



Franklin Amateur Radio Club Inc NZART Branch 10

President: Mike Jane ZL1UOM
 Vice President: Gary Landon ZL1WGL
 Secretary: Tom McDonald ZL1TO Ph. 09 238 8580.
 25 John St, Pukekohe 2120 E-mail zl1to@nzart.org.nz
 Committee: Ted Doell ZL1BQA, Durlene Griffin ZL1ULK
 Club examiners: Ian ZL1PZ and Tom ZL1TO.

Web page: www.qsl.net/zl1sa/

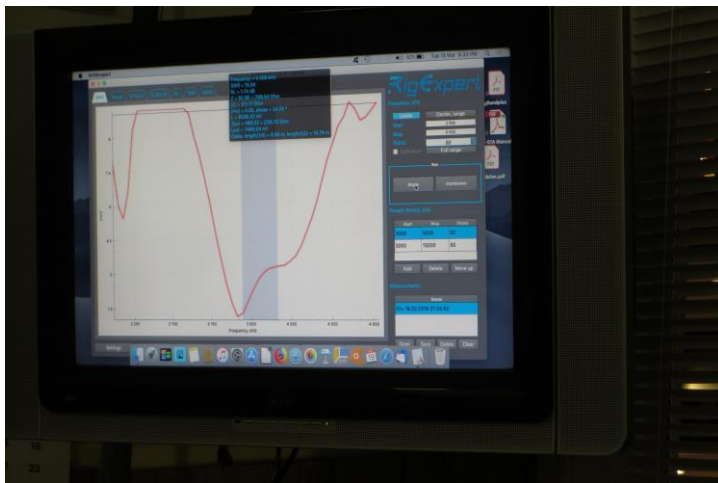
MEETINGS: The club meets on the third Tuesday each month, in the clubrooms, Stadium Drive Pukekohe at 7.30 pm. Visitors welcome.

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 and 9.30 am on the 146.900 MHz repeater. 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.

Analysing an AREC dipole



Club Notice Board

General meeting, Tuesday 16 April

The general meeting for April will conclude with a discussion, and hopefully some demonstrations titled 'Cooking with Microwaves' led by Ted ZL1BQA, Mike ZL1UOM and Tom ZL1TO.

Car Club Rally sprint Sunday 26 May

We have been invited to put up four stations for safety communications for this South Auckland Car Club event. Members who can assist should contact our AREC section leaders or David Karasch ZL1DK who is organizing the amateur radio contribution.





Minutes of Franklin Amateur Radio Club (Inc) General Meeting held in the Clubrooms Stadium Drive Pukekohe on 19 March 2019.

Chairman Mike ZL1UOM opened the meeting at 1944 hours.

Attendance: ZL1UOM, ZL1TO, ZL1PZ, ZL1PJH, ZL1TCL, ZL1GAC, ZL1TZP, ZL1BQA, ZL1WGL, ZL1ULK, ZL1LL, David McNeill

Minutes: The minutes of the February meeting were approved as a true record. ZL1BQA / ZL1TO

Correspondence:

Inward: Newsletters from Branches 12, 13/26, 29, 65, 80, 86 for March, as in QUA plus Branch 66.

Emails from Coral Timmins, setting up then canceling meeting for 28 February. A meeting did proceed as a result of the fire that started early afternoon of 28 February.

Email from Zena advertising a contest.

Report on correspondence received ZL1TO / ZL1WGL

Finance.

Balances at 25 February. Current a/c \$2177.44 Achiever Savings \$371.67 Term deposit \$21000.

The finance report was received and approved.

ZL1TO / ZL1BQA

Reports

Field Days: Reported in QUA. Log sheets were posted to Stuart Watchman earlier today and are available in scanned form. Thanks to Gary ZL1WGL for use of the venue. Gary felt this had been a very beneficial exercise for the club.



Minutes of Franklin Amateur Radio Club (Inc) Committee Meeting held in the Clubrooms Stadium Drive Pukekohe on 2 April 2019

Chairman Mike ZL1UOM opened the meeting at 1932 hours.

Attendance: ZL1UOM, ZL1TO, ZL1BQA, ZL1WGL.

Apology: ZL1ULK, accepted ZL1WGL / ZL1BQA

Minutes:

The minutes of the March meeting were approved as a true record. ZL1TO / ZL1BQA

Correspondence

Inward: Newsletters from Branches 03 (March), 65, 86 FMG newsletter

IRD form – to be completed and returned, with the Secretary to apply for an exemption of filing a return.

Noted that the annual return to Incorporated Societies has been accepted and is now posted on the web.

Report on correspondence received

Finance:

Payments: Reimbursement for payment of Firewatch and Contact Energy bills. totaling \$185.34 to T McDonald Contact Energy due 3 April \$45.66

Receipts: \$20 for a cash sale tonight.

The accounts are to be paid ZL1WGL / ZL1BQA

What do we do for a 40m antenna, in view of the poor communication with nearby stations for much of the day? Ted ZL1BQA said that a switchable ¼ wave vertical for the short range stations might be the answer.

AREC: ZL1ULK reported. Four operators (ZL1ULK, ZL1PZ, ZL1BBZ, ZL1PJH) attended the Bombay Fun Run on 17 March. Started 8 am for 4 events, with distances up to ½ marathon. All went well. There was less trouble picking up colours on the bibs this year. Bibs were plastic-like with colours in bands, easily visible at a distance. This year bibs were numbered with 100 per group and no duplicated numbers. There were no problems. Runners were identified over a loud speaker using information from radio operators at the gate as they came home for the last 100 metres. Ian ZL1PZ reported that he had very little to do – but got stung by a wasp! There were 195 competitors. This event has been done every year since the 150 year anniversary.

The St Patrick Parade in Auckland was cancelled.

Fire at Pukekohe Performing Arts: The garage has been removed as reported in QUA.

General business

ZL1PZ mentioned that the clubhouse needs painting – particularly on the northern side. Mike ZL1WGL would like to do the roof using a terrestrial line for safety. There is less risk on a low pitched roof like ours, and when more than 1.5 m from the edge. Paint brushes in action within the next month is recommended.

The meeting closed at 2024 hours

Three cheque cosignatories need to visit BNZ to complete the anti money laundering requirements.

In future the power bill will be paid on a cheque made out to Contact Energy and with one cosignatory having presigned the cheque.

Finance report received and approved. ZL1TO / ZL1BQA

Reports

AREC: Nil

General business

ZL1PZ reminded us at the March general meeting that the clubhouse needs painting – particularly on the northern side. ZL1TO will wash and spray the walls with 'spray and walk away'. ZL1UOM will do the roof.

Topic at next club nights:

April: It was agreed the session on aerials went well last month. Ted ZL1BQA will do something on the magnetic loop antenna once he has completed his project to build one. Agreed that the April meeting topic will be 'cooking with microwaves' with contributions from ZL1UOM, ZL1TO and ZL1BQA.

May: NZART remit night

June: To be decided

July: Do we keep going with the junk sale? (The Paengaroa sale had plenty of vendors, but some did not even recoup their fee for table space) Agreed to have a junk sale, noting there are still some offerings from ZL1TDH that did not reach last year's sale.

The meeting closed at 2140 hours

NEWSLETTERS FROM OTHER BRANCHES

03. March. Talk on brewing beer by Ian ZL1BYI. AGM 27 April. Regional AREC heard talk by Nigel ZL2SEA regarding Winlink.

29. Marcelo gave demonstration of FT8. Jumbo Challenges 17 April and 2 October. SAREX at Riverhead used SARTRACK – article by Malcolm ZL1MIT. Community Resilience Group (CRG) – an introductory letter by Andy ZL1COP.

65. Purchasing Bushcraft antenna for clubroom. Magnetic loop projects back on agenda. Radio Electronics Group sale 18 May. Use the NATO phonetic alphabet. Bombay Settler's fun run report. The horse fence antenna.

66. The El Transistor vineyard. Jim Hefkey ZL1LJH speaking on Auckland Programme for Space Systems on 8 April. Radio class first three Sundays of April. March talk on military intelligence. Major repair work on Klondyke tower completed 23 March with sand blasting and repaint next summer. Threat to amateur moonbounce with coming 'Lunar Orbital Platform and Gateway' in an L2-halo orbit. Klondyke fund now at \$45000.

86. Junk sale cancelled. A wartime receiver made during time of wartime parts shortage. \$2250 fine for radio on Whangarei police channels.

3 Projects in Space

Undergraduate students at Auckland University are working toward launching a low orbit CubeSat. The task chosen from a multitude offered by the students in 2017 was to remotely sense signs of imminent earthquakes. Jim Hefkey gave an interesting talk to the VHF Group on 8 April.

NASA's 'Lunar Orbital Platform and Gateway' would be in a similar orbit to the Webb telescope. The L2 orbit is one of the five orbits where sun and earth or earth and moon gravity effects are neutral. The platform is envisaged to be a staging point for further lunar exploration and preparation for a Mars mission. The project has some well informed detractors.

Radio Electronics Group

Annual Sale 18 May

Further detail will appear in May QUA.

NZART Conference 2019

This is a reminder to all members of the NZART conference and AGM in New Plymouth this Queens Birthday Weekend May 31 - 2nd June.

The easiest way to register is by logging in to <https://conference.zl2ab.com/>

There are two remits to the 2019 Conference. Franklin will discuss remits, and our position at the May general meeting.

The Black Hole in M87

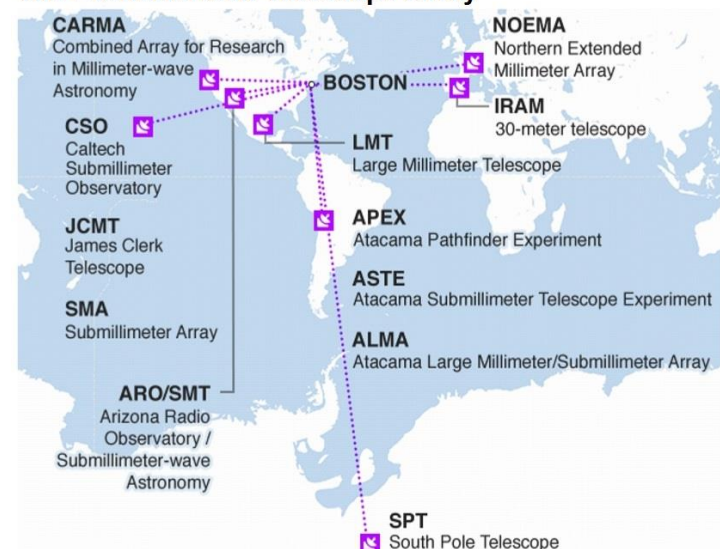
Astronomers have taken the first ever image of a black hole, which is located in a distant galaxy. It was captured by the Event Horizon Telescope (EHT), a network of eight linked radio telescopes.

It is larger than the size of our entire Solar System, and has a mass 6.5 billion times that of the Sun.

- A black hole is a region of space from which nothing, not even light, can escape
- There is a region of space beyond the black hole called the event horizon.

From <https://www.bbc.com/news/science-environment-47873592>

The Event Horizon Telescope Array

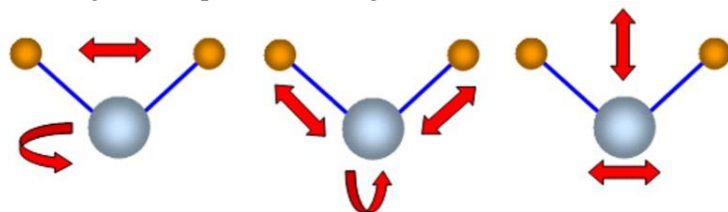


The eventual EHT will have 12 widely spaced participating radio facilities

BBC

Water

Here is some data that you may find useful at Tuesday's meeting. The topic is 'Cooking with microwaves'.



Thermodynamic properties of water:

Boiling temperature (at 101.325 kPa):	99.974 °C
Bulk modulus elasticity:	$2.15 \times 10^9 \text{ N/m}^2$
Critical temperature:	373.946 °C
Critical pressure:	22.06 MPa (MN/m ²)
Critical density:	0.322 g/cm ³
Ionization constant, pKw (at 25°C):	13.995
Latent heat of melting:	334 kJ/kg
Latent heat of evaporation(at 100°C):	40.657 kJ/mol
Maximum density (at 4 °C):	999.975 kg/m ³)
Melting temperature (at 101.325 kPa):	0 °C
Molar mass:	18.01527 g/mol
pH (at 25°C):	6.9976
Specific heat (C _p) water (at 15°C/60°F):	4.187 kJ/kgK
Specific heat ice:	2.108 kJ/kgK
Specific heat water vapor:	1.996 kJ/kgK
Specific Weight (at 4 °C):	9.806 kN/m ³
Thermal expansion from 4 °C to 100 °C:	4.2×10^{-2}
(Note! - volumetric temperature expansion of water is not linear with temperature)	
Triple point pressure:	0.00604 atm
Triple point temperature:	0.01 °C