QUA FARC

OCTOBER 2020

A Zoom meeting with show and tell

The general meeting on September 15 was held at a time when Auckland was still in Covid level 2. The formal business was dealt with in less than 15 minutes on our local repeater. Most members were able to go over to Zoom for a chin wag and shack visits. The novelty of this way of communicating extended the gathering by 1½ hours.

Topics covered included:

A TYT radio that senses over-voltage when on a car battery.

Screen sharing story of rabbits.

A tiny 10 W 12 V Software Defined Radio that performs on all amateur bands. Remarkable weak signal performance. Its Octopus card can process multiple spot frequencies simultaneously.

The Klondyke DStar repeater no longer connects to reflector 001C by default.

Comments on the regenerative receiver diagrams in QUA.

A Dick Smith set.

Events in various shacks.

Communicating via ISS

Club Notice Board

General meeting, Tuesday 20 October
The topic will be The Raspberry Pi, in a presentation by Steve ZL1TZP.

James Allan Rallysprint, Sunday 25 October
Franklin has five stations available for safety communications of this two stage rally in the Maramarua Forest. The organizers now need just 10 stations. With duties split between Papakura and Franklin amateurs the job will be well covered. David ZL1DK is organizer of the radio involvement.

Rally of Auckland, 14 November
Safety communications for stages at Kaipara, Puhoi and Riverhead are being provided by Auckland amateurs. Franklin is supplying one team. This rally has been organized to replace the International WRC event which has been cancelled on account of the pandemic.

Annual General Meeting, 17 November
Notice is given that the AGM will be held at the clubhouse, 19 Stadium Drive, beginning 1930 hours. Business includes receiving reports, and election of officers.

Anticlockwise from left – from the Zoom meeting:
Ted ZL1BQA with SDR radio; Mike ZL1UOM with the Dick Smith set; Peter ZL1PJH has problems with rabbits in the garden.

Minutes of Franklin Amateur Radio Club (Inc) General Meeting held on 690 repeater and then Zoom conference, 15 September 2020.

Chairman Mike ZL1UOM called for check ins at 1930 hours.

Attendance: ZL1UOM, ZL1PZ, ZL1BQA, ZL1DW, ZL1PJH, ZL1TZP, ZL1AQS, ZL1MFL, ZL1BBZ.

Apologies: ZL1WGL, and ZL1TO, ZL1LL (on Zoom link)

Minutes of the 18 August 2020 general meeting.
The minutes true and correct.   ZL1BQA / ZL1MFL

Correspondence:
Inward - Newsletters as listed in September QUA.
FMG asking for sign off of depreciated value of clubhouse.
From NZART Northern Councillor – with ideas arising from September QUA.
From Auckland Council Parks Administrator – offering to meet with committee.
From Auckland regional AREC. Meeting by Zoom 17 September.
Outward - Nil.
Mike ZL1UOM confirmed that all had read the detail of correspondence that had been circulated with the agenda of this meeting. Discussion to be deferred to the Zoom gathering which will follow.
Correspondence report received.   ZL1PJH / ZL1MFL

Finance:
Expenditure - $60.51 Contact bill for August has been reimbursed to Secretary.
Receipts - Nil.
The finance report was received.   ZL1BQA / ZL1PJH

Reports:
AREC: James Allan Memorial rallysprint at Maramarua on Sunday 25 October appears to be going ahead. Franklin are asked to supply 6 of the 12 stations required. Franklin have volunteered – ZL1ULK, ZL1PJH, ZL1MFL, ZL1BBZ, ZL1DW, ZL1TO and ZL1PZ. ZL1BBZ and ZL1DW will work as one station. Mike ZL1MFL reminded us to take a picnic lunch.

Any further volunteers for the Farmers Christmas Parade in the central city would be welcome. Date is 29 November or 6 December (rain day alternate). ZL1TO and ZL1LL have volunteered already.

General Business:
NZART Conference 2020 - The Secretary trusts that everyone has read the report that appeared in September Spectrum from the Auckland VHF Group. It is a full and accurate report. Ted ZL1BQA said the report had been well done.

Steve ZL1TZP will do a presentation on his Raspberry Pi projects at the October general meeting. The clubhouse will be open by 7.00 pm! There had been a duplication of the latest Raspberry Pi article in QUA.

The meeting closed at 1943 hrs

Minutes of Franklin Amateur Radio Club (Inc) Committee Meeting held in the Clubrooms Stadium Drive Pukekohe 6 October 2020

Chairman Mike ZL1UOM opened the meeting at 1930 hours.

Attendance: ZL1UOM, ZL1TO, ZL1BQA, ZL1PJH, ZL1WGL, ZL1ULK

Apology: ZL1DW Received   ZL1WGL / ZL1PJH

Forum: Greg Lowe, Parks Specialist with Auckland Council, was welcomed to the meeting at 1935 hrs and an exchange of ideas on the Club's situation at 19 Stadium Drive proceeded until 2029 hrs.
Key points: The Council is considering what to do with the 500 m^2 previously occupied on a temporary basis by the Opera Club. Likely to be additional amenities for the skate park, with a hard surface.
    Our Club sees the provision of a fence at our rear as Council responsibility, with health and safety implications for our members.
    Council sees the Radio Club as a key stakeholder.
    Pukekohe has a rapidly growing population, with attendant pressure on space.
After the discussion, the meeting asked the Secretary to write, thanking Greg for his visit and the sharing of thoughts. We wait with interest future progress.

Minutes of the 4 September 2020 committee meeting.
The minutes true and correct.   ZL1BQA / ZL1WGL

Correspondence:
Inward - Newsletters from Branches 3, 29, 65, 66, 80, 86.
With Greg Lowe re his visit to the club committee meeting 6 October.
From Franklin Local Board – letter relating to Auckland Annual Budget.
From David McNeill ZL1DW with thoughts on our needs regarding the clubhouse, and development of club activities to attract new, and younger members.
From Chris Stabler re Positive Ageing and request for comments on event 1 October 2021.
The meeting asked the Secretary to write saying we are interested in participating in another Positive Ageing Expo in 2021.
Outward - Nil.
Correspondence report received.   ZL1TO / ZL1WGL

Finance:
Expenditure - $48.76 Contact bill for September, paid.
Receipts - Gary ZL1WGL reported how he had sold the scrap metal accumulated some years ago at working bees in a power station control room. This had yielded $900.00
The finance report was received.   ZL1BQA / ZL1TO

Reports:
AREC: James Allan Memorial rallysprint 25 October, all go.
Rally of Auckland, 14 November. ZL1PJH and ZL1BBZ.
Farmers Parade, 29 November, ZL1TO and ZL1LL.

General Business:
Steve ZL1TZP will speak on Raspberry Pi, 20 October.

The Secretary is to investigate need for a Covid QR code.

The meeting closed at 2010 hrs

NEWSLETTERS FROM OTHER BRANCHES

03. (September) Taranaki sale postponed to March 2021. Westurn Suburbs used equipment sale Rosebank school hall 7 November. Robert Houison to speak on low power FM community radio 26 September. Steve Sapich ZL1SB silent key. JOTA 17/18 October. Reprint of Wanganui Amateur Radio Club diamond jubilee 2006 - early experiments 1914 - Radiotron 5W transmitting valves.

03. (October) Show and tell 17 October. Low power FM community radio on 87.8 88.3 107.3 and 107.8 MHz. Christmas dinner at New Lynn RSA. Used equipment sale 7 November. JOTA 17-18 October at Griffin Park, Camp Sladden and Hunua Falls Camp.

29: Paul ZL1GW to do presentation on 3D printing 5 October. AGM 7 November. Transition from Radio Teletype to the Accordian.

65: Meetings and project nights back to normal for October. AGM 4 November. Emirates Mars mission. Computer passwords. CyberSmart week. Learning the Linux operating system. Event horizon snapshot of M87 black hole. An accoustic thermometer. Microrobots that grow nerve connections. QRP frequency 3.690 MHz. Planning Christmas Dinner with Franklin.

66: Cover - building handrail at clubhouse. Soren ZL1SKL speaking on radio technology at Kiwirail 12 October. Klondyke working bee for cable maintenance on tower. Email reflector aucklandvhf@googlegroups.com Review of show and tell with topics 23 cm transverter, mast trailer, digital clock, IC705, satellite tracking hardware, 2m/70cm antenna of copper tape, 250W dummy load. Shakeout drill 15 October. Trading table online https://aucklandvhf.org/ .

80: Earth Station progress. Address on AREC developments by Andy ZL1COP. AMSAT-ZL and Kiwisat.

86: Two pass exam. Progress on T98 restoration and Dansk transmitter. Amateur radio in space. Old timer Jean Moffatt VE3OSC and students contact astronaut KF5KDP on ISS.

Franklin Amateur Radio Club - Annual General Meeting

The meeting will be held at the Clubhouse, 19 Stadium Drive, Pukekohe; 1930 hours on Tuesday 17 November.

Nominations for office, signed by Nominator, Seconder and Nominee should be in the hands of the Secretary at least 14 days before the meeting. Where insufficient nominations are received, nominations will be accepted from the floor of the meeting.

Reports for publication in QUA should be with the Editor by Friday 13 November.

Project evenings

The committee was asked at the October meeting what we could do to better meet the needs of members. An idea that gained some traction was that we might have one or two practical nights each month, given over to on air activity, or project nights which were pitched at problem solving, sharing many brains.

What do you think of:

Setting up a model station in the clubhouse shack.

Getting radio related programs running on member's computers.

Building from kits.

Mars in opposition

Our nearest neighbour in the solar system, and the planet most likely to have human visitors in the future is Mars. Presently the Sun, Earth and Mars are in line, with us in the middle. This situation repeats itself in 26 months since Mars takes a little over two years for an orbit of the sun, compared to our one year orbit. The red planet is visible in a small telescope as a disc, rising shortly after sunset.

In July-August several missions were launched for Mars to take advantage of Mar's proximity. These include the Chinese *Tianwen-1* (which is carrying a rover) and United Arab Emirates' *Hope* Probe. NASA's *Perseverance* rover is also on its way, and a small helicopter named *Ingenuity* is planned to go flying in the thin Mars atmosphere.

Refer to https://edition.cnn.com/2020/07/27/world/mars-mission-launches-summer-2020-scn/index.html

Raspberry Pi   Part 5

The Raspberry Pi can be used for HF.

To answer the question from last month.

That question was: Are Raspberry Pi's only useful for DV modes?

The answer: No. The Raspberry Pi is a small computer, so can be used for anything that you use your current computer for. And that includes using it in conjunction with your HF rig.

I have a Raspberry Pi 4 B set up for Digital modes on HF. Fldigi, Flrig, wsjtx and JS8call are all installed and run comfortably.

Most modern HF rigs have a USB port, which means they can be plugged into any computer including the Pi, for control of the rig and the transfer of audio signals for decoding. This is by far the easiest.

Another method to connect a rig without a USB port to a computer is via either a commercially available interface or a home brew interface, these will use the speaker, microphone and PTT lines from the rig.

I run this Raspberry Pi headless, that is, it does not have a display, keyboard or mouse connected to it. The only connections I have to this Raspberry Pi are power, network (wired, could be WiFi if you prefer) and the USB cable to the rig. VNC (Virtual Network Computing) server software is running on it, allowing the Raspberry Pi to be accessed and controlled remotely using VNC client software.
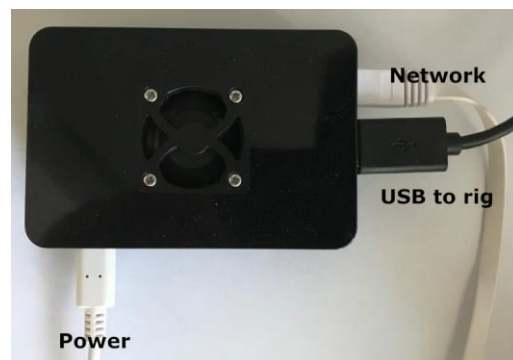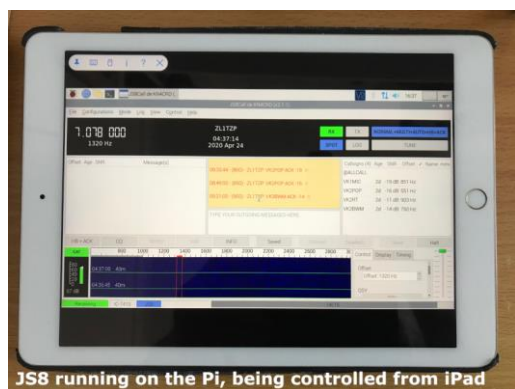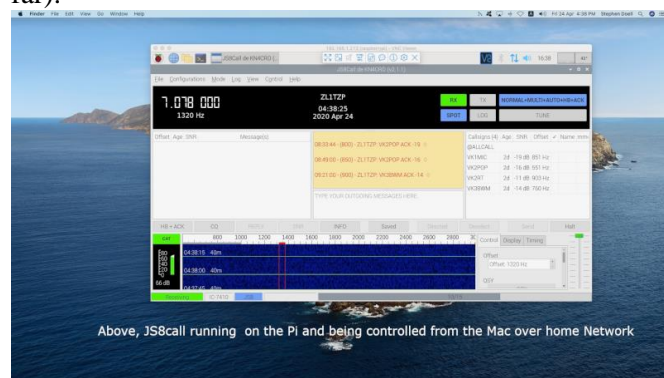

Figure 1: Pi in it's case and running

I can and do run any program (including the above mentioned Ham radio software) installed on this Raspberry Pi from any other computer or tablet within my home. With further network setup it would be possible to run the software from anywhere in the world where there is Internet connection (I haven't gone that far).

Above, JS8call running on the Pi and being controlled from the Mac over home Network

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JS8 running on the Pi, being controlled from iPad

This setup has proved to be effective, easy to use and reliable.

Until now I have looked at using the Raspberry Pi for Digital modes. Time to look at analog.

There are, as you may well be aware a number of commercial software packages made by transceiver manufacturers and independent software developers for remote operation of the rig. They are Windows based, which unfortunately doesn't work for me.

Sometime, when time allows a project for the future would be to remotely operate the HF rig for analog voice communication using the Raspberry Pi. There is a commercial solution, it is the 'RigPi Station Server' and sold as a fully built up system by MFJ, model MFJ-1234.

What else can you use the Pi for? A quick search of the Internet will reveal a large selection of free software that will run on the Raspberry pi.

Some of the more common examples are;
Fldigi, wsjtx and JS8call (Digital modes)
Flrig (Rig control)
Chirp (Radio programming)
Gpredict (Satellite tracking)
Klog (one of the many Logging packages)
FreeDV (Digital Voice on analog radio)
the list goes on.

From this short series I hope to have given an insight into what the Raspberry Pi can do, and maybe generated some interest in this small yet powerful computer.

Now it's up to you, what can you do with the Raspberry Pi?

Steve ZL1TZP

NZART
It's not them
It's us