QUA FARC

MAY 2020

Franklin Amateur Radio Club Inc NZART Branch 10

VOLUME 28 ISSUE 5

Committee
President: Mike Jane ZL1UOM
Vice President: Gary Landon ZL1WGL
Secretary: Tom McDonald ZL1TO Ph. 09 238 858
with: Ted Doell ZL1BQA, Durlene Griffin ZL1ULK, Peter Henderson ZL1PJH and David McNeill ZL1DW.
Club examiners: Ian ZL1PZ and 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). 2 metre frequencies are 145.775 MHz, then 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.

A show and tell on Zoom

The committee met in a Zoom videoconference on Tuesday 5 May. At the end, as is usual, the conversation turned to the projects that have engaged members.

Peter ZL1PJH illustrated his story of building a regenerative receiver, and an FM receiver by holding up the finished products to the camera.

Club Notice Board

General meeting, Tuesday 19 May

The face to face meeting, under Level 2 conditions, will be limited to a maximum of 10 members. Normal meetings can resume when we can meet the physical distancing and assembly rules relating to groups of our age group at the time.

Members are encouraged to come up on the 2 m repeater at Bombay (690) or Ponga Hill (6825). We may transfer to Zoom afterward.

Welfare net

Throughout the Covid-19 lockdown a daily (except Sunday) welfare net is being held on a southern 2 m repeater. To date we have used the Bombay 690 repeater. The 146.825 MHz short term purpose repeater, located on Ponga Road, Papakura is also available. Check in starts at 8.30 am

Franklin Junk Sale

The committee decided that the sale for 2020 should be cancelled. It is very unlikely that groups of the size that cram into the clubhouse for the sale will be permitted until a vaccination for COVID-19 is available.

A further decision can be made when circumstances allow.

Hawkes Bay Targa in July

In a sign of confidence, the Targa Hawkes Bay car rally is being scheduled to run on the 4 & 5 th July. This is still subject to how well people adhere to the social distancing rules.

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Minutes of Franklin Amateur Radio Club (Inc) General Meeting held as a Zoom conference, 21 April 2020.

President Mike ZL1UOM called for members to check in at 1930 hours.

Attendance: ZL1UOM, ZL1TO, ZL1BQA, ZL1TZP, ZL1PZ, ZL1WGL ZL1PJH, ZL1WGL, ZL1LL, ZL1AQS, ZL1RP; ZL1BBZ, ZL1MFL on 2 m

Apologies: ZL1GAC, ZL1ULK

The minutes of the March meeting circulated by email and published in abbreviated form in March QUA were approved as true and correct. ZL1BQA / ZL1WGL

Correspondence:
Newsletters from branches 02, 03, 65, 66, 80, 86 as described in April QUA.
IRD – tax return form.
Backyards on the Air (BYOTA) again on 25 April
Infoline Issue 409 21 April – WARO in recess, Office Assistant sought, ZL2AL activity marathon, no exams during lock-down, BYOTA.

Bob ZL1BBZ has asked for a list of club members and their phone numbers.

The report on correspondence received. ZL1BQA / ZL1UOM

Finance
Expenditure: Recent payments are described in April QUA. The paint job accounts for the dip in the cheque account. Ted ZL1BQA explained that finance was discussed at the committee meeting.

Odds are that we will not have a junk sale, so the cheque account will need to be topped up to pay insurance by breaking a small part of the term deposit at about November.

The finance report was received. ZL1TO / ZL1BQA

Reports:

Peter ZL1PJH asked if there had been anything from Auckland Council regarding the deputation to the Local Board. Tom ZL1TO reported there had been nothing either in writing or verbal.

Peter ZL1PJH reported that the morse training each night on 3.755 MHz has been very successful.

Tom ZL1TO reported there has been little happening on the AREC front. There had been a section leaders net, 20 April.

General business:
Peter ZL1PJH advised that there will be another BYOTA this coming Saturday. It is free for all.

The meeting closed at 1946 hours.

Minutes of Franklin Amateur Radio Club (Inc) Committee Meeting held as a Zoom teleconference on 5 May 2020.

Chairman Mike ZL1UOM opened the meeting on Zoom, at 1935 hours, following initial contact on 690 Bombay.

Attendance: ZL1UOM, ZL1TO, ZL1BQA, ZL1WGL ZL1PJH, ZL1PZ

Apology: ZL1ULK

Minutes of the April meeting circulated by email and published in abbreviated form in April QUA were approved as true and correct. ZL1BQA / ZL1PJH

Correspondence:
Newsletters from Branches 29, 65, 80.
A list of club members with phone numbers has been supplied to Bob ZL1BBZ. The list will not be circulated further until corrections are made and permission given by those named.
Report on correspondence was received. ZL1TO / ZL1PJH

Finance.
No expenditure this month. Reimbursement for power bills paid will be required after lockdown.
Current power bill $46.03 for zero units.
Water an estimated reading, but still leaves us in credit.
The finance report was received. ZL1TO / ZL1UOM

Reports
Nothing received from Auckland Council on lease or fence.

No AREC activity – the 146.825 MHz STSP repeater is running through the Covid-19 emergency.

Mike ZL1UOM reported that the 6825 repeater which had been transmitting continuously earlier this morning is now working properly. A nearby beacon and transponder had been making an interfering signal.

Gary ZL1WGL had driven past the clubhouse earlier today. The skate park is not being used, with no-one nearby today.

The reports were received. ZL1TO / ZL1BQA

General business:
The options for a junk sale were discussed. We can reassess a junk sale at a later date.
We are to have no junk sale this year. ZL1BQA / ZL1PJH

Future club meetings:
The options will vary depending on whether we meet on air or at the clubhouse. There is likely to be sufficient space in the clubhouse, with sanitizer available and suitable spacing between individuals for club meetings of our usual size.

Topics to consider:

Mike ZL1UOM suggested a TV show that aired on ANZAC day, regarding Pacific native radio operators.

Peter ZL1PHH suggested that he would like to hear about QRP operations, including Ted's experience with the 5 watt UBix transceiver. The UBix requires a resonant antenna.

Gary ZL1WGL advised that the previous W5KUB balloon came down in China. The ninth balloon launches tomorrow.

The meeting closed at 2013 hours.

NEWSLETTERS FROM OTHER BRANCHES

29. General meetings in video format, under Covid-19 restrictions. Stan Gurr ZL1TSG silent key. Welfare checks daily 12:30 pm on 670 repeater. Nostalgia items - John ZL1TDY rail mobile 1976; Tiritirimatangi Lighthouse 2003 and 2004.

65. On-air meetings 146.825 MHz. Sun not as magnetically active as others of its kind. A star that precesses around Milky Way central black hole. A mathematical model for cooking steak; another for stir fry. Using weather satellites. Covid-19 lockdown stories.

80. Main communication source is: https://www.facebook.com/ZL1HCR/
New 80 m net 3.605 MHz 8pm Mondays. News from Tony Watson ZL1BHU. On-line Schooling. Stan Gurr ZL1TSG Silent Key. A trailer recall? Raglan Branch 83 has commissioned a Yaesu Fusion DX2 repeater on 439.450 MHz operating in "Auto" mode; also D Star on 145.350MHz, and DMR on 439.425MHz.

66. Meeting online using Microsoft Teams, Monday 11th May at 7:30pm. Guest speaker not available to do the presentation. May Spectrum has also been delayed, and will be sent when received.

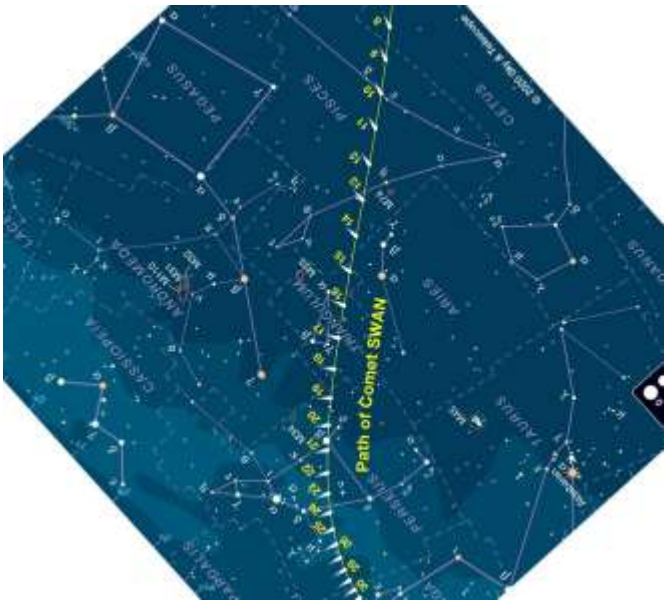
Poets Corner

There was a young lady named Bright
Whose speed was far faster than light;
She set out one day
in a relative way
And returned on the previous night.

Was Comet SWAN a fizzer?

We were tempted by a couple of astronomical spectacles for early May. The first is the annual Eta Aquiriid meteor shower due to earth passing through a field of fragments which owe their existence to comet Halley. The second was the approach of a new comet, discovered when an amateur in Australia, trawled through images taken by the SWAN satellite camera.

At right is a star chart published by *Sky and Telescope* showing the calculated path of Comet Swan through the month of May, as it makes a close approach to the sun around 27 May. Notice how the tail, streaming away from the sun, indicates the sun is in the constellation Taurus.



The lower picture is a screen grab from the planisphere program *Stellarium* (available for free download). You can see that the comet is barely 10° above the horizon in a north easterly direction as morning twilight begins at today's date, 11 May.

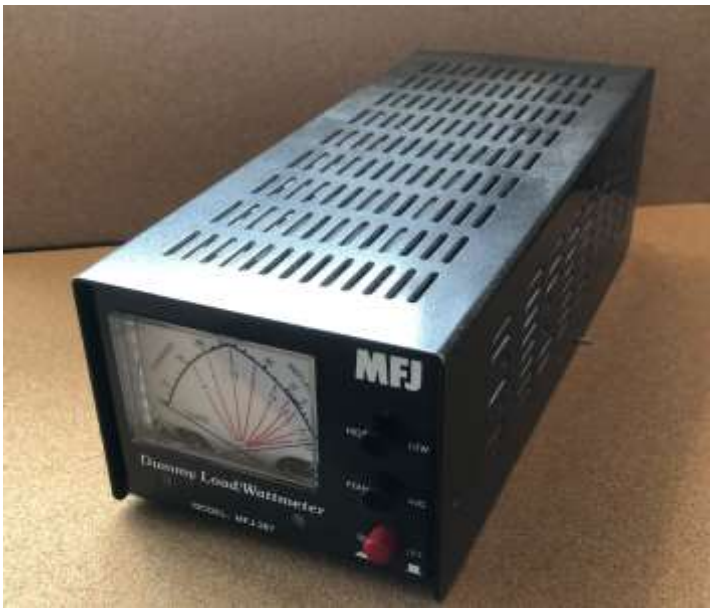
Now, the other piece of gear to be readied was the camera. I would not be using a telescope.

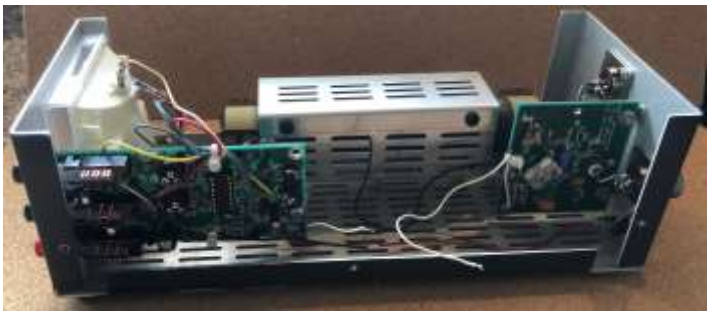
I did not have a tripod in lockdown with me, so I improvised by resting the camera on a bean bag, of oats, deformed to hold the camera pointing in the right direction. I used a ten second delay followed by 15 second exposure at the widest aperture available. The camera, a Canon Powershot SX280HS will not take time exposures at a faster ISO rating than 80 so I had to use an image manipulator, *Gimp*, to increase contrast and exposure. I practiced taking shots of the Southern Cross, but never had weather conditions suitable for the comet. [Editor]

On the work bench

Ted ZL1BQA

Approximately 12 months ago I obtained a MFJ-267 Dummy Load/Wattmeter, it was in a non-operational condition. The Covid-19 lockdown gave me time to put it on the bench and have a look at it. I searched the internet for a circuit so I could work out how it operated, all searches came up with no circuit diagram being available for **that** model. I mentioned it on the welfare net and John ZL1BYZ mentioned that he had the circuit of his MFJ-9982 which he sent me along with some photos and yes the modules and circuit were the same.

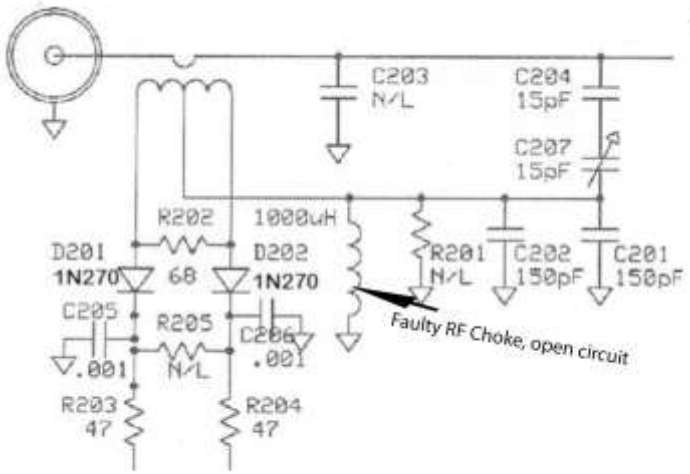




Testing I cut the output wires from the sensor unit to the meter board, applying a low voltage on the input to the meter unit proved that that part was operational. Connecting up output from my transceiver 50watts AM I found there was no output from the sensor unit going to the meter unit. Removed the sensor unit and a visual inspection showed no obvious fault, looking at the circuit and checking the diodes, sensor coil and RF choke showed the RF choke was open circuit, removed it and fitted a replacement and tested. Why is the RF coke there? The RF choke holds a relatively high impedance mid point of the capacitive divider to DC ground, necessary because the diode rectifying circuits are also referenced to ground.

Why did the component fail? I suspect no load or antenna on the output raising rf voltages around the sensor. The MFJ-267 had a switch to change from antenna to dummy load, when I went to change to dummy load the switch (which was of very poor design) failed to change over and partially fell apart. I have removed the switch and fitted an additional SO259 for the Dummy load. Replaced faulty dial lamp with an LED.

MFJ-267 0-60 MHz, 300/3000 W, 1500 W Dummy Load.



Straight Key Night
winter edition on Sunday 14 June

The winter edition of New Zealand Straight Key Night will take place 8-9pm on Sunday 14 June.

As usual, this casual contest will be held on 80 metres, and operators must use a straight key (no bugs, paddles or sideswipers). We'll use the traditional SKN exchange, which includes type of key and type of transmitter.

But this time there will be an extra challenge: the QSY Rule <maritimeradio.org/resources/new-zealand-straight-key-night/the-qsy-rule/>, and I strongly urge you to get familiar with it. If you don't, well, I think it will be a bit like driving on the wrong side of the road and wondering why everyone's tooting their horn!

Find out more about SKN, including the QSY Rule, at maritimeradio.org/skn

I hope to work you on 14 June! Please feel free to contact me with any questions.

Neil Sanderson ZL1NZ

SKN Manager <neil@zl1.nz>

Raspberry Pi

Steve ZL1TZP

The Raspberry Pi, a mini computer about the size of a small modern handheld transceiver that runs the Linux Operating System. It has a large following that has made it very popular amongst experimenters including Hams.

Figure 1 Raspberry Pi

I have been running a Raspberry Pi in some form or another for a number of years now. My start with them was a casual interest into what was then something new. I have found the Pi to be an asset to the Ham radio hobby.

My first Ham radio project to use a Raspberry Pi was for use with D-Star

What is D-Star?

Simply, it can be thought of as one of many Digital Voice (DV) modes that compliment other analogue modes such as AM, SSB and FM. D-Star stands for "Digital Smart Technology for Amateur Radio" which was developed by the Japanese Amateur Radio League. One of the advantages of DV modes is that they use less bandwidth than analogue modes.

DV modes use the same methods to communicate as do analog modes do, that is direct (ie simplex) and through repeaters. New Zealand has a network of repeaters (the National System) that are connected together. Using the National System someone in Auckland can have a QSO with someone else just about anywhere in the country.

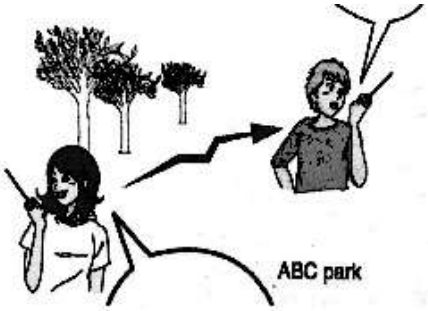


Figure 2
Simplex

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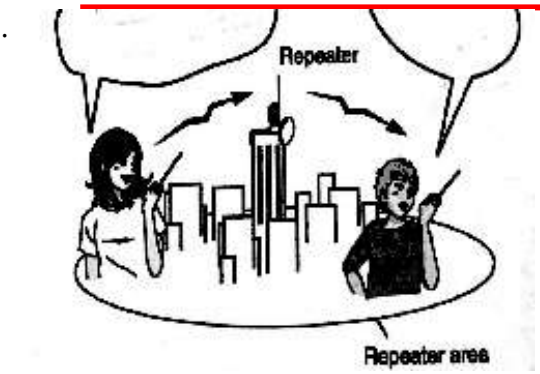
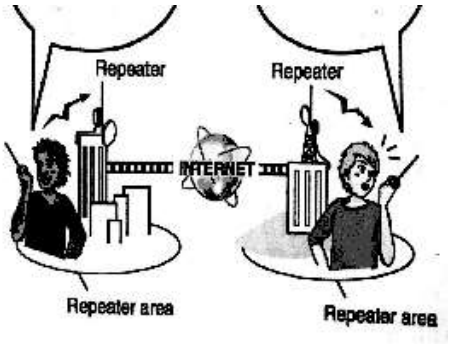


Figure 3
Repeater

What if we were to extend that so someone in Auckland can have a QSO with someone else anywhere in the world using a hand held Transceiver. This is what we can do using D-Star, as many D-Star repeaters connect to the internet.



What if you cannot access a repeater from your QTH?

This is where the Raspberry Pi comes in. Using the Raspberry Pi, a Transceiver and the appropriate software a personal repeater called a Hotspot can be quite easily built.

Next month I will continue this discussion.

Sangster Shield Contest – May 2020

The 2020 NZART Sangster Shield Contest is to be held Saturday 16th and Sunday 17th May 2000 – 2300hrs NZST each evening.

Rules for this year are unchanged since those published in the 2016 April/May Break In and as per the current NZART website under Activities – Contests.

80 metres CW only for entrants with power output up to 5 watts pep.

Note that the Transistor Trophy entry criteria allows first time Sangster entrants, rather than just newly licensed operators.

Remember that there are 6 HALF hour operating periods EACH evening.
i.e. 20:00–20:30; 20:30–21:00 etc.

Use the Branch Number of your location regardless of whether this is currently active or in recess.

Operating just one night is also fine as we would all prefer to have as many on the air as possible.

73s and hope to work you in the contest

– Glenn ZL2KZ