

Papakura Radio Club
August 2026
Newsletter

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I intend to produce a newsletter each month, and it is planned to be sent out prior to each monthly meeting. If you have any items you would like to see in the newsletter, please send to me at iana@kcbbs.gen.nz

Ian Ashley ZL1AOX, Secretary.

Next Meeting August 5th, 2026, at 19:30.

At the Papakura Radio Club... Wellington Park, Papakura... Opposite the GULL S/S, Takanini

MeshCore by Ian ZL1AOX.

JOTA – JOTI will be on October 16 to 18, 2026.

Aaron ZL2BGA will provide us an update whether we can help the Manurewa Scout Group.

Icom IC-7300 for sale

Was bought 31st august 2024 from RWB new

2 years Warranty left

Price $1650.00 is negotiable.

Contact John ZL1OJ Email zl1oj50@gmail.com



Papakura Radio Club (Inc.)

Minutes of General Meeting 01 July 2026 at 19.32

At the Clubrooms

Present: 17 as per roll book.

Teams: N/A

Apologies: ZL1ABR, ZL1IRC.

Minutes of the June 03, 2026, General meeting were taken as read as printed in the newsletter.

Matters arising: Nil.

Inward Correspondence:

Newsletters 29, 66, 10, 86
Papakura Resilience meeting notices and minutes
Lily Yao payment of invoice.
Kim Squire CLM Community
Papakura Business Association
Musick Point newsletter.
Auckland On the Air newsletter

Outward Correspondence

Lily Yao from Auckland Seniors Support and Caring Group invoice
Newsletter

ZL1AOX/ZL1TTM

Finances: Dave ZL1MR reported we had 48 current members.

Accounts to pay:

David ZL1DK 2x mini computers, 2x monitors, 1 keyboard and 1 mouse. $888.00

Moved by Dave ZL1MR, seconded by Helen ZL1HOW that accounts for payment be approved. Carried.

Report Number 08 for 2026 year

Statement 649. Paid up Members 48

Statement Balance	$4,195.62
Invoices on Statement	
Mercury 18 May Not received	
Invoices not on statement:	
ZL1DK 2 mini computers	$888.00
Balance	$3,307.62
Plus Westpac savings	$9,419.65
Plus ASB Investments	$40,393.01
Total Papakura Funds	$53,120.28
Simple Saver MRC	$39,525.19
Funds held for AREC	$14,220.82
Funds in PRC Acc	$106,866.29

General Business:

1. **Meetings 2026**:
   July 01: AllStar by Rob Stokes ZL1RJS
   August 05: MeshCore by Ian ZL1AOX
   September: 10 minute talks
   October: Planning for open day on the 17th October.
2. **Planned Open Day on 17th October** ZL1DK: Sub committee of Helen ZL1HOW, Tristan ZL3TI and David ZL1DK to report to Committee.
3. **MeshCore:** Discussion on 4th Wednesday 22nd July.
4. **New member:** Lauren Byron-Brodie ZL1LBB welcomed as a new Member.
5. **Silverdale sale:** Ian ZL1DM handed the Treasurer $110.00 from sale proceeds and to Dave ZL1MR $40.00 for items sold.
6. **Drone failure**: Graham ZL1AUG advised that the Sydney drone display had a mishap when the drones fell to ground after two nights.

Meeting closed at 20:06 and followed by presentation on AllStar by Rob ZL1RJS, followed by supper.

SINGLE SIDE BAND AND MOBILE PHONES!

Dave ZL1MR

Early radio efforts were all based around Amplitude Modulation. That is produce a constant carrier wave and then use the audio input from a spoken voice to make the power level go up and down – hence the term amplitude (power) modulation (change).

This was a pretty wasteful system for sending signals as 50% or more of the energy being transmitted was in the carrier was doing nothing useful! Why not remove the carrier and use all the energy to send the audio information?

Amateurs achieved this by twiddling with the radio internals to remove the carrier and one of the audio sidebands. The key components were filters that chopped out one sideband. Initially the filters were made using quartz crystals and later mechanical filters were invented along with other interesting solutions. The end point is that this technology, invented by amateurs, was commercialised and these filters are now critical components in all cellular and other RF devices.

This short YouTube video tells the story: https://youtu.be/uOvgS_HvOcw?si=e9XmajUa16ukEORf

MESHCORE & MESHTASTIC

Dave ZL1MR

Our meeting on Wednesday 22nd featured a presentation by Ian ZL1AOX about MeshCore and Meshtastic. The core technology is called the Internet of Things (IoT) and utilises Radio Frequency (RF) devices that fit into various radio bands. The devices fall into a category called Short Range Devices (SRD) with various segments of frequencies allocated for anyone to use.

Typical day-to-day use is for remote control of car alarms, garage doors, scientific instrumentation reporting, industrial equipment comms, etc. Of course, enthusiastic amateurs can't stop fiddling so it didn't take long for various firmware (device operating systems) and software (user interfaces) to be designed and tested. The end result has seen two technology solutions arise that transmit short messages of 150 characters.

Meshtastic was the first use case and uses a spread-out set of 'RF nodes' to distribute messages, one node to another

until they reach their destination. Whilst this is great for a small area and a limited number of nodes, the 'flood' of messages that hit every node is quite power hungry resulting in a relatively inefficient distribution of messages once the network reaches a critical size.

MeshCore on the other hand uses the same equipment but the firmware and software allocate some of the nodes to be a 'repeater node' and others to be a client – called a 'companion node'. Instead of always sending messages as floods hitting every available node, the system is programmed to learn the most direct route between the origin and target node. This reduces overall power consumption by nodes and provides more reliable message transmission complete with delivery confirmation (still a work in progress as often the confirmation is not reliably received).

MeshCore was developed in 2024 and has seen a rapid rate of adoption across the world. There are now a huge number of repeaters in Auckland and an increasing user base with companion nodes. There is a mix of users ranging from amateur radio operators to the younger hacker community pushing the boundaries of what technology can deliver but also quite adept and keen on programming. The bottom line is that all these non-amateurs are all ready to be encouraged to become ham operators and fill the gaps in the community as the older amateur operator's head into permanent retirement as Silent Keys!

The use case: The amateur/hacker use case appears to primarily have fun playing with radios and fiddling with firmware and software solutions. But there is a serious use case in the event of an emergency taking out the standard Business As Usual (BAU) communications such as cellular and fibre.

The most obvious current use case is that Gisborne District Council has now adopted the MeshCore technology as a back-up comms system for the small scattered communities on the East Coast from Gisborne north to East Cape. Locally AREC Emergency Communications in Auckland can probably lead the way in that aspect.

Technology: For local operators in Papakura entry to the system is a relatively low-cost option. Bulk buying of the companion nodes reduces freight costs. The recommended starting nodes can be found on the MeshCore website https://meshcore.io/ with the Wio Tracker L1 Pro appearing to be the most versatile unit currently available. When paired with a cellphone messages received can be easily accessed and messages readily composed and sent.

Branch 65 now has a private encrypted channel for communications between club members, and a Room Server has been set up to allow members to post messages that others can read at their leisure.

For more details contact members who have already gone down the MeshCore rabbit-hole!

OPEN DAY... Papakura Radio Club... 2026...

The Papakura Radio Club is planning an OPEN DAY, which is planned to be held on 17th October. Date and programme to be finalised soon.

That Saturday will see live demonstrations of Amateur Radio being held from 10.00 am right through the day and into the early evening. Demonstrations including HF (high frequency) communications over SSB (single sideband - voice), CW (morse code), FT8 (digital mode). There will also be demonstrations of VHF (very-high frequency) and UHF (ultra-high frequency) radios over simplex (radio to radio or direct line of sight) and repeaters (radio to repeater/repeater to radio) to increase distances of communications. On VHF we will have a repeater in action and over UHF we will have a link to the Winlink network. Winlink is a system where we can send messages for emergency communications. There will also be an active workshop where all the construction / repairs are carried out. On the construction side, we will be making a J-Pole antenna to suit the 2 metre band out of 300 Ohm TV ribbon... on the repair side we are going to be looking at a power supple that went 'BANG' some time back and needs repair.

There will be static displays of SSTV (slow scan television), examples of earlier radio used by amateur radio operators, some modified for amateur use, and some commercially available.

Where to from here... maybe it's time you considered amateur radio as your next hobby.

If so, you need to know what to do next... David ZL1DK

Contest Corral

Check for updates and a downloadable PDF version online at **www.arrl.org/contest-calendar**. Check **https://contests.arrl.org** for recent results. Refer to the contest websites for full rules, scoring information, operating periods or time limits, and log submission information

Contest Calendar

3rd August	North American QSO Party (CW)	80m-10m	CW
9-10th August	WAE DX Contest (CW)	80m-10m	CW
16-17th August	International Lighthouse Weekend	All HF	All
17th August	North American QSO Party	80m-10m	SSB
23-24th August	Ohio QSO Party	80m-10m	CW/SSB

Musick Point Newsletter link

Please find the latest MUSEletter at-

https://museletters.zlham.net.nz/m_2026.html

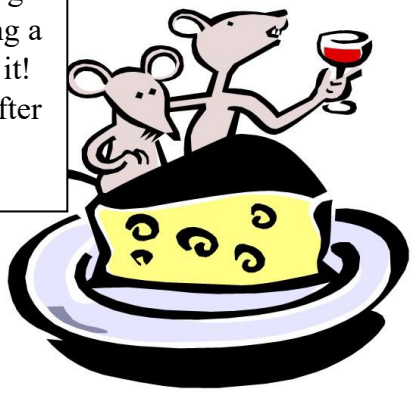
New Zealand & Australian Amateur Radio Magazine

https://us.list-manage.com/q3JEvLF3jc1?e=effe0514bb&c2id=2db5bf7fc7fbb67813cc7318b36a19dd
Use the above link to this newsletter.

ZL1RJS Website

Rob ZL1RJS/ZL3RS has created a website at https://zl1rjs.co.nz/ which has information on projects run and supported by the Papakura Radio Club Inc. He also has links to manuals for various radios and other interesting items.

Just a reminder that our General Meeting supper is provided by Members bringing a plate, preferably with some goodies on it! We don't need a banquet just a snack after the meeting.



Branch 29 Newsletter link:

The latest 29-er has been uploaded. A copy can be found **here**.

ZL1VK Kitsets available now…for immediate delivery.

- Anderson Power Pole Distribution, PC Board only… $5.00
- 2 Radio into 1 Headphone set switching radios, incl. PTT, PC Board only… $9.00
- Radio Interface for digital modes incl. Winlink, FT4, FT8 etc. Complete kit… $69
- Tait Radio TM8100 Series VFO unit… 100 Memories, Complete kit… $125
- Tait Radio VFO Escutcheon… clips over the VFO Unit… $15

The kits above are all designed by Keith Dix, ZL1BQE for the Papakura Radio Club.

The Diplexer is a kit designed by Rob, ZL1RJS for the Papakura Radio Club.

- Diplexer… UHF/VHF unit and metal Die-cast box, supplied, complete kit… $35

The following kit is still being finalised and will be available soon…

Voice Keyer… Record 4 messages, push button to play selection through TX radio, complete kit. TBA

Collect from the Papakura Radio Club most Wednesdays 7.30pm to 8.30pm or email zl1dk@nzart.org.nz for postage costs etc…

Club News:

Visit to Papakura by Warren Harris ZL2AJ, President of NZART.

20 members and visitors from Franklin and North Shore Radio clubs were given an update on happenings at the NZART HQ and a wide range of other subjects.

Break-In will become available as an electronic version with a reduction of $20 on the subscription. Planned for the new year I believe.

The meeting closed at 21.15 with supper.



Papakura Radio Club Inc.

Branch 65 NZART Club Directory
Wellington Park, 1 Great South Road.
Westpac 03-0399-0019896-00
Club website: http://www.qsl.net/zl1vk Club email: zl1vk.club@gmail.com

President	ZL1BNQ	Richard Gamble	021 729 270
Vice President	ZL3TI	Tristan Ilich	027 889 3309
Secretary	ZL1AOX	Ian Ashley	021 198 1810
Treasurer	ZL1MR	David Wilkins	021 185 7903
Committee	ZL1DK	David Karrasch	021 560 180
	ZL1IRC	Ian Clifford	021 082 48400
	ZL1RJS	Rob Stokes	021 307 005
	ZL1RIC	Ricky Hodge	027 533 8155
	ZL1KIM	Kimi Nooroa	021 024 66004

AREC Section Leader	ZL1BNQ	Richard Gamble	021 729 270
CD Liaison	ZL1AOX	Ian Ashley	021 198 1810
Newsletter Editor	ZL1AOX	021 198 1810	
Hall Custodian	ZL1AOX	Ian Ashley	021 198 1810

Newsletter. Contact: Ian Ashley iana@kcbbs.gen.nz
Our newsletter is published monthly and normally distributed just before the club meeting.
Please forward articles etc to the editor Wednesday 1 week before the general meeting.
Please notify any change of address including E-Mail Address to the secretary.

Meetings

General Meetings are held at the Clubrooms on the 1st Wednesday of each month, starting at 7.30 pm. Look at your calendar and mark these nights. The speaker follows the General Meeting.
Activity Nights are held on the 2nd Wednesday starting at 7.30 pm.
Committee Meetings are held on the 3rd Wednesday of each month at 7.30 pm unless advised.
Project Evenings are on the 4th Wednesday of each month.
AREC Meetings are on the 5th Wednesday night, also starting at 7.30 pm
AGM: Held in November
Subscription: Full membership and newsletter $30.00 Family Membership and newsletter $45.00
Bank Account number: **03-0399-0019896-00**
Working Bees: As required.
Branch 65 21 Award: For contacts with ZL1VK (5 Points) and 8 Papakura Radio Club Members (2 Points each). Total 21 Points. Cost $5-00. Certified list and $5-00 to Secretary, Papakura Radio Club. Address above.

ZL1VK Club Nets

146.625 MHz Sunday at 8.00 am. Controller ZL1RJS, Rob and any others available. If the repeater is not available, listen 146.475 MHz FM simplex.
7.085 MHz LSB, Sunday at 9.00 am. Controller Ian ZL1AOX this Sunday
(Linked to 146.675 & 438.775 FM Tone 141.3Hz) (Link inoperative at present)