The Official Newsletter of the

PAPAKURA RADIO CLUB INC.

March 2024

Made for Busy people, by busy people

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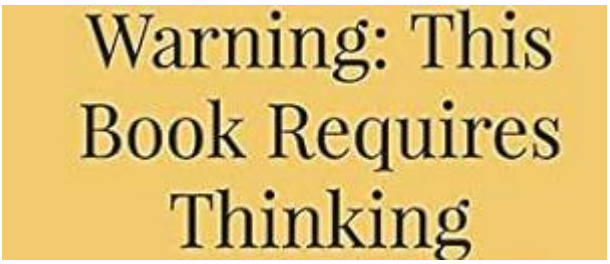


So too may some of these articles.

This Month's Meeting:

We had our general meeting on Wednesday 6th of March, sadly not that well attended. Terry spoke on Parks on the air and showed ways to get involved in the outdoor activity.

Maybe we could aim for a better attendance in April.

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

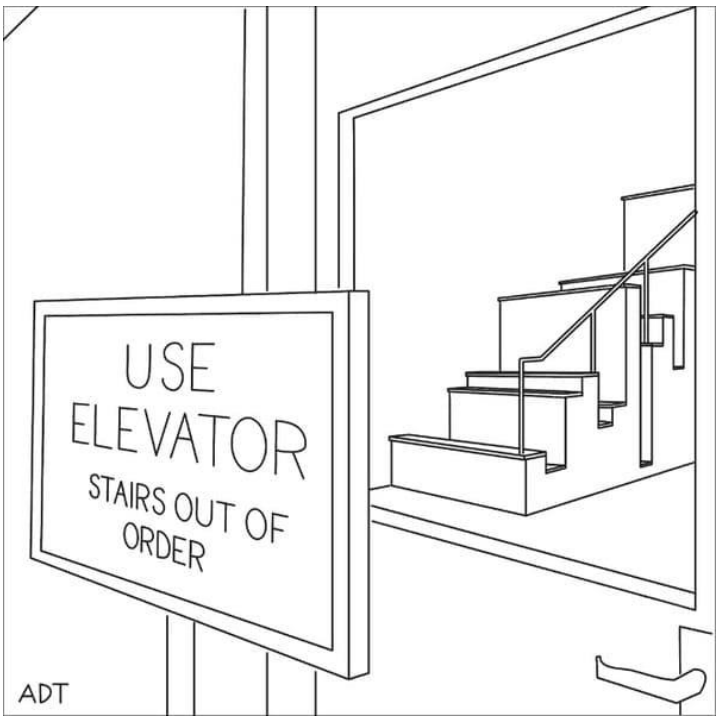
March Dates:

Wednesday 6th	**General Meeting – Guest Speaker Terry ZL1HOG on POTA**
Wednesday 13th	**Project Night**
Wednesday 20th	**Committee Meeting**
Wednesday 27th	**Activity Night**

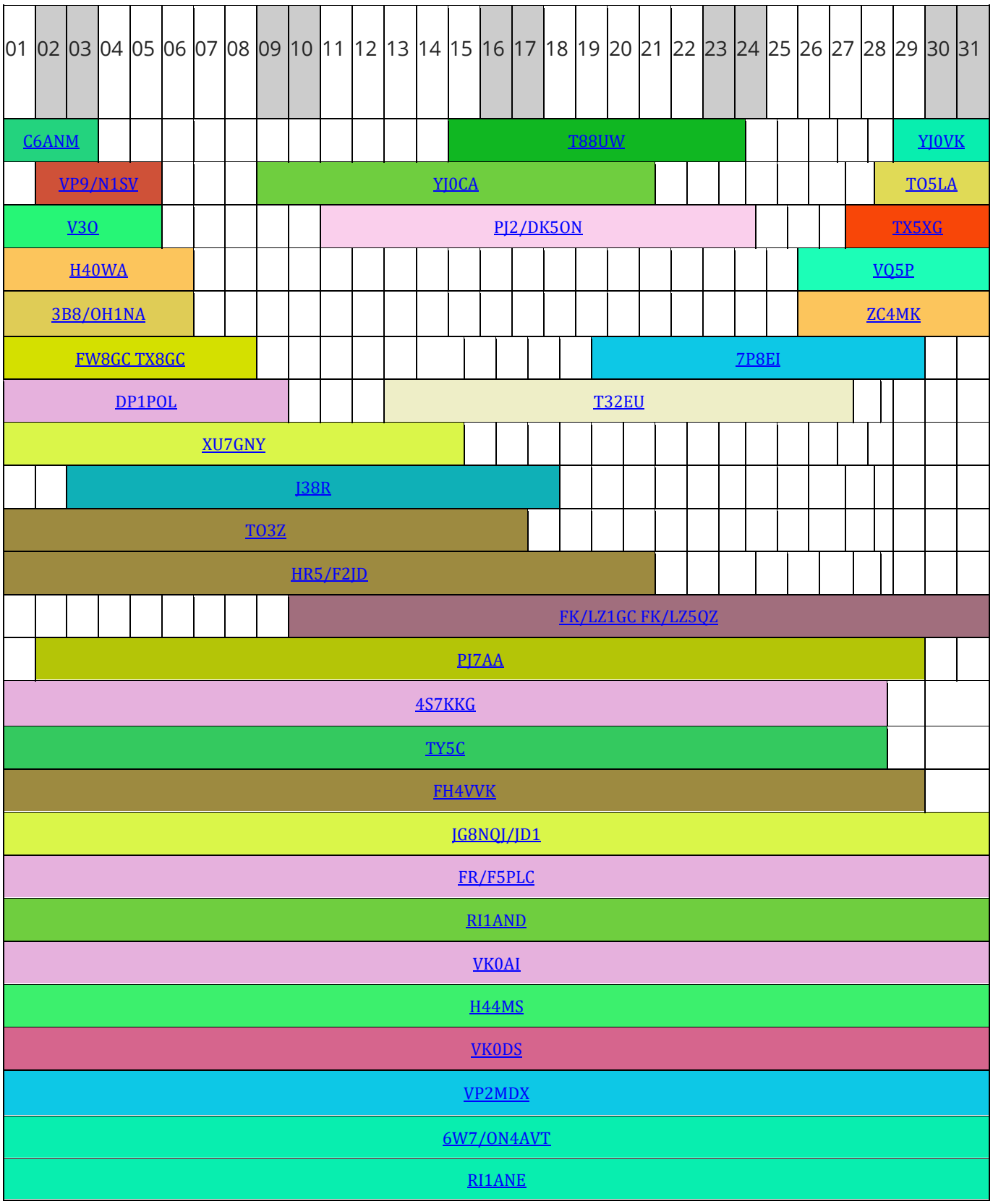
CLUB ACTIVITY:

Painting at the clubrooms is now almost completed, and a roof clean is being organised.

Some changes to the antenna system are also on the cards as we move the broadband out to Drury and replace it with a 40/80 metre dipole.



DX CALENDAR FEBRUARY 2024



1960 ——————————————————————————→ *2024*

Featured DX - T32EU Kiritimati Atoll

T32EU Team will be active from Kiritimati Atoll, IOTA OC - 024, Kiribati, 13 - 27 March 2024.
Team - DF4GV, DL4SVA, DK2AMM, DJ7TO, DL1KWK, DL2AWG.

They will operate on 160 - 6m, CW, SSB, RTTY and probably FT8.
QSL via DL2AWG, LOTW, ClubLog.
Equipment:
2x Elecraft K3 and Expert 1.3
1x FTDX10 and HAL 1200
160/80 verticals
DX Commander vertical for 40…10m
Spiderbeam 20…10m
J-Pole antenna for 30m.

Kiritimati is an island near the coast of Australia. It has a relatively small area of 140 square kilometers and is washed by the waters of the Indian Ocean. The nearest known geographical point - the capital of Indonesia Jakarta - is at a distance of 500 kilometers from the island.

Dimensions of the atoll:

The lagoon has an area of 324 square kilometers
The height of the island above the ocean level is 13 meters
The largest settlement of Kiritimati is Flyin' Fish Cove or otherwise - Settlement, which translates as "Settlement". Kiritimati has an alternative name - Christmas Island. The atoll received this name because it was discovered by J. Cook on Christmas Eve in 1777. When the crew of the traveler moored to the shores of the island, Cook arranged on its territory Christmas celebrations, which lasted for a week.

UPCOMING CONTESTS

Start - Finish Date-Time		Date-Time		Bands	Contest Name	Mode	Exchange	Sponsor's Website
2	0000	3	2359	1.8-28	ARRL International DX Contest, SSB	Ph	RS, SP or pwr	www.arrl.org/arrl-dx
2	0000	10	2359	See rules	Novice Rig Roundup	CW	Name, QTH; (optional rig)	www.novicerigroundup.org
2	0600	2	0800	7,14	Wake-Up! QRP Sprint	CW	RST, serial, suffix of previous QSO	qrp.ru/contest/wakeup/333-wakeup-eng
3	0700	3	1100	3.5	UBA Spring Contest, CW	CW	RST, serial, UBA section (if ON)	www.uba.be
3	1200	3	1400	7	SARL 40m SET	Ph	RS, serial	www.sarl.org.za
3	1200	3	2200	3.5	NSARA Contest	CW Ph Dig	RS(T), Nova Scotia county or serial	nsara.ca
3	1800	3	2200	3.5	WAB 3.5 MHz Phone	Ph	RS, serial, WAB square or country	wab.intermip.net/Contests.php
4	2000	4	2130	3.5	RSGB 80m Club Championship, Data	Dig	RST, serial	www.rsgbcc.org
5	0200	5	0400	3.5-28	ARS Spartan Sprint	CW	RST, SPC, pwr	arsqrp.blogspot.com
5	1900	5	2100	3.5	AGCW YL-CW Party	CW	RST, serial, "YL" (if YL), name	www.agcw.de
7	0000	8	0300	7	Walk for the Bacon QRP Contest	CW	Max 13 WPM; RST, SPC, name, mbr or pwr	qrpcontest.com/pigwalk40
7	1800	7	2200	28	NRAU 10m Activity Contest	CW Ph Dig	RS(T), 6-char grid	nrau.net
9	0000	9	2359	3.5-28	YB DX RTTY Contest	Dig	RST, serial	rtty.ybdxcontest.com
9	0800	10	1000	50,144,432	SARL VHF/UHF FM Contest	Ph	RS(T), 6-char grid	www.sarl.org.za
9	0800	10	1000	1.8-28	SARL Field Day Contest	CW Ph Dig	RS(T), # of transmitters, category, SA province or "DX"	www.sarl.org.za
9	1000	10	1000	3.5-28	RSGB Commonwealth (BERU) Contest	CW	RST, serial	www.rsgbcc.org
9	1200	10	1100	3.5-28	DIG QSO Party, SSB	Ph	RS, mbr or none	diplom-interessen-gruppe.info
9	1200	10	1200	3.5-28	EA PSK63 Contest	PSK63	RSQ, EA province code or serial	concursos.ure.es
9	1200	10	1200	28	South America 10m Contest	CW Ph	RS(T), CQ zone	sa10m.com.ar
9	1400	9	2000	3.5-28	AGCW QRP Contest	CW	RST, serial, pwr, mbr or "NM"	www.agcw.de
9	1500	10	1500	1.8	Stew Perry Topband Challenge	CW	4-char grid	www.kkn.net/stew
9	1500	10	2100	3.5-28,50	Oklahoma QSO Party	CW Ph Dig	RS(T), OK county or SPC	k5cm.com/okqp.htm
9	1800	10	0559	3.5,7	Tesla Memorial HF CW Contest	CW	RST, serial, 4-char grid	www.radiosport.yu1srs.org.rs
9	1900	10	1900	1.8-28	Idaho QSO Party	CW Ph Dig	RS(T), ID county or SPC	www.idahoqsoparty.org
10	0700	10	1100	144	UBA Spring Contest, 2m	CW Ph	RST, serial, UBA section (if ON)	www.uba.be
10	0700	10	1700	3.5-28	FIRAC HF Contest	CW	RST, serial, "F" (if mbr)	www.firac.de
10	1800	11	0100	All	Wisconsin QSO Party	CW Ph Dig	WI county or SPC	www.warac.org
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
13	2000	13	2130	3.5	RSGB 80m Club Champ., CW	CW	RST, serial	www.rsgbcc.org
13	2300	17	2300	3.5-14	AWA John Rollins Memorial DX Contest	CW	RST, equipt type, year	www.antiquewireless.org
16	0000	16	2359	1.8-28,50	PODXS 070 Club St Patrick's Day Contest	Dig	SPC	www.podxs070.com
16	0200	18	0159	3.5-28	BARTG HF RTTY Contest	Dig	RST, serial, 4-dig UTC	www.bartg.org.uk
16	1200	17	1200	1.8-28	Russian DX Contest	CW Ph	RS(T), oblast or serial	www.rdxc.org
16	1200	17	1200	3.5-28,144	F9AA Cup, SSB	Ph	RST, serial	www.site.urc.asso.fr
16	1200	17	1200	1.8-28	Africa All Mode Int'l DX Contest	CW Ph Dig	RS(T), serial	www.sarl.org.za
16	1400	16	1800	144,432	AGCW VHF/UHF Contest	CW	RST, serial, pwr, mbr or "NM"	www.agcw.de
16	1400	17	2359	All	Virginia QSO Party	CW Ph Dig	Serial, VA county or SPC	www.qsl.net/sterling/VA_QSO_Party
17	0700	17	1100	3.5	UBA Spring Contest, SSB	Ph	RS, serial, UBA section (if ON)	www.uba.be
17	2300	18	0100	1.8-28	Run for the Bacon QRP Contest	CW	RST, SPC, mbr or pwr	qrpcontest.com/pigrun
18	1800	18	2059	3.5,7	Bucharest Digital Contest	FT4	RST, serial	yo3test201x.blogspot.com
18	2000	18	2130	3.5-28	RSGB FT4 Contest	FT4	Signal report	www.rsgbcc.org
21	0000	22	0300	14	Walk for the Bacon QRP Contest	CW	Max 13 WPM; RST, SPC, name, mbr or pwr	qrpcontest.com/pigwalk20
21	0030	21	0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or pwr	naqcc.info/sprint_rules.html
21	1900	21	2000	3.5-14	NTC QSO Party	CW	Max 25 WPM; RST, mbr or "NM"	pi4ntc.nl/ntcqp
23	0000	23	2359	1.8-28, VHF	FOC QSO Party	CW	RST, name, mbr (if any)	g4foc.org/qsoparty
23	0000	24	2359	1.8-28	Maidenhead Mayhem Sprint	CW Ph Dig	2-char grid field	w9et.com/rules.html
24	0000	24	0400	3.5-14	North American SSB Sprint	Ph	Other's call, your call, serial, name, SPC	ssbsprint.com/rules
24	0600	24	1000	50	UBA Spring Contest, 6m	CW Ph	RS, serial, UBA section (if ON)	www.uba.be/en
28	2000	28	2130	3.5	RSGB 80m Club Champ., SSB	Ph	RS, serial	www.rsgbcc.org
29	1900	30	0300	3.5-28	Sasquatch Stomp	CW	RST, SPC, mbr or ZIP code, name	www.pnwqrp.org/sasquatch-stomp
30	0000	31	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.

SPACEX SETS DATE FOR STARSHIP TEST FLIGHT 3 OF 14 MARCH

Elon Musk lost his claim as having the most powerful space-worthy rocket when NASA blasted its mega rocket to the moon in 2022.

But the SpaceX founder could win back the title with his company's next big project: Starship.

During its next test flight, the colossal booster needs to separate about three minutes after liftoff and drop into the Gulf of Mexico. The rocket should then fly in space around Earth before splashing down into the Indian Ocean. The whole journey should last a little more than one hour.

This is a crucial demonstration of hardware that NASA is depending on to get humans back on the moon in the next few years. And, if successful, it'll mean Musk is one small step closer to realizing his personal dream of building a city on Mars.

NASA plans to use Starship to land astronauts on the moon during Artemis III and IV, two upcoming missions which could come as early as 2026 and 2028, respectively.

The space agency has tapped SpaceX to develop a human landing system version of Starship with a $4 billion contract. As part of the deal, the company will need to demonstrate an uncrewed test flight to the moon beforehand.

SpaceX is targeting March 14 for its third orbital test flight. A specific time for liftoff has not been provided, though, as the launch is still pending license approval from the Federal Aviation Administration.

This test will be different from the plans for the first two, which sought to reach orbit and splashdown off the Hawaiian coast. This time the company will send the spacecraft on a different trajectory for a controlled splashdown in the Indian Ocean. SpaceX selected this path to attempt new techniques, such as in-space engine burns "while maximizing public safety," according to an update on its website.

For viewers at home, SpaceX will start a live broadcast of the launch countdown about a half-hour before liftoff. The livestream feed will be available on SpaceX's website, and live updates will be posted on X, the social platform owned by Musk.

In addition, the Space.com site has lots of starships related data, and its YouTube channel will be livestreaming during the launch.

As Elon Musk likes to say. "Success is not guaranteed, but excitement is."

CHECK OUT THE UPDATED COUNTDOWN HERE OR VISIT SPACEX.COM

RAMBLINGS FROM THE EDITORS DESK

Be it ever so humble, there's no place like home.

After long weeks of travelling, it's both nice to be home, and challenging to catch up on the work I didn't get done while I was away.

Our trip took us down the east coast through Kaikoura, Christchurch, Oamaru, and then through Lake Tekapo, Lake Hawea, and over the Haast pass to the West Coast.

As always, the West Coast of the South Island was magnificent, and we had a wonderful time, travelling further up the West coast than previous visits, this time we stayed at Westport (and could easily have stayed longer) and then on to Murchison. But while Nelson and Motueka beckoned, we returned over the Lewis Pass back to say farewell to the reason for our visit, or new granddaughter.

The motorhome operated without incident, and apart from buying a fan to help with hot summer nights, we had all we needed on-board.

Returning to North Island was also smooth sailing and so was our journey home. But the same could not be said for the garden, or my workload, with much of the garden overgrown. The grapevine and Passionfruit were fighting each other for dominance, and the lawns needed a lot of care. Even now, we still haven't managed to tame the entrance.

In addition, the footpath, crossing and soon the road is all under maintenance, so even getting in and out of the driveway this week has proven to be a challenge. Work is also busy. The night classes and the piles of work to be done are proof that I have no risk of running out of it. I guess that's what they call job security.

The problem is, how do I maintain balance in my life when I'm so busy? On paper, it's easy, but in practice the demands make me feel like one of those entertainers' spinning plates. Always moving from one to the other, trying to stop it all falling over.

The changes to daylight hours and the cooler temperatures are reminders to us we are leaving the summer months and heading into autumn. While this will slow the garden growth, but it will also mean we need think about readying the shack, and the antennas for the coming winter months.

If you're going to get that antenna up, or you have joints of connections that have not been sealed, you may have been fine over summer, but the coming rains will soon take their toll, so it's time to get those jobs done before the seasons change, and the weather prevents you from completing them.

And in case you've forgotten, it's just one more month till we drop daylight savings and go back to real time. So, if you like your evenings, take advantage of them while you can. Ironically, I see the US is debating daylight savings again, after a poll found most people no longer support it. So, give us another 20 years, and we should be in a similar position. We seem to follow them on a 20-year leash.

If like me you're a bit of a space junkie, then this month is full of interesting viewing, Starship test flight 3 is only days away, Crew 7 is about to depart the ISS and return to earth, and flights every which way we look. The news for Boeing seems a bit worse with the Starliner capsule test being delayed yet again, and now years behind the due dates, but great for Blue Origin, who managed to get contracts for a lunar lander.

Also, we got to see the landing (if it breaks on landing, is it a landing or a crash?) of the Intuitive Machines "Ollie" was called a "Successful return" by NASA, even though none of the payloads got to do any science. Still on your side is better than Japan's lander face planting and landing upside down.
And it sent a picture before the batteries went flat

It seems only China has got there, on its own, and successfully do the hard science. How the world has changed in just my lifetime.

On the radio front, it's good to see that Winlink seems to be finding a place in AREC and "Resilience" applications. The system that allows emails and messages over radio if the internet is out is being used alongside radio systems that are linked by internet technologies. Sadly, the Willink client seems to be only available for windows PC, but it seems like there are some alternatives like PAT to play with, so I think I may have to spend some time playing … When I have some time to spare.

It's good to think that resilience of communications is on the agenda, and I have already attended the first meeting of a resilience plan for Papakura. Hopefully, this is the start of a log association with the various parties interested in communities supporting themselves.

Well, that's really all I have today, but I promise I'll try to get back to a better schedule as soon as possible. Of course, if you have news that belongs in this newsletter, let me know.

Hope to see you at a club meeting soon

73 for now de ZL1NUX

JOCK WHITE FIELD DAY REPORT

Another Jock White Memorial Field Day has now come and gone, and thanks to a small but intrepid team, we have logs to complete and send in.

We ran a new system this year, changing the antenna supports to poles, and lifting the antenna higher, with a central support. This seemed to do the job for 40 metres, with over 550 contacts logged over the two operating periods.

The morning start was delayed with several members not arriving until much later, but the team of David, ZL1DK, John, Ian ZL1IRC, Gavin, ZL1ZUX & Kimi, ZL1KIM all put the shoulder to the wheel and erected the 3 poles, and antenna's and as always, not without incident. But the number of antenna drops was less than some years.

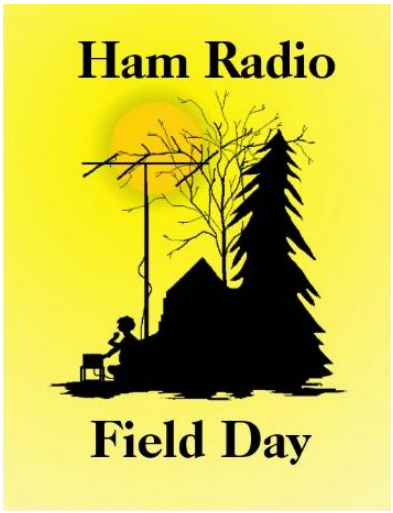
David and Kimi focussed on the 80 Metre band, operating from the back of a van, while Ann-Maree, Gavin & Ian looked after the 40-metre operation from the adjacent motorhome. Ian ZL1AOX also came down to help but was pulled away with family commitments. Hope that all went smoothly.

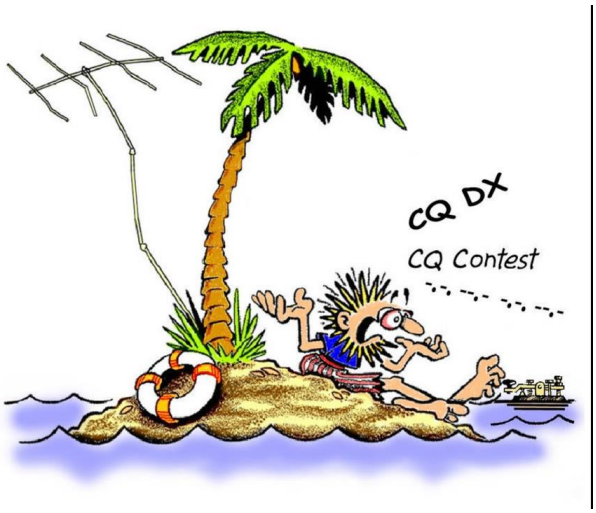
Power was from batteries, with solar panels on the motorhome charging the batteries used there.

Our 80 Metre effort had a few hiccups involving issues with a laptop and missing cables for the pushbutton announcements, meaning the operators' voices were much quieter by the end of the weekend, but even with some downtime, a healthy number of contacts were made in some very difficult conditions. *(Don't ask about the laptop and the coffee)*

Hopefully, we will present the story in more detail, and with photos (and maybe even a video) to one of the club meetings soon.

But as always, thanks to those who worked us from home, and all who came down to help. And for those who have not yet done a field day, it is highly recommended.





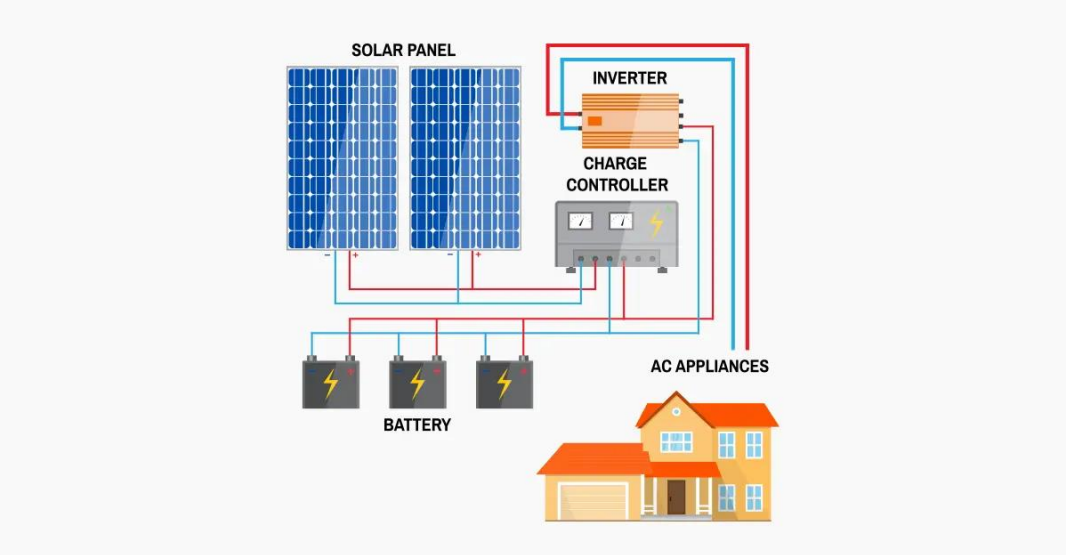
A SOLAR SYSTEM UPDATE

So we are finally up and running with our solar connection, and now that we are back home, with everything working, we are learning how to make the most of our generation capability.

Yes, we could just let the solar run and accept a reduced power bill, but there are quirks to a solar system, and this also means it's not the ideal solution for everyone. (Especially with its current cost).

Firstly, power is generated during the day, but not at night (in fact we get just under 8 hours of generation at present) which means you either sell that excess power, then buy back what you need at night, or you need storage. As storage is expensive, and batteries need time to charge. Solar is best for homes where people are home during the day.

Another obvious problem is that the cost of purchasing electricity is much higher (about 2.5 times) the price you get for selling it, so if you purchase 10 units, you need to sell 25 to break even … That is hard, but if you can save those 10 and use them later (even after efficiency losses) it's much better value. So, I have concluded, our battery storage is too small for our normal usage. That means a few thousand dollars more will need to spend on a battery expansion.



But while testing, we also discovered that the smart meter we use for import/export only runs the hot water cylinders from the grid, it never uses our solar, even when we are selling it, So this required the installation of an energy diverter, A system that pumps solar power into our hot water cylinders (yes we have two) rather than selling it, and this has made a real price difference.

With this, and some human management, we have taken a 300-dollar bill to about 50 dollars. A nice step towards recovering some of the "Substantial" investment in getting solar installed on the house. Best of all, we now have a backup system to supply power during any winter outages, and with warnings from both generators and Transpower of supply shortages, and increased cost, it's nice to know we have reduced dependency on the national grid.

How well we will go in winter is yet to be determined, but given the summer performance, I can only see mid-winter savings of about 50%, even with all the improvements. But it seems with solar energy, much like the human body, the lesson is "use it, or lose it".

CAN WE REALLY CALL EV'S ZERO EMISSION?

The study is not new. In fact, Emission Analytics released their findings in 2022, but a recent Wall street journal article on the need to look at tyres and roading methods has re-ignited the emissions debate.

We all know that 100% electric battery vehicles do not have a combustions engine (unless it's a plug-in hybrid) so they don't have an exhaust pipe, but does that mean Zero Emissions?

This is where the emission analytics study caused waves after they looked at all the sources of emissions from a vehicle. They found that engine emissions were not the main CO2 or particulate emission source. The study found the primary emissions from a modern vehicle came from the tyres, and then the brake pads. Together, the tyres and brakes produced 1850 times more particle pollution than the tailpipe of a modern engine. With exhaust emission controls and improved engine efficiency, the exhaust is no longer the main contributor to emissions.

With the average electric vehicle weighing 30% more than an equivalent combustion engine vehicle, the brakes and tyres on the EV wear faster than those on an Internal Combustion Engine (ICE) vehicle. Emission Analytics found that tyre wear emissions on half a metric tonne of battery weight in an EV are more than 400 times as great as direct exhaust particulate emissions.

For reference, half a metric tonne is equivalent to roughly 1500kg. The most popular EV in the US, Tesla's Model Y, boasts a lithium-ion battery that weighs in at a hefty 800kg.

Another sought-after electric model, Ford's F-150 Lightning pickup truck, also has an approximately 800kg battery.

Electric cars still use tyres made from petroleum that create particle pollution as they wear.

"A lot of it [chemicals] goes into the soil and water, affecting animals and fish. And we then go and eat the animals and fish, so we are ingesting tyre pollution," stated the WSJ article. "tyres are made up of a lot of nasty chemicals."

Going further, they stated that "the best first thing," to do to address this problem is to "change the recipe, minimise a number of toxic chemicals in the tyres — then you got the best of both worlds."

California's air agency used a model that assumes electric and gas vehicles have the same amount of tyre wear when analysing the effects of policy, according to the Journal.

The public was quick to note the error, but the agency doubled down on its stance, saying it's "speculative" to assume electric cars will always be heavier than their gasoline counterparts.

California's Air Resources Board (CARB) insists in its "Final Statement of Reasons for Rulemaking" that automakers could "offset" the weight of heavy batteries with "weight reduction in other components or the vehicle body," though the agency didn't specify how.

New Zealand has no plans to address these emissions but is about to add road user charge to electric vehicles to offset some of the damage caused to the roading network and has dropped the ES subsidies. Causing a glut of EVs at retailers and reducing the value of second-hand EVs.

But as EV prices fall, and fuel costs increase, more EVs are on the roads, and this along with our aging fleet, means we should be looking at the synthetic rubber (loaded with carbon) used to make our tyres if we are to get serious about making our vehicle fleet better for our clean green image.

I wonder if the commerce commission would look at the advertising use of the term "zero emissions" on vehicle sales…

Somehow I doubt it.

"No, smaller shoes will not reduce your carbon footprint!"

Sodium batteries leave the pages of... maybe.

A cheap sodium-ion battery that doesn't use expensive lithium but with the higher energy density of solid-state batteries would be a coveted achievement for spearheading electric mobility.

That's exactly the production goal of the Huahui New Energy battery maker, which managed to cram 200Wh/kg of energy density in a sodium battery with solid-state electrolyte.

This is closer to the energy density of current LFP batteries in electric cars like the Tesla Model 3 RWD, rather than the 145Wh/kg to 160Wh/kg of the first cars with cheap sodium-ion battery that were unveiled last year.

While most solid-state battery makers use oxide or the more expensive sulphide solid electrolytes, the sodium battery breakthrough has been achieved by combining polymer composites. This has allowed to lower the cost of the resulting solid-state electrolyte without sacrificing performance, and the same has been achieved for the electrodes by supplementing sodium instead of lithium and coating the cathode with a combination of organic and inorganic materials.

As a result, the end goal of the mass production start that the company received a round of financing for is to hit 300Wh/kg of energy density at a cost of just 4 cents per watt hour.

While Toyota, ProLogium, Samsung and others are preparing to commercialize vehicles with their own solid-state batteries by 2027, the first models will be premium electric cars in limited batches. That is why the cheaper solid-state sodium battery could prove an even more important achievement.

It would usher in electric cars with a solid-state battery that is comparable in price to the current LFP pack in the Model 3, but safer to charge fast and with higher energy density. The company plans to have its sodium solid-state battery in storage systems in 3 years and in electric vehicles in 5, while it is simultaneously working on a solid-state lithium battery so that it can cover the premium EV market as well.

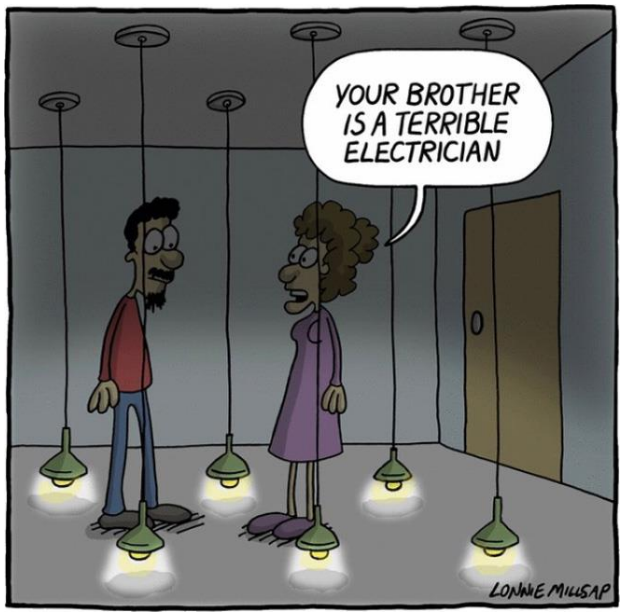
These advantages make them the next frontier in the personal transport electrification battle and BYD, which recently surpassed Tesla to become the world's biggest electric vehicle manufacturer, has broken grounds on a $1.6 billion sodium-ion battery factory, the world's largest. When operational, the innovative sodium-ion battery facility will churn out 30 GWh of cell capacity a year. The company doesn't want to be left behind considering that VW's joint venture with JAC just launched its first mass-produced EV with sodium-ion battery. The compact city hatch is powered by a 23.2 kWh sodium-ion battery by HiNa and offers a CLTC range of 230 km (about 140 miles) on a charge.

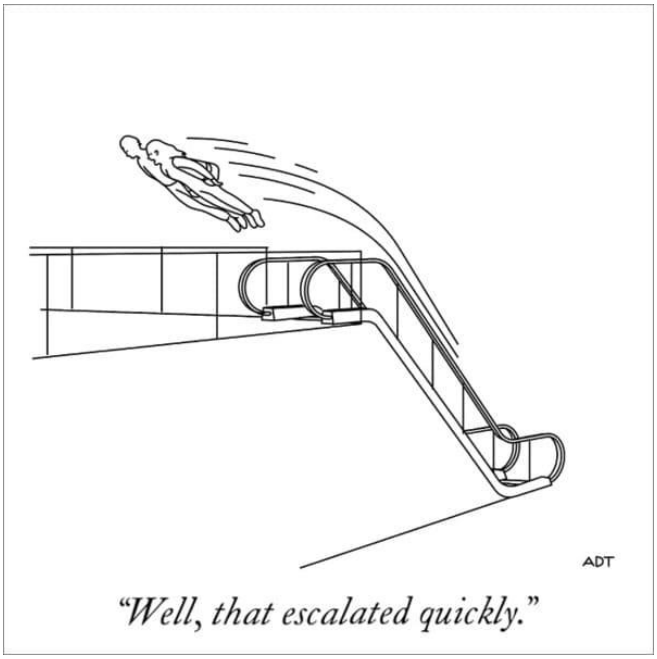
The battery charges from 10-80% in 20 minutes, much faster than the LFP packs used in bestselling EVs like the Tesla Model 3, and it also retains 92% capacity even at -20 degrees (-4 Fahrenheit) temperatures, making it ideal for cheap and unpretentious city mobility.

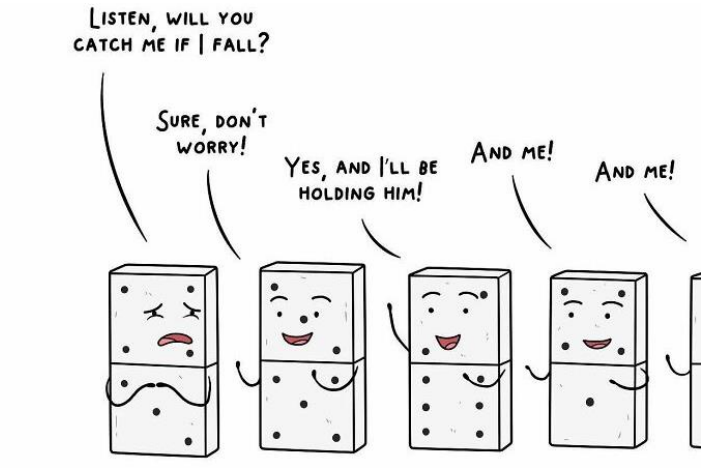
Sodium-ion batteries don't even target sub-$15,000 electric cars like the BYD Seagull, bur rather sub-$10,000 EVs and even two-wheelers, of which automakers intend to sell many millions, so BYD's new 30 GWh factory seems like a timely investment.

A safer, Lighter and cheaper battery might be a lot closer than we thought.

JUST FOR A LAUGH







HEARD AROUND THE SCENES

10% OFF ALL ICOM RADIOS IN MARCH

RWB Communications are absolutely delighted to announce our March Madness sale. For this month, and only this month, get 10% off the price of any Icom Amateur Radio. Order online, though our website and we'll take 10% of your purchase price.

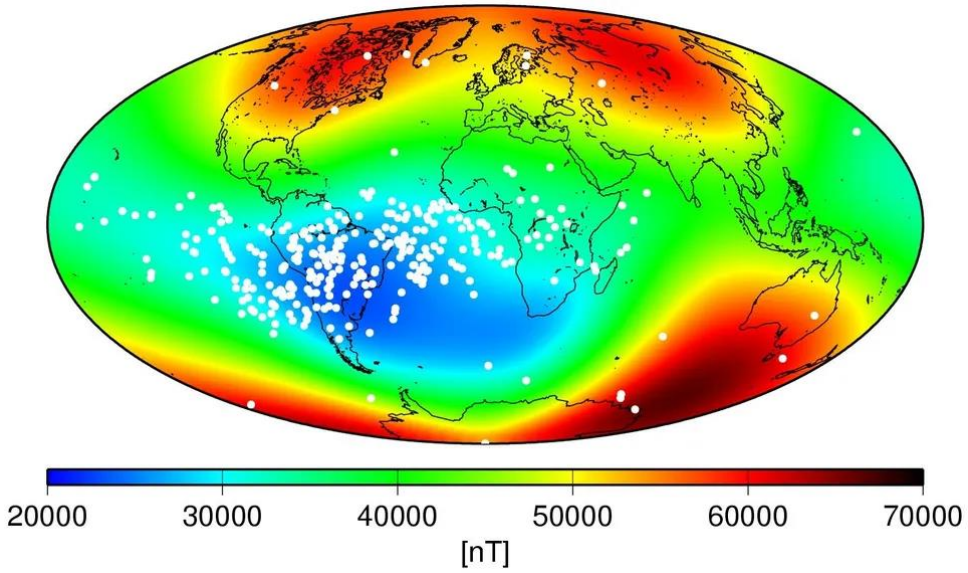
This offer doesn't include our accessories and note that all delivery charges are charged on top of the discounted radio price.

If you thought the NZ auroras were messed up… you're right

Turns out there is an anomaly in the Atlantic that makes the NZ auroras (or at least some of them) weaker, and therefore dimmer

The South Atlantic Anomaly is a large, oval-shaped region over South America and the southern Atlantic Ocean where Earth's magnetic field is weakest. The anomaly is already well known for allowing charged particles from the sun to dip close to Earth's surface, exposing satellites orbiting above to high levels of ionizing radiation, according to NASA.

Now, a study published Feb. 8 in the journal Geophysical Research Letters finds that this weak region also affects the southern aurora, the glowing lights in the upper atmosphere that can be seen at high latitudes. The southern lights occur over and around Antarctica and are the equivalent of the northern lights that dance over the Arctic and the subarctic.



The researchers used data from an instrument aboard the FengYun-3E satellite, launched in 2021, that measures magnetic-field variations. They found a "substantial weakening" of magnetic fluctuations in the aurora australis, or southern lights, where it overlaps with the South Atlantic Anomaly.

To confirm the findings, they also analysed ultraviolet light from this region of the aurora using data from the US Defence Meteorological Satellite Program. This also showed a weakening in the southern lights around the anomaly.

Maybe this helps explain why I've never managed to catch one when visiting Lake Tekapo … Or maybe it was the cloud Cover.

The next NZART broadcast is on the 31st of 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

Papakura to develop a resilience plan.

It was good to see a large turnout at the first meeting for a plan to develop community resilience for local residents in Papakura. It was also very good to see a large turnout from the radio club. The formation process may take some time, and the upcoming meetings might be conducted at the clubrooms. If you're interested in knowing more, have a chat with the editor. And we will arrange for you to attend future meetings.

"Many people told Beethoven that he would never be a musician because he was deaf, but... Did he listen?"

SOME NETS – FOR WHEN YOU ARE LOOKING FOR SOME COMPANY

Day	Time (Local)	Freq (MHz)	Group
Sunday	08:00	3.750	Southern Net
	08:30	**146.625**	**Br 65 – Papakura Net**
	09:00	3.700	Br 10 - Franklin
	09:15	3.755	Br 65. Papakura.
	09:30	146.900	Br 10 – Franklin ZL1SA
	19:00	146.700	YL Net
	19:45	145.575	Thames radio club ZL1DF
	20:00	3.700	Br 42. Titahi Bay
	21:30	3.595	Duran WIA Net.
Monday	11:30	3.850/7.125	Br 12. Hamilton
	19:30	3.757	Br 12. Hamilton
	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
	21:00	1.850	160m Net _ Ron ZL4JMF
	19:30	3.690	QRP ZL2BH
	20:00	3.581	CW improvers Net
Wednesday	11:30	3.850/7.125	SPAM Net
	19:30	146.700	ZL1AB Net
	20:00	3.660	Geek Net
	20:00	3.645	Br 02. Auckland
	20:00	3.745	Br 84. Bay of Islands
	20:30	146.525	W.R.S.C
Thursday	09:00	7.096	Ex Post Office Techs
	19:30	3.690	QRP ZL2BH
	20:00	3.540	CW Practice Net
	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
	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
	08:30/20:00	3.730	ZL3RP
	20:30	3.725	ZL2HN / ZL4RF
	21:00	3.677	Counties Net ZL2MA
	21.00	3.535	New Zealand Net (CW)

This is designed to be a living list, Please send me any updates whenever you are able:

Papakura Radio Club Inc.
Branch 65 NZART Club Directory 2017
Wellington Park, 1 Great South Road.
PO BOX 72-397 Papakura 2244
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.
Project Evenings are on the 4th Wednesday of each month.
Committee Meetings are held on the 3rd Wednesday of each month at 7.30 pm unless advised.
Activity Nights are held on the 2nd Wednesday starting at 7.30 pm.
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) after January 2011. 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 8.30 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)