The Official Newsletter of the

Auckland VHF Group Inc.

Spectrum

Alister ZL1NOE

Recently after gaining his
Call Sign at North Shore
he can now use radios

He was taught by the
Army NZ Signal Corps as a
Communications Technician
and later in IT Support.

Now he is mixing computers
and radios for all to try.

Auckland VHF Group Inc.
Branch 66 NZART

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

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 Peter ZL1UKG
spectrum@aucklandvhf.org

Auckland VHF Group (Inc) Branch 66

<u>Notice of Meeting</u>

At the Hazel Avenue Club Rooms
(Located on the left at the end of Hazel Avenue)

**The Auckland VHF Group Meeting will be held on
Monday 12 September
At the Clubrooms, 30 Hazel Avenue at 7:30 pm**

There are 2 past Meeting Minutes to be ratified before continuing.

**Simon Bridger ZL1THH is interested in SOTA operation.
With limited antenna capability how does it handicap your signals?**

**Is a 3:1 SWR really just a 25% mismatch loss as transmission line as theory tells us? We will directly measure the power an actual transmitter delivers into the antenna for different SWR's and loads you might see on a SOTA antenna, and see what really happens.
If you have a low power 5-10W 40m or 20m rig, you can bring it along and we can try it.**

(If you have a Class E transmitter like a QCX, give me a call as I am particularly keen to try it. 021-623402)

Simon will share his experience with what really happens.

At the May 2022 Committee Meeting it was determined that
"The wearing of Face Masks at our General Meetings is now optional"

Auckland VHF Group President's Column

VHF Group Presidents Report
August 2022

Hello again, from a puddle west of Silverdale, where the only waves are wet ones.

Our auditor Basil ZL1TOW has noticed we worded our acceptances of meeting minutes incorrectly. I humbly apologise. These have to be done right. We should have accepted them as a "true and correct" record of the meetings. To that end we will move the following motions on Monday night.

1.   That the minutes of the General Meeting on 8 October 2021 as published in Spectrum are a true and correct record of that meeting.
2.   That the minutes of the General Meeting on 14 February 2022 as published in Spectrum are a true and correct record of that meeting.

Down on the farm we are back to milking the full herd once a day. There are about ninety healthy calves, with another dozen yet to emerge. Some of the calves didn't connect with their mothers, so we are hand feeding two lots (one aggressive mob, one passive) twice a day. There are still a lot of bellowing cows because the calves go through under the electric fences and fall asleep, and their mothers can't get to them. The ground is very very wet, so we can't put the tractors over the paddocks. We are feeding out with the little six-wheel-drive Gator, which only carries five or six bales.

In a few weeks when calving has finished I will look at putting up some long wire aerials. There are very high gums and redwoods here, so a 5/8 vertical on 80 meters is an option, or inverted Vs on 80m and 160m. Or a long wire swung from tree top to tree top in a quarter mile radius. The back paddock hills give a view across to Silverdale and down to the Sky Tower, so a remote controlled VHF rig could go up on a pole there, with a solar panel. Then I wouldn't have to drive up around the hills to do the Sunday night net anymore!

        Cheers, Matthew King   022 6493310

Coming Events:

- Sat Sep 24   The Te Puke ARC will be held in the Paengaroa Community Hall at 4 Old Coach Road, Paengaroa.   Vendors from 7:00 Sale Time from 10:00am. Door charge $2.00 per person. Hot Breakfast available from 7:30 to 11:00am.
        For further information contact Syd Rowe at (07)5331029, 0272488664 or sydrowe@xtra.co.nz or by post 223 State Highway 33, RD 9, Te Puke 3189

Minutes of the August General Meeting of the Auckland VHF Group Inc.,
held on Monday 12 August at the Clubrooms, 30 Hazel Avenue

The meeting commenced at: 19:32

Present: ZL1YOT, ZL1VH, ZL1TUX, ZL1GSG, ZL1TCI, ZL1TOW, ZL1AYV, ZL1NEO, ZL1UXB, ZL1TUJ, ZL1THH, ZL1JHW

Present Via Teams: ZL1UMK, ZL1OMB

Apologies: ZL1TIA, ZL1UKG

Minutes of the July 2022 General Meeting – There was no meeting in July and therefore no minutes to be approved.

Reports: There were no reports.

General Business for August:

    1.   Remits for NZART Conference:
On a show of hands, we had 8 members present who were also members of NZART attached to Branch 66 and eligible to vote.

Remit 1: - This remit dealt with updates to the NZART Constitution to remove cheques as a form of payment and provide for electronic banking. The meeting was advised that the remit as presented was incorrect: was wrongly classified as non-transmitting and did not comply with Clause 8.1.d of the NZART Constitution. The meeting approved this remit in principle, subject to it being correctly presented. For 8, Against 0.

Remit 2: - This remit as presented does not comply with Clause 8.1.d of the NZART Constitution and as such is incorrect. The intent of the remit is to reduce the number of Councillors on the National Executive from 9 to 5. Accompanying this is the abolishment of the existing four councillor electorates and the establishment of one NZ wide electorate with a North Island and South Island representative and the other three elected from anywhere in New Zealand.

Discussion followed with members unhappy about the reduction from 9 to 5 people and the loss of geographic representation. Concern was expressed about the concentration of power in the hands of a small number of people. Although incorrect, the remit was put to the vote: for 0, against 8.

Appointment of a Delegate to Conference: ZL1YOT asked who was going to Conference, only ZL1VH. Moved ZL1YOT, seconded ZL1TOW, that ZL1VH be appointed delegate and granted discretion to alter the Branch's voting, should new information be presented at the Conference AGM.

2.   Klondyke – ZL1VH reported that the replacement cable tray for Klondyke was not yet in place. This will be ladder tray. We still have to get the damaged power splitters back to get the UHF National System repeater working.

3.   Bombay 690 Repeater – ZL1VH reported on work being done to find a new site for the 690 repeater as we do not have access to the current Chorus owned site. The repeater will remain on the Bombay hills but possible at a lower elevation site.

The General Meeting Closed at: 19:37

Matthew ZL1YOT introduced

The presenter for the evening: Alastair Anderson ZL1NEO. Alastair passed the exam for his Amateur Certificate Of Competency at the end of May and began what he described as "A Journey into the Hamverse"

He commenced with a brief outline of his background history – His Dad taught him how superheterodyne valve radios worked at the age of 11! On leaving school, he joined the NZ Army in the Royal New Zealand Signal Corps as a Telecommunications Technician. He recalled an exercise at the Papakura Camp where he enviously watched the Hams calmly working their net while the Signal Corps net was just a lot of static.

After gaining some experience there, he departed for the big OE, ending up in the UK, working in the IT Sector and a position as Desktop Support Team Leader at the Hammersmith Hospital in London. Returning to New Zealand, he set up his own business offering IT Support services and found time to get involved in amateur radio. His initial reaction was "A bunch of people who designed and fixed stuff" – Very unusual.

After attending a Ham Cram weekend course at the North Shore Radio Club, he received his Amateur Certificate and started working out how he could get on the air. Getting an email from Radio Spectrum Management with his licence was a buzz!

Starting out with no radio transceiver, and two months' worth of You Tube videos, he started to get an understanding of what was required to get on the air. With no radio and the challenges of a home QTH "in a bit of a hole", Alastair looked at what he could do with his computers.   His first action was to register for Echolink and using this medium, made his first contact!
Echolink is a computer-based Amateur Radio system distributed free of charge that allows radio amateurs to communicate with other amateur radio operators using Voice over IP (VoIP) technology on the Internet for at least part of the path between them. It was designed by Jonathan Taylor, K1RFD, and allows worldwide connections to be made between stations, or from computer to station, greatly enhancing Amateur Radio's communications capabilities. There are more than 350,000 validated users worldwide — in 159 of the world's 193 nations — with about 6,000 online at any given time.

After watching some more videos, digital radio modes looked attractive, and he signed up for a DMR ID.   Discovering QRZ.com, he signed up noting that now he can be found!

Hamsphere looked interesting and he registered for a trial account to learn how HF communications works. HamSphere is a subscription-based internet service which simulates amateur radio communication using VoIP connections over the Internet. The simulator allows licensed radio amateurs and unlicensed enthusiasts to communicate with one another using a highly realistic simulated ionosphere. A subscription service, Hamsphere costs €32 for a 12-month subscription.

The loan of a 2m Motorola GM339 VHF Mobile Radio with a mag mount antenna introduced Alastair to real world VHF communications. It quickly showed the limitations of his QTH with regard to radio reception. A study of antennas ensued and plans for various options were discussed. Dipoles, J-Poles, Yagi's and the end-fed half-wave (EFHW) plus the very useful stealth antennas!
Encouraged to try putting the mag-mount antenna outside, Alastair discovered that the acrylic veranda roof was not the best location and a suggestion that he try it on the tin roof instead (thanks Graham ZL1GMB) reception was greatly improved by something called a ground plane! This worked fine and Alastair was now able to access the Klondyke, Waitakere and Rodney repeaters.

Looking at further videos put him onto the trail of a suitable hand-held. Looking at overseas prices and he found he even had enough money for the desired item! Then a check of the

Meanwhile his research into amateur radio communication modes continued.
Winlink cropped up and was duly downloaded. Winlink has the potential to route around the world using the network of HF stations – could be very useful if the internet fails. This then lead down a rabbit hole of TNC's and software modems. But which software modem? Dire Wolf (Dire Wolf) is a software "soundcard" AX.25 packet modem/TNC and APRS encoder/decoder. It can be used stand-alone to observe APRS traffic, as a tracker, digipeater, APRStt gateway, or Internet Gateway (IGate) looked promising leading to a look at APRS and AGWPE, the packet radio sound card utility. Vara and VaraFM are still to be explored – so many choices! The Signalink USB modem looked a likely product at about $US140 plus shipping but did not quite fit the budget for a new Ham.

APRS was mentioned and after muddling through the various software programmes and installing APRS32/W he then realised that some sort of GPS would be useful. More web searching and yay, ShareGPS looked like it would do the trick! However, this was another rabbit hole!

Straying into the realm of digital modes, Alastair looked at JS8Call - software using the JS8 Digital Mode providing weak signal keyboard to keyboard messaging to Amateur Radio Operators. Then there was Olivia, VaraHF and FT8 – so many choices and so much to learn!
shipping costs happened. $US95 for the handheld was fine but $US98 for shipping – Boo hoo!
An email direct to the manufacturer, TYT brought the reply "how many units do you want". A suggestion that he looked at the radios on TradeMe and in particular the hand-helds from trader Techoman revealed that Craig Sullivan, Mr. Techoman, was already planning on importing some. Looking for something better than a Baofeng, the TYT Models MD-UV380 and MD-UV390 look attractive. Both are dual band vhf/uhf with DMR and analogue modes. The MD-UV390 adds IP67 (dustproof/waterproof) and optional GPS.

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AREDN, the Amateur Radio Emergency Digital Network was of great interest to Alastair, especially with his IT background. AREDN is an ad-hoc radio frequency (RF) mesh networking application that allows amateur radio operators to share applications and data over long distances using widely available low-cost hardware to establish 2.4 and 5 GHz point to point links between stations. A mesh network is a local network topology in which multiple nodes and devices connect directly, dynamically, and without hierarchy to as many other nodes as possible to build a reliable, self-configuring communications network. The AREDN mesh is self-healing, meaning that if a node is removed from the network, the remaining nodes automatically reconfigure themselves to maintain connectivity across the network—this is a key feature driving the increasing popularity of AREDN for emergency response connectivity.

Alastair concluded his talk by asking if there were any questions. This stimulated discussion on several of the topics with several of the members present offering their experiences.

Matthew ZL1YOT thanked Alastair for a very informative evening. The meeting wrapped up with the usual tea, coffee and biscuits – thanks again Margaret ZL1AYV for organising the supper.

APRS and Voice Repeater on the International Space Station

ARISS, Amateur Radio on the International Space Station has announced that simultaneous operations of the ARISS Voice Repeater and digital APRS communications on the Space Station is now a reality. Current ARISS operations include voice repeater transmissions with the JVC Kenwood D710GA in the Columbus module and APRS packet operation from an identical radio in the Service Module (Zvezda). Packet operations are on 145.825 MHz.

The ARISS Russia and USA teams have been working for several weeks to prepare the Service Module radio for APRS operations. ARISS Russia team member Sergey Samburov, RV3DR, led the

effort, working with Russian mission controllers and the onboard ISS cosmonauts to configure the Service Module radio for APRS ops.

On August 11, final checkouts were completed and the APRS packet mode was switched on for amateur radio use. ARISS-International Chair Frank Bauer, KA3HDO, said, "Simultaneous operation of APRS and the voice repeater on ISS is transformative for ARISS and represents a key element of our ARISS 2.0 initiative, providing interactive capabilities 24/7 that inspire, engage and educate youth and lifelong learners — especially life-long learning in ham radio operations. … Our heartfelt thanks to Sergey Samburov, RV3DR, for making this crucial ARISS 2.0 initiative become a reality."

The Columbus Module radio uses the call sign NA1SS and the new Service Module radio uses RS0ISS. Aside from the call signs, the radios are identical and packet operations are the same as before. Hams can use RS0ISS, ARISS, or APRSAT as the packet path. Also, both radios are expected to be on full time, except during educational contacts, EVAs, and dockings or un-dockings. You can find operational status and expected downtimes of the ISS radios at:

https://www.ariss.org/current-status-of-iss-stations.

Northland man who breached Radiocommunications Act faces fine of up to $30K

The man, who has interim name suppression, recently appeared in Whangārei District Court, pleading guilty to breaching the Radiocommunications Act 1989 by importing Prohibited Unrestricted 2 Radios without a licence. Scheduled for sentence later this year, he faces a fine of up to $30,000.

The charge is related to a consignment of 50 Baofeng UV-5R and 2 Baofeng UV-82 two-way radios, which was addressed to the man's home and intercepted by Customs.
Radio Spectrum Management had previously issued Warning and Infringement Notices to the man for offering similar devices for sale via TradeMe. The defendant continued to ignore these notices which culminated with the interception of the illegal radio transmitters and subsequent charges.

Source: Radio Spectrum Management Business Update September 2022

VHF Group Subscriptions are now due for 2022-2023 year.

Subscriptions are now being accepted for the 2022-2023 year, 1 July 2022 to 30 June 2023.

This coincides with the change of the financial year to ending 30 June 2022. The change is intended to give sufficient time to get the accounts sorted and reviewed before the AGM in November 2022. Invoices will be sent out in May to all members who have not renewed by that time.

Note on Subscriptions

a. There is an increase for the 2022-2023 subscription year.

b. All yearly subscriptions terminate on 30th June each year. To keep your membership active, we need to receive your subscription renewal by that date.

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 family person then becomes a family member.

50th Anniversary of opening of clubrooms

Location: Hazel Ave Clubrooms

When: Saturday, 29 October 2022 2:00 pm – 4:00 pm

Description: Join us for finger food and refreshments to celebrate the 50th Anniversary of the opening of the Hazel Ave Clubrooms

View a demonstration of the National System Radio Repeater Network.

See the latest SDR Radio in Operation Watch a Microwave Contest Station in action.

Meet some of the characters who have made the Auckland VHF Club what it is today.

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

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AREC News:

AUCKLAND VHF GROUP (INC)

SUPPORT THE EFFORTS OF THE VHF GROUP THROUGH YOUR SUBSCRIPTION

SUBSCRIPTIONS FOR 2022

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)
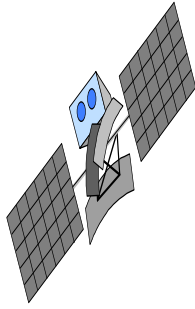
REMEMBER TO KEEP US INFORMED OF YOUR EMAIL ADDRESS!

OTHERWISE WE CANNOT SEND YOU SPECTRUM!

Thought for the month:

"The most difficult thing is the decision to act. The rest is merely tenacity."

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 #)	

	Membership Category		To pay
New/Renewal/Change	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 →)	Cash ☐	Internet deposit ☐	
If require Invoice / Receipt *Please Advise Treasurer*	Other: ☐		

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)**
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, 2nd Monday of the month or to the Committee meeting the 4th Monday of the month.
Privacy	Unsubscribe from Email Notifications ☐ Do Not disclose contact Information ☐
	Unsubscribe from Google Groups ☐

Club use only: ☐	Approved: ☐		Not Approved: ☐		
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

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

2021-2022, Donations for Repeater Licences and Klondyke Refurbishment

Frequency + Operation		Location	Donation	Donor Name
53.725	Repeater	Klondyke Road	$50.00	Gwynne Rowe
144.253	Beacon	Nihotupu	$50.00	
144.575	Digipeater	Whitford		
145.625	Data Rptr	Klondyke Road		
145.650	D-Star Rptr	Klondyke Road	$50.00	
146.625	Repeater	Klondyke Road	$50.00	David Wilkins
146.700	Repeater	Ruaotuwhenua	$50.00	
146.900	Repeater	Mt Puketutu	$50.00	David Wilkins
432.253	Beacon	Nihotupu	$50.00	
438.175	D-Star Rptr	Klondyke Road	$50.00	
438.450	Repeater	Klondyke Road		
438.500	Repeater	North Head	$50.00	
439.850	Kaimai Link	Klondyke Road	$50.00	
439.875	Nat System Rptr	Klondyke Road	$50.00	Soren Low
439.900	Egmont Link	Klondyke Road	$50.00	
439.950	Brynderwyn Link	Klondyke Road	$50.00	
1291.900	Repeater	217 Glenfield Rd	$50.00	
DMR Rptr (Waitakere)		Quinns Rd	$50.00	NZART AREC
			$250.00	

2021-2022, Donations for Refurbishment

	Donation	
Rob Heyer VK2XIC	$4.41	
	$0.00	
	$0.00	
	$0.00	
	$0.00	
	$0.00	
	$4.41	

Total	**$254.41**	

Klondyke Tower
Donations towards Maintenance

Target   100,000

Name		Donation	Pledge
Donations 2018 - 2021		9479.00	
George Marr	ZL1TUJ	100.00	
Dave Dingley	ZL1TIA	205.00	
Estate Ian Sexton	ZL1PZ	950.00	
Estate Tony Babish	ZL1ATE	500.00	
John Sexton	ZL1AQS	750.00	

Tower	63,245.00	Other	27268.25	
GST	9,486.75			
Total	72,731.75	Total	27,268.25	
Auckland VHF Group		40,000.00	40.00	

	Donation	Pledge
Total	11949.00	-
Percent	11.98	

Klondyke Funding

Legend:
- Pledge
- Donation
- Auckland VHF Group

Y-axis: $ Received (000s), scale 0 to 100
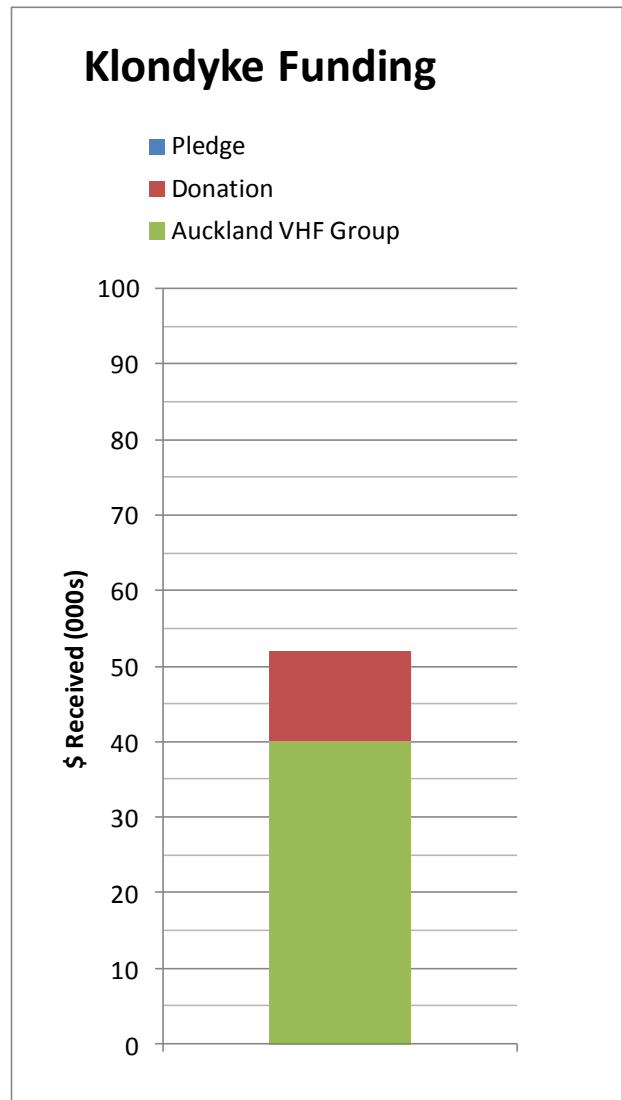
TRADING TABLE

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.