QUA FARC

OCTOBER 2021

Franklin Amateur Radio Club Inc NZART Branch 10

VOLUME 29 ISSUE 10

Committee
President: Gary Landon ZL1WGL
Vice President: Peter Henderson ZL1PJH
Secretary: Tom McDonald ZL1TO Ph. 09 238 8580
with: Mike Jane ZL1UOM, Ted Doell ZL1BQA, Durlene Griffin ZL1ULK, and Mike Lee ZL1MFL.
Examiners: Ian ZL1PZ, Tom ZL1TO.

Web page: www.qsl.net/zl1sa/

MEETINGS: The club meets on the third Tuesday each month, in the clubrooms, Stadium Drive Pukekohe, 7.30 pm. Visitors welcome.

The committee meets on the first Tuesday of each month (excepting January) at 7.30 pm in the clubrooms.
Subscriptions $20.00, family $30.00.

Nets every Sunday at 9.00 am on 3.700 MHz (controller ZL1UOM) and 9.30 am on the 146.900 MHz repeater (controller ZL1PZ). Other 2 metre frequencies are 145.775 MHz, 146.625 MHz, and 146.900 simplex if repeaters off air.

Newsletter: Editor Tom ZL1TO tom.mcdonald@xtra.co.nz
A copy is sent to members and clubs in the Auckland area. Sent free of obligation by e-mail to anyone interested.

Club Notice Board

General Meeting, Tuesday 19 October

A face to face meeting will not be permitted until we come down to Covid Level 2 restrictions.

Subsequently the October general meeting will start on the 690 repeater at 1930 hours. At 1945 hours we will change to a Zoom conference. The log in details will be sent to members and any others who wish to attend. The guest speaker will be Douglas ZL1BFS, on the topic of recent efforts with the KiwiSat project. The talk will terminate before 2030 hours, at which time a rag chew session will conclude the evening.

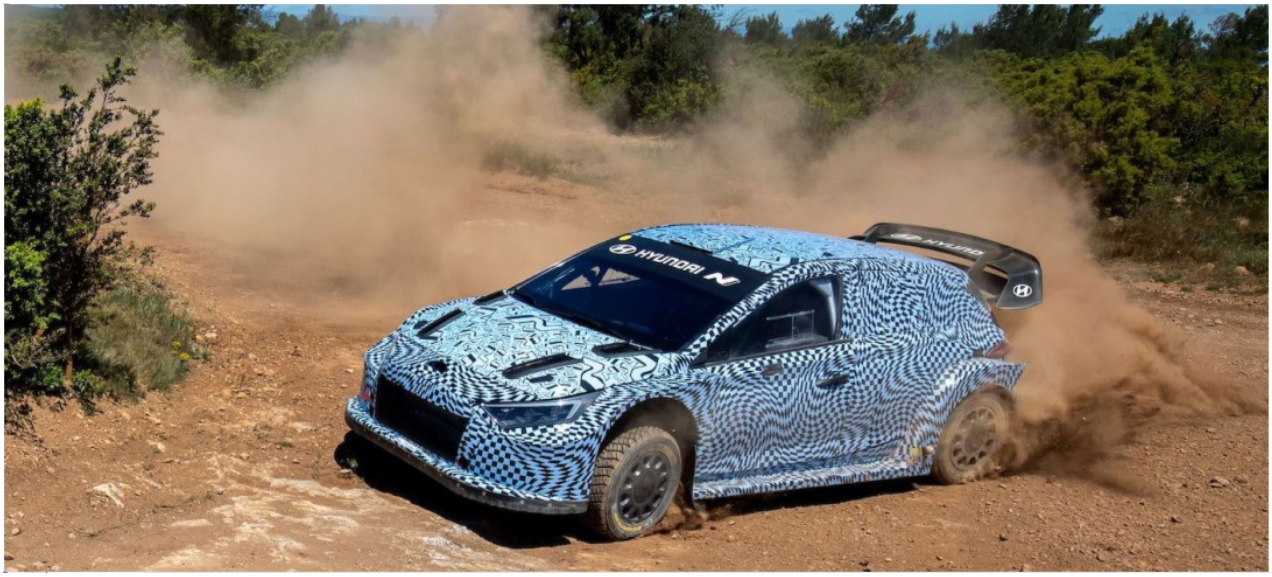
World Rally Championship enters hybrid era

Traditionally New Zealand amateurs have formed a large team to contribute safety communications for the World Rally Championships when they have been held in his country. Next year we might well be involved again.

New Zealand will make an exciting return to an enlarged FIA World Rally Championship in 2022 after the sport's first hybrid-era calendar was unveiled on Friday 15 October.

The North Island gravel roads near Auckland will feature for the first time since 2012 as the WRC celebrates its 50th season. New Zealand will stage round 11 of the year from 29 September to 2 October.

The season covers four continents – Europe, Africa, Asia and Australasia – as the pandemic eases and commercial rights owner WRC Promoter rebuilds towards its target of a 50-50 split between European and long-haul rounds.



At left

Hyundai i20 N, a Rally1 WRC entrant in the 2022 event

Next year brings some of the biggest and most far-reaching changes in the sport's history as the WRC enters a more sustainable age.

Exciting top-tier hybrid Rally1 cars will blend 100kW electric motors and the existing combustion engine, while a hydrocarbon-based fossil-free fuel will be 100 percent sustainable.

The calendar was approved at the FIA's World Motor Sport Council in Paris and will be a mix of classic fixtures and next year WRC will welcome the new hybrid era Rally1 cars, in part of a portfolio of regulations to drive the series towards a greener and more sustainable future. The organisers are delighted to welcome back New Zealand, a rally which first appeared in 1977. Its gravel roads are a driver's delight.

The pandemic Covid-19 sadly brought the globe to its knees but as the world recovers so, too, does the WRC.

Summarised from
https://www.wrc.com/en/news/2021/wrc/wrc-roars-into-hybrid-era-with-expanded-2022-calendar/

Minutes of Franklin Amateur Radio Club (Inc) General Meeting held by Zoom, 21 September 2021

President Gary ZL1WGL opened the meeting at 1930 hours.

Check ins on 690 repeater: ZL1WGL, ZL1TO, ZL1UOM, ZL1PJH, ZL1LL, ZL1BQA, ZL1PZ, ZL1BBZ

Apologies: David ZL1DW, Durlene ZL1ULK, Mike ZL1MFL Accepted ZL1WGL / ZL1UOM

Minutes of the August meeting. The report in August QUA was approved. ZL1BQA / ZL1TO

Correspondence:
Inward Newsletters from Branches 29, 65, 66, 80, 86, 90 as in September QUA. Branch 13/25. (September).
Outward Bob ZL1BBZ asked if the Secretary has changed the Club's listing in Yellow Pages community clubs section to show the start of our meetings as 7.30 pm. This is still on a to-do list! The correspondence report was received. ZL1TO / ZL1WGL

Finance:
Income: Sale of Eddystone $183.00 Components $25.00
Expenditure: Expenditure ratified Contact Energy $53.83 (paid 28 August)
The report was received. ZL1BQA / ZL1TO

Reports:

AREC. Tom ZL1TO reported Andy Brill has organized an exercise for the North Shore AREC people on Saturday 25 September. We are invited to join in. Those who have volunteered are ZL1TO and ZL1PJH and possibly ZL1BBZ. Field stations will produce answers to trivia questions and SARTrack capable stations will compile the results. Peter ZL1PJH reported that Andy has registered 11 field stations, plus 6 working SARTrack in his latest message. The exercise will use the 670 and 730 repeaters.

Ted ZL1BQA has been working on a 40 m project based on a Raspberry Pi and running 0.2 watt. Ted's signals have been confirmed from England, Scotland, Spain and all over Europe. He is now building a daughter board for 10 metres, and anticipates giving an explanation of how it works at the next face-to-face meeting.

Peter PJH reported on progress with morse training on the national system. Five operators have been checking in regularly with the speed now at 11 words per minute.

The meeting closed at 1950 hrs.

A Zoom conference immediately after was joined by ZL1WGL, ZL1TO, ZL1PJH, ZL1UOM, ZL1BQA, ZL1TZP, ZL1MFL, ZL1PZ, ZL1AQS, ZL1ERI and ZL1LL.

NZART

It's not them

It's us

Minutes of Franklin Amateur Radio Club (Inc) Committee Meeting held by Zoom, 5 October 2021

President Gary ZL1WGL opened the meeting at 1930 hours.

Check ins on 690 repeater: ZL1WGL, ZL1BQA, ZL1PJH, ZL1UOM

Apologies ZL1TO, ZL1MFL received. ZL1WGL / ZL1BQA

Minutes of the September meeting.
The report in QUA was approved. ZL1PJH / ZL1UOM

Correspondence:
Inward - October newsletters from Branches 13/25 (September) 29, 65, 86, 80, 89.
Outward -
The correspondence was received. ZL1WGL / ZL1PJH

Finance:
Income: -
Expenditure: ratified Contact Energy $55.00 (paid 4 October) This payment is based on an estimate by the Treasurer as the invoice has not yet been sighted. ZL1WGL/ ZL1PJH
Balance in Current Account at 5 October is $1831.48

Reports:
AREC: Andy Brill ZL1COP organized an exercise for volunteers to participate in from their home stations, from 1000 hours to midday Saturday 25 September. Field stations were set trivia questions. The questions and answers were compiled under SARTrack by six base stations. ZL1TO and ZL1PJH volunteered as field stations. The spreadsheet of logged messages has been circulated.

There will be a Teams meeting organized by AREC regional manager at 1930 hours on Thursday 7 October.

A survey of the training needs of AREC members has been circulated and all are encouraged to respond.

Peter ZL1PJH gave a short report on AREC activity. ZL1PJH and ZL1WGL took part in the survey.

General Business:
Ted ZL1BQA thought that we may not be able hold a face to face meeting before Christmas.

Peter ZL1PJH reported on the morse broadcasts.

Annual General Meeting – November. Ted ZL1BQA suggested that the Secretary should give early notice to the Registrar of Incorporated Societies if we are unable to hold a face to face AGM in November.

The meeting closed at 1950 hrs

Attendance on Zoom from 1947 hours: ZL1TO, ZL1MFL, ZL1PJH, ZL1UOM, ZL1BQA, ZL1WGL, ZL1PZ

Apology: ZL1ULK ZL1WGL / ZL1BQA

A general discussion took place.

The Zoom gathering closed at 2130 hours.

NEWSLETTERS FROM OTHER BRANCHES

03: Meetings disrupted by Covid lockdown. Wednesday online meetings on Google Meet. Used equipment sale 12 February 2022. Experience of Starlink intetet service from a Waitakere address out of cell phone range.

29: Dennis ZL1TAY silent key - obituary. Treasurer vacancy. October ham cram likely to be postponed.

65: Project and Activity nights on hold. Solar cycle 25 predictions. Windows11 launch imminent. Repairing electrical appliances - rules for homeowners who are unregisterded electricians. The history of mRNA research and applications. An end fed five band antenna. Invitation to AREC survey. SARTrack training when back at Covid Level 2.

80: Meetings to be by Zoom. 40th celebration at end of August had to be cancelled. RocketLab offer of launch for Kiwisat December 2021 - subsequently on hold. NZART represented at Natural and Built Environment Bill comittee hearing.

86: Cover photo - view from clubhouse toward Browns Island and Rangitoto Island. Jeff ZL1BIV silent key. SPAM SDR receiver continues to give good services. Tauranga Village Radio 1368 AM and some vintage broadcast transmitters. Possible meeting 10 October.

89: On air meeting 1 pm 9 October on Waikato repeaters. Working International Space Station - FM repeater, APRS, packet radio, SSTV, extravehicular activity. Ham shack of John ZL1ECG. Digital voice technical net.

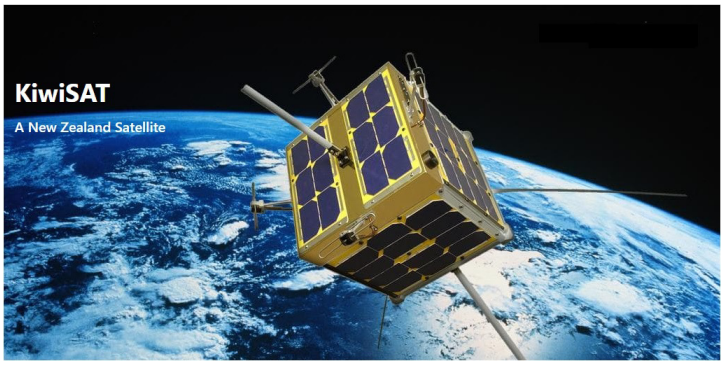
AREC SARTrack exercise

In the exercise on 25 September six base stations using the SARTrack software were deployed from their homes to record and pass on data that was accumulated from 13 field stations.

Field stations received messages in the form of questions which would take some research to answer. The answers were then radioed back on one of two VHF channels to the base operators.

While field stations may have been delayed finding their answers, some of the base stations, who were using SARTrack for the first time had the usual hold ups sorting out unexpected computer problems. In all 223 messages were logged on SARTrack over the two hour duration of the exercise.

It has been suggested that Franklin might like to organize a future exercise. Perhaps Franklin could organize an exercise to test the internal communications of AREC groups by way of callout given without advance notice? We would need to sort out things such as a telephone tree, and have radios in a state of readiness, with batteries fully charged so as to respond at short notice. It may well happen that Covid restrictions would require us to operate as individuals.



The design of KiwiSAT is based on the Microsat formula and is basically a system of trays clamped together in a box shape of 30 cm sides. Solar cells cover the exterior to charge the batteries.

KiwiSAT talk to be given by Douglas ZL1BFS

Our Zoom meeting on Tuesday 19 October, starting at 1945 hours will be addressed by Douglas ZL1BFS.

At the NZART annual general meeting earlier this year Douglas called for interest to get KiwiSAT saved from the skip, and launched to orbit.

A great deal of work has been done over the past couple of decades to design and build the satellite. The final challenge is to get the satellite launched into a low earth orbit.

For amateurs with just a passing interest the feature of greatest interest would be the transponder and repeater with a 70 cm uplink and 2 m downlink. KiwiSAT also has a camera and the ability to transfer digital files.

KiwiSAT includes two exciting science experiments: an Ionospheric Research Project that allows characterization of the ionosphere to improve the accuracy of Earth observations related to climate change and an Attitude Determination and Control Subsystem to refine the state of the art in small satellite control.

The ionospheric characteristics that require investigation are Total Electron Content (TEC) and Faraday Rotation.

To investigate these signal path characteristics, KiwiSAT will transmit two identical, phase locked, signals, one at 145.865 MHz with 1 Watt EIRP via an omni-directional circularly polarised antenna, the other on 437.425 MHz at 100 mW (+20 dBm). Both channels will carry telemetry at 9600 bps. Radio amateurs and satellite enthusiasts around the world will be able to participate in the generation and collection of data reporting the results via the web to a central point.

The Science ADAC (Attitude Determination And Control) package to be carried by KiwiSAT was significantly enhanced and advanced by support from Massey University.

Being an ongoing orbital experiment, much of the work cannot be implemented or verified until KiwiSAT is launched and has settled down in orbit.

Zoom meeting ID: 925 994 7329 Passcode: Satellite

This synopsis is based on material from the site
https://www.kiwisat.org.nz/

Morse Diary: Peter learns Morse code - Sending

Peter Henderson (ZL1PJH)

Friday 27 August 2021

At last night's 3545 kHz session, a new CW learner sent in his call sign. I sent the usual CQ at 8.30 but heard no reply. Then at 8.34 after I had broadcast a second CQ, a strong clear signal came back from Ben (ZL1BWG). Ben told me my 'sending is ok' and gave a signal report of '566'. I replied with my name and location. Then Ben keyed 'antenna is ….' and some word I could not copy. When I asked 'antenna is what?' I tried again to read his response but could not get a recognisable word to describe an antenna. I sent back 'cannot copy antenna'. Ben went on to thank me for the call and gave a 73 before signing off. Once I started the 3545 kHz sessions a couple of weeks ago, I kept them going in the hope there were other hams learning Morse out there who might want to take part. Jeff (ZL1TOU) joined the sessions one week ago. Now there is a third CW learner on our frequency. The advantage for me of a 'slow' session like this is we can get on with learning the CW protocols and abbreviations without irritating all those fast, experienced keys out there. It looks like this idea has some merit. For three of us, at least.

Ben's messages have given me another thought. If I cannot read some of his transmissions, perhaps because of spacing difficulties, then he may not be getting some of my messages for the same reason. To test out this idea, I need to find some way to assess my own transmissions. Am I leaving out importance pauses that separate one word from another? Or, could I be inserting pauses within Morse sounds so the listener cannot copy them? For example, the letter C which should be sent as dash-dot-dash-dot might be sent with a pause in the middle. It would then sound like two Ns (dash-dot dash-dot) rather than C. I need some method that will help me assess this.

Friday 3 September 2021

This evening another reply came to my CQ on the 'slow Morse' frequency of 3545 kHz. The contact was again ZL1BWG but his name is Bruce, not Ben as I had thought last week. He explained that he 'tried to call u a week back but was running 10 watts. Now am running 100.' His signal was certainly stronger than last week. He went on to say he knew Waiuku very well as he grew up in Papatoetoe but now lived in Whangarei. This has been the first CW QSO I have experienced where I understood more of the signal sent to me than I lost in translation. It was an such an enjoyable moment to see my pen write down the entire sentence 'We all started slow so don't worry abt (sic) it' translated from Bruce's transmission. I had been hoping to be able to do this since I first began with Morse and to have it happen at last gave such exquisite feelings of satisfaction and contentment.

I have given some thought to how I might monitor my own Morse transmissions to check I send recognisable code. If I can find Morse translator software for my computer, I might be able to send Morse to it and see letters and numbers displayed on screen as I send them. I should then be able to adjust my spacing and timing as I make the characters with the Morse key so the correct character shows on the computer display. If I sent an A for example, and it was spaced badly, it might show as an E and a T. On the other hand, if I sent the letter A with proper spacing, then I should see A on screen.

Sunday 12 September 2021

I downloaded CWGet to my PC and attached a microphone to a USB connection. I then switched on the Morse tone generator I made a couple of months ago and laid the headphone output from this generator next to a microphone. My first efforts indeed showed I needed to adjust timing and spacing for some letters. CWGet displayed my character speed at about 10 wpm and not the 20 wpm I wanted. My spacing also failed quite a bit. Letter F • • – • continually appeared as U • • – and E •. Likewise, the letter V • • • – appeared as three Es • • • and one T –. Letter C proved a tricky character to get right as it displayed correctly only 20% of the times I keyed it. However, I feel I must trust the software and I continued on these timing and spacing issues for forty five minutes this evening and will continue the work every few days to see if I can get more hits on the intended letter with my Morse key.

You can see CWGet displaying some of my efforts to get the timing right below. In this exercise, I try to key in the letter C – • – • . At first, the software records most of my attempts as one N sound – • followed by another N or as a combination of T – E • and N – •. But, as I continue to practice, I manage to improve my keying until the software shows a string of corrects hits.