

**The Official Newsletter of the
Auckland VHF Group Inc.
Spectrum**



Club Contacts — page 2
Next Meeting — page 3
September Meeting Minutes— page 4
NZART Centenary Challenge — page 5
World Radio Conference 23 — page 5
Regarding PL259 Connectors — page 6
Silent Keys — page 8



Auckland VHF Group Inc.

Branch 66 NZART

PO Box 10138, Dominion Rd, Auckland 1446
Clubrooms: 30 Hazel Ave, Mt Roskill

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Secretary	Alastair Anderson	ZL1NEO		secretary@aucklandvhf.org
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ZL1BQ Trustee	Vaughan Henderson	ZL1VH	021 844 804	zl1bqtrustee@aucklandvhf.org
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ZL1VHD Dstar gateway registration URL :			http://zl1vhd.dstar.org.nz	
Webmaster	Terry Corin	ZL1BPA	027 697 4686	webmaster@aucklandvhf.org
Club Web Page:			http://aucklandvhf.org	

Club News and Net:

The combined Auckland VHF Group and Auckland Regional Branch News and Net are held on 146.625 MHz and 439.875 MHz at 8.15 pm each Sunday or after the ZL6A National Broadcast on the last Sunday of the month.

Club meetings are held at the Clubrooms at Hazel Avenue, on the second Monday of each month at 7.30 pm. For other details, listen to the News and Net each Sunday evening.

SPECTRUM is the official journal of the Auckland VHF Group Inc. Opinions expressed are those of the authors and do not necessarily reflect club points of view. The closing date for SPECTRUM articles is by the 1st of each month. Articles to be submitted to the editor Mark ZL1UMK
spectrum@aucklandvhf.org

Auckland VHF Group (Inc) Branch 66

**The next Auckland VHF Group General Meeting
be held on
Monday 9 October
At the Clubrooms, 30 Hazel Avenue at 7:30 pm**

To mark the start of Daylight Saving, we will be having a **"Fox Hunt"**

Two or more 2 metre transmitters will be placed within the Arthur Falkner Reserve and possibly 2 (or more) FM "bugs" in the same area.

You will need your own Hunting gear, aerials, receivers etc.
A torch and wet weather gear might be a good idea.

The 2 metre signals will be in the 144 - 145 MHz region and the LPFM signals will be in the 107.5 - 108 MHz (flea power) region.

ALL welcome. Come and have some fun. Tea, coffee and Bikkies after.

Chocolate Foxes (or Fish) up for grabs.

Answer to mystery picture in August issue

This is the high power coax feeder for an outdoor cellular Yagi

Minutes of the August General Meeting of the Auckland VHF Group Inc.
Held on Monday 11 September 2023 at the Clubrooms, Hazel Avenue, Mt. Roskill

Meeting started at: 1945 Hrs (7.45pm)

Present: 15 members as per the Attendance Book.

Visitors: NIL

Apologies: Basil ZL1TOW.

(Moved apologies be accepted: ZL Seconded ZL) Was not put.

Minutes of August General Meeting – the minutes of the August meeting were not available at the present time.

A moments silence was taken for the passing (Silent Key) of George Marr, ZL1TUJ.
Several members attended the funeral.

General Business:

Dave ZL1TIA advised that due to medical reasons he would not be standing for office at the AGM in November.

Dave ZL1TIA asked for any nominations for the Position of: Vice President or/or Committee Members.

Brian ZL1UXB offered to be a committee member.

Seconded by Darryl ZL1TCI

Moved that nomination be closed: George ZL1TUX

Nomination put to General Meeting. The Nomination was Carried.

Any other business from the floor:

Mention that the side benches are becoming storage area's and these need to be kept clear for users of the clubrooms and for club activities.

There being no further general business, the business session closed at 2015 and the guest speaker for the evening, Vaughan Henderson ZL1VH was introduced by ZL1TIA.

Guest Speaker:

Vaughan gave an informative talk on the Repeaters in the Northern Region and gave some information on the Digital Modes available to Amateurs.

The meeting closed at: 9:30pm and was followed by a light supper.

AVHFG General Meeting Minutes, 11 September 2023 v1.0

NZ Callsign Centenary Challenge:

On 7th June 1923 the first New Zealand Amateur Callsigns were allocated. To commemorate this historic centenary NZART has launched a special Callsign Centenary Award.

Your challenge is to work enough amateur radio stations to accumulate all 26 letters of the alphabet from the suffixes of their callsigns. There will be bonus citations on the award for any station working a branch call sign that was one of the first callsigns allocated.

Those stations are: ZL1AA Auckland Branch, ZL1AB North Shore Branch, ZL1AC Western Suburbs Branch, ZL2AB New Plymouth Branch, ZL3AC Christchurch Branch, ZL4AA Otago Branch.

The Award will run from the 7th August to the 7th of December 2023. All two-way contacts are eligible, including repeater contacts and any digital mode.

Applications for the award (with details of the contacts claimed) should be made by email to awards@nzart.org.nz by 31 December 2023. There is no charge for this Award, which will be emailed to successful applicants in pdf form ready for home printing.

Footnote: Contacts with Auckland Branch ZL1AA may be difficult to obtain as the Branch does not have a regular HF net.

World Radio Conference 2023 (WRC-23)

World Radiocommunication Conference 2023 (WRC-23) will take place in the United Arab Emirates from 20 November to 15 December 2023, preceded by the Radiocommunication Assembly 2023 (RA-23) from 13-17 November.

This year at WRC-23, the amateur service may see the loss of more radio spectrum. Additional measures to protect the radionavigation-satellite (space-to-Earth) in the 1240 - 1300 MHz band from amateur interference are likely to be adopted. As in most microwave allocations, the Amateur Service is secondary and must avoid interfering with primary services operating in the band, even if they are introduced later. The Global Navigation Satellite System (GNSS) operators have for some time been voicing their concern that the continuing amateur operation in the band 1240 – 1300 MHz has the potential to interfere with satellite ground based receiving equipment. This, despite no evidence to support this claim.

The other band under threat is the amateur 3cm band (10.0 – 10.5 GHz). International Mobile Telecommunications (IMT) is under consideration as an additional use of this part of the spectrum. Lobbying by the RSGB (UK) and other European amateur organisations to try and garner support from their administrations to oppose this proposal has been on-going since last year. How successful this proves to be will have to wait on the outcomes of WRC-23.

Agenda Item 1.12 seeks to give additional considerations to the spectrum from 40 to 50 MHz for wide band spaceborne radar sounders, used for climate monitoring. Originally introduced to monitor the shifts in polar ice sheets, the radar sounders may get an increase in power (9dB) as well as the removal of geographical mitigations. This has the potential to severely impact amateur 6m operation, especially the bottom end weak signal and calling frequencies in the 50.0 to 50.5 MHz range.

PL259 / SO239 Connectors

RadCom (Radio Society of Great Britain) Magazine for September 2023 has an interesting item on the "Shielded Banana Plug". Every radio amateur knows the SO239/PL259 connector family, also referred to as "UHF Connectors". Used extensively as the antenna connector on HF and many VHF rigs, there are a large number of VHF/UHF operators who consider them useless at the higher frequencies where they are considered to be mis-matched and do not offer a constant impedance.

But are they really as bad as people claim? For most practical purposes, a physical mismatch has to have dimensions of at least $1/20^{\text{th}}$ of a wavelength in order to be noticed. At 2m, that's 10cm and at 70cm it's 3.5cm. The whole connector isn't that big, so they can't be that bad? Mechanically they are quite robust unless you buy the really cheap ones and while not waterproof, some self-amalgamating tape solved that.

UK amateur Dave, G8WBX who is professionally involved with network analyser calibration kits and measurement services made some tests on the UHF connectors. He tested two adaptors, a male PL259 to female N-type and a male N-type to female SO239. He first checked the pin depth of the N connectors as he would be plugging them into his calibrated test equipment cables and did not want to cause any damage. Finding the pin depth acceptable, he then performed a calibration on his HP8720D Vector Network Analyser from 50 MHz to 20 GHz. Dave notes that this was a bit excessive but was interested to know how their performance was in the GHz range.

The figures given below are the loss through a mated pair of adaptors:

70 MHz: 0.001dB

144 MHz: 0.036dB

423 MHz: 0.21dB

1296 MHz: 0.832dB

2622 MHz: 3.95dB (first frequency where the loss increased significantly)

10368 MHz: 3.37dB

Maximum loss of 7.76dB at 14.9375 GHz.

VSWR measured at the female N connector (port 1)

70 MHz: 1.05:1

144 MHz: 1.11:1

432 MHz: 1.34:1

1296 MHz: 1.73:1

VSWR measured at the male N connector (port 2)

70 MHz: 1.05:1

144 MHz: 1.11:1

432 MHz: 1.37:1

1296 MHz: 2.13:1

10368 MHz: 4.63:1

Dave notes that the tests at 10GHz were more in jest than anything else, but do show the trend. The measurements do seem to bear out the commonly held belief that, for practical purposes, the PL259/SO239 are going to be OK up to 144 MHz. Above that, with a measured 1.37:1 VSWR, equating to a rather poor 16dB return loss at 432 MHz, he would not go near one.

Silent Keys:

George Marr ZL1TUJ sadly passed away on 31 August 2023. A long-time member and supporter of the VHF Group, George was on the Club Committee prior to his passing. His obituary will be in next month's Spectrum.

Steven Hayman ZL1TPH passed away on Thursday 21 September. The family has held a private funeral service. Steven was, for some time a member of the Auckland VHF Group and a contributor to Break In. He was a man who put Amateur Radio at the top of his interests. He made equipment and lent them to others to be able to create Records. He went the extra mile and will be remembered for what he achieved and what he helped others to achieve. A true Amateur Radio Enthusiast.

Thank you to John-Henry Wilson, ZL1JHW for the donation of plug in circuit breakers. Hopefully these will alleviate future "fuse popping" mishaps.

Do you have a contribution for Spectrum?

Any and all contributions, would be welcome.

I don't promise to publish everything I receive, but would be glad to receive suggestions or contributions.

Auckland VHF Group Subscriptions are due for 2023-2024 year by the end of June 2023.

Subscriptions are now be accepted for the 2023-2024 year, 1 July 2023 to 30 June 2024.

This coincides with the financial year for the group, which ends 30 June 2023.

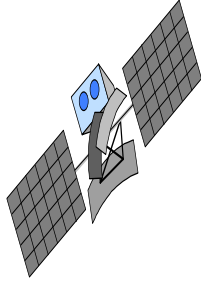
Subscription update notice will be sent out in early June to all members who have not renewed by that time.

Note on Subscriptions:

- a. There is no increase in subscription for the 2023-2024 subscription year.
- b. All subscriptions terminate on 30 June.
- c. Your subscription will run for two-months after end of year to 30 August 2023 and then drop to the in-active membership list. (as per the constitution)

Subscription Type	Subscription Price
Ordinary Members (Full)	\$60.00
Associate Members	\$55.00
Family Members	\$25.00

- For Family Members, one person needs to be an Ordinary Member, and then each additional person then becomes a family member.
- Subscription prices are determined at the AGM preceding the year being implemented (7 months ahead)



AUCKLAND VHF GROUP INC.

P O Box 10138, Dominion Rd, Auckland 1446,
 30 Hazel Avenue, Mount Roskill, Auckland,
 Email: treasurer@aucklandvhf.org
 Web: <http://www.aucklandvhf.org>
 NEW ZEALAND



		Date Form Completed:	
Mr/Mrs/Miss/Ms	Forename	Surname	
	Address1	Phone: (home)	
	Address2	NZ Post Code	Phone: (work)
	Town/City	Phone (Mobile)	
	Email	Phone (Cell)	
Occupation:		Callsign:	
NZART Member	Yes / No	Branch assigned	
AREC Member	Yes / No	Branch assigned	
Family Member 1	(Name)	(Call)	(Email) (Mobile #)
Family Member 2	(Name)	(Call)	(Email) (Mobile #)
Family Member 3	(Name)	(Call)	(Email) (Mobile #)
New/Renewal/Change	Membership Category		To pay
	Ordinary (Full)		\$60.00 \$
	Associate		\$55.00 \$
	Family (per member after 1 full member registered at same address)		\$25.00 \$
Donations	Klondyke Refurbishment		\$
	Repeater Maintenance		\$
	Data/D-Star		\$
	Beacon/Repeater/Links Licences		\$
	General Club Donation / Other		\$
		Total	\$
Payment (Mark One →) If require Invoice / Receipt Please Advise Treasurer		Cash <input type="checkbox"/> Internet deposit <input type="checkbox"/> Other: <input type="checkbox"/> Credit Card <input type="checkbox"/>	
Internet	Account ASB 12-3011-0830580-00 . Account Name: Auckland VHF Group Inc. Include your Name/Callsign for track. Note: this form needs to be sent to us to update our records. Email to: treasurer@aucklandvhf.org . (Especially if Contact information has changed)		
Credit Card	Membership Link: https://aucklandvhf.org/product-category/membership-and-donations/membership/		
Post	The Treasurer, Auckland VHF Group Inc. PO Box 10138, Dominion Road, Auckland 1446.		
In Person	Bring this form and payment to the next club meeting, 2 nd Monday of the month or to the Committee meeting the 4 th Monday of the month.		
Privacy	Unsubscribe from Email Notifications <input type="checkbox"/> Unsubscribe from Google Groups <input type="checkbox"/>		Do Not disclose contact Information <input type="checkbox"/>

Club use only: <input type="checkbox"/>	Approved: <input type="checkbox"/>	Not Approved: <input type="checkbox"/>
Sponsored by*		Sponsor's Callsign*
*New members only.		Date:

The information requested is for membership records required to be maintained under the Incorporated Societies Act and having due regard to the provisions of the Privacy Act



**Amateur Radio Emergency
Communication.
Volunteers in radio communications.
Using our resources to help the
community.**



INFORMATION

The Auckland VHF Group has an AREC Group that works closely with Auckland Council Emergency Management. They provide advice, resources and manpower to assist in times of need.

The AREC section is headed by Group Leader Matthew King ZL1YOT.

From time to time the VHF Group has training sessions and exercises. Members also assist with sports events, parades and other community activities. For further information about AREC please see the NZART web site: <http://www.nzart.org.nz/arec/>

JOIN BRANCH 66 AREC

All members of the Auckland VHF Group are encouraged to join the AREC section. Your contribution, large or small is appreciated by all involved.

For further information about joining Branch 66 AREC contact the Group Leader:

Matthew King ZL1YOT

022-6493310

mattking@gmail.com

The Deputy Leader position is currently vacant



AUCKLAND VHF GROUP (INC)

SUPPORT THE EFFORTS OF THE VHF GROUP THROUGH YOUR
SUBSCRIPTION

SUBSCRIPTIONS FOR 2022-2023

THE SUBS GO TOWARDS;

- Maintenance and on-going improvements to beacons, repeaters and linking systems for the national system, including the Klondyke repeater site.
- Providing on-time and free access to spectrum magazine as soon as it is available.
- Providing facilities for good speakers and lecturers at our general meetings.
- Discounted access to our trading table goodies.
- Access to test equipment and technical help when needed.

FULL MEMBERSHIP **\$60.00**

ASSOCIATE MEMBERSHIP **\$55.00**

FAMILY MEMBERSHIP ADDITIONAL **\$25:00**

SEE ATTACHED MEMBERSHIP RENEWAL FORM (next page)

REMEMBER TO KEEP US INFORMED OF YOUR

EMAIL ADDRESS!

OTHERWISE WE CANNOT SEND YOU SPECTRUM!



The Auckland VHF Group Inc Branch 66 NZART

gratefully acknowledges the sponsorship of Branch 66 Beacons, Repeaters and Fixed Links license fees and the Group's repeater operations by the following radio amateurs and NZART Branches for 2022—2024

1291	Repeater	217 Glenfield Rd	Franklin Branch	ZL1SA	\$50.00
439.900	Link to Egmont	Klondyke Rd	Franklin Branch	ZL1SA	\$50.00
439.700	DMR Repeater	Quinns Rd	Franklin Branch	ZL1SA	\$50.00
438.500	Repeater	North Head	Franklin Branch	ZL1SA	\$50.00
146.70	Repeater	Ruaotuwheua	Terry Corin	ZL1BPA	\$50.00
438.175	D-Star Repeater	Klondyke Rd	Terry Corin	ZL1BPA	\$50.00
432.253	Beacon	Nihotapu (Testing Clubrooms)	Terry Corin	ZL1BPA	\$50.00
145.650	D-Star Repeater	Klondyke Rd	Terry Corin	ZL1BPA	\$50.00
144.253	Beacon	Nihotapu (Testing Clubrooms)	Terry Corin	ZL1BPA	\$50.00
145.625	Data Repeater	Klondyke Rd	Terry Corin	ZL1BPA	\$50.00
439.950	Link to Brynderwyn	Klondyke Rd	Terry Corin	ZL1BPA	\$50.00
439.875	Link to National System	Klondyke Rd	Soren Low	ZL1SKL	\$100.00
53.725	Repeater	Klondyke Rd	Gwynne Rowe	ZL1AAR	\$100.00
439.850	Link to Kaimai	Klondyke Rd	George Marr	ZL1TUJ	\$50.00
146.900	Repeater	Mt Puketapu	David Wilkins	ZL1MR	\$100.00
146.625	Repeater	Klondyke Rd	David Wilkins	ZL1MR	\$100.00
					\$1000.00

**Klondyke Tower
Donations towards Maintenance**

Donations 2018 - 2022 \$7840.00

Donations 2022 –2023

George Marr ZL1TUJ \$100.00

Estate Ian Sexton ZL1PZ \$950.00

Estate Tony Babish ZL1ATE \$500.00

John Sexton ZL1AQS \$750.00

Klondike Raffle \$270.00

George Raffles ZL1TUX \$199.16

Marty Seay ZL3CK \$100.00

Russell Richardson ZL1RWR \$100.00

Ian Ashley ZL1AOX \$40.00

Donation \$10.00

2022 –23 Year to Date \$3019.16

Total \$10,859.16

Percent of Goal 10.86 %

Other Donations

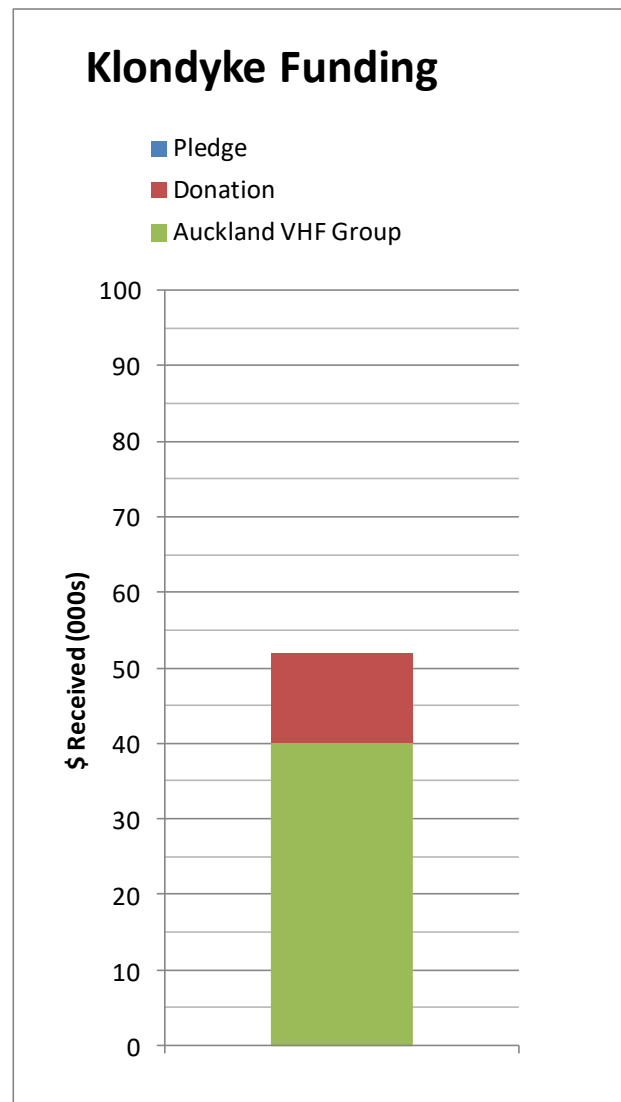
Target 100,000

Tower 63,245.00 Other 27,268.25

GST 9,486.75

Total 72,731.75 Total 27,268.25

Auckland VHF Group 40,000.00 40.00



TRADING TABLE

Currently our Trading Table is only open on meeting nights.

NEW – Printed Circuit Board. Thanks to a generous donation from N.Z.'s last circuit board production company (now closed down), we have a large quantity of single sided fibreglass printed circuit board material in sizes ranging from 1200 x 600 down to smaller pieces. There's some double sided board as well. Come along to our May meeting if you want some – prices can be negotiated!

NEW – RG58C/U 50 Ohm Coaxial Cable. Thanks to a bulk purchase we are able to offer this good quality coax at a competitive price. The cable has tinned centre conductor and screen braid making it resistant to long term corrosion. The price is \$2.00 per metre with a discount for purchases of 20m or more. See Vaughan ZL1VH on meeting nights to get this quality coax cable.

The Trading Table is now on line. Navigate your way to our new look web site at <https://aucklandvhf.org/> and click on TRADING TABLE (the most right hand tab).

Wait a few seconds and the on-line version of the Trading Table will pop up. From here you can browse the various sections, dig deeper to look at what's available and even place your order online.

If you prefer to just look at the Trading Table List, just hover your mouse pointer over the TRADING TABLE and a pull down list will appear. From this you can access the full trading Table list and download it in .PDF form.

We also have heaps of parts from dismantled commercial analog TV gear – transmitters, filters, circulators, patch panels, power supplies. Too much to list individually, so come along to the clubrooms and have a look.

