheduled	Minutes published in our newsletter
March	AGM	2 nd half March	March N/L following year
June	Normal general	2 nd half June	September N/L
September	Normal general	2 nd half September	December N/L
December	Normal general	1 st half December	June N/L following year

A guest speaker and/or presentation is arranged for most meetings. If you have a suggestion for a presentation or speaker, let one of our committee members know so we can arrange/schedule it.

Licence Fee increase for Amateur Radio Service:

Radio licencing fees will be increased by Radio Spectrum Management (RSM) on **1st July 2026**, and for amateur radio repeater, links and beacons that increase is 32% to \$66.00 per annum per licence, taking the Waikato VHF Group's total to \$858.00. In order to keep those facilities on the air, our VHF Group committee decided to absorb that increase by covering it under present revenue streams.

However, as a consequence of this increase, the **cost of sponsoring each Waikato VHF Group radio licence will rise to \$66.00 per annum.**

Thanks to our 2026 sponsors, all our 2026 licences except the 12com beacon have already been sponsored. A table recording the licences and sponsors can be viewed at <https://www.zl1is.info/members.html>

NZART Centennial Conference 2026: held in Auckland over King's Birthday weekend.

Results of Remit voting:

- Remit 1: Digital Magazine & Membership Category - Failed on voices
- Remit 2: Access to Digital TV Spectrum - Passed on show of Hands
- Remit 3: NZART HQ Procedure Manual - Failed on Voices
- Remit 4: Electronic Voting – Schedule A –Passed on show of hands
- Remit 5: Constitution clause 4.3 change - Passed on voices

Full report is in NZART HQ Infoline Issue # 511

'For Sale' items on Waikato VHF Group Web site:

When our new web site was created in 2025, we included a page for items offered for sale, see <https://www.zl1is.info/sale.html> Links to this are under the home page header 'SALE' tab.

WD-40:

You may be familiar with WD-40 (standing for Water Displacement, 40th formula) a multi-purpose petroleum-based spray used to displace moisture, penetrate rust, lubricate light mechanisms, loosen rusted or seized metal parts, and dissolve grease. Although not recommended for use on electronics because it can leave a residue potentially damaging delicate electronics (specialized contact cleaners are recommended instead). Images right show 1960s spray can, and current packaging.

Development began on September 23rd, 1953, in a small chemistry lab in Chula Vista, California, where three men named Norman Larsen, Gordon Dawson, and John Gregory founded the Rocket Chemical Company with a single mission: create a water-displacement solvent that could protect the stainless-steel outer skin of the Atlas Intercontinental Ballistic Missile from rust. Its formulation is so secret that the company has never even filed for a patent.

You can watch the story of its development, which failed 39 times before succeeding at <https://www.youtube.com/watch?v=SfmnyOdIGQ4>

Among its many uses are a some you mightn't expect, like removing stickers and permanent ink from most items, rejuvenating the tip of a dead ball point pen, removing lipstick from fabric (test small area of fabric first), and even discouraging ants from surfaces by disrupting their pheromone trails (although it shouldn't be used on food preparation surfaces, plants, or in areas easily accessed by pets or young children because of its toxicity, a vinegar spray in 50/50 ratio of water and white vinegar is safer). A list of more than 2000 uses is at <https://wd40company.com/app/uploads/2020/08/2000usesfinal.pdf>



Silent Key:

Laureen Tubby ZL1BTP became SK on 8th June 2026. Laureen was a member of our VHF Group from 2004 through to 2009, during which she also served as our accounts reviewer. RIP Laureen.



Vendors from 8am

Selling commences at 10am

\$2.00 Entry / Raffle

Hamilton Amateur Radio Club

NZART Branch 12

www.zl1ux.org.nz

Branch.12@nzart.org.nz

Meeting: 3rd Tuesday each month @ 7:30pm

88 Seddon Road, Hamilton

All Welcome

Amateur Radio & Electronics

MARKET DAY

Gordonton Hall

1024 Gordonton Road (S.H 1B)

Gordonton

Sat 29th August 2026

Vendors from 8am

Selling commences at 10am

\$2.00 Entry / Raffle

See Branch 12 Web Site for Registration Form

Contact Phone Dennis 021-747-664

Branch 12 Web Site, including Registration Form

https://www.zl1ux.org.nz/market_day.html

*These are the minutes of our last General Meeting
(our March AGM minutes will be published in the March 2027 newsletter)*



**WAIKATO VHF GROUP Inc.
NZART Branch 81**

Minutes of General Meeting

held at the Te Aroha Events Centre, 44 Stanley Ave., Te Aroha
on Sunday 7 December 2025 at 1:30pm.

Present:- David ZL1DGK (Chair), Neill ZL1TAJ (Vice President), Ian ZL1TAT (Treasurer), Alan ZL1AMW (Secretary), [Steve ZL2RI](#), [John ZL2XJ](#), [Chris ZL2CS](#), Rod ZL1TFX, Ian ZL1AOX, Roy ZL1BPB, Morris ZL1ANF, Wally ZL1WE, Dennis ZL1UET, [Stephen ZL1ANK](#), Maxine ZL1FW, [Dean ZL1SE](#), Chris ZL1CJH,
(12 members [plus 5 guests and visitors](#))

Apologies: David ZL1TLQ

Minutes of Last Meeting:- Minutes from our previous (21st Sept 2025) general meeting as circulated with the November issue of our newsletter were accepted.

Matters Arising:- no matters were raised.

Finances:- Ian ZL1TAT reported:
Our \$8000 Term Deposit matured on 17th September, and the principal has been reinvested on 23rd September for twelve months at 3.65%.

General Business:

There being no General Business, our Chair invited our two special guests, John ZL2XJ and Steve ZL2RI to present on the new AREC structure, and to demonstrate some of the current AREC specialist equipment.

This was enjoyed by all, and a vote of thanks was agreed.

The meeting concluded with afternoon tea together, thanks to David ZL1DGK