The Official Newsletter of the

PAPAKURA RADIO CLUB INC.

March 2021

Special Limited Edition, One Time 2021 Lockdown edition … Again

CONTENTS …

This Month's Meeting: AGM

~~Wednesday 3rd of March at 7:30pm will be the first general meeting for 2021.~~
Update – CANCELLED – Due to Alert Level 3 – A special net on 690 will instead be operated by ZL1VK

Car boot equipment sale

Planned – March 13 2021 – Cancelled
Due to the uncertainty of changing alert levels, border crossing restrictions and the age the onset of autumn, we are simply running out of time. As a result the car boot sale for 2021 is now cancelled. If the outlook changes later in the year we may look at an October/November date.

Meetings for March.

Meetings will only occur at alert level 2 or lower. We cannot have social meetings at level 3. This means we will only open the clubrooms on Wednesdays when at we at alert levels 1 or 2 in accordance with current government guidelines

CLUB ACTIVITY:

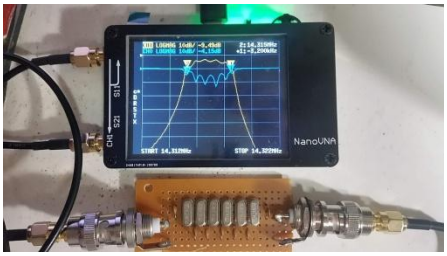
Following our sucessful Jock White Field day event, even when the alert levels changed mid-event, we are again in an uncertain time as we play the wait and see game, But this is actaully what we trained for. Ham radio is about comunication when it all goes wrong, so put that training and equipment to use.

We will be meeting on air on the 690 repeater on any night we cannot meet at the club

Ian ZL1IRC has been running some VNA training, and this will no doubt continue at some tim in the futre, in the meantime we have a small article here on how to work the touchscreen . If you can see it

UPCOMING PROJECTS:

PROJECT AND ACTIVITY NIGHTS



We have started a series on using the Nano-VNA,

We will also, later, be building some satellite antenna designs for working off the ISS or other satellites. Also an updated version of the flower pot Portable VFH/UHF ground independent dual band antenna

We will be building some HF antennas for Drury, and planning some long wire 5 band antennas for Home Stealth use over upcoming project nights, these will include some experimental stealth and portable designs suitable for AREC, SOTA or POTA type activities, as well as general field or Home use.

And we have a DC power distribution project, in the pipeline. – So a busy year

UPCOMING ACTIVITIES:

(LEVELS PERMITTING)
~~WEDNESDAY 3 MARCH – GENERAL MEETING~~ – CANCELLED!
WEDNESDAY 10 MARCH – PROJECT NIGHT – NANO VNA
WEDNESDAY 17 MARCH – COMMITTEE MEETING
WEDNESDAY 24 MARCH – ACTIVITY NIGHT – NANO VNA CONTINUES

PLEASE LISTEN FOR UPDATES ON THE SUNDAY MORNING CLUB NETS
(SEE LAST PAGE FOR FREQUENCIES AND TIMES)

JOCK WHITE FIELD DAY 2021 – ZL1GIT

Just like each Jock White Field Day I've been involved in, I spent time leading up to it looking forward with anticipation of a fun weekend of making as many contacts as we could, mixed with the fun of socialising with other members of the club as we work to do our best! However, this one turned out to be like none other I have had the pleasure of being part of….from beginning to end!

The weekend started with the usual time setting up….only this time I spent my time setting up the camper for the night knowing how exhausted we'd be by midnight and that having Timothy's bed ready ahead of time and being as organised as possible would make a big difference… whilst of course keeping an eye out the window as the guys got busy with antennas, tables and radios….making sure they were doing it right! (Like I'd know?!). Then I glanced out and saw the pole was up on the end of David's bus! That was quick…normally I would be laughing as they struggled and making sure I got some photos….never mind…..it never goes smoothly…..it wouldn't be long before it would be coming down and then back up (I could get photos then). However, as I said, this year was different….it worked first time!!! So no photos of that process!

Not long after that the tables were up, radios connected and things were laid out ready to go. I should say, one thing was the same as other years….it rained! Quick coffee before we could start transmitting! Again this year was different…..long chat and leisurely coffee…..we were ready with time to spare! Well, one hiccup…the wind came up and we decided to move the radio inside the camper, but still time to spare! Boy, clocks move slowly while you're watching them!!!

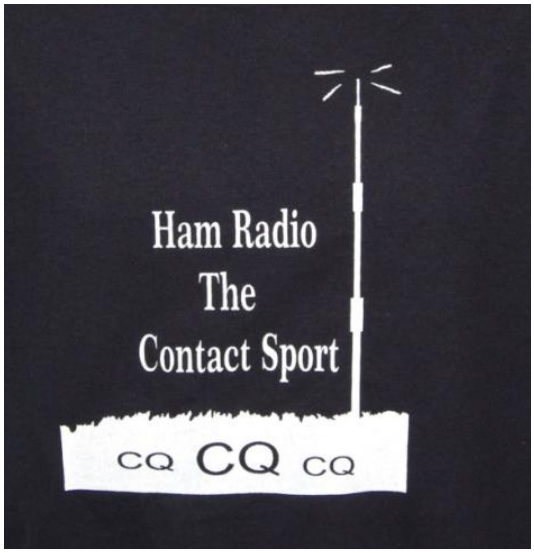
Finally 3pm came around and the competition was on! Keep that button being pressed and sending that CQ message…we needed to make contacts! Anyone who loves fishing knows what it's like….you've gotta have that bait in the water if you're going to catch anything! I must admit it was quite different having a pre-recorded CQ message and just pushing a button rather that pressing the mike and talking…..and as you could chat to those around you at the same time as no-one could hear, it sometimes gave you a bit of a fright when someone came back! That part was a bit like when a fish nibbles at the bait ….not hooked yet, but it's looking good! Then the best part…numbers are exchanged and the details are recorded….you've caught one! While waiting for the next bite you have a chance to check what you've caught…a home station….a branch you don't have yet….an overseas contact….a good friend who faithfully comes back each hour to give you the extra contact….. It's all fun!

I must say, having club members come in and take turns on the Saturday was great to watch, especially as it was their first experience of Jock White Field Day! Seeing the stress on their faces and hearing the nervousness in their voices during their first couple of contacts, and then seeing their confidence grow and hopefully discovering the fun that is Jock White Field Day was great! Whilst this part wasn't different to other years….sadly the announcement at 9pm was…we were moving to Level 3 at 6am on Sunday. Messages were sent out to let members who weren't there at the time to not come in on Sunday and we decided that the few of us there would decide at midnight (when we were able to stop and talk) whether we would continue on Sunday or not. With some discussion we felt we would be fine to continue as we had been together the whole day anyway, there were only a few of us and there was no way those antenna's were coming down safely in the dark! Thankfully when the police popped in in the morning to see what was happening they agreed we were fine to continue with the few of us that were there….so the fun continued but without the extra socialising going on.

By 3pm Sunday I was very grateful we had recorded the CQ messages, I think it's the first time I've finished the weekend and still had my voice! Pack down was done, farewells were said and we returned home to our bubbles with the satisfaction of a great weekend completed.

Thank you to everyone who was involved and gave up your time to come down and help over the weekend (and for those yummy scones!) and also to those who took the time to give us contacts even though you weren't competing as a home station….it was really appreciated. To those of you who came down and had a go on the radio, I hope you've caught the bug and will be back next year. Sorry to those of you who missed out due to the change to Level 3 on Sunday, we wish you could have been there but it was important we did our part to avoid contact, hopefully you will be able to join us next year! Who knows, if enough people catch the bug we might be able to set up a second station and enter our club in one of the other categories as well!

73 de ZL1GIT Ann-Maree



DX Calendar March 2021

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
3A/F5RBB 3A/F4FRL Monaco															VK9CE									JW/LB5SH JW2T						
ZF2BJ															FG4KH															
JX2US																														
			PJ2/DK5ON																											
									JG8NQJ/JD1																						
									3W9OK																					
PJ7AA																														
RI01ANT																														
JW/LB2PG																														

Some Key Data follows - Click on the link (CTRL + Click for some PDF readers) in the PDF versions for more information on the Expeditions

RI01ANT Antarctica

Alex, RI01ANT will be active from Progress Station till 24 March 2021.
Then he will go to Novolazarevskaya Base and Bellingshausen Base.
Bellingshausen Base located on King George Island, South Shetland Islands.
He will operate on HF Bands.

JW/LB2PG Bear Island

Erling, JW/LB2PG will be active again from Bear Island, IOTA EU - 027, until 1 June 2021.
He will operate on 80 - 20m

3W9OK Vietnam

Brian, AA5H will be active as 3W9OK from Vietnam in March - April 2021.
He will operate on HF Bands.

FG4KH Guadeloupe

Philippe, F1DUZ will be active again as FG4KH from Guadeloupe, IOTA NA-102, 16 March - 1 April 2021.
He will operate on HF Bands, including active in CQ WW WPX SSB Contest.

Click on the link (CTRL + Click for some PDF readers) in the PDF versions for information on the Expeditions

DX news.com More than just DX News

Or check them out at DX News.com

CONTESTS MARCH 2021

Date-Time		Date-Time		Bands	Contest Name	Mode	Exchange	Sponsor's Website
1	0000	1	0100	1.8-14	K1USN Slow Speed Test	CW	Max 20 WPM, name, SPC	www.k1usn.com/sst.html
1	1630	1	1729	3.5, 7	OK1WC Memorial (MWC)	CW	RST, serial	memorial-ok1wc.cz
1	2000	1	2130	3.5	RSGB 80-Meter Club Championship, Data	Dig	RST, serial	www.rsgbcc.org/hf
2	0100	2	0159	1.8-50	Worldwide Sideband Activity Contest	Ph	RS, age group	wwsac.com/rules.html
2	0200	2	0400	3.5-28	ARS Spartan Sprint	CW	RST, SPC, power	arsqrp.blogspot.com
2	1700	2	1900	3.5-14	RTTYOPS Weeksprint	Dig	Other's call, your call, serial, name	rttyops.wordpress.com
2	1900	2	2100	3.5	AGCW YL-CW Party	CW	RST, serial, name	alt.agcw.de/index.php/en
3	1300	3	1400	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
3	1700	3	2000	144	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	ft8activity.eu/index.php/en
3	1900	3	2000	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
3	2000	3	2100	3.5	UKEICC 80-Meter Contest	Ph	6-char grid square	www.ukeicc.com/80m-rules.php
4	0300	4	0400	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
4	1800	4	2200	28	NRAU 10-Meter Activity Contest	CW Ph Dig	RS(T), 6-char grid square	nrrlcontest.no/index.php
4	2000	4	2200	1.8-50	SKCC Sprint Europe	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
5	0145	5	0215	1.8-21	NCCC RTTY Sprint	Dig	Serial, name, QTH	www.ncccsprint.com
5	0230	5	0300	1.8-21	NCCC Sprint	CW	Serial, name, QTH	www.ncccsprint.com
6	0000	7	2359	1.8-28	ARRL International DX Contest, SSB	Ph	W/VE: RS, SP. DX: RS, power	www.arrl.org/arrl-dx
6	0000	14	2359	3.5-144	Novice Rig Roundup	CW	Name, QTH, rig, mbr	www.novicerigroundup.org
6	0600	6	0800	7, 14	Wake-Up! QRP Sprint	CW	RST, serial, suffix of previous QSO	qrp.ru/contest/wakeup
6	1800	7	1359	1.8-28	Open Ukraine RTTY Championship	Dig	State/province/canton/etc, serial	krs.ho.ua/openrtty
7	0700	7	1100	3.5	UBA Spring Contest, CW	CW	RST, serial, UBA section (if ON)	uba.be/hf/contest-rules
7	1200	7	2200	3.5	NSARA Contest	CW Ph Dig	RS(T), county (if Nova Scotia)	nsara.ve1cfy.net/?page_id=82
7	1800	7	2200	3.5	WAB 3.5 MHz Phone	Ph	RS, serial, WAB square or country	wab.intermip.net
10	1700	10	2000	432	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	ft8activity.eu/index.php/en
10	2000	10	2130	3.5	RSGB 80-Meter Club Championship, CW	CW	RST, serial	www.rsgbcc.org/hf
10	2300	14	2300	3.5-14	AWA John Rollins Memorial DX Contest	CW	RST, eqpt type and year	antiquewireless.org
13	0000	13	2359	3.5-28	YB DX RTTY Contest	Dig	RST, serial	rtty.ybdxcontest.com
13	0500	14	1100	50-1296	SARL VHF/UHF Analogue Contest	CW Ph	RS(T), 6-char grid	www.sarl.org.za
13	1000	14	1000	3.5-28	RSGB Commonwealth Contest	CW	RST, serial	www.rsgbcc.org/hf
13	1200	14	1200	3.5-144	F9AA Cup, SSB	Ph	RST, serial	www.site.urc.asso.fr
13	1200	14	1200	28	South America 10-Meter Contest	CW Ph	RS(T), CQ zone	sa10m.com.ar
13	1200	14	2359	1.8-50	SKCC Weekend Sprintathon	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
13	1400	13	2000	3.5-28	AGCW QRP Contest	CW	RST, serial, class, mbr or "NM"	alt.agcw.de/index.php/en
13	1400	14	2100	3.5-50	Oklahoma QSO Party	CW Ph	RS(T), county or SPC	k5cm.com/okqp.htm
13	1500	14	1500	1.8	Stew Perry Topband Challenge	CW	4-char grid square	www.kkn.net/stew
13	1600	14	1600	3.5-28	EA PSK63 Contest	Dig	RSQ, province or serial	concursos.ure.es/en
13	1800	14	0559	3.5,7	Tesla Memorial HF CW Contest	CW	RST, serial, 4-char grid	www.radiosport.org.rs
13	1800	14	1800	1.8-50	QCWA QSO Party	CW Ph Dig	Year first licensed, name, SPC	www.qcwa.org
13	1900	14	1900	1.8-28	Idaho QSO Party	CW Ph	County or SPC	pocatelloarc.org/idahoqsoparty
13	2300	14	0300	3.5-14	North American Sprint, RTTY	Dig	Other's call, your call, serial, name, SPC	ncjweb.com
14	1400	17	0800	1.8-144	Classic Exchange, Phone	Ph	Name, RS, SPC, rig	www.classicexchange.org
14	1800	15	0100	All	Wisconsin QSO Party	CW Ph Dig	County or SPC	www.warac.org/wqp
15	0000	15	0200	1.8-28	4 States QRP Second Sunday Sprint	CW Ph	RS(T), SPC, mbr or power	www.4sqrp.com
15	1800	15	2059	3.5, 7	Bucharest Digital Contest	Dig	RST, serial	yo3test201x.blogspot.com
15	2000	15	2130	3.5	RSGB FT4 Contest Series	Dig	4-char grid square	www.rsgbcc.org/hf
16	1700	21	1700	3.5-28	CLARA Chatter Party	CW Ph	RS(T), name, SPC	clarayl.ca/chatter-party
18	0030	18	0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or power	naqcc.info
18	1930	18	2059	3.5	BCC QSO Party	CW Ph Dig	RS(T), t-shirt size	bavarian-contest-club.de
20	0200	22	0159	3.5-28	BARTG HF RTTY Contest	Dig	RST, serial, 4-digit UTC time	www.bartg.org.uk
20	1200	21	1200	1.8-28	Russian DX Contest	CW Ph	RS(T), oblast or serial	rdxc.org/asp/pages/rulesg.asp
20	1400	20	1800	144, 432	AGCW VHF/UHF Contest	CW	RST, serial, power, 6-char grid	alt.agcw.de/index.php/en
20	1400	21	2359	All	Virginia QSO Party	CW Ph Dig	Serial, county or SPC	www.qsl.net/sterling
20	2000	20	2159	1.8-28	Feld Hell Sprint	Dig	RST, mbr, SPC, grid	google.com/site/feldhellclub
21	0700	21	1100	3.5	UBA Spring Contest, SSB	Ph	RS, serial, UBA section or serial	uba.be/hf/contest-rules
21	2300	22	0100	1.8-28	Run for the Bacon QRP Contest	CW	RST, SPC, mbr or power	qrpcontest.com/pigrun
24	0000	24	0200	1.8-50	SKCC Sprint	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
25	2000	25	2130	3.5	RSGB 80-Meter Club Championship, SSB	Ph	RS, serial	www.rsgbcc.org/hf
27	0000	27	2359	1.8-VHF	FOC QSO Party	CW	RST, name, mbr (if any)	g4foc.org/qsoparty
27	0000	28	2359	1.8-28	CQ WW WPX Contest, SSB	Ph	RS, serial	www.cqwpx.com
31	2000	31	2100	3.5	UKEICC 80-Meter Contest	CW	6-char grid	www.ukeicc.com/80m-rules.php

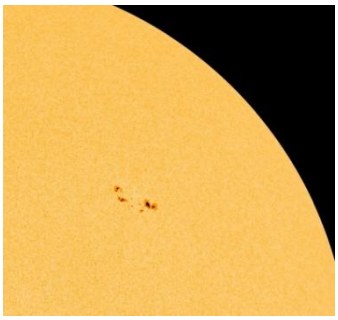
All dates and Times are in UTC and are not adjusted for local time
Mbr = Membership number. Serial = Sequential number of the contact. SPC = State, Province, DXCC Entity. XE = Mexican state.
Listings in blue indicate contests sponsored by ARRL or *NCJ*. The latest time to make a valid contest QSO is the minute listed in the "Finish Time" column. Data for Contest Corral is maintained on the WA7BNM Contest Calendar at **www.contestcalendar.com**

Check for updates and a downloadable PDF version online at www.arrl.org/contests.

RAMBLINGS FROM THE EDITORS DESK

Well if we had any lingering doubts about 2021, they are pretty well dashed, 2020 was not a year, but the start of a decade, and we can see that it's going to be quite a decade. We are again at Level 3, and again in spite of the "Be kind" mantra, it is clear we are in the post kindness stage now, and there is a solid element of "Big Stick" brewing that will not help, and may in fact harm. Don't get me wrong, I know it's been mismanaged by all, and information has been confusing and chaotic, but rather than sitting in judgement and "tweeting" we as a community need to take a lead, and support each other, as we travel a road, that we are going to walk many more times. Vaccine or no vaccine, masks or no masks, scanning or not, Viruses adapt and change, and like a chess game, every move we make, results in a counter move. We are in for a long haul, and we will only make it if we change the game, and outsmart the opponent. And that is a virus, not any person.

Sadly this again means we cannot have meetings, and we cannot go ahead with the car boot sale. I know that there are differing views about this, but for it to be a success, we need to promote with plenty of time, and for everyone to be confident that we can proceed, and have plenty of people willing to attend, and under the current uncertainty, we don't really have this, so it's better to be safe than sorry and make an early call to forget about it for now, and wait for a better date later in the year.



On a positive, the lockdown notification came in the middle of Jock White Field Day operations, and since we had a team that could lock in and continue, we stayed the course on Sunday (We had a friendly police visit, but they were happy for us to finish off our activity), even though, true to form, the rain could not stay away but even that's a reminder that we are again changing seasons, and moving out of the summer highs and back towards the winter months. The days will again get shorter, and the nights longer. Band conditions are also changing, and the solar cycle moves slowly and surely with ever increasing baselines towards becoming a more active sun and the solar flux number keep the slow and steady creep towards the three digit numbers. (They were between 77 and 81 over the last week)

While no help to Field-Days, the solid numbers have boosted 20 metres, and there have been some nice 20 metres contacts well into the evening so for the brave HF DX chaser the bands are on the slow improve and there is plenty to catch your interest, but as the sun rises there is increasing interest in the effects of space weather on our modern connected satellite society. Later in the newsletter we have an article on space weather and progress to a better prediction model, as well as some HF tools to help you work out which bands will get you where.

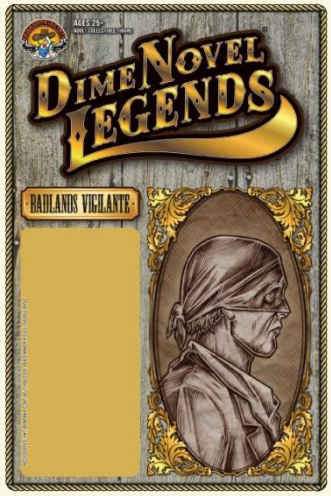
ALERT LEVEL 3

Having just come off the Jock White Field Day, I'm naturally fairly keen on sorting some issues with the camper setup for radio, Tired from long sessions and little sleep, and trying to get my head back into normal life and days while adapting to working from home. Given that the office is in the ham-shack, with the distraction of conversations on the different radios interrupting my work day, and given that it's in need of a good sort out and clean, I could easily use an extra 20-30 hours in each day. Sadly I don't see that as an option, so I'll need to make some decisions on how to best spend my time as far as doing my best to keep all the plates in the air.

At level 3 I work from home, and have only a single day to be in the office, so sorted here will be a priority.

But I have it easy.

The shift back to level 3, In spite of promises of wage subsidies, and financial support is not going to be easy. For many businesses this will be the last straw. In the USA Ham stores are giving up and closing, and while we don't have too many such businesses, the cost of lockdowns in jobs, in incomes, in family tensions and rising prices, as well as the supply shortages, and shipping delays causing increased freight costs, will all take a toll, and for those businesses that try to keep moving forward, there will be challenges in meeting the expectations of a customer base that would rather buy on-line from china, than wait for the container to be unloaded.



These pressures will no doubt bring out the worst, and like we saw in Level 4, many will take on the role of vigilante, or self styled detective, and with so many different rules for different industries, and different interpretations of these by different people and police will be overloaded by do-gooders filing pointless reports, and a hyped media (or social media) who will in fact destroy the lives of others for no good reason. If you remember the old detective stories, you should know first impressions are normally wrong. How often does the wrong suspect get arrested before the real culprit is revealed? History tells us what happens when neighbours turn on neighbours and children report parents, there are countless telling of this tale, and in none of them, has the state rewarded them as expected, in fact the state normally turned on them as well. We must be careful in these times to be sure that we act, not out of fear, but with reason, calm and certainty. Judgment should be only exercised by judges. I hope history judges us equally well at this "interesting" time.

As you may have already guessed, I think we are in for more than just a week, and as the year progresses, I also suspect we will find ourselves facing many more unexpected cases, Viruses have exited on this planet longer than us, and are incredible survivors and adaptors. We are not playing tic-tac-toe to win, we are paying chess against a superior opponent, who cannot loose, and we must play for a stalemate. This will be a long and tedious game, with many twists and turns.

But we as hams already know this game well. We play against nature, solar flux and the ionosphere, we can't control nature, but we can work with it, but can we still play the game, or has cheating made our hand weak? Have repeaters and internet connections left us at the mercy of technology outside our control, or can we still remember how to set-up a gain antenna and work simplex? Can we ride the fickle currents of the troposphere; can we work the different bands to make the every changing ionosphere an ally, rather than a foe? If not, and we are totally dependent in digital linked networks, what happens when they fail, or are shut down?

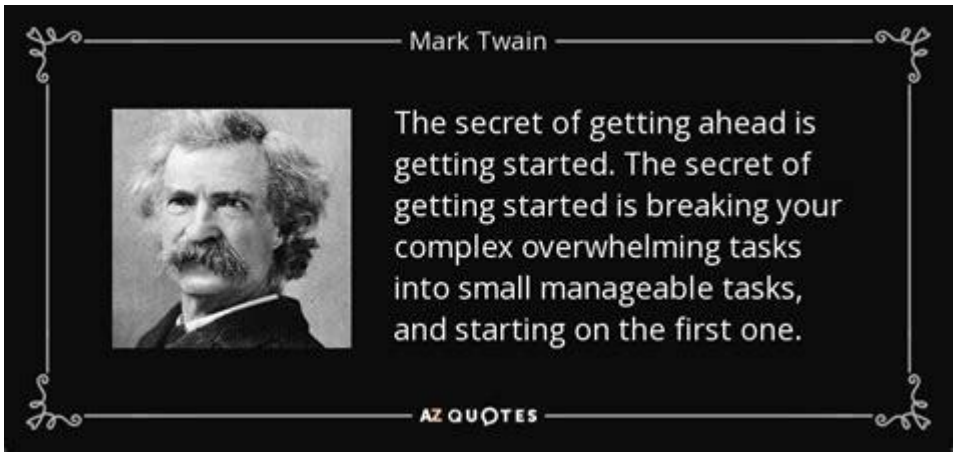
A Ham Shack in Can – Canned Ham

In World War 2, Ham radio operators were recruited by the military for their skills and technical knowledge, but in this day and age are we still contenders? An old valve radio can be thing of beauty, but so too is a modern SDR touch screen radio with high power modes and efficient digital transmit modes & signal enhancements, but without an effective radiating antenna, good coaxial connections, and an operator that can work the bands and select frequencies to get the message through, It remains only something to look at. A nice radio in a box is pretty, but it's not what it was made for. A working, but old radio in skilled hands will fill a logbook, pass a message or catch up with an old friend. The skill of the operator will see to that.

Sure LandSAR and AREC are a good example of what a Tin of "Canned Ham" and some training can achieve, POTA, SOTA and contesting field stations are all examples of skill building, but will our next generation of amateurs be ready, are we passing on the skills of the chess champions before us, and are we learning from the masters before we lose their examples forever.

In the age of You-tube and easy, how do we learn to do complex and hard?

Samuel Clements, or as he is better known, Mark Twain, is quoted as giving the secret of success as given below:



If we are to achieve any lasting results, we must first take baby steps, and these include taking time to bring others along for the ride, Its difficult when you really just want to get the job done, to step back and let someone else have a try, but with patience and time, you will end up with an asset, cut the training short by just 2 letters and ... well it's not good if you lose et.

As, some of us, vote for an NZART president, and consider (if we are allowed to) going to NZART conferences, or decide whether to get into building stuff, fixing it or going portable, maybe getting onto new bands, or new modes, the trick is not making sure we get it right, it's making sure we get moving.

Of all the safety equipment, and systems of a ship at sea, the most critical is the engine. If a ship is moving, it can be steered, (manually if need be) you can set a course by the stars if you must, but if you stall, if the engine stops, then all hope is lost, there is no power to drive the systems. no water, no electricity ... Nothing. The ship will drift aimlessly and eventually founder, all you can do (unless another vessel rescues you) is abandon the vessel and hope the sea chooses to be merciful. In the ham community our enemy is not a virus, a virus can't travel over a radio wave, it's not that they can lock us out of our buildings, we can still talk on air, and our community can use other technology to see and learn, but if we lose our engines, if we stop doing something, then we are already lost.

SO what will you do in 2021?

It doesn't have to be much, but it has to be something... Not a thing built of fear, but a thing that challenges you to do something new, or different or unexpected. For every field antenna I have built, I have built 3 dummy loads and broken two others. My engineering skill (as limited as it was) was found lacking, but each disaster showed me what not to do, and the next attempt failed a little less, and finally to get something that not only worked, but worked a little better than the one before. And there is still plenty of room to improve.

Maybe this sounds a little too simple, too much like a formulae that it can't work, but if you need to see what can be achieved just see what Hope and Perseverance can achieve.

Yes it's a shameless mars plug.

The hope project was the UAE first Arab mission to the red planet, and entered orbit on the 20th of February. It became the 5th entity to reach the red planet.

The UAE has sped into the space sector: Hope launched a little more than a decade after the nation's first Earth-orbiting satellite, DubaiSat 1, did so. The nation has pushed space exploration as a way to develop its science and technology know-how and to buffer its economy, which is largely built on oil.

In addition to the Hope mission, the UAE is recruiting new astronauts in the wake, plans to launch a technology Lander to the moon in 2024, and has a century-long Red Planet strategy dubbed Mars 2117, which incorporates both terrestrial priorities and long-term exploration goals.

Perseverance is the name of the newest Mars rover from NASA. NASA's Mars 2020 Perseverance rover launched to the Red Planet on a United Launch Alliance Atlas V rocket on July 30, 2020, and successfully touched down in Jezero Crater on Feb. 18, 2021. The rover will explore Mars to search for signs of life, study the planet's geology and much more.

And it even has a cute family tree photo on the back of the rover, showing the scale of each rover, and the parachute even contained a hidden binary message.

SO there it is – A bit of Hope and Perseverance can go a very long way. In fact a few million miles ☺

So take a challenge, Break it down into baby steps, and take one step, then when you master that take another, and see where the challenge takes you. – There a whole world of ham left to explore, even if you can't leave home, look up. The satellite (or a satellite) will come to you, put together something and work it.

It really is the final frontier

Catch you other ... somewhere ... Until then 73 for now

NANO-VNA PART 2- CONTROLLING THE VNA – FIRST STEPS

While Ian is focussing on what a VNA does, and how to use it with a laptop, definitely useful in the shack, I often use my VNA in the field, so let me take you on a working the interface journey.

Throughout this guide, I will assume you are using a stylus (or your finger) to control the Nano-VNA via the touch-screen. You can of course use the rocker control to perform all these applications, but it's so much harder. Any item of plastic (not too hard) can be used to make a stylus, I have the end of an old (big) knitting needle and a 3D printed one in my 3D printed housing, Both work fine, and are more precise than my "Fat" Fingers

The default firmware (on my VNA at least) provides 2 traces (Yellow= TRACE 0, Blue= TRACE 1). The current 'active' trace is highlighted at the top left. Any changes you make will be made for this trace.

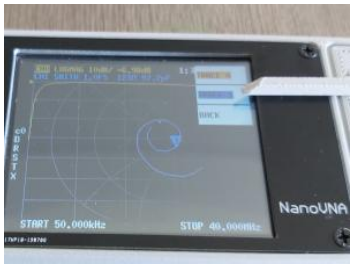
To make a trace 'active'

Enter the **DISPLAY** menu. (Tap the top left of the screen)

Now select the **TRACE** menu.

TRACE menu

Select the trace you want to change.



Select Trace

By default I have trace 1 and 2 active and see both blue and orange traces, but this can be easily changed to a single or dual trace. Trace 2 is limited – You can turn it on, and select it as the active (changes show here) trace.

Trace 1 offers 3 more choices. Off – (see only trace 2) – Single (See only Trace 1) and Back (no changes please)

In the image above-right) the blue Trace is now active. Currently measuring channel 1(S21)

Selecting the input.

The two traces can be in the CH0 (S11 Return) or CH1 (S21 Through) inputs, both can be on the same input, but giving 2 different displays, or they can be on different inputs, depending on how we want to use them.

But for now, let's just learn how to select the input.

From the Display Menu, Select Channel

Then it's a simple case of choose either Ch0 or Ch1, remember this equates to S11 using only the top RF port or S21 measuring the transmission from the top to the lower RF port.

Finally you just need to select a format.

Located in the FORMAT menu under DISPLAY. You can now choose from a range of graphical presentations.

The most common use cases will probably be LOGMAG, SWR and SMITH. I tend to use LOGMAG for transmission measurements (S21) and either LOGMAG or SMITH for S11. (Sometimes SWR as well), Why are there still some hams who just have to know what the SWR is? The main reason I use SMITH is to help me see if the antenna is Capacitive or Inductive at my desired frequency, which is sometimes handy to know what to add, but phase tells is less intrusive on dual trace. So LOGMAG on Trace 1 and Phase on trace 2 is my go to default. At least for antenna building (... Ok, hacking)

<u>So what are all these options?</u>

LOGMAG – For S11 measurements this is the **Return Loss** and is measured in dB. For passive networks it will always be below negative. For S21 measurements this is the **INSERTION LOSS** in dB.

SWR – The Standing Wave Ratio, More correctly called Voltage Standing Wave Ratio (VSWR), is often used for measuring antennas. I think this is purely for historic reasons, as LOGMAG or LINEAR are generally more easily understood. For S11 measurements and SWR of 1 is considered perfect match (zero reflected power). The figure is normally quoted as a ratio i.e 2:1. An antenna SWR of 3:1 would normally be considered good, while better than 2:1 would be excellent. You can use SWR for S21 measurements, but I'm not really sure why anyone would do so.

LINEAR – Same as LOGMAG, but expresses as a ratio rather than dB. For S11; 1 would be 100% power reflected, 0 would be 0% power reflected.

PHASE – The relative phase difference between the signal source (always top port for NanoVNA) and received signal.

SMITH – This is just the LINEAR and PHASE plots combined onto a polar co-ordinate system. The marker readings in this format will display the equivalent Resistance and Inductance/Capacitance for marker frequency.

POLAR – Same as SMITH, but provides marker readings as a complex number.

IN the next instalment, we will look at how to set up the frequency setting Start-Stop or Centre and Span

Beware the Illegal Two-Way Radio

Radio Spectrum Management has produced an information leaflet regarding unrestricted two-way radios. The leaflet can be downloaded on the Radio Spectrum Management website under "Products and equipment you can't use in New Zealand".

This is part of an ongoing campaign to stop people from using prohibited equipment in particular unrestricted two way radios – handy if you need to "Assist others"

RADIO SPECTRUM MANAGEMENT

Beware the illegal two-way radio

Two-way radios (also known as walkie talkies) are easily bought online but some overseas models are illegal in New Zealand.

Illegal radios are often cheap and typically sold by overseas retailers with a package of pre-programmed frequencies or fully programmable options. For example radio brand names such as Baofeng, Pofung and Wouxun are in most cases illegal to own or operate. These radios do not meet the required technical standards and can be easily programmed to operate on channels which the public are not authorised to use. There have been examples of these radios being used on emergency services and public safety communication channels which can have very serious consequences.

What happens if I'm caught?

In October 2018, the Radiocommunications Regulations (Prohibited Equipment – Unrestricted Two Way Radio) Notice 2018 was introduced to prohibit the import, sale, and distribution of unrestricted two-way radio equipment, other than by a permitted person. Breaching these regulations could lead to prosecution and fines of up to $200,000.

Where can I find more information?

Radio Spectrum Management Website **https://www.rsm.govt.nz/**
By phone: In New Zealand, call us on **0508 RSM INFO** (0508 776 463)
From overseas, call **+64 3 962 2603**
By Email: **info@rsm.govt.nz** Service centre

How can I avoid buying an illegal two-way radio?

Look for the New Zealand Compliance mark:

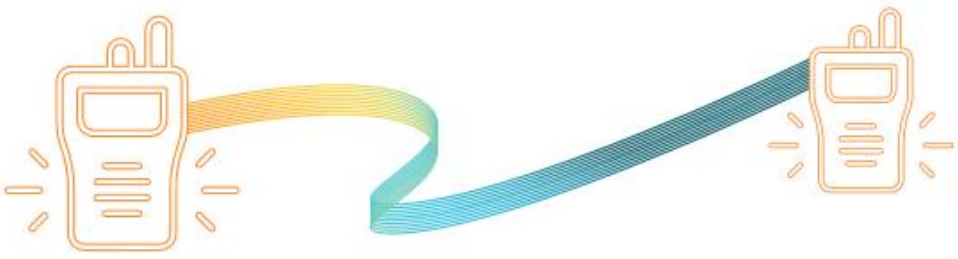
Before a New Zealand supplier can sell a two-way radio, they must meet a range of compliance requirements, including correct labelling and ensuring the device complies with Radio Spectrum Management mandated technical standards. The New Zealand compliance mark **R-NZ** tells the buyer that this radio complies and can operate safely in New Zealand.

Make sure you have the right radio communications licence:

You can't operate a two-way radio without an appropriate radio licence, so check you understand and meet your radio licensing requirements.

Buy a Citizen Band (CB) or PRS radio:

You can own and operate a Citizen Band (CB) radio (also known as personal radio service or PRS) and communicate with other people over short distances without the need to get a licence in your own name or pay licence fees.



MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

New Zealand Government

M17 – A NEW DIGITAL VOICE AND PACKET MODE FOR AMATEUR RADIO VHF/UHF

Hi folks. Rob with Mobilinkd. I am a member of the M17 Project team. I saw a post from last week about M17 and thought I would talk a bit about what we are working on, where we are at, and answer as many questions as I can.

M17 started by u/SP5WWP with a desire to have a digital voice mode based around open specifications and open software, and specifically based on an open vocoder, Codec2. This gives amateurs much more freedom to experiment, without requiring proprietary hardware or proprietary software blobs. Already this has allowed a lot of great experimentation and development.

M17 uses 4-FSK modulation, 4800 symbols/sec (9600bps) with convolutional FEC (forward error correction). It uses a 384-bit frame (really 16 bit sync + 368-bit data). This results in 25 frames per second (40ms per frame). By default we use a 3200bps Codec2 vocoder, which sounds great.

I started working on M17 about 4 months ago around the time u/SP5WWP asked about RRC filtering in r/hamdevs. At the time there was no over the air (OTA) implementation available for anyone to play with. So I got involved working on a basic baseband implementation so we could work on at least putting M17 on the air. My initial implementation was in Python in order to ensure I understood the reference documentation. This gave us our first valid bitstream which we could play over the air using GNU Radio and a Pluto SDR. I have since made both a C++ modulator and demodulator which we can now use to demodulate M17 over the air using an RTL SDR.

Over the holiday break I implemented M17 in the Mobilinkd TNC3 and NucleoTNC (there is experimental firmware available for both). This lead to the creation and documentation of M17 packet modes and a KISS interface for M17 packet and streaming modes. Packet mode operates at a base rate of 5kbps, with typical throughput of 3.6-4.8kbps. These TNCs work with 9600-baud capable radios. Steve KC1AWV has been testing APRS over M17 for a couple of weeks. It should be possible to use M17 for any packet application that can talk over KISS.

Around the same time, someone started working on a project called Codec2Talkie, an Android app for doing low-bitrate Codec2 over KISS TNCs, LoRA modules, etc. I spoke with the author and he was not interested in supporting M17 and suggested forking his code. I did that and this code has morphed into M17 Kiss HT, an Android app that will do M17 over KISS via USB (for NucleoTNC & TNC3) or BLE (for TNC3). We can now use an Android app -> TNC -> VHF/UHF radio to do bi-directional over the air voice communication.

At the same time, we have the group from OpenRTX along with M17 team members conducting experiments to see if it is possible to get M17 running on inexpensive DMR HTs. I have high hopes that this will work. I have played around with hacking an SA868 radio module to transmit M17. We also have new prototype hardware to experiment with using the ADF7021 chip for M17.

Jonathan Naylor, G4KLX, has an M17 implementation for MMDVM. So it should be possible to make an M17 hotspot for use with these radios. We still need to do interop testing.

We are at a really exciting time in the project. There has been a lot of progress recently. The project is attracting a lot more attention. Things are really starting to come together for those who like to experiment with new modes, but it certainly isn't ready for those who want something that will work out of the box. If you are interested, come see us on IRC/Matrix/Discord.

With thanks to rob for allowing the re-production of this reddit post, and Rodger (ZL1RAH) for bringing it to my attention.

IF DOGS WERE ABLE TO CHANGE LIGHT-BULBS ...

how many dogs does it take to change a lightbulb?

◆ **Golden Retriever**: The sun is shining, the day is young, we've got our whole lives ahead of us, and you're inside worrying about a stupid burned out bulb?

◆ **Border Collie**: Just one. And then I'll replace any wiring that's not up to code.

◆ **Dachshund**: You know I can't reach that stupid lamp!

◆ **Rottweiler**: Make me.

◆ **Boxer**: Who cares? I can still play with my squeaky toys in the dark.

◆ **Lab**: Oh, me, me!!!!! Pleeeeeeeeeze let me change the light bulb! Can I? Can I? Huh? Huh? Can I? Pleeeeeeze, please, please, please!

◆ **German Shepherd**: I'll change it as soon as I've led these people from the dark, check to make sure I haven't missed any, and make just one more perimeter patrol to see that no one has tried

to take advantage of the situation.

◆ **Jack Russell Terrier**: I'll just pop it in while I'm bouncing off the walls and furniture.

◆ **Old English Sheep Dog**: Light bulb? I'm sorry, but I don't see a light bulb.

◆ **Cocker Spaniel**: Why change it? I can still pee on the carpet in the dark.

◆ **Pointer**: I see it, there it is, there it is, right there...

◆ **Greyhound**: It isn't moving. Who cares?

◆ **Australian Shepherd**: First, I'll put all the light bulbs in a little circle...

◆ **Poodle**: I'll just blow in the Border Collie's ear and he'll do it. By the time he finishes rewiring the house, my nails will be dry.

◆ **The Cat's Answer**: Dogs do not change ligh bulbs. People change light bulbs. So, the real question is: How long will it be before I can expect some light, som dinner, and a massage?

28 July 9, 2011

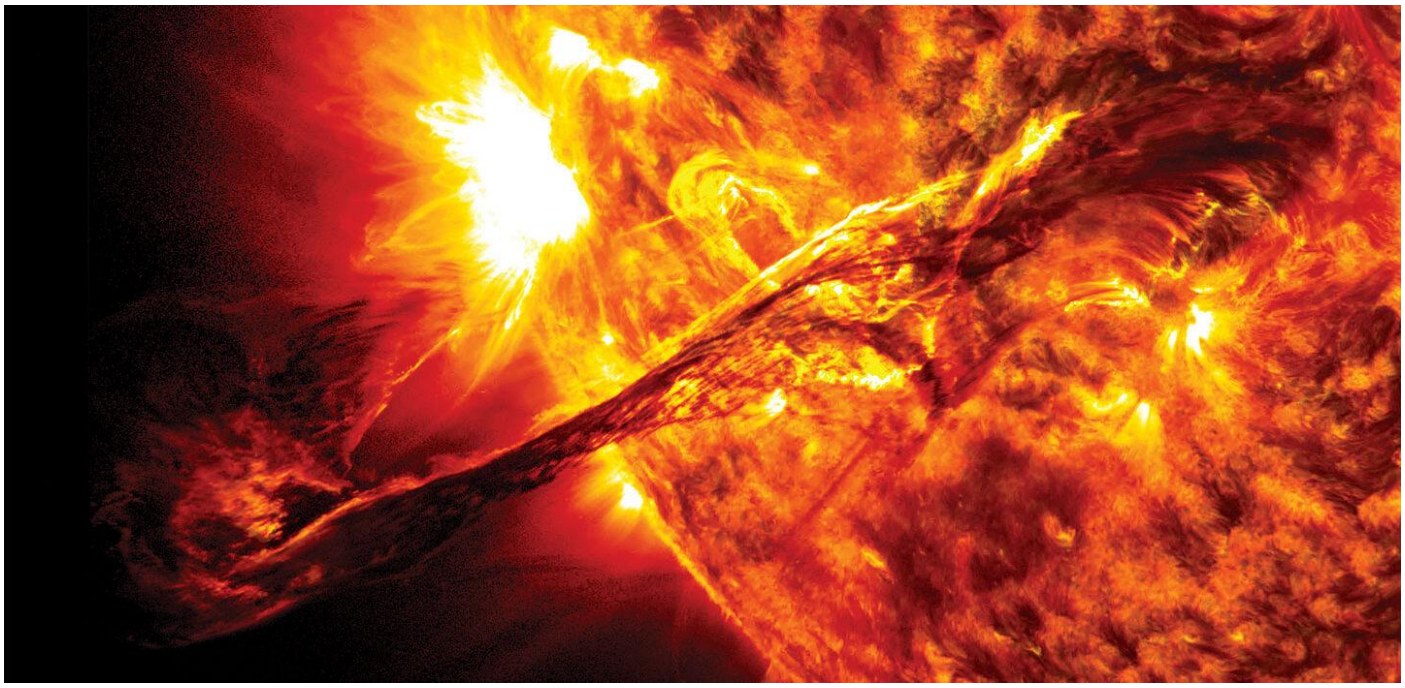
Old, But worthy of a recycle

SOLAR STORMS CAN WREAK HAVOC. WHY WE NEED BETTER SPACE WEATHER FORECASTS

Since December 2019, the sun has been moving into a busier part of its cycle, when increasingly intense pulses of energy can shoot out in all directions. Some of these large bursts of charged particles head right toward Earth. Without a good way to anticipate these solar storms, we're vulnerable. A big one could take out a swath of our communication systems and power grids before we even knew what hit us.

A recent near miss occurred in the summer of 2012. A giant solar storm hurled a radiation-packed blob in Earth's direction at more than 9 million kilometers per hour. The potentially debilitating burst quickly traversed the nearly 150 million kilometers toward our planet, and would have hit Earth had it come just a week earlier. Scientists learned about it after the fact, only because it struck a NASA satellite designed to watch for this kind of space weather.

That 2012 storm was the most intense researchers have measured since 1859. When a powerful storm hit the Northern Hemisphere in September of that year, people were not so lucky. Many telegraph systems throughout Europe and North America failed, and the electrified lines shocked some telegraph operators. It came to be known as the Carrington Event, named after British astronomer Richard Carrington, who witnessed intensely bright patches of light in the sky and recorded what he saw.



The world has moved way beyond telegraph systems. A Carrington-level impact today would knock out satellites, disrupting GPS, mobile phone networks and internet connections. Banking systems, aviation, trains and traffic signals would take a hit as well. Damaged power grids would take months or more to repair.

With so many of us now relying on Zoom and other video-communications programs to work and attend school, it's hard to imagine the widespread upheaval such an event would create. In a worst-case scenario conceived before the pandemic, researchers estimated the economic toll in the United States could reach trillions of dollars

To avoid such destruction, in October, then-President, Donald Trump signed a bill to support research to produce better space weather forecasts and assess possible impacts, and enable better coordination among agencies like NASA and the National Oceanic and Atmospheric Administration.

Space weather hits home

These Earth systems and industries are at risk during a solar storm:

- Power grids
- Oil and gas industry
- Communications: mobile networks, fiber-optic networks, shipping and military
- Ground transportation (railways)
- Satellites
- GPS
- Aviation

The ideal scenario is to get warnings well before a storm disables satellites or makes landfall, and possibly even before the sun sends charged particles in our direction. With advance warning, utilities and governments could power down the grids and move satellites out of harm's way.

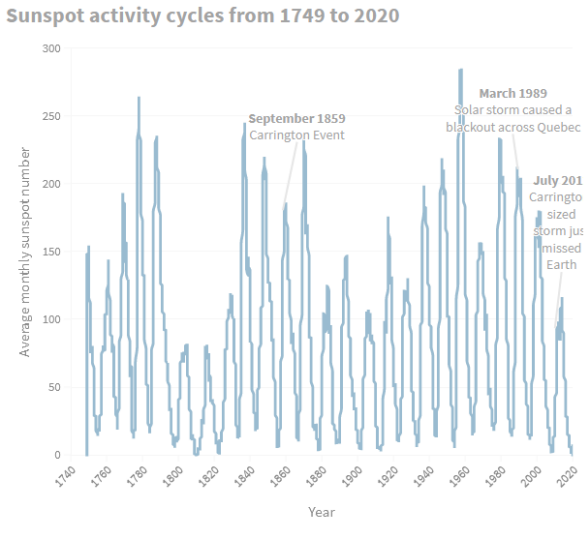
When scientists talk about space weather, they're usually referring to two things: the solar wind, a constant stream of charged particles flowing away from the sun, and coronal mass ejections, huge outbursts of charged particles, or plasma, blown out from the sun's outer layers. Some other phenomena, like high-energy particles called cosmic rays, also count as space weather, but they don't cause the same levels of concern.

Coronal mass ejections, or CMEs, the most threatening kind of solar storms, aren't always harmful — they generate dazzling auroras near the poles, after all. But considering the risks of a storm shutting down key military and commercial satellites or harming the health of astronauts in orbit, it's understandable that scientists and governments are concerned.

Astronomers have been peering at our solar companion for centuries. In the 17th century, Galileo was among the first to spy sunspots, slightly cooler areas on the sun's surface with strong magnetic fields that are often a precursor to more intense solar activity. His successors later noticed that sunspots often produce bursts of radiation called solar flares. The complex, shifting magnetic field of the sun also sometimes makes filaments or loops of plasma thousands of kilometres across erupt from the sun's outer layers. These kinds of solar eruptions can generate CMEs.

Up and down

The number of sunspots, and other solar activity that generates solar storms, rises and falls in an 11-year cycle. Solar cycle 25 began in December 2019 and is expected to peak in 2025.



Source: SILSO data/Royal Observatory of Belgium 2021

It was 19th century German astronomer Samuel Heinrich Schwabe who realized that such solar activity ebbs and flows during 11-year cycles. This happens because the sun's magnetic field completely flips every 11 years. The most recent sun cycle ended in December 2019, and we're emerging from the nadir of sun activity while heading toward the maximum of cycle 25 (astronomers started numbering solar cycles in the 19th century). Solar storms, particularly the dangerous CMEs, are now becoming more frequent and intense, and should peak between 2024 and 2026.

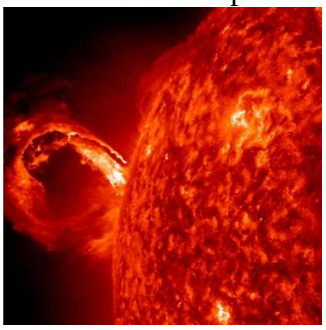
Solar storms develop from the sun's complex magnetic field. The sun rotates faster at its equator than at its poles, and since it's not a solid sphere, its magnetic field constantly roils and swirls around. At the same time, heat from the sun's interior rises to the surface, with charged particles bringing new magnetic fields with them. The most intense CMEs usually come from the most vigorous period in a particularly active solar cycle, but there's a lot of variation. The 1859 CME originated from a fairly modest solar cycle

A CME has multiple components. If the CME is on a trajectory toward Earth, the first thing to arrive — just eight minutes after it leaves the sun — is the electromagnetic radiation, which moves at the speed of light. CMEs often produce a shock wave that accelerates electrons to extremely fast speeds, and those arrive within 20 minutes of the light. Such energetic particles can damage the electronics or solar cells of satellites in high orbits. Those particles could also harm any astronauts outside of Earth's protective magnetic field, including any on the moon. A crew on board the International Space Station, inside Earth's magnetic field, however, would most likely be safe.

But a CME's biggest threat — its giant cloud of plasma, which can be millions of kilometres wide — typically takes between one and three days to reach our planet, depending on how fast the sun propelled the shotgun blast of particles toward us. Earth's magnetic field, our first defence against space weather and space radiation, can protect us from only so much. Satellites and ground-based observations have shown that a CME's charged particles interact with and distort the magnetic field. Those interactions can have two important effects: producing more intense electric currents in the upper atmosphere and shifting these stronger currents away from the poles to places with more people and more infrastructures. With an extremely powerful storm, it's these potentially massive currents that put satellites and power grids at risk

Anyone who depends on long-distance radio signals or telecommunications might have to do without them until the storm blows over and damaged satellites are repaired or replaced. A powerful storm can disturb airplanes in flight, too, as pilots lose contact with air traffic controllers. While these are temporary effects, typically lasting up to a day, impacts on the electrical grids could be worse.

A massive CME could suddenly and unexpectedly drive currents of kiloamps rather than the usual amps through power grid wires on Earth, overwhelming transformers and making them melt or explode. The entire province of Quebec, with nearly 7 million people, suffered a power blackout that lasted more than nine hours on March 13, 1989, thanks to such a CME during a particularly active solar cycle. The CME affected New England and New York, too. Had electricity grid operators known what was coming, they could have reduced power flow on lines and interconnections in the power grid and set up backup generators where needed.



Early warning

But planners need more of a heads-up than they get today. Perhaps within the next decade, improved computer modelling and new space weather monitoring capabilities will enable scientists to predict solar storms and their likely impacts more accurately and earlier

Space meteorologists classify solar storms, based on disturbances to the Earth's magnetic field, on a five-level scale, like hurricanes. But unlike those tropical storms, the likely arrival of a solar storm isn't known with any precision using available satellites. For storms brewing on Earth, the National Weather Service has access to constantly updated data. But space weather data are too sparse to be very useful, with few storms to monitor and provide data.

Two U.S. satellites that monitor space weather are NASA's ACE spacecraft, which dates from the 1990s and should continue to collect data for a few more years, and NOAA's DSCOVR, which was designed at a similar time but not launched until 2015. Both orbit about 1.5 million kilometres above Earth — which seems far but is barely upstream of our planet from a solar storm's perspective. The two satellites can detect and measure a solar storm only when its impact is imminent: 15 to 45 minutes away. That's more akin to "nowcasting" than forecasting, offering little more than a warning to brace for impact.

Eyes on the sun

Three main satellites have been monitoring space weather, starting as early as 1995, but can only pick up an imminent impact.

ATG MEDIALAB/ESA

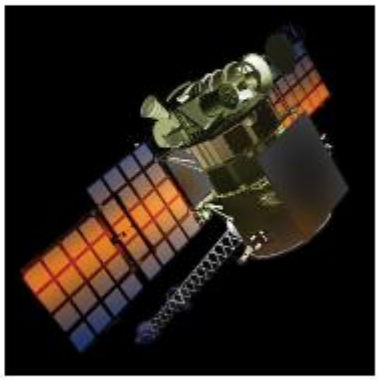
SOHO

Launched in 1995

NASA

ACE

Launched in 1997



NOAA

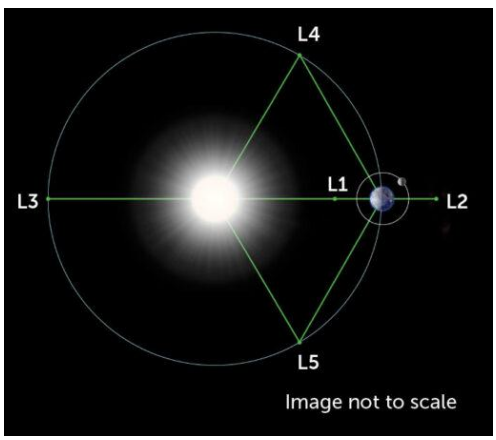
DSCOVR

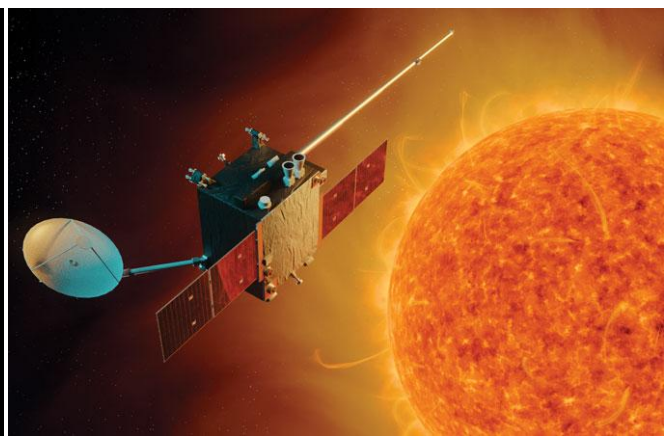
Launched in 2015

Ideally, scientists want to be able to forecast a solar storm before it's blown out into space. That would give enough lead time (more than a day) for power grid operators to protect transformers from power surges, and satellites and astronauts could move out of harm's way if possible.

That requires gathering more data, particularly from the sun's outer layers, plus better estimating when a CME will burst forth and whether to expect it to arrive with a bang or a whimper. To aid such research, NOAA scientists will outfit their next space weather satellite, scheduled to launch in early 2025, with a coronagraph, an instrument used for studying the outermost part of the sun's atmosphere, the corona, while blocking most of the sun's light, which would otherwise blind its view.

A second major improvement could come just two years later, in 2027, with the launch of ESA's Lagrange mission. It will be the first space weather mission to launch one of its spacecraft to a unique spot: 60 degrees behind Earth in its orbit around the sun. Once in position, the spacecraft will be able to see the surface of the sun from the side before the face of the sun has rotated and pointed in Earth's direction.





That way, Lagrange will be able to monitor an active, flaring area of the sun days earlier than other spacecraft, getting a fix on a new solar storm's speed and direction sooner to allow scientists to make a more precise forecast. With these new satellites, there will be more spacecraft watching for incoming space weather from different spots, giving scientists more data to make forecasts.

Satellite safety

There have been a few cases of satellites damaged by solar storms. The Japanese ADEOS-II satellite stopped functioning in 2003, following a period of intense outbursts of energy from the sun. And the Solar Maximum Mission satellite appeared to have been dragged into lower orbit — and eventually burned up in the atmosphere — following the same 1989 solar storm that left Quebec in the dark.

Satellites affected by solar storms could be at risk of crashing into each other or space debris, too. With mega-constellations of satellites like SpaceX's being launched by the hundreds, and with tens of thousands of satellites and bits of space flotsam already in crowded orbits, the risks are real of something drifting into the path of something else. Any space crash will surely create more space junk, too, tossing out debris that also puts spacecraft at risk.

These are all strong motivators for scientists to study how storm-driven drag works. The U.S. military tracks satellites and debris and predicts where they'll likely be in the future, but all those calculations are worthless without knowing the effects of solar storms. To put satellites on trajectories so that they avoid collisions, you have to know space weather.

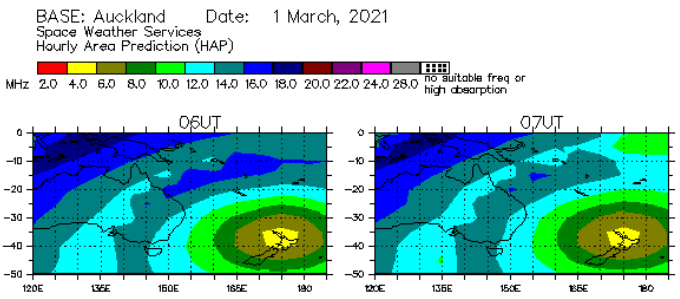
Our reliance on technology in space comes with increasing vulnerabilities. Some space scientists speculate that we've failed to find alien civilizations because some of those civilizations were wiped out by the very active stars they orbit, which could strip a once-habitable world's atmosphere and expose life on the surface to harmful stellar radiation and space weather. Our sun is not as dangerous as many other stars that have more frequent and intense magnetic activity, but it has the potential to be perilous to our way of life.

Globally, we have to take space weather seriously and prepare ourselves. We don't want to wake up one day, and all our infrastructure is down. With key satellites and power grids suddenly wrecked, we wouldn't even be able to use our phones to call for help.

Of Course HF and Simplex radio will work, but repeaters, and internet connected systems will be as useful as your phone.

The International coordinating body is **The International Space Environment Service (ISES)** a collaborative network of space weather service-providing organizations around the globe. Their mission is to improve, to coordinate, and to deliver operational space weather services. ISES is organized and operated for the benefit of the international space weather user community.

While New Zealand is not a member and does not have a space weather forecasting service (like a NIWA for space), the Australian Bureau of Meteorology, Space Weather Services (SWS) website has a wealth of information and tools for amateur radio and other users to help predict HF performance including HAP (HF Hourly Predictions), Lamp (Local Area Mobile Prediction), Satellite performance predictions and educational materials. These allow locations to be selected including Auckland. So we are well served by the Australian government.



SEEN OR HEARD AROUND THE SCENES

WHILE WE CAN'T FLY, OUR BATTERIES MIGHT BE ABLE TO.

(Supplied by Graham Street)
Hey Graham

You've heard of flights having issues with exploded lithium-ion batteries. But how does that happen, and how do you avoid it? Well first of all, those incidents are why you must store spare batteries in your carry-on, and not in any luggage in the cargo.

In the unlikely event that one of your batteries starts to have issues, the crew can be alerted to the problem and grab the fire extinguisher before it gets out of hand, rather than it occurring where no people can see it happening.

Other than that, as long as your spare batteries are below 100Wh each, you're allowed to carry up to 20 spare lithium-ion batteries onboard Virgin, Jetstar and Qantas.

It is advised that any spare lithium-ion batteries have their terminals protected against short circuiting. If you don't have a case to put them in just put some tape over the terminals before takeoff. It's a simple tip, but an important one to give you a safe flight for all of your future travels. Remember, stay charged, power up!

Cam,
Sales and E-commerce Manager, Better Batt

CONFERENCE 2021

The upcoming conference and AGM will be held in Napier at Queens Birthday weekend in 2021, Mark calendar now to prevent double bookings – *It is recommended to book accommodation first, as it seems like it might already be in short supply.*

SUBJECT: [NZART-MEMBERS] COMMONWEALTH CONTEST 2021

The times/dates for this year's contest are 1000utc 13th March to 1000utc 14th March - NZ local times are 2300-2300.

It's a CW only contest, however those of us who have operated in this contest in previous years know that you can be as serious as you want to be, and that you can still make some good DX contacts regardless of your CW skills.

Contest rules can be found at: http://www.rsgbcc.org/hf/rules/2021/rberu.shtml. Other background information about the contest can be found at: https://berucontest.wordpress.com/

One of the fun aspects of the contest is a team competition between teams of five operators in each of the various Commonwealth countries. If anyone is interested in being a member of a ZL team please let me know.

In addition Commonwealth national ham radio associations such as NZART are encouraged to activate their HQ station for this contest. So if anyone is keen to operate as ZL6HQ in this contest please get back to me.

73, Frank ZL2BR
NZART Contest Manager

EQUIPMENT SALES

NEW PLYMOUTH AMATEUR RADIO CLUB are hosting their

'JUNK DATE'

on Saturday 20th March at the Mangorei Hall on the Corner of State Highway 3 and Kent Road,New Plymouth.
Registered sellers will be admitted from 8am,
and buyers from 10am.

Tables can be reserved for $20.Food and hot drinks will be available before and during the sale.
They ask that all attending, please observe the current COVID requirements on the day....If you are unwell, please stay home.
For more information or to reserve a table,
email Doug Beale ZL3DUG secretary@zl2ab.com,or go to their website ZL2AB.com

TE PUKE AMATEUR RADIO CLUB INC. MARKET DAY
SATURDAY 20TH MARCH 2021

Te Puke Amateur Radio Club Inc.
Branch 53 of NZART

Market Day
Saturday 20th March 2021

Paengaroa Community Hall, Old Coach Road, Paengaroa. 3189

Open 06.30am, Sale at 10.00am.
$20.00 Per Table or $25.00 on the day, $12.00 For Half a Table or $15.00 on the day.

As Always Plenty of Good Tucker & All Day Breakfasts from 07.30am.

Motorhome Parking Available
If you get lost tune into 147.175 or D-Star 145.725

For Further Information and Table Bookings:
Ph. 0272488664 or (07) 533 1029. Email: sydrowe@xtra.co.nz

RADIO ELECTRONICS GROUP INC ANNUAL EQUIPMENT SALE

At Glenview Club Inc. 211 Peacocks Road Glenview, Hamilton

- Saturday 15th May 2021
- Vendors: 8-30am
- Doors open 10am
- Tables $20
- Public $2 Lucky Ticket Entry
- Trade display – Refreshments – Door prizes
- Plenty of parking
- Easy access
- Motor Home Parking

For Vendor registration and enquires
Contact Vern ZL1TKG
ZL1REGSALE@gmail.com

Or Phone John ZL1PO 021 204 5990

Radio Electronics Group

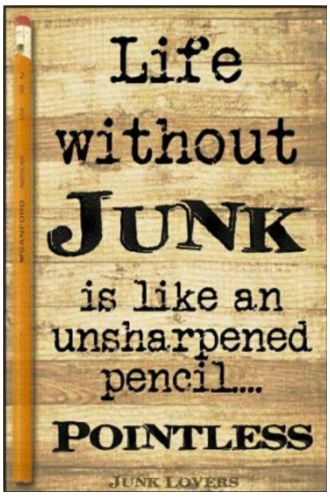
RADIO AND COLLECTABLES AUCTION
STOKE, NELSON
SATURDAY 10 APRIL, 2021

AUCTION STARTS AT 11am
Viewing from 9am

A large collection of approximately 400 radios plus cases, parts etc and other collectables
Looks like receivers not transmitters ... But what a collection

For details check out:
http://www.jwauctions.co.nz/upcomingauctions.html

Just make sure you know WHY, the seller is motivated!



SOME NETS – FOR WHEN YOU ARE LOOKING FOR COMPANY

Day	Time (Local)	Freq (MHz)	Group
Sunday	08:00	3.750	Southern Net
	09:00	3.700	Bch 10. Franklin.
	09:00	3.755	Bch 65. Papakura.
	16:00	7.125	SPAM Net (AM Mode)
	19:00	146.625	YL Net
	20:00	3.710	Bch 42. Titahi Bay
	21:30	3.595	Duran WIA Net.
	21:30	3.595	VK2WI
Monday	19:30	3.757	Bch 12. Hamilton
	20.00	3.540	CW Practice Net
updated	20:00	3.605	Br 80. Hibiscus Coast
updated	20:00	Nat System	W.A.R.O
	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	20:00	3.660	Geek Net
	20:00	3.645	Bch 02. Auckland
	20:00	3.745	Bch 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	Bch 89. REG
	20:30	3.696	ZL1OA
	20:30	3.666	LF Net ZL2CA
	20:00	3.690	ZL QRP SSB Net
Friday	20:00	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
	20:00	3.760	???
	20:30	3.600	Ch 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
	17:30	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

This is designed to be a living list, Please update whenever you are able:

Also: Calling Frequencies:	Daily	Sunset-Sunrise	3580 USB	NZ FSQCall
Courtesy of Murray ZL1BPU	Daily	Sunrise-Sunset	7105 USB	NZ FSQCall
	Daily	24/7	7104 USB	International FSQCall

I'm told the last of these sees some amazing DX, especially around sunset.

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

Elected Officers				
President	ZL1NUX	Gavin Denby	Ph 09 299 3415	021 1046946
Vice President	ZL1BNQ	Richard Gamble	Ph 09 5371238	021 729270
Secretary	ZL1AOX	Ian Ashley	Ph 09 2981810	021 1981810
Treasurer	ZL1MR	David Wilkins	Ph 09 2999346	021 1857903
Committee	ZL1RJS	Rob Stokes	Ph 09 2961152	021 307005
	ZL1IRC	Ian Clifford	Ph	021 8248400
	ZL1ASN	Rolly Adams	Ph 09 2966107	021 0427760
	ZL1DK	David Karrasch	Ph 09 296 8264	021 560180
	ZL1RIC	Ricky Hodge		021 666421
AREC Section Leader	ZL1BNQ	Richard Gamble	Ph 09 5371238	021 729270
CD Liaison	ZL1AOX	Ian Ashley	Ph 09 2981810	021 1981810
Newsletter Editor	ZL1NUX	Gavin Denby	Ph 09 299 3415	021 459 192
Hall Custodian	ZL1AOX	Ian Ashley	Ph 09 2981810	021 1981810
Newsletter.	Contact: zl1nux@outlook.com			

Our newsletter is published monthly and normally distributed just prior to the club meeting. Please forward articles etc to editor Wednesday 1 week prior to the general meeting. Do notify any change of address. Including E-Mail Address.

Meetings
General Meetings are held at the Club rooms on the 1st Wednesday of each month, starting at 7.30pm. 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 3rd Wednesday of each month at 7.30pm, unless advised.
Activity Nights are held on the 2nd Wednesday starting at 7.30pm.
AREC Meetings are on the 5th Wednesday night, also starting at 7.30pm
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
146.900 MHz Sunday at 8.30am. Controller ZL1NUX, Gavin Denby. If the repeater is not available, listen 146.475 simplex.
3.755 MHz Sunday at 9.00am. Controller ZL1BNQ Richard Gamble. (Linked to 146.675 & 438.775)