The Official Newsletter of the

PAPAKURA RADIO CLUB INC.

March 2025

Change is in the Air

CONTENTS ...

March Calendar:

The March Meeting will be followed by a presentation about Papakura's team during the Jock White Field Day weekend. We hope you will join us for an enjoyable evening.

We encourage you to take the opportunity to chat with someone new and make the most of the supper that will follow.

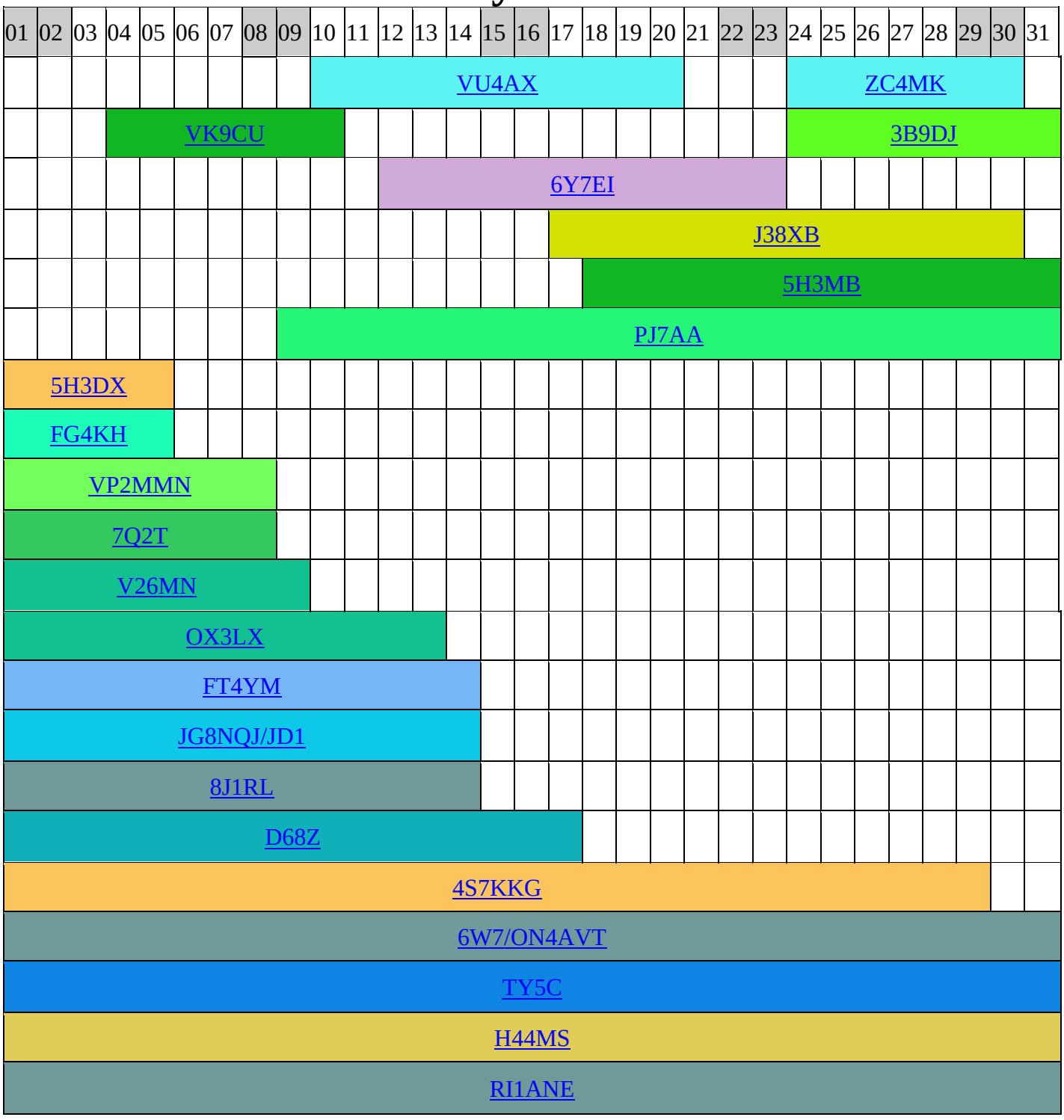
If transport is a problem, let the committee members know, and we may be able to assist you with arranging a ride.

Alternatively, ask zl1nux@outlook.com for the teams link, and you can join us from home.

December Dates

Wednesday 5th	**General Meeting & Jock White Filed Day Report**
Wednesday 12th	**Activity Night**
Wednesday 19th	**Committee Meeting**
Wednesday 26th	**Project Night**

DX Calendar February 2025



Click any link above for details on the expedition

1960 ——————————→ *2025*

FEATURED DX: VK9CU COCOS KEELING ISLANDS

VK9CU Team will be active from Cocos Keeling Islands, IOTA OC - 003, Australia, 4 - 11 March 2025.
Team - DF4GV, DJ9RR, DL2AMD, VK6SJ, DL2AWG.

They will operate on 160 - 6m, CW, SSB, RTTY, FT4, FT8.
QSL via DL2AWG, LOTW, ClubLog OQRS.

Cocos Islands

The Cocos Islands or Keeling Islands are a group of 27 small coral islands in the Indian Ocean, discovered over 400 years ago. The land area is 14 km2 and the population is 544. Only two islands are inhabited, the rest are uninhabited.

The place is famous for its extraordinary picturesqueness. Most of the area is occupied by tropical forests and beaches. Wild, untouched by man nature and snow-white sand attracts thousands of tourists every year. Keeling can surprise everyone with its views. It is comparable in beauty to the Maldives and other famous tourist destinations of the world.

The islands are located at a distance of about 2100 kilometres northwest of Australia. They are part of Australia. Do not border with any states, countries, surrounded by the ocean. The archipelago belongs to the category of dwarf countries because of its size.

Cocos Keeling Islands. Author - Danica Jovanovic.

Historical Summary

Keeling is an island with a rich historical past. During its existence, the locality has changed several types of power and stages of government. The discoverer was Captain William Keeling in 1609. For a long time, there was minimal interest in the new land. It was not rich in resources and did not represent an economic benefit.

In 1827, the first settlement was laid out, marking the beginning of the area's historic formation. In 1835 the Clunies-Ross dynasty took over the islands. A few decades later, the Australian government bought the rights to the land and included it in the Outer Australian Territories.

The history of the islands is quite rich and saturated, even though there were no active hostilities or battles on the territory. The area has undergone many changes that have accelerated its development and establishment as tourist islands. Due to its remoteness from the mainstream world and its unusual structure, Keeling has been able to preserve its naturalness and purity (minimal interference from the modern world). Today, tourists come here mainly for the solitude, the opportunity to enjoy nature untouched by man.

Geography. Features of the islands

Keeling is 27 small islands connected into one territory. Only 2 of them are inhabited. The rest are reserved for tourist entertainment, recreation, and are habitats for wild animals.

The surface of the islands is flat, without rocks, hills and steep hills. Sandy land covers prevail. The highest point above the sea is at a height of 5 meters. A huge number of palm trees grow throughout the territory. Fresh water is very scarce. For food purposes, the local population uses rainwater, which is collected in special reservoirs. For tourists there is a constant supply of drinking water. The territory has a well-developed tourist sphere. Visitors are required to obtain a visa, insurance. The attitude to visitors is attentive and polite.

The administrative centre of Kiling is West Island. This is a small village located on the island of the same name with a population of about 150 inhabitants. The area of the main island is only 6.2 square kilometres. The infrastructure is poorly developed. Of the public buildings here are a hospital, a small market, an airport, a few cafes, a pier, a beach. All the rest of the space is planted with palm trees.

Kiling is easily recognizable on the world map: many small plots are lined up in the shape of a crescent. It is fairly easy to find, as the islands have no neighbours.

Climate

The climate is tropical and moderately hot. There are no sharp temperature changes. The weather is favourable for recreation and does not depend on the time of year. Both day and night the temperature remains almost at the same level, which is especially pleasant for tourists. On Kalinga there is no debilitating heat or cold winds or strong weather fluctuations.

The average air temperature varies around +26...+28 degrees all year round. Thanks to the constantly blowing humid winds there is practically no feeling of heat. The climate is favourable, mild and easily tolerated by the guests of the archipelago.

From time to time there are short-term heavy rains. They bring a slight feeling of coolness and freshness. There is no drought or too heavy precipitation that floods the land. Such weather has a favorable effect on the flora and fauna, allowing it to develop with positive dynamics.

From the beginning of October to the end of April cyclones come to the islands, often becoming the cause of large-scale destruction. At this time, the flow of tourists decreases. It can be unsafe to be on Kalinga during cyclones.

Nature

The nature of Kiling is not inferior in its beauty and scenic beauty to the famous Maldives. Snow-white beaches, clear, blue water and an abundance of greenery. Tourists love this area for its extraordinary scenery and brightness. The total number of animals is small due to the small land area. Fish, birds and representatives of aquatic elements prevail.

Due to the historical and geographical isolation, unique species of animals can be found here that do not live anywhere else. This feature makes the area unique and inimitable in terms of natural richness.

Birds predominate: the striped shepherd, the introduced green jungle fowl, the common guillemot, the white-breasted pogon, the eastern reef heron, the Caledonian quail and the introduced white-eyed whitethroat.

Mammals include sperm whale, humpback whale, grinda, dugong, and beaked whale. Terrestrial reptiles include geckos and blind snakes, sea snakes, and turtles. About 500 species of fish have been recorded.

The flora is mostly represented by a large variety of palms, tropical plants. Most of the territory is covered with vegetation. Beaches are covered with sand, small stones. The water is clean, transparent. On the territory you can meet poisonous snakes, especially dangerous for people in the summer period. Also, going to these islands, you should take care of protection from insects. As in any other country with a tropical climate, insects here can be very annoying.

Infrastructure, transportation

The islands are not equipped with developed infrastructure. You can get to them only by personal, rented water transport (yacht) or airplane. Keeling is not equipped with seaports for cruise ships.

The capital is home to an international airport that receives flights from all over the world. The building was constructed during World War II and has undergone virtually no changes. Most tours involve primarily air travel as a way to get to Keeling.

Tourism sector

The tourism sector is the main sector in Keeling. It is the main source of income and sustains the local economy. Most of the local population is involved in working with visitors and guests of the islands. The best conditions of rest are created for tourists. Kiling is ready to offer 6 hotels to choose from of different levels and services. Despite its small size, the area can please you with interesting excursion offers, active recreation and beach entertainment. Residents are very friendly and polite to tourists. The crime rate is minimal.

VK9CU. Where are Cocos Keeling Islands located. Map.

VK9CU Cocos Keeling Islands. Sunrise 03-01-2025 at 23:33 GMT sunset at 11:55 GMT

UPCOMING CONTESTS

March 2025

Refer to the contest websites for full rules, scoring information, operating periods or time limits, and log submission information.

Start - Finish Date-Time		Date-Time		Bands	Contest Name	Mode	Exchange	Sponsor's Website
2	0700	2	1100	3.5	UBA Spring Contest, CW	CW	RST, serial, UBA section (if ON)	**www.uba.be**
2	1200	2	1400	7	SARL Hamnet 40m SET	Ph	RS, serial	**www.sarl.org.za**
2	1200	2	2200	3.5	NSARA Contest	CW Ph Dig	RS(T), Nova Scotia county or serial	**nsara.ca**
2	1800	2	2200	3.5	WAB 3.5 MHz Phone	Ph	RS, serial, WAB square or country	**wab.intermip.net/Contests.php**
3	2000	3	2130	3.5	RSGB 80m Club Championship, Data	Dig	RST, serial	**www.rsgbcc.org**
4	0100	4	0300	3.5-28	ARS Spartan Sprint	CW	RST, SPC, pwr	**ars-qrp.com**
4	1900	4	2100	3.5	AGCW YL-CW Party	CW	RST, serial, "YL" (if YL), name	**www.agcw.de**
5	2000	5	2100	3.5	UKEICC 80m Contest	Ph	6-char grid	**www.ukeicc.com**
6	0000	7	0300	7	Walk for the Bacon QRP Contest	CW	Max 13 WPM; RST, SPC, name, mbr or pwr	**qrpcontest.com/pigwalk40**
6	1800	6	2200	28	NRAU 10m Activity Contest	CW Ph Dig	RS(T), 6-char grid	**nrau.net**
8	0000	16	2359	3.5,7,21, 28,144	Novice Rig Roundup	CW	Name, QTH, optional rig or mbr	**www.novicerigroundup.org**
8	0800	9	1000	50,144,432	SARL VHF/UHF FM Contest	Ph	RS, 6-char grid	**www.sarl.org.za**
8	0800	9	1000	1.8-28	SARL Field Day Contest	CW Ph Dig	RS(T), # of transmitters, category, SA province or "DX"	**www.sarl.org.za**
8	1000	9	1000	3.5-28	RSGB Commonwealth (BERU) Contest	CW	RST, serial	**www.rsgbcc.org**
8	1200	9	1200	3.5-28	EA PSK63 Contest	Dig	RSQ, EA province code or serial	**concursos.ure.es**
8	1200	9	1200	28	South America 10m Contest	CW Ph	RS(T), CQ zone	**sa10m.com.ar/wp/rules**
8	1200	9	1100	3.5-28	DIG QSO Party, SSB	Ph	RS, mbr or none	**diplom-interessen-gruppe.info**
8	1400	8	2000	3.5-28	AGCW QRP Contest	CW	RST, serial, pwr, mbr or "NM"	**www.agcw.de**
8	1500	9	1500	1.8	Stew Perry Topband Challenge	CW	4-char grid	**www.kkn.net/stew**
8	1500	9	2100	3.5-28,50	Oklahoma QSO Party	CW Ph Dig	RS(T), OK county or SPC	**k5cm.com/okqp.htm**
8	1800	9	0559	3.5,7	Tesla Memorial HF CW Contest	CW	RST, serial, 4-char grid	**www.radiosport.yu1srs.org.rs**
8	1900	9	1900	1.8-28	Idaho QSO Party	CW Ph Dig	RS(T), ID county or SPC	**www.idahoqsoparty.org**
9	0700	9	1100	144	UBA Spring Contest, 2m	CW Ph	RS(T), serial, UBA section (if ON)	**www.uba.be**
9	0700	9	1700	3.5-28	FIRAC HF Contest	CW	RST, serial, "F" (if mbr)	**www.firac.de**
9	1000	9	2159	3.5-28	YOTA Contest	CW Ph	RS(T), age	**www.ham-yota.com**
9	1800	10	0100	No WARC	Wisconsin QSO Party	CW Ph Dig	WI county or SPC	**www.warac.org**
10	0000	10	0200	1.8-28	4 States QRP Group Second Sunday Sprint	CW Ph	RS(T), SPC, mbr or pwr	**www.4sqrp.com**
12	2000	12	2130	3.5	RSGB 80m Club Championship, CW	CW	RST, serial	**www.rsgbcc.org**
13	1900	13	2059	3.5	BCC QSO Party	CW Ph Dig	RS(T), T-shirt size	**www.bavarian-contest-club.de**
15	0000	15	2359	1.8-28,50	PODXS 070 Club St. Patrick's Day Contest	Dig	SPC	**www.podxs070.com**
15	0200	17	0159	3.5-28	BARTG HF RTTY Contest	Dig	RST, serial, 4-dig UTC	**www.bartg.org.uk**
15	1200	16	1200	1.8-28	Russian DX Contest	CW Ph	RS(T), oblast or serial	**www.rdxc.org**
15	1200	16	1200	3.5-28,144	F9AA Cup, SSB	Ph	RS, serial	**www.site.urc.asso.fr**
15	1400	15	1800	144,432	AGCW VHF/UHF Contest	CW	RST, serial, pwr, mbr or "NM"	**www.agcw.de**
15	1400	16	2359	No WARC	Virginia QSO Party	CW Ph Dig	Serial, VA county or SPC	**www.qsl.net/sterling**
15	2300	24	0300	3.5-14	AWA John Rollins Memorial DX Contest	CW Ph	RS(T), name, SP, eqpt year	**www.antiquewireless.org**
16	0700	16	1100	3.5	UBA Spring Contest, SSB	Ph	RS, serial, UBA section (if ON)	**www.uba.be**
16	2300	17	0100	1.8-28	Run for the Bacon QRP Contest	CW	RST, SPC, mbr or pwr	**qrpcontest.com/pigrun**
17	1800	17	2059	3.5,7	Bucharest Digital Contest	FT4	RST, serial	**yo3test201x.blogspot.com**
17	2000	17	2200	3.5-28	RSGB FT4 Contest	FT4	Signal report	**www.rsgbcc.org**
19	2000	19	2100	3.5	IRTS 80m Counties Contest	CW Ph	RS(T), serial, EI/GI county (if EI/GI)	**www.irts.ie**
20	0030	20	0230	1.8	NAQCC CW Sprint	CW	RST, SPC, mbr or pwr	**naqcc.info/sprint_rules.html**
20	1900	20	2000	3.5-14	NTC QSO Party	CW	Max 25 WPM; RST, mbr or "NM"	**pi4ntc.nl/ntcqp**
22	1200	23	1200	1.8-28	Africa All Mode International DX Contest	CW Ph Dig	RS(T), serial	**mysarl.org.za**
23	0000	23	0400	3.5-14	North American SSB Sprint	Ph	Other's call, your call, serial, name, SPC	**ssbsprint.com**
23	0600	23	1000	50	UBA Spring Contest, 6m	CW Ph	RS(T), serial, UBA section (if ON)	**www.uba.be**
26	2000	26	2100	3.5	UKEICC 80m Contest	CW	6-char grid	**www.ukeicc.com**
27	2000	27	2130	3.5	RSGB 80m Club Championship, SSB	Ph	RS, serial	**www.rsgbcc.org**
28	1900	29	0300	3.5-28	Sasquatch Stomp	CW	RST, SPC, mbr or ZIP code, name	**www.pnwqrp.org**
29	0000	30	2359	1.8-28	CQ WW WPX Contest, SSB	Ph	RS, serial	**www.cqwpx.com**

Note: All dates and times are in UTC, Mbr = Membership number. Serial = Sequential number of the contact. SPC = State, Province, DXCC Entity. XE = Mexican state.

OPERATORS NEEDED FOR COMMUNITY EVENT

Bombay Fun Run / Walk etc...

This activity is courtesy of the Bombay Lions Club.

It's on Saturday the 22nd of March and radio operators are split between both the Papakura Radio Club and the Franklin Radio Club.

From all accounts it looks like I need 4 additional operators so 2 from each branch.

Club member, Ian ZL1DM, tells me that handhelds would be okay but as we will be in our cars, I guess, I think the mobile rigs we have would be better suited.

I'm told that the area is in line of sight from the base (wherever that will be located).

I guess the usual procedure... call in the first 3 or 4 runners and then just record

As many of the shirt numbers passing your location.

If you look at ... Bombay Fun Run on the internet, you will know as much as me!

The location is a farm at 554 Paparata Road, Bombay.

More to follow when known.

David zl1dk

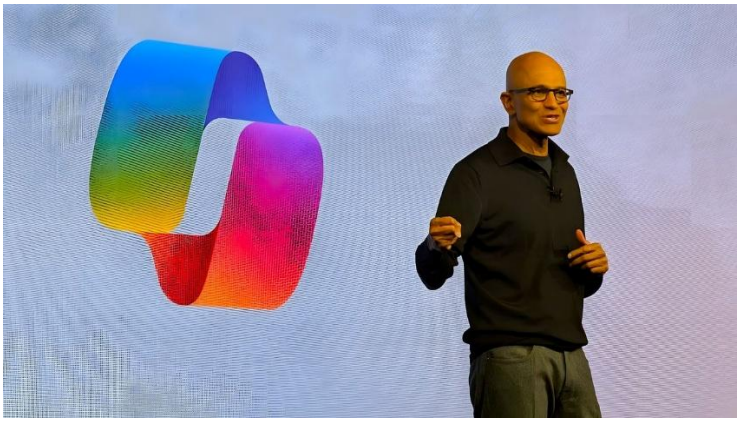
SO LONG SKYPE

Skype will shut down in just over two months. Microsoft confirmed the May 5, 2025 cutoff date shortly after reports emerged that showed the upcoming end of Skype before Microsoft intended to share it.

Skype launched in 2003 and was an extremely popular platform for video calls and messaging. Microsoft purchased Skype in 2011 for $8.5 billion.

Throughout the 14 years Skype has been part of Microsoft, the platform has struggled to remain relevant. Multiple app rewrites and a shift in focus could not help Skype compete with Zoom, WhatsApp, iMessage, and other platforms.

Microsoft also shifted its focus to Teams years ago, leaving the writing on the wall regarding Skype.



It has been quite the week for Microsoft. The tech giant announced the end of Skype, confirmed the use of AI to generate content in Call of Duty, and began testing a free version of Office that contains ads. Microsoft Copilot also helped people pirate Windows 11 for a brief time, though the AI tool will no longer provide a guide on that when asked.

Call of Duty: Black Ops 6 and Warzone both contain AI-generated content. Many have suspected as much for months, but Activision (owned by Microsoft) confirmed the fact this past week.

A zombie Santa with six fingers was just one piece of content that flagged up the possible use of AI within the Call of Duty games.

But lets face it, Drawing hands is always hard

IT'S A SMALL WORLD AFTER ALL

Helen ZL1HOW shares just how small New Zealand Really is, and How Ham Radio connects over generations.

On Auckland Anniversary weekend I had a lovely trip down home to visit my family in New Plymouth culminating by meeting up with fellow HAM Radio enthusiasts, and unknown family member, Ngaire and Graeme Jury.

How this all started was by finally being sent the National YL Newsletter thanks to Ann-Maree ZL1GIT. I read it in-depth but what caught my attention was the name of Ngaire Jury on the front page with all the Committee members' names and callsigns!

Jury is my maiden name, so I was very interested to contact Ngaire and see where we all fit in as almost all Jury's are related.

Well, Ngaire was most accommodating and we finally caught up on Auckland Anniversary Monday and I spent over two hours in family-link heaven. Talk about feeling like we had known each other all our lives!

Turns out Graeme and I are third cousins once removed. We both come down through Justinian Jury but Graeme comes through son Richard and I come through his brother,

John down to Thomas then Leonard then my Dad, Frederick. Graeme being the same generation as my Dad, hence the "once removed".

1960 ——————————→ *2025*

Over the course of those two hours of amazing conversation we found we had so very much in common. It was like we had led parallel lives until that day when we came together and finally met. I was gobsmacked. Graeme used to fly aircraft, so did I. Graeme used to hunt, so did I, Search and Rescue, Ham Radio, AREC, etc, etc. The list was endless.

Not only that but my best friend (whom I stay with when down in New Plymouth) her father was a HAM Radio enthusiast – ZL2MU. When I was a kid I was fascinated by all the equipment he had and used to watch him when he was buried in his "Radio Cave" when I was over playing at my friend's farm (we are both from farming backgrounds and Lois and I are only four days apart).

Her father has been a Silent Key for at least 10 years now but I found out from Graeme Jury that it was himself and Ian Perrett who helped to clear all the radio gear out of my friend's father's place when he passed away.

This world is getting smaller and smaller.

RAMBLINGS FROM THE EDITOR'S DESK

In case you missed it, February has come to a close, marking the end of summer weather (at least according to the calendar). The solar patterns I've noticed indicate that the sun's path is slowly moving northward. While we've successfully harvested our grapes and the tomatoes are abundant, we are still awaiting the bulk of our feijoas and have yet to see much fruit from our cherry guavas. This suggests that we may experience a bit more warm weather before the seasonal change becomes evident.

This transition reminds me of the summer tasks I still need to complete, especially before the winter weather makes antenna work impossible.

March is shaping up to be a very busy month, with Parkfest on the 8th and the Bombay fun run on the 22nd. Taking our radios into the field to provide updates and information at events is one of the ways we can hone our skills and demonstrate the benefits of two-way radio communication. The ability to communicate anywhere, anytime, and in (almost) any conditions elevates the role of a ham radio operator beyond just operating a radio—it's not limited to AREC roles.

The capability to perform portable operations and optimize our equipment for reliable communication is a key skill that distinguishes us as more than just equipment operators. We are solution providers who happen to use radio technology to deliver our solutions.

We have successfully completed the Jock White Field Day operations and are currently preparing the log files for submission for grading. This year's event was particularly enjoyable, thanks to the high solar activity, which made the 40-metre band a pleasure to operate. Even on Sunday morning, we had many stations active in the early hours, turning the event into a great experience for those dedicated participants who chose to forego their morning sleep to be on air. It was also fantastic to have club members operating as home stations and taking the time to make contacts. After all, ham radio is a "contact" sport!

This year, I had a great opportunity to test my portable NVIS antenna. When we started, the morning critical frequency was only 6 MHz. However, by 7:30, the conditions had improved, and the critical frequency had risen to 9 MHz. The inverted V antenna, positioned at a center height of 7 meters, was between 0.1 and 0.25 lambda high, which allowed for excellent NVIS coverage—sometimes even better than that provided by the folded dipole.

While I'm not entirely sure if the additional antenna gave us a distinct advantage, the overall performance was very good. I look forward to conducting more experiments as I incorporate additional bands into my setup.

All current and past members should have received an email from the secretary inviting you to participate in a short survey. This survey aims to gather your feedback on how we, as a club, can better serve our members. I encourage you to take some time to consider the questions and share your thoughts on what we do well, where we may fall short, and areas where improvement is needed. With our diverse membership, it is important that everyone has a voice, and we genuinely want to hear your suggestions on how the club can enhance its service to you.

It's great to see that we have been asked to provide communications for another fun run. After so many years of disruptions, it's encouraging to see community events starting up again. I hope this is a sign of more positive changes to come. However, it does make me think about what the future needs of our communities will be and how our hobby will fit into the new world that is emerging.

If cell phones disrupted how we communicated, just imagine the impact that technologies like Starlink will have in the coming years. Additionally, how will AI affect us?

The acceptance of AI, despite its current unreliability, may worry some people, but it also allows us to create smart machines that can assist us with daily tasks. For instance, imagine a radio equipped with ALE that also has AI.

Now, picture asking it when the best time is to contact a DXpedition. That machine could look up the DXpedition's location, check all the FT8 connections and whisper traffic, then analyse band forecasts, note the operators' behaviours (like where they are pointing their antennas), and communicate with other AI radios via ALE. It could then advise you to try a specific frequency at a particular time and even offer to schedule an appointment in your calendar, waking you up with enough time to grab a coffee *first (unless it's FT8, in which case you can stay in bed while the machine handles everything for you).*

I know this might sound a bit far-fetched, but as AI assistants become a more significant part of our lives, the potential for machines to perform tasks without us will change how we operate. However, will our skills still be necessary? Even as my own work increasingly aligns with AI, I find that the requirement to explain to an AI exactly what is needed is growing. My job is no longer to do everything, But instead to guide the AI to do more, faster than I could do it alone.

Some time ago, a comment was made: "AI won’t take your job; someone who understands how to use AI may well take your job." I think I understand that sentiment. Even with the best radios, the finest commercial antennas, perfect professionally made cables, and top-quality battery hardware, you still need a person to set everything up, configure it, test it, and ensure it operates as expected—making adjustments when things don’t go as planned.

The human element will always be an integral part of ham radio. It's fundamentally about people. While our hardware will evolve, the underlying connection between the operator and the machine will remain constant.

Change is inevitable, but we should not fear it. Instead, we should master it and take control.

The sooner we understand AI and its limitations, the more proactive we can be. Learning to utilize the features in our radios will make us better operators. The more we expand our knowledge of radio technology, the more effectively we can leverage it to our advantage.

Change is the only constant in the universe, and we are currently witnessing rapid transformations. We live in an era where technology is advancing at an astonishing rate, leading us toward an uncertain future. However, that future will be shaped by those who learn to harness the latest tools to overcome the challenges that lie ahead.

This doesn’t mean our lives will instantly get easier. I’ve been promising myself, that I will have the PC clogging working for the last few field days, But again, this year we had to do paper logging, because, I overlooked one small, but critical thing, and by the time I solved it, we had lost too much time to recover, So now, I have to manually type all that data into the PC software. But now I know what I don’t know, and I will practice and make sure it's working right before I rely on it, so maybe next year, my logs will just roll off the laptop once the contest is over. But it won’t be without changing me, I will have learnt a new skill, and I will be better off for the experience.

And so as I ramble my way from summer into autumn, and think about the many things that lie before me, let me throw this question out into the void.

What are you going to learn this year?

How will you use tools and technology to make your life better?, to make you more productive, to let you do something, you couldn’t do before?

Because we’ve never had so many possibilities as we have before us.

Now, I just need to work out How I can watch Starship test flight 8 take off on Tuesday Noon, while I’m also teaching a class.

Anyone have a spare time machine?

73, for now, de ZL1NUX

3 PRIVATE LUNAR LANDERS ARE HEADING TO THE MOON.

We're living through a big moment in spaceflight history.

With the launch of Intuitive Machines' Athena spacecraft atop a SpaceX Falcon 9 rocket (Feb. 28), three lunar landers are currently on their way to the moon. Such a surge of exploration has never happened before — and all three vehicles are operated by private companies.

The other two private landers — Firefly Aerospace's Blue Ghost and Resilience, built by Tokyo-based ispace — launched atop the same SpaceX Falcon 9 rocket on Jan. 15.

Blue Ghost, like Athena, is flying under the flag of NASA's Commercial Lunar Payload Services program, which puts agency science gear on private robotic landers. The goal is to gather data that will help pave the way for NASA's Artemis astronauts, who are scheduled to touch down near the moon's south pole a few years from now and then establish one or more bases in the water-rich region over the ensuing years.

Blue Ghost and its 10 NASA payloads have been circling the moon for two weeks and are scheduled to land in the Mare Crisium ("Sea of Crises") region of the lunar near side early Sunday morning (March 2). Athena, which totes a small "hopper" named Grace and a rover from Colorado company Lunar Outpost along with its NASA science gear, will follow suit four days later. Athena will land just five degrees of latitude away from the south pole — closer than any other mission has gotten.

Resilience is taking a much longer, more circuitous route to the moon; the Japanese lander isn't expected to reach lunar orbit until late May or early June. It will make its touchdown attempt shortly thereafter.

Resilience isn't flying a CLPS mission. However, the lander does carry a tiny rover called Tenacious, which was built by ispace's Luxembourg-based subsidiary. Tenacious will collect samples of moon dirt for NASA, though there are no plans at the moment to get this material back to Earth.

To date, just one private spacecraft has ever landed successfully on the moon — Intuitive Machines' Odysseus, which did so in February 2024. *(albeit one leg collapsed, leaving the machine on its side.)* Others have come close; for example, ispace's first lander reached lunar orbit in March 2023 but crashed during its touchdown attempt a month later. (Resilience is the Japanese company's second moon lander.)

Athena launched with several other spacecraft last night, including Odin, a scouting probe built by the asteroid-mining company Astroforge, and NASA's water-hunting Lunar Trailblazer.

At the time of writing this, Odin is in a slow tumble, and the clock is ticking to see if the spacecraft can be recovered, before the batteries run flat due to the inability to deploy it’s solar panels.

Whether or not, these probes make it to their destination remains to be seen, but it’s a great time to be in the private space game.

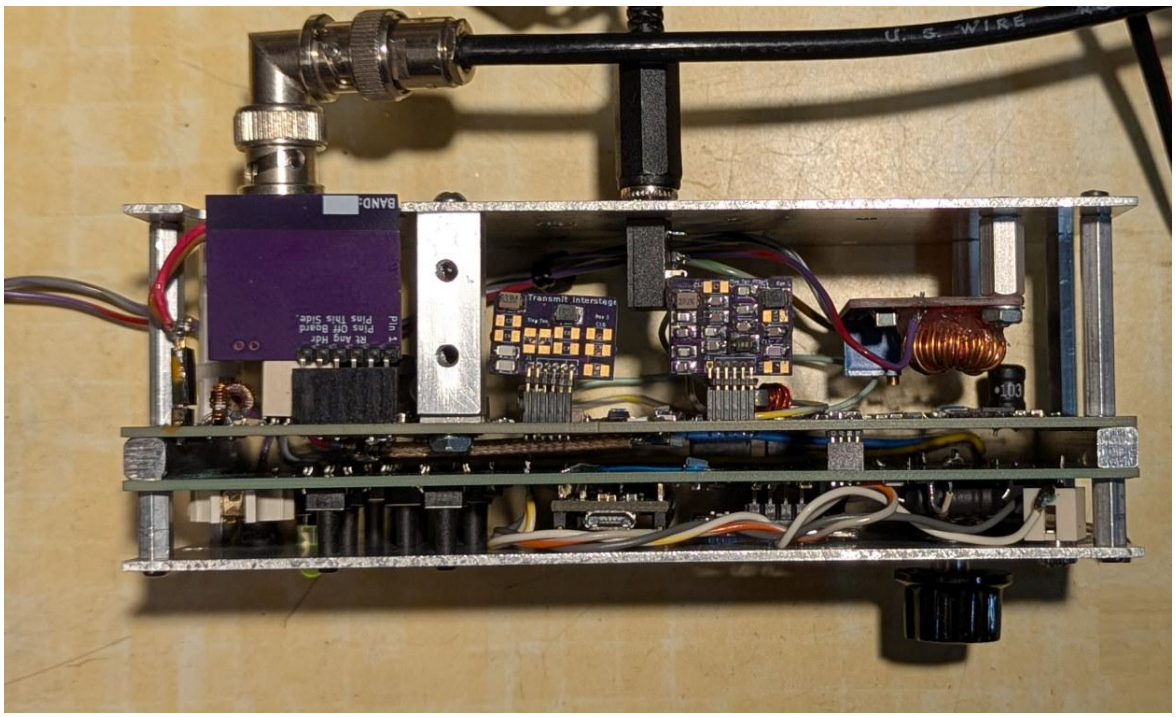
MEET THE TINY TEN AMATEUR RADIO TRANSMITTER

See: Tiny Ten DSP-based HF Transceiver for full details of the project

Making a multi-band amateur radio transceiver has always been a somewhat challenging project, and making one that also supported different modes would for many years have been of almost impossible complexity best reserved for expensive commercial projects. [Bob W7PUA] has tackled both in the form of a portable 10-band multi-mode unit, and I must honestly say he's done a very good job indeed.

As you might expect in 2025 it's a software defined radio (SDR), but to show how powerful the silicon available today is, it's all implemented on a microcontroller. There's a Teensy 4 with an audio codec board that does all the signal processing heavy lifting and an RF board that takes care of the I/Q mixing and the analogue stuff.

Band switching is handled using a technique from the past; interchangeable plug-in coil and filter units, that do an effective job. The result is a modestly-powered *(currently 15 watts, which outperforms most Portable Rigs, the target is to get to 25 watts)* but extremely portable rig that doesn't look to have broken the bank, and since the write-up goes into detail on the software side we hope it might inform other SDR projects too. They might have gone for old-school embossed Dymo labels on that brushed aluminium case just for retro appeal, but how can you fault it?



And no, There are no Kitsets, Unless we build our own. But the plans are on the site: [Tiny Ten DSP-based HF Transceiver]

The radio described by bullet items - This lets you see the general character of the project.

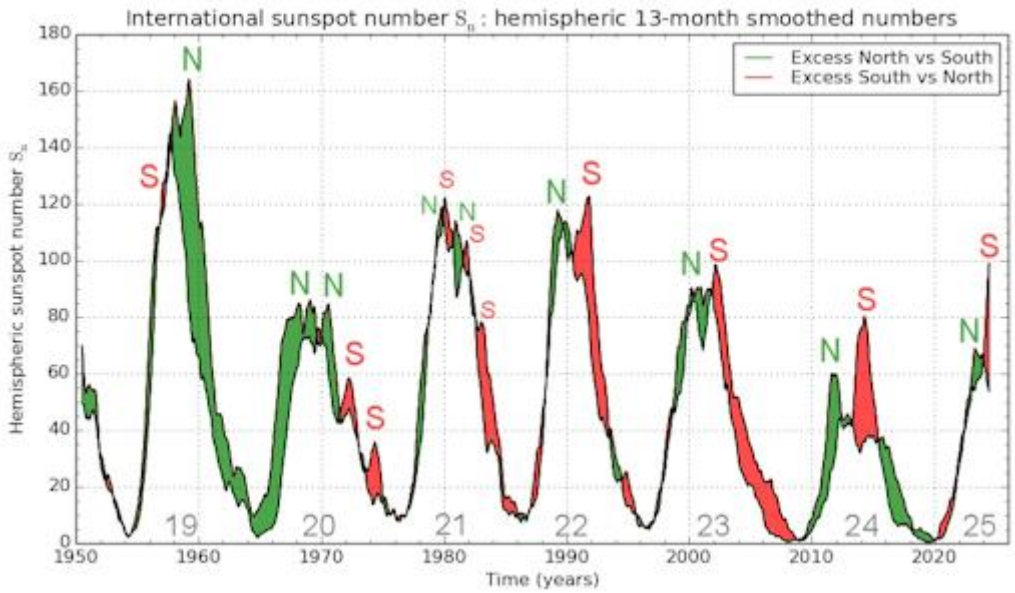
- **SSB, CW, AM, FM, FT8 (13 character text) modes**
- **10 Bands, 160 to 10-meters BUT, Plug-In Coils!**
- **1-inch 128 x 64 display, Cute and tough to read**
- **1 knob and 10 buttons**
- **W9GR Controlled Envelope SSB - 3 to 4 dB increased average power**
- **Built-in 7.4V 2.2AH battery**
- **Battery draws 170 mA receive, 4A transmit**
- **High accuracy TCXO frequency reference**
- **Built-in microphone and speaker**
- **Delay stereo with external 'phones or speakers**
- **Regulated 14-Volt, 2 Amp DC-DC converter, used only on transmit**
- **Gaussian shaped CW on transmit and receive**
- **Careful control of digital noise by construction and filtering**
- **600 MHz Teensy 4.1 with ARM Cortex-M7 for both DSP and control**
- **All DSP with OpenAudio_F32 floating point library**
- **Battery backed real time clock.**
- **Storage of settings with power off**
- **No electrolytic or tantalum capacitors**
- **Size 2-1/2 x 6 x 2-inches (100 x 240 x 80 mm), weight under 1 lb**

Code is at: [GitHub - KI3P/T41-V12-SDT: Latest SDTVer050.0 with G0ORX MCP23017 Front Panel]

And the book behind it is at: [Software Defined Radio Transceiver: Theory and Construction of the T41-ep Amateur Radio SDT: Peter AC8GY, Albert, Purdum W8TEE, Dr. Jack: 9798446384280: Amazon.com: Books]

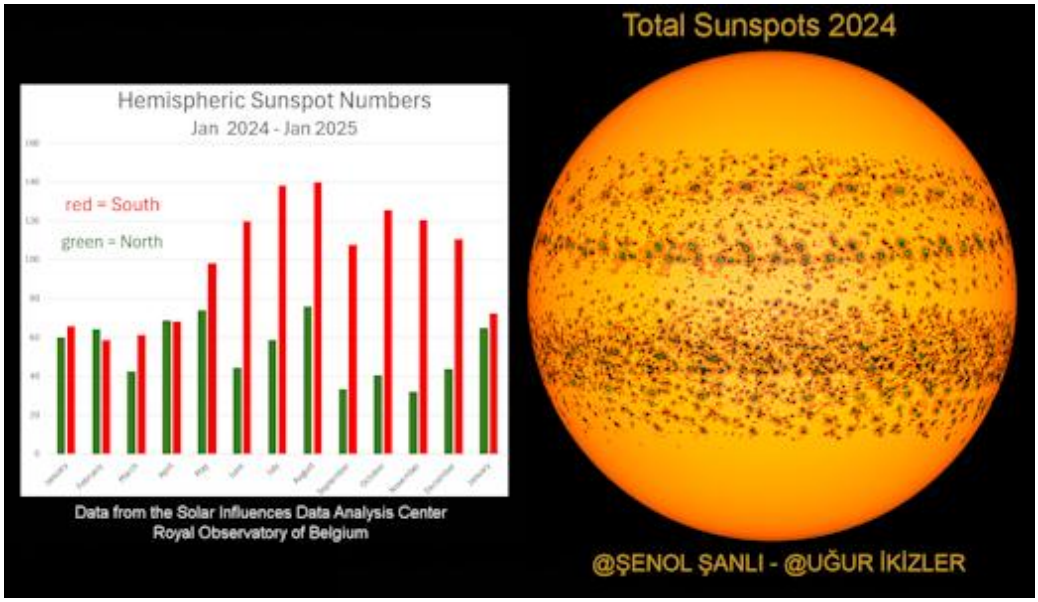
SOLAR MAX – ARE WE THERE YET? IS A SECOND PEAK COMING?

Last October, NOAA and NASA announced that Solar Max has arrived. Only half the sun got the memo. The majority of solar activity has been happening in just one of the sun's hemispheres--the south. The solar superstorm of May 10, 2024, for instance, was caused by a monster southern sunspot. It makes you wonder, is the *other* half of Solar Max still coming? This plot of hemispheric sunspot numbers from SILSO provides some context:



Here we see all seven solar cycles of the Space Age, punctuated by current Solar Cycle 25 on the far right. The most recent cycles are double peaked, with northern sunspots (green) and southern sunspots (red) reaching their own Solar Max ~two years apart. This isn't big news. Researchers have long known that the two hemispheres of the sun are slightly out of sync. The north vs. south delay is called the "Gnevyshev gap."

This composite image of last year's sunspots shows how dominant the southern hemisphere has been:



1960 → *2025*

For forecasters of the solar cycle, this raises an interesting possibility: Maybe the northern peak is still coming. Indeed, there are signs in February 2025 that the pendulum is swinging. This month's sunspots have been more evenly distributed between the two hemispheres, a sign that activity may be shifting north.

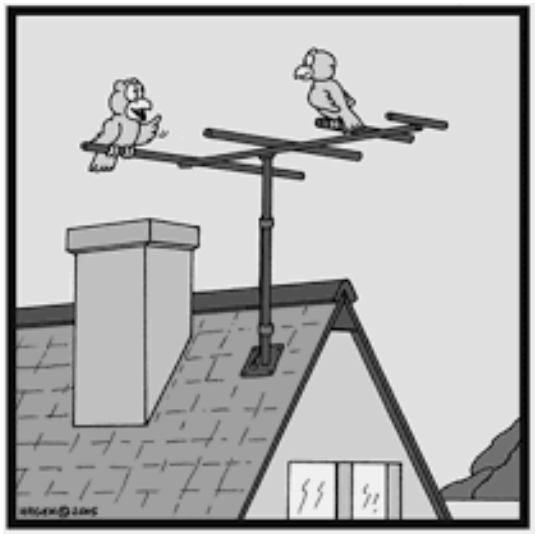
On the other hand, the northern peak might have already occured. Take another look at the first plot. There is a puny northern peak near the beginning of Solar Cycle 25. Perhaps that was it. (Indeed, that would jibe with the north-first, south-second order of recent double peaks.)

This discussion focuses attention on the north-south balance of sunspots. A northern shift in the months ahead could herald a second peak and another year or two of excellent auroras before Solar Cycle 25 finally peters out.

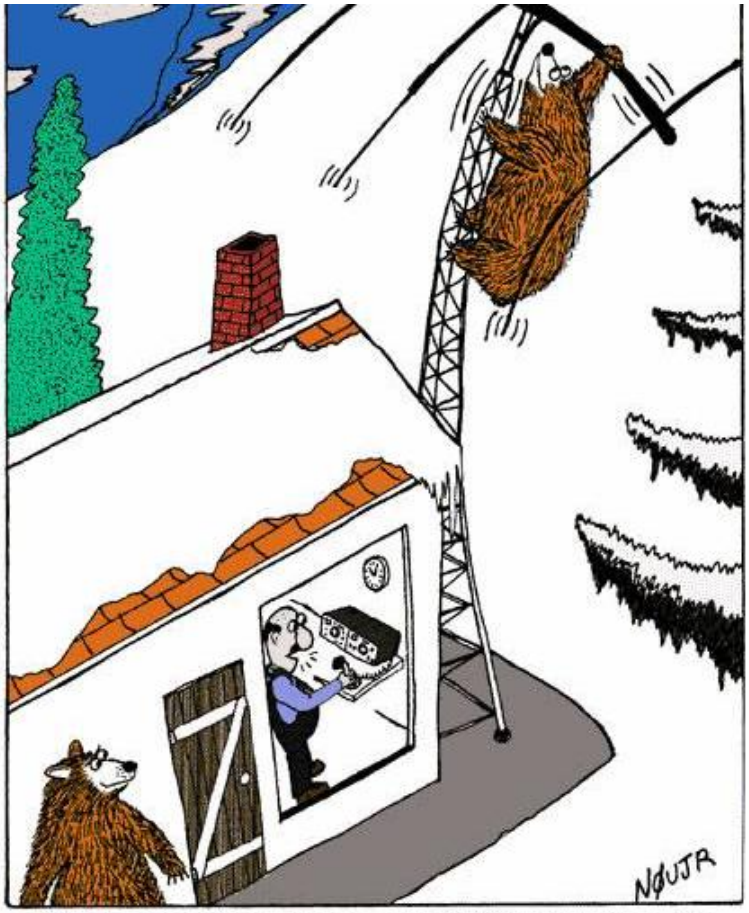
But given the inaccuracy of almost every forecast to date (remember this was supposed to be a very low year) we could still see the sun throw a few more surprises.

In addition, we know that there are more flare events after solar max, than before it. So like all things to do with our Sun… The only thing we know for sure is that there is a lot about it we still don't know

Stay tuned! Fun Times are still ahead.



Hams love us, look at the wonderful perches they install!



"Hang on a minute Larry...my SWR is jumping...I'm going outside and see what the problem is..."

HEARD AROUND THE SCENES

PAPAKURA PARKFEST

Our club will be manning a stand at the Papakura Parkfest on Saturday the 8th of March.

The event is coming up on Saturday the 8th of March

10am-2pm at Central Park. 57 Wood Street, Papakura

We will be setting up around 8:30am for the 10:00 am start, so feel free to drop in to assist. It's a chance to promote Ham radio, and some of the things we do with it.

It'll be a great day of food trucks, live entertainment, face painting and free events for the family, so make sure you have a look around, and maybe make sure others on the stand get a chance to have a look around too.

ICOM IC-7760 RADIO NOW IN STOCK

Icom agent RWB are taking orders for the new IC-7760,

30Khz to 60Mhz HF radio with Dual receivers, separated control deck, via your LAN, 200W output, built in Tuner, Dual Spectrum and Waterfall, Automatic Contest serial numbering, CW RTTY and PSK decode,

And it's only $12,247.00

But if you want something less ostentatious, maybe the fact that all Icom radios re 10% off during March.

Check out : https://rwb.co.nz/product-category/amateur/ to get the current prices.

FOR SALE

One Diamond D130J Super Discone Antenna. This antenna is an ultra-wideband antenna covering amateur radio, commercial 2-way, cellular, air traffic control and various utility frequency bands. Rust-free stainless steel is employed in major component parts

The antenna includes the coaxial cable fitted originally with an N connector.

Frequency coverage on RX 25 – 1400MHz and on TX 50 – 1200MHz

Max power 20W Max at 50MHz and 200W Max above 140MHz. (HF transmission is not permitted) *This is primarily a receive antenna.*

A new Unit from MFJ, would value at about $250 from the US before freight, and Tecsun copies sell on trademe for $190 each (also before freight)

TE PUKE AMATEUR RADIO CLUB INC. BRANCH 53 OF NZART
MARKET DAY 2025 SATURDAY MARCH 8TH,

Paengaroa Community Hall
4 Old Coach Road, Paengaroa.

Venue opens for Vendors at 6.30am

Table Prices Pre-Sale 1.8 Table $20.00 On The Day 1.8 Table $25.00

Pre-Sale ½ Table $12.00 On The Day ½ Table $15.00

Sale time 9.30am

Door Charge $2.00 per person.

Bank Account for Table Payment 03—0474—0030113—00 Use Your Call Sign As Reference.

For further information contact ZL1LWR Syd Rowe (07) 533 1029 or 027 248 8664,

Email: sydrowe@xtra.co.nz

Breakfast available from 7.30am to 11.00am at reasonable prices.

THE NEXT NZART BROADCAST IS ON THE 30TH MARCH 2024 AT 8:00 PM (REPLAYED AT 9:00 PM) AND WILL BE POSTED ON THE WEBSITE ABOUT THE SAME TIME..

The HF broadcast is made on 3900 KHz, LSB at the top end of the 80m band. It will be rebroadcast in the Auckland area on the 6625 Repeater, and is available on the NZART website: NZART-Official Broadcast

FOR A LAUGH

Ham Radio Jokes work best, when they are well received.

REWARD OFFERED

A reward of 500 microfarads is offered for information
leading to the arrest of this desperate criminal - Hop-A-Long Capacity

This unrectified criminal escaped from a western primary
cell where he had been clamped in ions awaiting the gauss chamber.

He was charged with the induction of an 18 turn coil named
Millihenry who was found choked and robbed of valuable joules

He is armed with a carbon rod and is a potential killer. If
encountered, he may offer series of resistance.

Capacity is also charged with driving dc motor over a
Wheatstone bridge and refusing to let the band-pass

The electromotive force spent the night searching for him in
a magnetic field, where he had gone to earth. They had no success and believed he had returned ohm via a short circuit

He was last seen riding a kilocycle with his friend eddy
current who was playing a harmonic

Q: How do you greet a ham radio operator?

A. With a short wave.

SOME NETS – FOR WHEN YOU ARE LOOKING FOR SOME COMPANY

Day	Time (NZST)	Freq (MHz)	Group
Sunday	08:00	3.750	Southern Net
	08:00	**146.625**	**Br 65 – Papakura Net**
	09:00	3.700	Br 10 - Franklin
	09:00	**3.755**	**Br 65. Papakura.**
	09:30	146.900	Br 10 – Franklin ZL1SA
	19:00	146.700	Auckland YL Net
	19:45	145.575	Thames radio club ZL1DF
	20:00	3.710	Br 42. Titahi Bay
	20:15	146.625	Sunday News and Net (Auckland)
	21:30	146.900	Franklin Net (ZL1-SA)
Monday	11:30	3.850/7.125	Br 12. Hamilton
	19:30	3.757	Br 12. Hamilton
	20:00	Echolink	Basic Morse (ZL1PX)
	20.00	3.540	CW Practice Net
	20:00	3.605	Br 80. Hibiscus Coast
	20:30	3.870	O.T.C (Old Timers Club)
Tuesday	09:00	7.096	Ex Post Office Techs
	19:30	3.690	QRP ZL3TK
	20:00	3.581	CW improvers Net
	20:00	7.025 – 7.040	VK CQ QRS Group (CW)
	21:00	1.850	160m Net
Wednesday	11:30	7.125	SPAM Net
	18:00	14.049	VK CW NET
	19:30	146.700	ZL1AB Net
	20:00	3.660	Geek Net
	20:00	3.645	Br 02. Auckland
	20:30	146.525	W.R.S.C
Thursday	09:00	7.096	Ex Post Office Techs
	18:00	7.0674	SAS Net (CW)
	20:00	3.615	Br 89. REG Net
	20:30	3.696	ZL1OA
	20:30	3.666	LF Net ZL2CA
	20:00	3.690	ZL QRP SSB Net
Friday	20:30	3.850	SPAM (AM Mode)
	20:30	3.650	W.S.R.C.
	20:30	3.560	Digital Modes Net
Saturday	10:30	28.530	10-10 Down Under (AK Based)
	19:30	3.650	Christian Fellowship
	20:30	3.600	Br 62. Reefton/Buller
Daily or Other	07:30	3.696	ZL2OA
	08:30	3.730	ZL3RP
	15:00	14.300	Pacific Seafarers
	17:30	3.760	Home Brew
	05:00 Zulu	14.183	ANZA DX Net
	18:00	7.115	VK7OB
	19:30	3.720	ZL1MO
	18:30	3.766	ZL3LE
	08:00	3.730	ZL3DAC
	20:30	3.725	ZL2HN / ZL4RF
	21:00	3.677	Counties Net ZL2MA
	21.00	3.535	New Zealand Net (CW)

Our desire is that this will be a living list,
Please email zl1nux@outlook.com any updates, deletions or changes required.

Papakura Radio Club Inc.
Branch 65 NZART Club Directory
Wellington Park, 1 Great South Road.
PHONE 09 296 5244
Westpac 03-0399-0019896-00
Club website: http://www.qsl.net/zl1vk Club email: zl1vk.club@gmail.com

President	ZL1NUX	Gavin Denby	021 459 192
Vice President	ZL1BNQ	Richard Gamble	021 729 270
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
	ZL4MDE	Mike Enderby	021 529 895
	Zl1KIM	Kimi Nooroa	
AREC Section Leader	ZL1BNQ	Richard Gamble	021 729 270
CD Liaison	ZL1AOX	Ian Ashley	021 198 1810
Newsletter Editor	ZL1NUX	Gavin Denby	021 459 192
Hall Custodian	ZL1AOX	Ian Ashley	021 198 1810
Newsletter.	Contact:	zl1nux@outlook.com	

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 $25.00 Family Membership and newsletter $40.00
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 ZL1NUX, Gavin Denby. If the repeater is not available, listen 146.475MHz simplex.

3.755 MHz Sunday at 9.15 am. Controller ZL1BNQ Richard Gamble. (Linked to 146.675 & 438.775)