The Official Newsletter of the

PAPAKURA RADIO CLUB INC.

September 2025

Spring forward ... soon

Contents ...

September Calendar:

Wednesday 3rd will be our General meeting. Speaker TBC

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, you can join the online Teams meeting by clicking the link below

Join the meeting. Note: It will open 5 minutes before the meeting begins.

June Dates

Wednesday 3rd	**General Meeting & Speaker**
Wednesday 10th	**Activity Night**
Wednesday 17th	**Committee Meeting**
Wednesday 24th	**Project Night**

If we each do a Little, it becomes a lot.

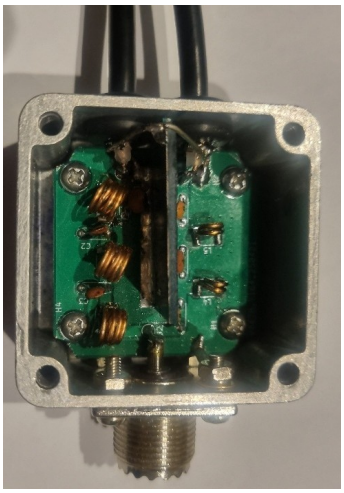
Club Activities:

A quiet month with most of us shaking off the winter blues, or sniffles.

Just a reminder of our ongoing projects

New Project – VHF/UHF Diplexer

Thanks to an excellent design (reverse engineering) by Rob, ZL1RJS, we have a project to build a new project. The diplexer allows a UHF radio and a VHF radio to be simultaneously connected to a single Dual band antenna.



The Diplexer is effectively 2 filters that isolate the radios from each other, while allowing them to couple to the 50 ohms antenna at a midpoint. Full plans are available on Rob's Website, and you can read the instructions at: https://zl1rjs.co.nz/diplexer.html

As this is a natural extension of the Tait radio projects we have already made, the Radio Connections are BNC by default, while the antenna is an SO239 (UHF) connector. If you're after a kit, see the available list below.

ZL1VK Kitsets available now... ex stock... for immediate delivery.

- Anderson Power Pole Distribution, PC Board only... $5.00
- 2 Radio into 1 Headphone set switching between radios, incl. PTT, PC Board only... $5.00
- Radio Interface for digital modes incl. Winlink, FT4, FT8 etc. Complete kit... $69
- Tait Radio TM8100 Series VFO unit... 100 Memories, Complete kit... $120
- 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.

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

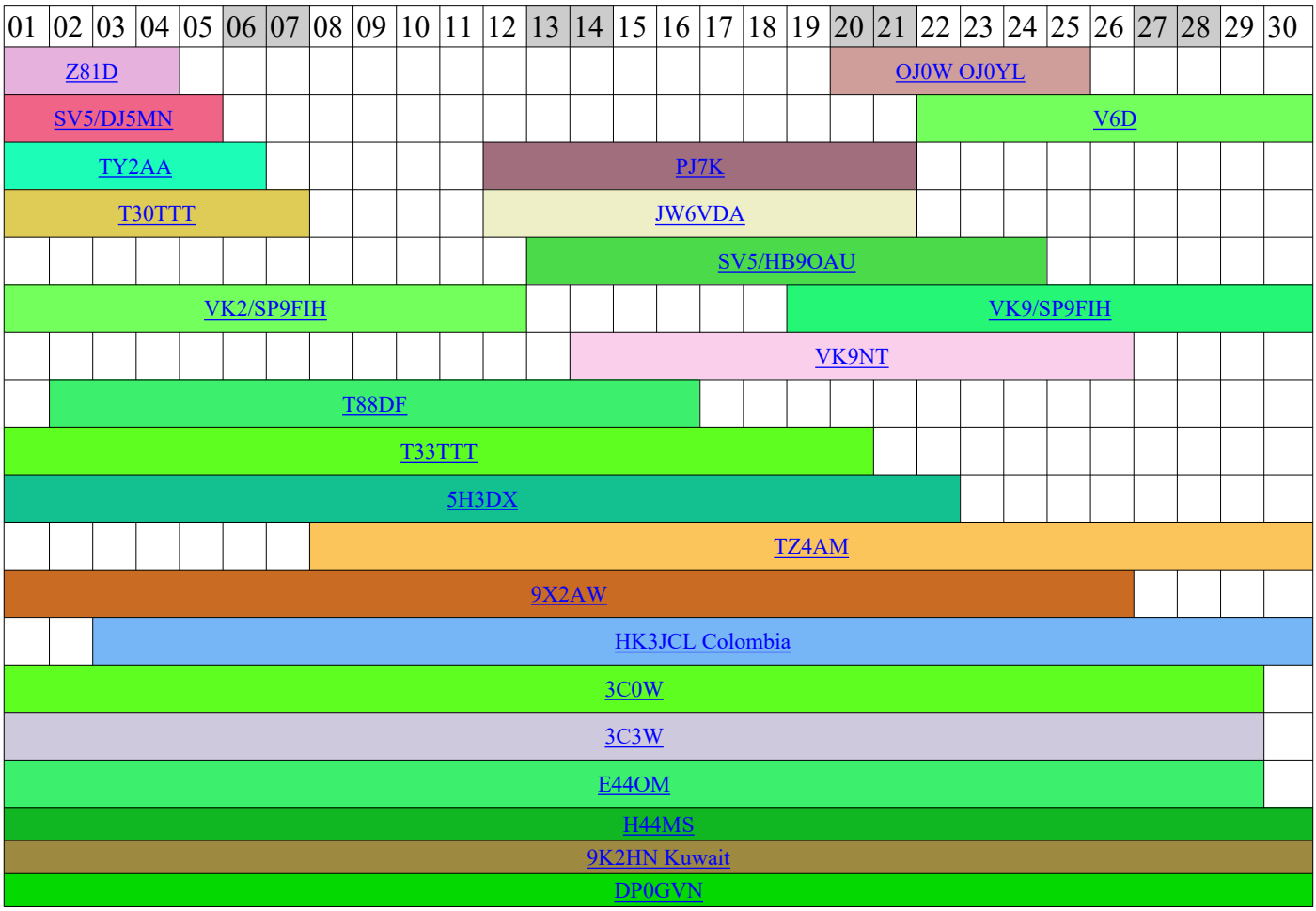
The Diplexer is a kit designed by Rob, ZL1RJS for the Papakura Radio Club.

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.

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

DX Calendar August 2025



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Click any link above for details on the expedition.

Featured DX: VK9NT Norfolk Island

VK9NT Team will be active from Norfolk Island,
IOTA OC - 005,
14 - 27 September 2025.
Team - VK3QB, VK3HJ, VK6CQ.

Norfolk Island

- Norfolk Island, is a small island in the Pacific Ocean.
- Motto- Inasmuch.
- Capital city- Kingston.
- Official languages- english, norfuk.
- Area- 34.6 sq km.
- Currency- Australian dollar AUD.
- Time- UTC +11.3

There are few places on earth that can be referred to as paradise without thinking twice. Norfolk Island of Australia is one of those few places. Located amidst the South Pacific region, this island provides shelter to one of those communities that are isolated on the planet. This place, situated amidst the untamed ocean, has every reason to make it into the top places in the world to be treated as a paradise.

A Brief History
This island is actually a patch of the volcanic outcrop and is known to preserve its own tradition with utmost care. This area came into the sight of Captain James Cook as early as 1774, and European settlement was soon established after the visit. Cook, on behalf of the British, claimed the island. However, the French were in competition too. The British were finally able to capture this island as the first settlers arrived at this place in 1788. The British had planned to establish a farm on this island, where the prisoners would work in order to feed the colonies in New South Wales.
However, the place did not work well as a farm and was abandoned by the year 1814. Bad weather, caterpillars, and rats were held responsible behind the inability of establishing the island as a farm. The entire area remained uninhabited until 1825, when the British Government decided to use the place as a Penal Colony for the offenders with worst and repeated charges.

Dancing Prohibited
Youngsters and teenagers, who love to party and dance, should try to stay out of this place. This place has a strict prohibition on dancing. Flavoured milk might bring about the maximum level of excitement in this place. However, these factors cannot deny from the area being referred to as paradise.

Safety and Peace at the Same Time

Peace, serenity, and relaxation are some of the most cherished things by the tourists, who have visited this place. There seems to be no stimulating conditions in this area, as people can leave their cars with the windows down, or do not worry if they have left the home with the doors open. Thieves are absent here, and people can enjoy the maximum level of security, which is quite hard to get in the recent era.

Things to See

The Gregorian buildings located in this island are simple, yet graceful, and prove to be of a real treat to the eyes. Most of the historic houses, as well as, the Government building are completely preserved. Most of these houses have been in use till date. The Quality Row, located on the southern shore of Kingston, is the best available example of the Gregorian bungalows that were built years ago.

The Bloody Bridge

You'll often hear that much of Norfolk Island was built with convict blood, sweat and tears, and it's no exaggeration. Legend has it that during the construction of Bloody Bridge, a tyrannical overseer pushed his work gang to breaking point and ended up with a pickaxe imbedded in his skull.

Fearing a punishment even worse than their overseer's grizzly fate, the convicts swiftly walled their tormentor into the bridge's stonework. Feigning ignorance when questioned about the sudden disappearance, all went well for the work gang, until the replacement overseer noticed blood oozing from the still-wet mortar!

But despite the history, the current locals in this place seem to bear a smile on their face throughout the day, and greet the tourists with a warm welcome. Most of them will wave at you as you pass by in your car. Therefore, if peace and relaxation accompanied with safety is something that attracts you, go for the Norfolk Island as your upcoming tour destination.

Where to find Norfolk Island

Should be an easy one for the log, but still not a common one, so worth chasing

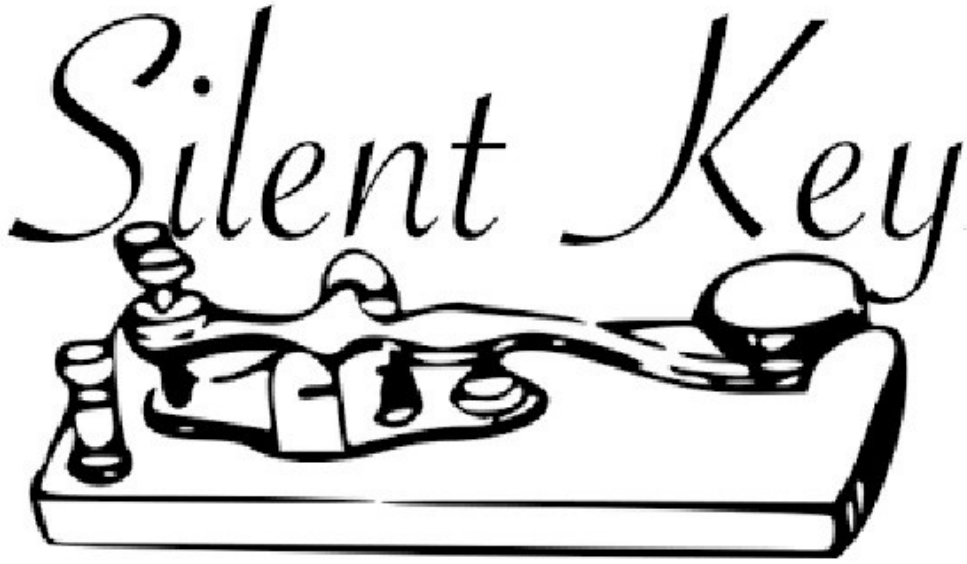
Upcoming Contests

July 2025

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

Start - Finish Date-Time		Start - Finish Date-Time		Bands	Contest Name	Mode	Exchange	Sponsor's Website
2	0001	3	2359	28	10-10 International Summer Contest, SSB	Ph	Name, mbr or "0," SPC	www.ten-ten.org
2	1200	2	2359	1.8-28	European HF Championship	CW Ph	RS(T), 2-digit year first licensed	euhf.s5cc.eu
3	0600	3	1359	144	Hemus VHF Contest - 144 MHz	CW Ph	RS(T), 6-char grid square	radioclub-troyan.bg
3	1400	3	1700	3.5-14	SARL HF Phone Contest	Ph	RS, serial	mysarl.org.za
5	0000	5	0200	3.5-28	ARS Spartan Sprint	CW	RST, SPC, power	ars-qrp.com
5	0800	5	0929	3.5	ZL Sprint	CW Ph Dig	CW/SSB: RS(T), outside temp; FT4: 4-char grid	www.nzart.org.nz
6	1700	6	2100	144	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	www.ft8activity.eu
7	0000	8	0300	7	Walk for the Bacon QRP Contest	CW	Max 13 WPM; RST, SPC, name	qrpcontest.com/pigwalk40
7	1800	7	2200	28	NRAU 10m Activity Contest	CW Ph Dig	RS(T), 6-char grid square	nrau.net/nrau-contests-in- gen-eral
9	0000	10	2359	3.5-28	WAE DX Contest, CW	CW	RST, serial	www.darc.de
9	0000	9	2359	3.5-28	FISTS Saturday Sprint	CW	RST, first name, mbr or "0," SPC	fistsna.org
9	1200	10	1159	3.5,7,28	YB Bekasi Merdeka Contest	Ph	RS, YB section or "DX"	bmc.orari-kotabekasi.com
9	1400	10	0400	1.8-28	Maryland-DC QSO Party	CW Ph	MDC county/city or SPC	www.w3vpr.org
9	1400	9	2200	3.5-28	Kentucky State Parks on the Air	CW Ph Dig	KY park abbr, SP or "DX"	k4msu.com/kypota
9	1800	9	2200	50	50 MHz Fall Sprint	CW Ph Dig	4-char grid square	packratvhf.com
10	1300	10	1600	3.5-14	SARL HF Digital Contest	Dig	RST, serial	mysarl.org.za
11	0000	11	0200	1.8-28	4 States QRP Group Second Sunday Sprint	CW Ph	RS(T), SPC, mbr or pwr	www.4sqrp.com
11	2200	13	2159	144	MMMonVHF/DUBUS 144 MHz Meteorscatter Sprint Contest	CW Ph Dig	Signal report	www.mmmonvhf.de
12	0800	12	0929	3.5	ZL Sprint	CW Ph Dig	CW/SSB: RS(T), outside temp; FT4: 4-char grid	www.nzart.org.nz
12	1900	12	2029	3.5	DARC FT4 Contest	Dig	RST, 4-char grid square	www.darc.de
13	1700	13	2100	432	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	www.ft8activity.eu
16	0000	17	1600	3.5-28	SARTG WW RTTY Contest	Dig	RST, serial	www.sartg.com
16	0800	17	0800	1.8-28	Russian District Award Contest	CW Ph	RS(T), RU district code or serial	rdaward.org/rdac1.htm
16	1200	16	1300	7	SARL Youth QSO Party	Ph	RS, age	mysarl.org.za
16	1600	16	1759	1.8-28,50	Feld Hell Sprint	Dig	See rules	sites.google.com/site/ feldhell-club
16	1200	17	1200	1.8-28,50	Keyman's Club of Japan Contest	CW	RST, JA prefecture/district code or CQ zone	kcj-cw.com
16	1800	17	2100	1.8-28	CVA DX Contest, CW	CW	RST, PY state, continent or "MIL"	cvadx.org
17	0000	17	2359	3.5-28	FISTS Sunday Sprint	CW	RST, first name, mbr or "0," SPC	fistsna.org
17	1700	17	2100	3.5-28	NJQRP Skeeter Hunt	CW Ph	RS(T), SPC mbr or power, "W"	www.qsl.net/w2lj
17	2300	18	0100	1.8-28	Run for the Bacon QRP Contest	CW	RST, SPC, (mbr/pwr)	qrpcontest.com/pigrun
19	0800	19	0929	3.5	ZL Sprint	CW Ph Dig	CW/SSB: RS(T), outside temp; FT4: 4-char grid	www.nzart.org.nz
20	1700	20	2100	1.2 GHz	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	www.ft8activity.eu
21	0000	22	0300	14	Walk for the Bacon QRP Contest	CW	Max 13 WPM; RST, SPC, name	qrpcontest.com/pigwalk20
21	1900	21	2000	3.5-14	NTC QSO Party	CW	Max 25 WPM, RST, mbr or "NM"	pi4ntc.nl
23	0400	25	0400	1.8-28	Hawaii QSO Party	CW Ph Dig	RS(T), HI district, or SP	www.hawaiiqsoparty.org
23	1200	24	1200	3.5-28	YO DX HF Contest	CW Ph	RS(T), YO county, or serial	www.yodx.ro
23	1600	24	0400	1.8-28	Ohio QSO Party	CW Ph	RS(T), OH county, SP or "DX"	www.ohqp.org
23	1800	24	2100	1.8-28	CVA DX Contest, SSB	Ph	RS, PY state, continent or "MIL"	cvadx.org
24	1400	24	1700	3.5-14	SARL HF CW Contest	CW	RST, serial	mysarl.org.za
26	0800	26	0929	3.5	ZL Sprint	CW Ph Dig	CW/SSB: RS(T), outside temp; FT4: 4-char grid	www.nzart.org.nz
29	2200	31	2359	1.8-28	SCRY/RTTYOps WW RTTY Contest	Dig	RST, 4-digit year license first issued	rttyops.com/index.php
30	0000	30	2359	1.8-28,50	Feld Hell Sprint	Dig	See rules	sites.google.com/site/ feldhell-club
30	0600	31	0559	3.5-28	ALARA Contest	CW Ph	RS(T), serial, name	www.alara.org.au
30	1200	31	0300	1.8-28,50	U.S. Islands QSO Party	CW Ph Dig	RS(T), island designation or SPC	usislands.org
30	1200	31	1200	1.8-28	World Wide Digi DX Contest	Dig	4-char grid square	ww-digi.com
30	1300	31	0400	All, except WARC	Colorado QSO Party	CW Ph Dig	Name, county or SPC/DX prefix	ppraa.org/coqp
30	1400	31	2000	3.5-28,50	Kansas QSO Party	CW Ph Dig	RS(T), KS county, SP or "DX"	ksqsoparty.org

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



SILENT KEY - ZL1TKA

HINDMARSH, Robert John.

Passed away peacefully at home on 24th August 2025, aged 93 years.

Dearly loved husband of the late Helen. Loved father and father in law to Trevor (deceased), Linda and Dave, Ken and Helen, Donna (deceased), Dave and Carole, Glennis and Paul, and Tony (deceased). Grandfather and Great Grandfather to many. "Will be sadly missed."

Bob was a long time member of the Papakura radio club, and at one time ran the VHF AM Net. He was known to many of our older members and was active on the radio bands with regular contacts with many on-air friends.

I met Bob as a neighbouring Ham operator when Ann-Maree would join the YL net on HF.

Due to our close proximity, it was not uncommon for Bob and I to experience some mutual interference. Bob had a scheduled net every week on 80 metres very close to the frequency used for the National YL net.

When bob became aware of the net, he re-scheduled his net to allow Ann-Maree to join the other ladies on air

Bob was a true Gentleman of the airwaves, and it was a pleasure to have met him.

73 Bob, Enjoy your rest.

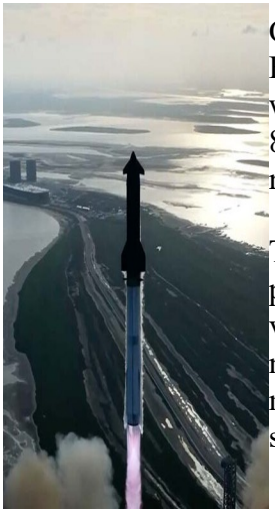
Ramblings from the editor's desk

Spring has sprung ... The months of September, October and November are the traditional months of Spring. A time of changeable seasons, rapid plant growth and warmer nights. Already the days are feeling a little bit longer, and its a bit brighter later into the evening.

The last weekend of September however, will change this when Daylight saving starts again. Those of us who have to work will be again driving in the dark each morning, but at least the solar will still be producing power when we start cooking dinner, rather than draining the battery, so maybe I'll complain a little less this year.

August was a very busy month for me, with work commitments in Auckland and Christchurch, including attending the Solar Energy Association of New Zealand (SEANZ) conference in Auckland.

So chances to operate radios have been almost non-existent. This busy schedule almost meant that there was no newsletter sent out for August. Hopefully the rest of the year will give me opportunities to stay on top of this task.



On a more exciting note, SpaceX overcame the Block B curse, and launched Test Flight 10 on a suborbital flight test that proved the many critics wrong, the flight was not without excitement, but it achieved every one of its objectives, Launching 8 simulated Star-link satellites as well as a number of tests including rocket engine relights.

The ships were not caught, but were deliberately destroyed on the ocean to prevent them becoming a floating hazard to shipping, Starship re-entered on a very intense angle to test the survivability of the ship, and to help with this, as number of heat tiles were removed, and several different types were tested, making a brilliant light show as the ship experienced serious levels of plasma scorching to the hull.

It was certainly a show worth watching, and with only one last Block B ship left, the data collected is being used to improve the block C designs for the next generation, which will hopefully include a double catch on the two new towers, as well as full orbital flight testing. A good reasons to look up and see what's happening in the space front.

Not to be outdone, NASA has put out a call for anyone who wants to help monitor the artemis mission. NASA will not only use its traditional space communication networks (Near Space Network and Deep Space Network). It also wants to open the door to universities, international agencies, private companies and ordinary citizens to help track the Orion spacecraft from Earth.

It is "easy", they will only need to capture the spacecraft's radio signal and analyse the changes in the waves to know its trajectory. Back in the Artemis I mission, ten volunteers managed to do it successfully, showing that citizen collaboration can provide valuable data.

Those interested must send their proposals before October 27. It is not about travelling to Cape Canaveral or having a big laboratory: you only need an antenna capable of receiving radio signals and a bit of technical knowledge. Nothing that any satellite geek, radio amateur or astronomy fan who takes it seriously doesn't already have.

With this gesture, NASA reaffirms the idea that exploring space is not just for a few. Anyone can help. Anyone can be part of history.

The methodology involves observing the Doppler shift on the Orion S-band return link carrier signal when it is received at a partner ground station.

- This is a passive operation; no transmissions or uplink signals from the ground station will occur.
- The objective is to achieve and maintain carrier lock on the signal for tracking purposes; collecting or tracking telemetry data is not part of this activity.
- Orion is configured to transmit S-band signals within the frequency spectrum of 2200 to 2290 MHz, a range earmarked for Space Operations.
- For one-way Doppler measurements, Orion's transmission power specifications are anticipated to be in sync with antenna apertures having a diameter of 9-meters or more (or equivalent gain for a non-parabolic dish antenna). Smaller apertures may be suitable depending on their capabilities.
- NASA Centres across the nation may be among the recipients of this service data.

It's NASA's return to the moon, it will be historic and it will be the first step to return to the Moon, it will be the first crewed trip beyond Earth's orbit since 1972!! And we will be one step closer to Mars!

You can get more information about this mission by clicking the NASA Official website. It may be one way to get yourself over the moon.

August gives us two further reasons to look up, A lunar eclipse on the 8th and a Partial solar eclipse on the 22nd of September. As the solar eclipse is only a partial eclipse, it will be important to use approved solar filers, or better yet make a projector to view the action. Remember, while there are plenty of second hand shops, there are no second eye shops, so don't attempt to stare directly at the sun.

There's a call for speakers, or topics you wish covered at the 100th centenary conference, and there's also a special call sign to listen out for ZL100C. The callsign has been operating from the clubrooms, and its a special station as we gear up to celebrate 100 years of NZART. So mark your calendars and be ready to book early as places will be limited for this special event. And if you can, log a contact for the ZL100C contact.

Talking of times gone by, I have a special article on some of the best scientific and medical u turns (and no I didn't have to go back to leaches to find some skin crawling practices) that were one considered safe and normal, that will have you shaking your heads. But if you want some more ridiculed theories, we now consider normal Check out this video for fun.
https://youtu.be/MFWmhTzOiS4

But just in case you missed some radio news, There's an article on the Icom releases at the Tokyo Ham Fair. In addition to the 7300 Mark II there's the ID-5200 and AH-6 as well.

So hopefully a bit of everything for everyone.

But if you still need more check out ZL1GUDs new magazine (see heard about the scenes) to entertain your mind.

So no big thoughts for this month, Just a lot of interesting things happening to keep you busy until the next newsletter

So take care, Enjoy the hobby and I'll catch you again soon

Till then ...

73, for now, de ZL1NUX

The Shortwave Radio Station Stoking US-Russia Nuclear Fears

Through a fog of static, at 4625 kHz on the shortwave dial, a man's voice spoke in monotone: "Nikolai, Zhenya, Tatiana, Ivan." He repeats the message—spelled out in the Russian phonetic alphabet—followed by a series of numbers and letters. The whole message reads: "NZhTI 01263 BOLTANKA 4430 9529." What it means is anyone's guess, but lots of people are guessing.

This radio station, dubbed UVB-76, has spent much of 2025 broadcasting cryptic messages, strange music, and pirate interruptions. The channel has elicited fascination for decades. This time, however, something is different. Now, Moscow's network of propagandists and warmongers are suddenly fascinated by this obscure channel.

UVB-76's real purpose is almost certainly innocuous and mundane. But in recent weeks, Moscow has capitalised on the eerie fixation with the channel to stoke fears of nuclear Armageddon.

On Tuesday, the station signalled four words, according to Telegram channel UVB-76 logs. These were: Neptune, Thymus, Foxcloak, and Nootabu.

The mystery station has sparked numerous theories, with the most common being a military communication tool. Some have rumoured it to be a "dead man's switch" system, automatically triggering a military response if Russia became under attack.

Throughout the Cold War, ham radio hobbyists searched the shortwave dial in search of agencies communicating with their agents. Tune in to the right frequency, and you could hear a KGB officer reading out coded messages for their undercover operatives in America, a Cuban intelligence officer relaying a message to Moscow, or a CIA asset in eastern Europe trying to get in touch with Langley.

The end of the Cold War and the advent of modern technology made secure communication easier—making these shortwave radio stations largely, though not entirely, obsolete. At the same time, however, amateur radio fans began congregating online, and they scoured for spy stations on the radio dial.

"What have you stumbled on to?" reads a message posted to curious visitors to Spynumbers.com. "Instructions to spies? Messages exchanged between drug dealers? Deliberate attempts at deception and mis-information? Chances are, all of the above!" The website's users kept a meticulous database of the shortwave stations that, they believed, were used by spooks. Operators around the world logged the station at 4625 Khz as "The Buzzer."

The station, which was categorized only as "Slavic," is thought to have come online in the 1970s. The fact that it could be heard straight across the globe—from London to Sydney—suggested that it had some pretty powerful transmitters behind it. A perpetual tone, an incessant buzzing, was thought to be a way for the operator to reserve the frequency, even when it wasn't actively being used. The buzzing would infrequently stop, perhaps once a week, replaced with other tones or a man reading a message using the Russian phonetic alphabet. Try as they might, listeners never decoded those messages.

For years, the station's main signal emanated from a military outpost some 50 miles north of Moscow. When urban explorers reached the site in 2011, they found it abandoned—but forgotten radio equipment and log books suggested that it had once been the headquarters of UVB-76. ("In general, it was boring," the explorers wrote.)

Russian broadcaster RT also visited the site that year, reporting that the site was, most likely, just a mundane part of Russia's military communication apparatus.

The fascination with the station was offset only by the fact that its transmissions weren't very interesting. Of the hundreds of messages logged on Priyom, none have actually been decoded. There is little doubt that the channel is used by the Russian military, because it has admitted as much.

A military journal obliquely references the site as part of a program to maintain communication between Russia's various military assets, even amid warfare. "Its main goal is indeed to serve the Russian strategic military radio network," Goldmanis says.

Given Russia's huge territory, Goldmanis says, shortwave networks like UVB-76 are useful for connecting far-flung outposts. "This is a normal peacetime operation," he says.

It's impossible to say whether the channel has an axillary purpose, as the Russian military is understandably secretive about its communication systems. That has left lots of room for speculation. This includes the unsubstantiated idea that UVB-76 was a central part of Moscow's nuclear failsafe. And it has kept growing more popular.

On December 11, 2024, UVB-76 once again sprang to life. After a quiet month, the station delivered 24 transmissions in a single day—a record, according to its fan club on Russian social media network VK. The transmissions themselves were standard fare ("alphabet," "billiards," or just nonsense words), but the volume caused a stir among those who monitor the channel.

Russian state news agency RIA-Novosti published what appears to be its first-ever article on UVB-76, summarizing the new broadcasts and explaining to its readers that "it is called a 'Doomsday Station' because it is believed to have been allegedly created as part of the Dead Hand system."

Since early this year, RIA-Novosti has published roughly one story per week on UVB-76, suggesting its coded messages are related to missile strikes on Iran, the war in Ukraine, and negotiations with Trump.

RT, which had once pooh-poohed the idea that UVB-76 was part of Moscow's nuclear deterrence, began regularly posting its broadcasts on X, writing in April that the station often broadcasts "coded alerts pre-major events"—particularly around phone calls between Trump and Putin—and suggesting that it operates as a "nuke failsafe."

Chatter about the station grew on Telegram, the messaging app popular in Russia. Channels claimed that UVB-76 grew active "during periods of escalation" of military activity and that it served as a kind of oracle, sending its coded messages "before global events." Some of these channels, some with millions of subscribers, are themselves close to the Russian Ministry of Defense.

Between 2022 and 2023, the Center for Strategic and International Studies tracked nearly 200 instances where Russian officials issued threats around the use of nuclear weapons, particularly as it tried to dissuade Western support for the Ukrainian government amid its ill-fated invasion. That culminated in changes to the Russian nuclear doctrine last year. The new orders, approved by Putin, allow Moscow to launch a nuclear strike in response to certain large-scale conventional attacks on Russian territory.

While UVB-76 continued to gurgle out messages over the past week, amid an extraordinary meeting in Alaska between presidents Donald Trump and Vladimir Putin, speculation about its true purpose has noticeably quieted on pro-Kremlin channels.

Icom Unveils the IC-7300MK2

Icom announced the debut of the IC-7300MK2 HF/50/70 MHz Transceiver at the Tokyo Hamfair stating. “The successor to the wildly successful and world-renowned IC-7300, the IC-7300MK2 builds on a legacy of excellence with enhanced performance and great new features, setting a new standard for HF operation.

The original IC-7300 revolutionised the market with its RF direct-sampling system making sophisticated SDR technology accessible to a wider audience. The IC-7300MK2 takes that innovation to the next level offering improved features that will delight both new and experienced operators.”

Enhancements include:

- Reciprocal Mixing Dynamic Range (RMDR) improved to approximately 105 dB (at 2 kHz separation) - *Improved weak signal performance*
- Transmit Phase Noise characteristics are improved by about 12 dB (at 1 kHz frequency separation). - *Reduced Transmitter noise*
- The European versions will allow transmission on the 5MHz (70 Metres) bands
- Standby power falls from 0.9A to 0.7A.
- Some heat specs are given showing improved output performance, but Transmitter currents are not currently available.

The unit also offers:

- built in CW decoding
- HDMI output for an External Display *(sadly this does not seem to allow Touch screens)*
- Built in RS-BA1 software connection via the built in LAN port
- USB-C connector for Dual Virtual Comm ports and Input/Output Audio *Allowing Logging software and Digital modes to operate at the same time over a single cable)*
- Rx input/output connections (SMA) allow specialised reception features and filters to be added without affecting the traditional SO239 antenna socket

A promo Video can be seen Here: https://youtu.be/OnrJ5dxxFRc

ICOM Announces New ID-5200 & AH-6 Concept Models at Tokyo Ham Fair 2025

Icom have used the Tokyo Hamfair to showcase a preliminary look at two new concept models: the ID-5200 144/430 MHz Dual-Band Transceiver and the AH-6 Automatic Antenna Tuner. *Please note that specifications may be subject to change in the future.*

ID-5200 144/430 MHz Dual-Band Transceiver

The ID-5200 (shown above) is a versatile 144/430 MHz dual-band transceiver which will support both FM and DV (Digital Voice) modes. A key feature is its ability to perform simultaneous dual reception of FM-FM, FM-DV and DV-DV signals. *(For DV – Read D-Star?)*

• Touchscreen Operation - The unit will feature a touchscreen for intuitive operation and easy access to various settings and functions.

• Broad Reception Capabilities - It will receive VHF, UHF and Airband signals expanding your listening options.

• Wi-Fi and Bluetooth Connectivity - The ID-5200 will be Wi-Fi enabled and includes Bluetooth connectivity allowing for seamless integration with other devices.

• Internal Gateway Function - An internal gateway function will allow you to connect to Wi-Fi and operate in terminal mode or access point mode offering flexible networking options.

• DV Repeater Monitoring - It will support a dedicated DV repeater monitor function to help you stay connected.

AH-6 Automatic Antenna Tuner

The AH-6 (shown below) is a new automatic antenna tuner designed to be a single, comprehensive solution for your antenna tuning needs.

• Dual Antenna Support - The unit will support both 50Ω antennas (SO-239) and long-wire antennas.

• Wide Frequency Range - It will cover frequencies from 1.8 MHz to 50 MHz, making it suitable for a wide range of HF operations.

• Power Rating - The AH-6 will have an input power rating of 100W.

As this is such fresh information we have no details about pricing and availability.

As more information is released about these models as well as the IC-7300MK2 HF/50/70 MHz Transceiver, Icom will update their website and inform everyone via media channels.

Facebook: https://www.facebook.com/IcomUK/
Twitter: http://www.twitter.com/icom_uk

YouTube Channel: https://www.youtube.com/user/IcomUK

Linkedin: http://www.linkedin.com/company/icom-uk-ltd

Pinterest: https://www.pinterest.com/icom/

Tumblr: https://www.tumblr.com/blog/icom-uk

Instagram: https://instagram.com/icom_uk/

Threads: https://www.threads.net/@icom_uk

TikTok: https://www.tiktok.com/@icom_uk

Scientific American Celebrates 180 Years with Stories of Scientific U-turns

As you know, nothing irks me more than to hear – The Science is settled. Mostly because it never is. So it was good to see the magazine spotlight the biggest "Wait What" moments in honour of SciAm's 180th birthday

First up, was a story from freelance health and life sciences journalist Diana Kwon about nerve regeneration. For millennia doctors and scientists believed that any damage to the nerve cells that carry signals throughout the body must be irreversible. While many instances of nerve damage are, indeed, difficult to treat, scientists have realised over the past couple of centuries that nerves can and do regenerate.

Throughout this evolution in our understanding of nerves it was still widely believed that neurons within the central nervous system, composed of the brain and spinal cord, were incapable of healing. Now we know that even these most precious neurons can regenerate under the right conditions. Just imagine what secrets we'll have uncovered about the nervous system 180 years from now!

In another example of a scientific turnabout, Scientific American senior features editor Jen Schwartz reminds readers that plastic was, ironically, invented as a sustainable alternative to another material: ivory. In fact, back in 1864 Scientific American published news of a contest from billiard-table manufacturing company Phelan & Collender seeking an alternative for vanishing elephant tusks, which, at the time, were used to make pool balls. The company offered $10,000 as a reward for this feat of materials science.

A printer from Albany, New York, named John Wesley Hyatt came up with celluloid in response, though he chose to patent the invention for himself rather than accepting the prize money. His celluloid billiard ball has been called "the founding object of the plastics industry." Unfortunately, as Jen's article for SciAm explains, while the demand for ivory in the billiard industry dropped with the introduction of celluloid, elephants were still targeted for their tusks for other products. And as we now know the invention of plastic radically changed the way we produce and consume goods—and not always for the better.

In another scientific 180, detailed by Scientific American contributing editor Sarah Scoles, we learn how the search for alien life has periodically been turned on its head. (So maybe multiple 180s?)

In the late 19th century an Italian astronomer observed groove like markings on Mars, which convinced an American astronomer that the Red Planet hosted a whole Civilization. In 1906 that second astronomer, Percival Lowell, wrote a book positing that Martians had carved out a sophisticated network of watery canals. Even when a closer look at Mars in 1909 revealed that those canal-like markings had actually been an optical illusion, Lowell's theories persisted.

In 1916 a Scientific American managing editor wrote in New York Times letters to the editor that he still believed Mars held sophisticated life and an irrigation system to prove it. Of course, when the Mariner 4 spacecraft gave us our first flyby view of Mars in 1965, we saw our planetary neighbour for the desolate world it is.

While we're unlikely to do another 180 on the existence of intelligent life in our solar system anytime soon, scientists have recently become aware of the abundant potential opportunities for microbial life in our cosmic backyard and beyond. We may not be peering up at Mars hoping to see aliens travelling around by gondola anymore, but in some ways the hunt for alien life is more optimistic than ever.

Add to that some other "say what"s such as doctors used to prescribe cigarettes due to the health benefits they offered.

In the 1940's lice on children was treated with Dichlorodiphenyltrichloroethane or simply know as DDT.

For Babies and Children who had diarrhoea, a cough or teething a nurse would issue Paregoric. This is a camphorated tincture of opium. Nurses administered it by drops or teaspoons and instructed mothers on proper usage at home. It was available in pharmacies until the late 1960s.

In 1950s, Merbromin was used for daily wound care of diabetic foot sores and ulcers. When applied to the skin, it produced a distinctive carmine red stain. The stain stayed on the skin for several weeks, even after repeated washes. The solution was also commonly used by nurses and midwives for antisepsis of umbilical cord in birthing facilities during this time.

Because of merbromin's mercury content, the US Food and Drug Administration banned its use in 1998. It can potentially cause mercury poisoning especially when used in large amounts.

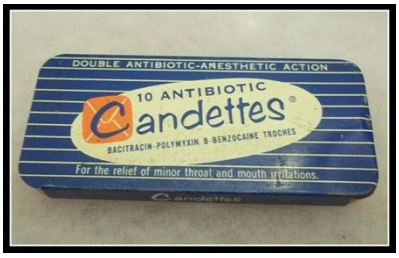
Dr. Nathan Tucker Asthma Specific is an early version of inhaler. The drug came with an inhaler-like device that vaporised accompanying liquid drug for immediate relief of asthma.

When analysis was made on the remaining samples of the drug, it was discovered that it contained cocaine and atropine. This was the reason why it became addictive to patronising users. The relief felt by its users was actually related to cocaine euphoria. The drug was discontinued during the implementation of narcotic drugs control.

Candettes are similar to cough lozenges. Based from their ad, it contained two undisclosed types of antibiotics and an anaesthetic compound for immediate relief of sore throat. It became popular in the 1950s under Pfizer's name.

Due to the success of candettes among consumers, more products under this trademark was produced like cough syrups, cough gels and cold tablets.

Candettes was later discontinued in the 1970s. The complete contents of the product is still a mystery.



Moon photobombs the sun

To study the sun, scientists use a specialised telescope called a coronagraph. This instrument mimics a solar eclipse by using a occulting disk to block out the sun's bright light. By doing this, astronomers can study the fainter solar atmosphere, the sun's corona, that's hard to see when viewing the entire sun.

However, recently, a coronagraph used by the National Oceanic and Atmospheric Administration (NOAA) caught something extra in their images: the moon.

What is it?
NOAA's Compact Coronagraph-1 (CCOR-1) has a particularly unique vantage point for viewing the sun because it sits on the GOES-19 satellite, which scans the Earth. The CCOR-1 was developed and launched in June 2024 to replace older coronagraphs that, despite still working, have exceeded their life expectancy. NOAA plans to have these types of coronagraphs on future GOES satellites to continue studying the sun.

Why is it amazing?
While coronagraphs typically study the sun, recently, the CCOR-1 captured something rather special: the moon passing almost directly in front of the sun, appearing within the field of view of the coronagraph. This happens because CCOR-1 orbits closer to Earth than other coronagraphs, meaning the moon will occasionally be seen in its imagery.

While the moon appears almost fully illuminated in the image, it isn't actually a full moon. This brightness comes from Earthshine: sunlight that's reflected from Earth and lighting up the surface of the moon. Because of its high resolution, the CCOR-1 coronagraph could capture this light, making the moon seem full.

Voyager 1 keeps making discoveries that surprise

Voyager 1 has been exploring the vastness of space for nearly five decades, and it just made a finding that is reshaping how scientists understand our cosmic neighbourhood. At an incredible distance of about 15 billion miles from Earth, this legendary spacecraft stumbled upon a blazing region at the edge of our solar system that's changing modern astrophysics forever.

Imagine a wall of fire where temperatures soar to nearly 54,000 degrees Fahrenheit. It feels like something out of science fiction, but these scorching temperatures are very real and hidden light-years away in the depths of space.

When Voyager 1 blasted off in 1977, its mission was to study the giant planets in our solar system, snapping breathtaking images of Jupiter and Saturn. But its real legacy began once it crossed into the solar system's outer boundary—the mysterious heliopause.

The heliopause is where the solar wind, a constant stream of charged particles from the sun, finally meets the interstellar medium, the space between stars filled with particles and radiation from other sources. It's basically the border where our sun's influence fades and true interstellar space begins.

Voyager's instruments detected a surprising rise in both the temperature and density of particles as it crossed this frontier. Scientists have aptly named this region the "wall of fire", a massive burst of energetic particles creating a cosmic heatwave at the solar system's edge.

What is the heliopause?

To really grasp this discovery, let's break down what the heliopause is. Think of it as our solar system's invisible shield or bubble. It's the outermost boundary where the sun's magnetic influence and solar wind pressure meet the cold, vast emptiness of interstellar space.

Beyond this boundary, charged particles from distant stars flow freely, unaffected by the sun's power. For many years, researchers theorised that this edge would be cold and sparse, but Voyager 1's findings have upended that notion.

The detected "wall of fire" isn't actually fire as we know it—it's a dense build-up of charged particles moving at nearly the speed of light, slamming into each other in this low-density region, heating it to insanely high temperatures.

Temperatures reaching around 54,000 degrees Fahrenheit sound catastrophic, but the NASA team clarifies this isn't heat that would burn up a spacecraft.

Instead, these temperatures measure the kinetic energy of particles racing through space at staggering speeds. In this extremely thin plasma, collisions are rare, so Voyager 1 is safe to cruise through this fiery frontier like a cosmic champion.

Standing out even more is how these energetic particles and magnetic fields behave at this boundary.

One of the most striking recent findings from Voyager 1 is that the magnetic fields inside the heliopause and those in interstellar space are surprisingly similar. Previously, scientists expected dramatically different magnetic environments between our solar bubble and the vast galaxy beyond.

It turns out the sun's magnetic field lines get dragged out and compressed by solar wind, creating a zone where magnetic reconnection happens—basically a rearrangement of magnetic forces that transforms the energy of particle flows into intense heat.

This discovery that solar wind interactions create such an energetic boundary has huge implications for how we understand magnetism and plasma flows in space.

After 48 years in space, Voyager 1 is nothing short of a space exploration legend. Using Sensors powered by less energy than a typical LED light bulb (about 4 watts per instrument), it continues to send valuable data back to Earth.

Its radioactive plutonium core powers the craft, but even this slowly loses strength year after year. Ingenious NASA engineers constantly tweak Voyager's systems, optimising power use to keep its most essential sensors operating as it drifts further into the unknown.

At such incredible distances, radio signals from Voyager 1 weaken drastically, so NASA relies on massive, 230-foot ground antennas and state-of-the-art receivers to catch every faint transmission.

The journey doesn't stop at the "wall of fire." Voyager 1 keeps measuring the density of charged particles and the complex dance of magnetic fields as it ventures deeper into interstellar space.

Its invaluable data will help scientists better understand the heliosphere's structure, the protective bubble formed by the solar wind. Such knowledge is crucial for future missions that might travel past Pluto's orbit into the vast cosmic ocean.

Every reading Voyager 1 sends back is a new piece in the puzzle of our place in the galaxy. The spacecraft's crossing into this superheated zone marks a key moment in humanity's quest for knowledge beyond the familiar planets.

Voyagers next big landmark will come in November 2026 when it will be one light day from Earth. A distance where radio signals, and light takes one day to reach it, or 2 days for the return message.

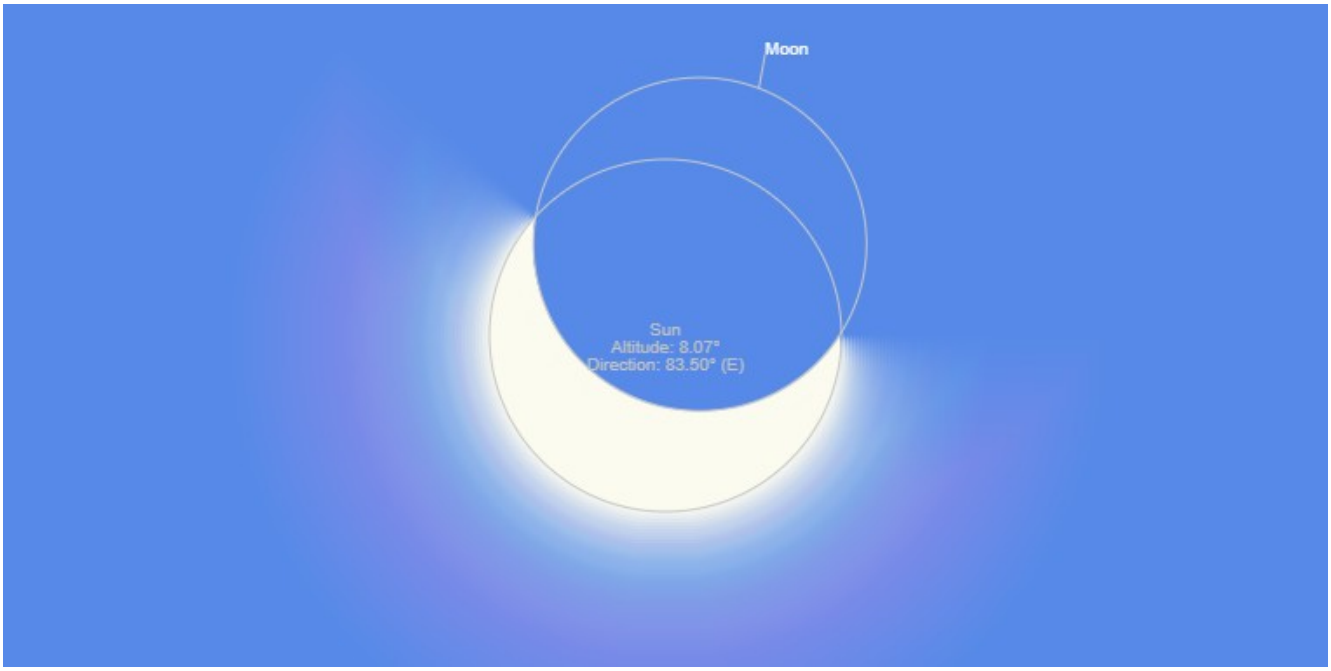
Not bad for a 48 year old low powered item that was supposed to last for five years to visit the outer planets. If the power supply lasts, (the Isotope is good for about 88 years, but the power loss is about 4 watts per year ... or 1 less instrument per year) we can probably listen to it until about 2036. after that it will drift into an unknown future.

In the year 40,272 AD (more than 38,200 years from now), Voyager 1 will come within 1.7 light years of an obscure star in the constellation Ursa Minor (the Little Bear or Little Dipper) called AC+79 3888. unless something dramatic happens, it's likely to pass by unnoticed by anyone, just a cold silent object in the vast comic ocean.

A sad end for such an incredible contributor to scientific knowledge.

Are you ready for a Partial Solar Eclipse?

On the Morning of the 22nd of September, Watch the eastern Sky for a partial solar eclipse.



The morning sunrise of the 22nd of September will being about a partial lunar eclipse. The start of the eclipse will be below the horizon, so we wont see the start, but we will see it rise about 6:10am, with the moon reducing some of the light, the maximum light loss will be about 6:55 with a solar magnitude of about 0.696 (about 70% as bright as normal) , then the moon will drift off with the eclipse over at about 8:04 am

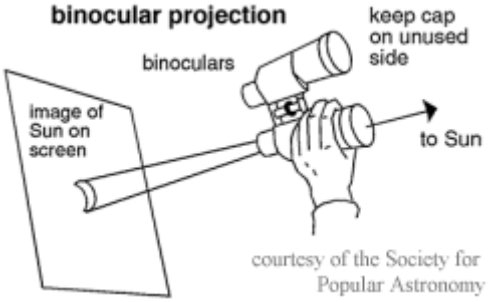
I will be in Christchurch for this event, so for me the time will be 6:19 for the sunrise. 7:08 for the Maximum (0,766 Magnitude) and then all over by 8:19 – Not as impressive as Auckland, but still a treat to watch.

This of course depends on possible cloud cover, and based on past performance, and the averages since 2000 there is an 80% chance of cloud cover.

But It will still be worth getting a projector, and trying to view the partial coverage.

Since solar elipses only happen after a lunar eclipse, Its worth noting the a lunar eclipse will also be seen from Auckland on Monday the 8th of September at 6:11pm. Starting at 4:27, but due to the moon setting at 6:37. We will not see the end of the lunar eclipse.

But, Still a good reason to look up.



Smile and Wave Boys

For a change, How about some Solar Humour

Heard Around the Scenes

New ARRL Book Release: Stealth Antennas for Ham Radio

Stealth Antennas for Ham Radio is full of antennas to get you on the air no matter where you live. Even radio amateurs who live with antenna restrictions or covenant limitations will find solutions in this book. Learn how to install a multiband vertical that looks like a flagpole, or how to run an end-fed random wire along your roof, so the neighbours never notice. If you are looking for an invisible repeater connection, try the Ham Walking Stick. If you want five bands but cannot put wires in trees or display anything even remotely antenna-like, try the Compact Stealth Inverted L.

Stealth Antennas for Ham Radio will also help hams who want to stay unnoticed by neighbors. There are ideas for small lots, covenant-restricted properties, and many other living situations. Steve Ford, WB8IMY, kicks off the collection with safe, effective, and ethical stealth operation. “Stealth operating can be highly rewarding if you understand your limitations and work to alleviate them as much as possible” Ford says.

Order from the ARRL online store or find an ARRL publication dealer; ARRL Item No. 2288, ISBN: 978-1-62595-228-8

NZART 100th Anniversary Conference 2026... Auckland

Conference. Put the dates of 30 May to 1 June in your 2026 diary. Our 100th AGM and Conference will be held at the Waipuna Conference Centre, Mt Wellington, Auckland.

The dual conference themes will commemorate our history and explore our future. The conference organising team are seeking offers to present a talk at conference and also ideas of what talks you would like to hear

Please send you offers and ideas to the conference secretary at zl1aox@gmail.com

A new Magazine

Greg ZL1GUD is making “THE HAM SHACK” magazine available at the Amauer radio price of .... Free. Copies can be found at: https://thehamshack.co.nz/pages/new-zealand-and-australian-amateur-radio-magazine-nz In his own words...

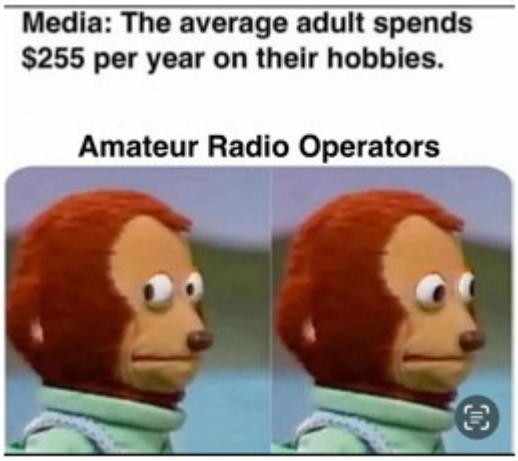
Here at the Ham Shack, we not only sell top quality HF Amateur Radio gear and equipment, but we also live the Amateur Radio life, doing weekly POTA and SOTA Activations and getting out and supporting others in the community with Disaster Preparedness and Community Emergency Net Works.

As part of this, we have started up the New Zealand and Australian Amateur Radio Magazine. It started off with just a few pages based around New Zealand Amateur Radio activities and has now grown to include Australia as well as things happening around the world. If you have something to share or are involved in some exciting projects on the go, then feel free to get in contact and share your photos and articles with us and we will get them featured.

Each month we will upload the latest publication here, just click on the photo to download the PDF file.

Greg ZL1GUD and the Ham Shack Team

And we share a similar sense of humour too ... Sorry, But I had to "Promote" these ones ...



The next NZART broadcast is on the 28th September 2025 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

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.

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Westpac 03-0399-0019896-00
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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
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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)