

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**

Web: www.zl1is.info

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MARCH 2026 ISSUE

WAIKATO VHF GROUP CONTACTS

| | | | |
|----------------|----------------|--------|--------------|
| President | David King | ZL1DGK | 07 884 9590 |
| Vice President | Neill Ellis | ZL1TAJ | 07 576 1999 |
| Secretary | Alan Wallace | ZL1AMW | 027 495 4006 |
| Treasurer | Ian Brown | ZL1TAT | 0274 818 414 |
| Committee | David McMillan | ZL1TLQ | 027 477 0854 |
| Committee | Chris Hattan | ZL1CJH | 027 849 9206 |
| Committee | Dennis Seymour | ZL1UET | 021 747 664 |
| Webmaster | David McMillan | ZL1TLQ | 027 477 0854 |
| Trading Table | Tom Bevan | ZL1THG | 0273 093 449 |
| NL Editor | David King | ZL1DGK | 07 884 9590 |

Annual General Meeting March 2026

The 62nd Annual General Meeting of the Waikato VHF Group will be held on

Sunday, 29th March 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)

Bring along your ideas or suggestions for presentations later this year.

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

TREASURER'S REPORT FOR FINANCIAL YEAR ENDED 31 DECEMBER 2025

As I enter my 40th consecutive year as your Treasurer, it's my pleasure to summarise financial results from the Waikato VHF Group Inc's 2025 year. Our independently reviewed **Financial Statement** follows with the reviewer's report. Re-registration requirements under the 2022 Incorporated Societies Act prompted several clubs in our area to go into recess. Among those was Waihi Branch 43, with several of their remaining members transferring their branch affiliation to the Waikato VHF Group Inc. In accordance with NZART's Constitution, Branch 43's financial balance was donated to Branch 81, prior to being invested in two term deposits from which interest earned now assists us to offset some operating expenses. 2025 membership remained largely unchanged at 25, while five have already pre-paid for 2026. Members are reminded that our **subscriptions fall due on 1st January each year**, and you need to be a financial member to participate in voting at our March AGM. Membership renewal details can be advised via our membership application/update form at <https://www.z1is.info/members.html> The 2022 Incorporated Societies Act (under which we and NZART now operate) requires us to maintain an up to date 'membership list', so please submit/update your details as appropriate using that form?

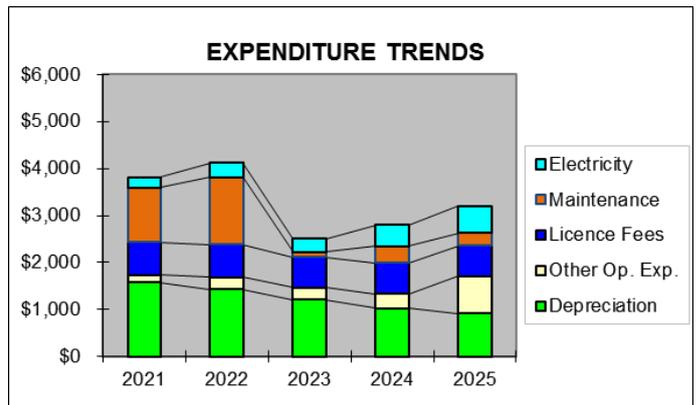
In addition to paying an annual subscription, some **members have sponsored our radio licence fees** and/or contributed **donations** directly. In that respect, we express appreciation to ZL1AOX, ZL1AMW, ZL1ANF/ZL1UJB, ZL1RWR, ZL1WE, and ZL2JC for their support. Tom ZL1THG again did a sterling job manning our trading table at Branch 12 and Branch 89 market days as well as bringing in other funds throughout the year. You're reminded that our web site lists **items for sale** at <https://www.z1is.info/sale.html> - some bargains only seek a reasonable offer!

In addition to annual radio licensing fees (which are due to rise in 2026), **electricity for repeater sites** continues to be a significant expense. Since the 'Low User Tariff' was discontinued under Government mandate, cost of electricity for our Kaimai National System site has to date risen 373% since 2021, even though our load hasn't changed. These increases will continue through to 2027, as was outlined in last year's report. Included in the \$797 'Other expenses' in our 2025 Financial Statement is a **\$500 donation we made to the Auckland VHF Group** supporting operation

of their Klondyke site, which, via our Kaimai '850 repeater, links five other repeaters in this area to the national backbone. **Capital Expenditure** of \$259.59 at our Kaimai site during 2025 was to upgrade the DC distribution system and install a Low Voltage Disconnect for the '850 repeater. Further expenditure at our Kaimai site is being incurred during 2026 to re-roof our hut plus carry out other building and tower maintenance.

Our Committee is once again up to full strength following Alan ZL1AMW's confirmation as Secretary at our September general meeting. Alan has since been appointed as one of our 'payment Approvers' spreading that administration load a little. I express appreciation to my fellow executive and our committee who meet quarterly via Zoom, usually in the month before our general meeting, to take care of the majority of administration tasks. Last, but not least, thank you to each and every member for your ongoing support, without which the Waikato VHF Group couldn't have achieved all it has in its 63 years.

Ian Brown ZL1TAT
Treasurer
January 2026



FINANCIAL STATEMENT

for the WAIKATO VHF GROUP Inc. for F.Y. Ended 31 December 2025

INCOME & EXPENDITURE ACCOUNT

| <u>2024</u> | | <u>2025</u> |
|-------------|-----------------------------|-------------|
| | INCOME ... | |
| \$645 | Subscriptions received | \$690 |
| \$10,610 | Donations received | \$3,195 |
| \$885 | Profit from Trading Table | \$930 |
| \$172 | Interest received | \$438 |
| \$12,312 | | \$5,253 |
| | EXPENSES ... | |
| \$1,031 | Depreciation | \$914 |
| \$366 | Repairs & Maintenance | \$266 |
| \$441 | Electricity | \$581 |
| \$650 | Radio Licence fees | \$650 |
| \$305 | Other expenses | \$797 |
| \$2,793 | | \$3,208 |
| \$9,519 | Excess Income / Expenditure | \$2,045 |

BALANCE SHEET

| <u>2024</u> | | <u>2025</u> |
|-------------|-----------------------------------|-------------|
| | CURRENT ASSETS ... | |
| \$8,857 | Bank Current Account | \$5,104 |
| \$8,000 | Bank Term Deposits | \$14,500 |
| \$0 | Cash on hand | \$0 |
| \$0 | Stock on hand | \$0 |
| \$16,857 | | \$19,604 |
| | LIABILITIES ... | |
| \$135 | Subscriptions received in advance | \$175 |
| \$16,722 | Working Capital | \$19,429 |
| \$5,842 | Fixed Assets | \$5,180 |
| \$22,564 | Member's Funds | \$24,609 |
| \$22,564 | | \$24,609 |
| | EQUITY ... | |
| \$13,045 | Opening Balance | \$22,564 |
| \$9,519 | This Year | \$2,045 |
| \$22,564 | | \$24,609 |

SCHEDULE OF FIXED ASSETS & DEPRECIATION

| ASSET | Original Cost plus Addns / Disposals at Cost | B/V at 31.12.24 | + Addns. | - Deprec. 15 % | Book Value at 31.12.25 |
|----------------------------------|---|--------------------|-----------------|-------------------|---------------------------|
| Waihi North '5475 Rpx & Link | 11,220.65 | 1,288.95 | | 193.34 | 1095.61 |
| Maungakawa '5575 Rpx & Link | 7,421.61 | 947.36 | | 142.10 | 805.26 |
| TeWeraiti '895 Rpx & Links | 8,185.57 | 1,094.37 | | 164.16 | 930.21 |
| Kaimai Repeaters Site facilities | 6,317.50 | 262.76 | | 39.41 | 223.35 |
| Kaimai '485 N.S. ULS Repeater | 2,829.20 | 93.06 | 259.59 | 52.90 | 299.75 |
| Kaimai 12cm Beacon | 449.00 | 2.48 | | 0.37 | 2.11 |
| Hamilton 2m/70/23cm Beacon | 315.22 | 7.33 | | 1.10 | 6.23 |
| Hamilton '9975 Nat. Syst.Rpx. | 4,382.73 | 77.17 | | 11.58 | 65.59 |
| Te Uku '5675 Rpx, Links + IRLP | 17,765.16 | 2,060.90 | | 309.14 | 1751.76 |
| TK705D 2m Transceiver | 225.00 | 7.40 | -7.40 | 0.00 | 0.00 |
| TOTALS: | 58,879.24 | \$5,841.78 | \$252.19 | \$914.10 | \$5,179.87 |
| Less Accumulated Depreciation | 57,415.58 | | | | |
| Equals Book Value at 31.12.25 | \$5,179.87 | | | | |


I. W. Brown (Treasurer)


A. J. Wallace (Secretary)


D. G. King (President)

**REPORT
TO THE MEMBERS OF
WAIKATO VHF GROUP INCORPORATED**

I have reviewed the financial statements of the Waikato VHF Group Incorporated. The financial statements provide information about the past financial performance and financial position of Waikato VHF Group Incorporated as at 31 December 2025. This information is stated in accordance with the accounting policies set out separately.

The Committee's Responsibilities

The Committee are responsible for the preparation of financial statements which fairly reflect the financial position of the Group as at 31 December 2025, and the results of it's operations for the year ended 31 December 2025.

My Responsibilities

It is my responsibility to express an independent opinion on the financial statements presented by the group, and report my opinion to you.

Basis of Opinion

A review includes examining, on a test basis, evidence relevant to the amounts and disclosures in the financial statements. It also includes assessing:

- The significant estimates and judgements made by the Group in the preparation of the financial statements, and
- Whether the accounting policies are appropriate to the group's circumstances, consistently applied and adequately disclosed.

I conducted my review in accordance with generally accepted accounting standards in New Zealand. I planned and performed my review so as to obtain all the information and explanations which I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatements, whether caused by fraud or error. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements.

Unqualified Opinion

In my opinion the financial statements fairly reflect the financial position of the Group as at 31 December 2025.

My review was completed on 14 January 2026 and my unqualified opinion is expressed at that date.



M Y JAENSCH

TAURANGA

National System usage guide:

Please avoid use of the National System for local chatter, move to a local repeater or simplex if possible, as it holds the whole country on, not just your local repeater. Also, please make sure to leave a minimum of 3 second gaps between overs. At busy times 5 seconds is recommended. Key-up delay from the Far North to the Far South is several mS making gaps left between overs very important so others can access if required. Please limit conversation to a maximum of 20 minutes and if possible move to simplex or a local repeater. Recognise that a conversation on your local National System repeater activates the whole system nation wide.

Licence Fee increase for Amateur Radio Service:

Following Radio Spectrum Management's 2025 review of radio licencing fees, Cabinet has agreed to update the current fees (set below full cost recovery in 2017) with new fees coming into effect on 1st July 2026. For amateur radio repeaters, links and beacons, this will be a 32% increase to \$66.00 per annum per licence, taking the Waikato VHF Group's total to \$858.00.

Maungakawa '5575 is back on air:

Our WaiPlenty network repeater at Maungakawa which suddenly disappeared off the air in early July 2025 was reinstated on 14th January 2026. Its 12V DC power supply had failed due to vermin urine though the power module's perforated top cover, causing a flash-over between the mains and low-voltage circuitry on its PCB (ouch!). Our trustees decided to replace that module with a different make/model having a solid top cover to eliminate that risk (photo on p11 last page of this newsletter). Our upgraded power supply was returned to site on 14th January, and quickly found to back on air.

Te Uku '5675 issues:

Our WaiPlenty network repeater and associated links at Te Uku which disappeared off the air during the first week of October 2025, returned just as mysteriously late in the week ending 5 December 2025. However while remaining on air with its associated links facing '695 and '5575, the repeater once more lost its modulation a couple of weeks later. We're awaiting some kind person visiting that site to swap out that repeater/link shelf with our spare, however no likely date is presently identified.

Te Werati '695 back on the air:

Our Te Werati '695 repeater and its associated links disappeared off the air completely in early January after our equipment lost mains power during a storm over Christmas / New Year 2025. One of our trustees visited that site with a co-owner on 10 March, discovering not only the mains circuit breaker had tripped, but also our DC load circuit breaker had failed due to severe corrosion in the very poor environment our equipment has endured since 2019. Supply to our repeater and links was restored.

Putuaki / Mt Edgecumbe repeaters relocating:

All amateur and commercial repeaters are vacating Putuaki as its Maori owners transition that maunga back to "its original state". Edgecumbe '700 (2m) and '9975 (National System) were shut down on 9th September 2025, prior to relocating to a new site at Manawahe (pictured right).

The Waikato VHF Group established the original 2m repeater then called "channel C" on Putuaki / Mt Edgecumbe which was commissioned on the 2nd March 1975, subsequently becoming Edgecumbe '700. On 15th December 2001, we assisted the Kawerau Radio & Hobbies Club to establish an extension to the National System, '915, which became '9975 on 5th December 2005 under the current band plan.





NZART Centennial Conference 2026:

Forums...

What are you expecting for talks/forums at the 2026 NZART AGM/Conference?

Would you like to give a presentation, and approximately how long might that presentation take? 1 hour slots with the first and last 5 minutes to move in and out of the location are being allocated.

If you're willing... please advise your call-sign, name and email contact details, so we can contact you to finalise matters.

ZL100C... this call-sign is special and sought after by hams, worldwide.

If you'd like to use this call-sign for a time... please email David Karrasch, z11dk@nzart.org.nz- with the dates, times, bands and modes so he can add your details to the register of operators.

David will send you a reply within 24 hours with approvals, depending on other operator's bookings.

You will be required to send David a computer-generated adif file of your log daily, with all contacts so he can add those to QRZ.com. Paper logs are no good... it must be a computer-generated log to add details into QRZ.

Thanks for your consideration.

Regards

Ian Ashley, ZL1AOX,
2026 Conference Secretary.

Solid State Batteries in cars are getting really close:

Development and testing of Solid-State Battery (SSB) technology has been a focus of numerous companies since before 2010. Application of low power SSBs already exists in medical (pacemakers) and fashion (wearables), while development of large high-capacity batteries to power electric vehicles has proceeded at increasing pace over the last decade. Leading this field has been Toyota, who as of 2019, held more SSB patents than any other company world-wide. Their roadmap for roll-out of newer battery technology is shown below. Observe how cost has fallen along with fast charging times.

TOYOTA'S BATTERY TECHNOLOGY ROADMAP

| | TODAY | | NEXT-GENERATION | | FURTHER EVOLUTION | |
|--------------------------------|------------------|--------------|----------------------|--------------------------------|-------------------|---------------|
| | 2023 | 2026 | 2026-2027 | 2027-2028 | 2027-2028 | TBD |
| | Battery for bZ4X | Performance | Popularisation | High-Performance | Solid-State 1 | Solid-State 2 |
| | Monopolar | | Bipolar | | N/A | N/A |
| Electrolyte type | Liquid | | | | Solid | |
| Chemistry | Li-Ion | | LiFePO* ¹ | Li-Ion | | |
| Driving range (WLTP) | 500km | > 800km | > 600km | > 1,000km | > 1,000km | > 1,200km |
| Cost | - | -20% vs bZ4X | -40% vs Bz4x | -10% vs NG performance version | TBD | TBD |
| Fast charge time* ² | ~30 min. | ~20 min. | ~30 min. | ~20 min. | ~10 min. | TBD |

*¹ Lithium iron phosphate *² SoC = 10-80%

NOTE: Established driving range includes aerodynamic and vehicle weight improvements

Smaller SSBs (eg 33kWh) have already appeared in some motorcycles, with Verge Motorcycles (Estonia) revealing their first production ready models in January 2026 at CES in Las Vegas featuring rapid charging (10-80% in 10 minutes) and range up to 600km https://www.vergemotorcycles.com/gl_en/

To dive into this subject, have a look at this Wikipedia article https://en.wikipedia.org/wiki/Solid-state_battery

Radio Electronics Group Inc. **ANNUAL EQUIPMENT SALE**

New & used electronic components, amateur radios of all description, 26MHz & 27MHz CB radios, PRS UHF CB radios, general coverage communication receivers, shortwave radios, vintage radios, power supplies & communication equipment accessories!

WHERE Glenview Club Inc
211 Peacocks Road
Glenview, Hamilton

- Easy access
- Plenty of parking for vehicles and motorhomes

WHEN Saturday 16th May 2026
Vendor entry: 8:30AM
Public entry: 10:00AM

| COST | Entry fee | Table fee |
|-------------|-------------------|------------------|
| | Public Lucky | Prebooked: \$20 |
| | Ticket entry: \$2 | On the day: \$25 |

For Vendor Registration

Form Contact:

Chris Herd

zl2tch@gmail.com



Waikato VHF Group Inc will again have a table at this popular annual event.

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

When our new web site was created last year, 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.

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 welcome to submit items for listing on our web site.

Subscriptions:

Members are reminded that our financial year aligns with the calendar year, so **subscriptions fall due on 1st January each year**. If you haven't already paid for 2026, you'll not be eligible to vote at our upcoming AGM (Constitution page 9 refers).

Subscription rates for 2026 remain the same as they were in 2025, and are 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.

These are the minutes of last year's Annual General Meeting



**WAIKATO VHF GROUP Inc.
Branch 81**

Annual General Meeting

Held at the Te Aroha Events Centre, 44 Stanley Ave., Te Aroha
on Sunday 16th March 2025, at 1:30pm.

Welcome:- David ZL1DGK welcomed members and visitors present.

Present - (9 members, plus **two visitors**): David King ZL1DGK (Chair), Ian Brown ZL1TAT (Treasurer & minute taker), Maxine Rowe ZL1FW, Dennis Seymour ZL1UET, Russell Richardson ZL1RWR, Chris Hattan ZL1CJH, Rod Rowe ZL1TFX, Roy Smith ZL1BPB, Neill Ellis ZL1TAJ, **Stephen Pearce ZL1ANY & XYL**.

Apologies:- were received from Ross Walker ZL1AAF, Ian Ashley ZL1AOX, Warren Harris ZL2AJ, Morris & Joline Beale ZL1ANF & ZL1UJB, Tom Bevan ZL1THG, Kevin Hampshire ZL1KRH, David McMillan ZL1TLQ and Wally Edlin ZL1WE.

Silent Keys:- ZL1AQC Vic Sinclair (member 2012~2024), ZL1GWP Gavin Petrie (member 1984~2024 and our Secretary for 38 years). A one minute silence was observed in remembrance of these past members who became Silent Keys during the past twelve months.

Minutes of 2024 AGM:- as published in the March 2025 newsletter were confirmed.

Moved ZL1DGK, seconded by ZL1TAT, Adopted

Matters Arising:- Nil

Presidents Report:- was presented by President David King ZL1DGK.

Moved ZL1DGK, seconded by ZL1UET, Adopted

Treasurers Report:- as published in March 2025 Newsletter was presented by Ian ZL1TAT.

Moved ZL1TAT, seconded by ZL1RWR, Adopted

Election of Officers:-

Vice-president Neil ZL1TAJ took the chair for the election of President.

President ZL1DGK was nominated by ZL1TAJ, seconded by ZL1BPB. With no further nominations David offered to leave the room however was advised to stay where he was, and was elected President to acclamation.

Vice President;- ZL1TAJ nominated by ZL1TAT, seconded by ZL1BPB

Secretary;- No nominations were received, however (Life Member) Russell ZL1RWR indicated he may be in a position to take up the role from March 2026 if no one else steps in prior.

Treasurer;- ZL1TAT nominated by ZL1DGK, seconded by ZL1CJH

Committee:- Nominations were called for up to 4 committee members;

Nominated: – ZL1UET nominated by ZL1TAT, seconded by ZL1DGK
ZL1CJH nominated by ZL1DGK, seconded by ZL1TAJ
ZL1TLQ nominated by ZL1TAT, seconded by ZL1TAJ (is also our Web Master)
ZL1ANF nominated by ZL1DGK, seconded by ZL1TAT

With no further nominations, these four were declared elected with acclamation.

Bulletin Editor:- ZL1DGK offered to continue in this role, seconded by ZL1TAT. With no further nominations, David's reappointment was carried with acclamation, and he was thanked for producing our newsletters over the past twelve months.

Accounts Reviewer:- ZL1DGK proposed, seconded by ZL1BPB that Yvonne Jaensch be re-appointed as reviewer for our 2025 year. Carried on voices.

Subscriptions:- Treasurer, Ian ZL1TAT proposed "subscriptions for 2026 remain as they are for 2025, being \$35.00 for an individual member or \$40.00 for a family or Club, and \$20.00 for a Student member.

Moved by Ian ZL1TAT and seconded by David ZL1DGK. Carried

General Business:

Constitution Review Ian ZL1TAT led a clause by clause discussion on review of our Constitution to meet requirement of the Incorporated Societies Act 2022. Most attendees has read the draft sent out with our March newsletter, so we were able to skip through the document focusing on changes made to NZART's model Branch Constitution. It was noted our group needs to re-register by 5 April 2026 to avoid being de-registered.

Moved that the Waikato VHF Group adopt the 2025 Constitution as presented at this meeting by

Moved by David ZL1DGK and seconded by ZL1UET. Carried

RSM 2025 Review Ian ZL1TAT outlined Radio Spectrum Management's review of radio licensing fees proposed to be introduced from July 2026 as the result of winding down their Memorandum Account. Under both options proposed by RSM, Amateur licence fees are proposed to increase by the same amount (37%) from \$50 incl GST to \$68 incl GST.

Our committee proposed not making a Branch specific submission, but to support NZART ALO's submission through a letter of support.

Moved by Ian ZL1TAT and seconded by ZL1UET. Carried

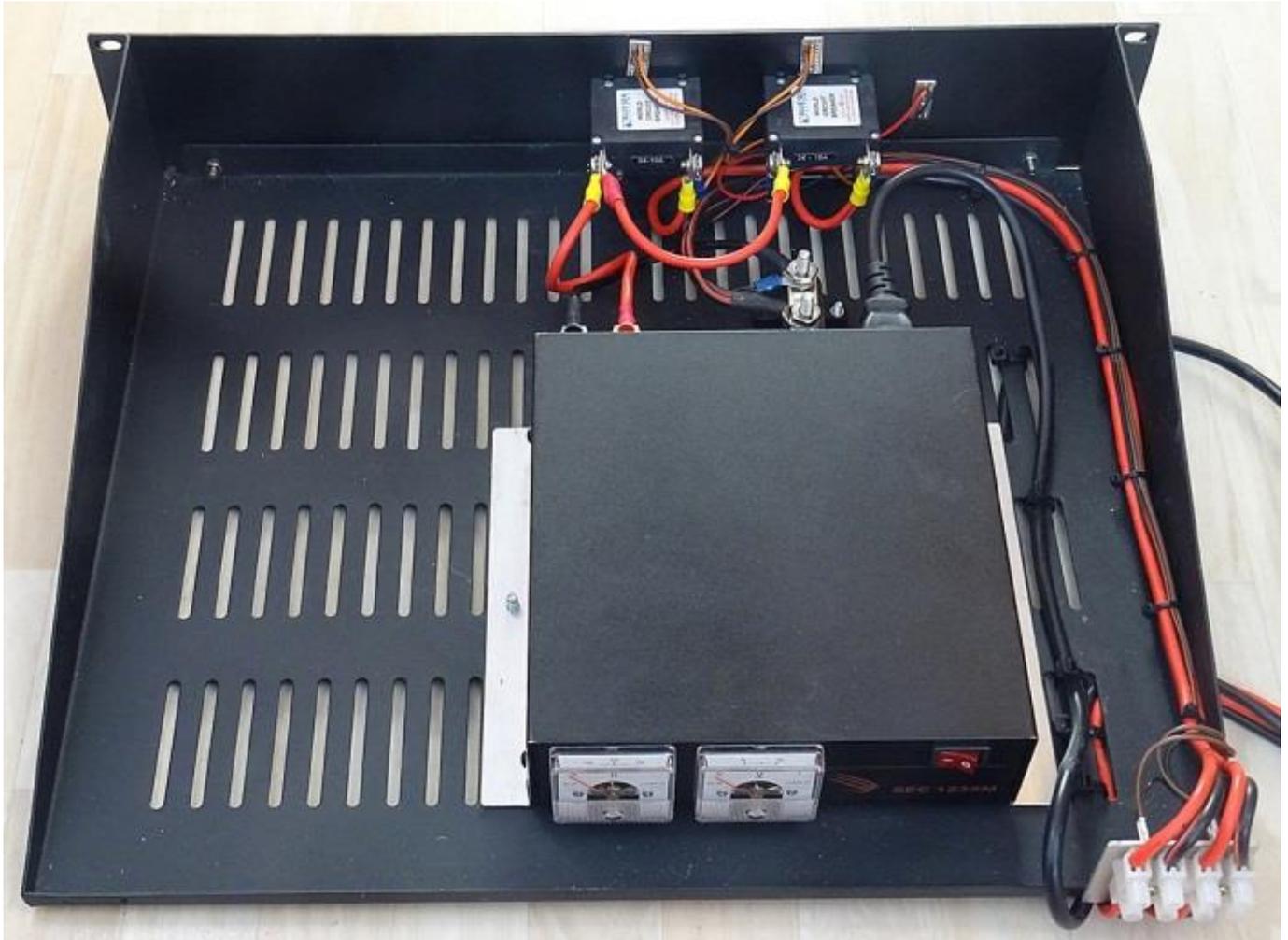
Meshtastic Russell ZL1RWR introduced the off-grid mesh network 'Meshtastic' facilitating low-speed text communication through nodes operating in the 915~928 MHz ISM / Amateur band. To extend established Waikato coverage into the Bay of Plenty, he suggested a node at our Takauranga (Kaimai) site would be a useful addition. A self-contained solar powered node not requiring any external power or hut access was available for inspection, and would be similar to the installation he proposed.

An indication of approval for this was obtained from the meeting,

Moved by ZL1TAJ and seconded by ZL1DGK that the Waikato make their Takauranga (Kaimai) site available for a Meshtastic node installed by Waikato VHF Group members. Carried on voices.

There being no further business, the meeting closed at 1515 hours, followed by afternoon tea kindly arranged by David ZL1DGK.

New Power Supply in our Maungakawa repeater DC Supply shelf
ready for re-installation back on site.



After the above photo was taken, the circuit breakers were enclosed in a cage to prevent vermin access.

