



Franklin Amateur Radio Club Inc NZART Branch 10  
Committee

President: Mike Jane ZL1UOM

Vice President: Gary Landon ZL1WGL

Secretary: Tom McDonald ZL1TO Ph. 09 238 8580  
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/](http://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.

VOLUME 28 ISSUE 11

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](mailto: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.

## Rally of Auckland, 14 November

New Zealand was to have been part of the WRC (World  
Rally Car) circuit this year. Then the Covid-19 pandemic  
surfaced!



Above: Hayden Patton, rally winner in an Hyundai i20, takes  
flight during Rally of Auckland.

The local rally organisers planned for a smaller, local event  
to take the place of the intended WRC activity. So was born  
the Rally of Auckland. The one day event did two loops  
through three stages in the Kaipara area and then followed  
with two runs through Jack's Ridge; a 6.3 km stage on  
private property near Whitford.

An amateur team of radio operators manned the 5 km  
intermediate points of the northern stages to provide safety  
communications. Franklin provided Peter ZL1PJH and Bob  
ZL1BBZ, at checkpoints 2C and 5C on the Puhoi stage. All  
went according to plan – if  
you rule out an unplanned  
50 km detour, unreadable  
numbers on the first rally  
cars, and a repeater that  
suffered from intermod that  
played music some of the  
time. The STSP repeater  
146.825 MHz was used for  
all amateur radio traffic.

Right: Bob ZL1BBZ on site  
near Kaukapakapa.

Far right: The northern  
stages marked in red, with  
touring legs in green.



## Club Notice Board

### Annual General Meeting, 17 November

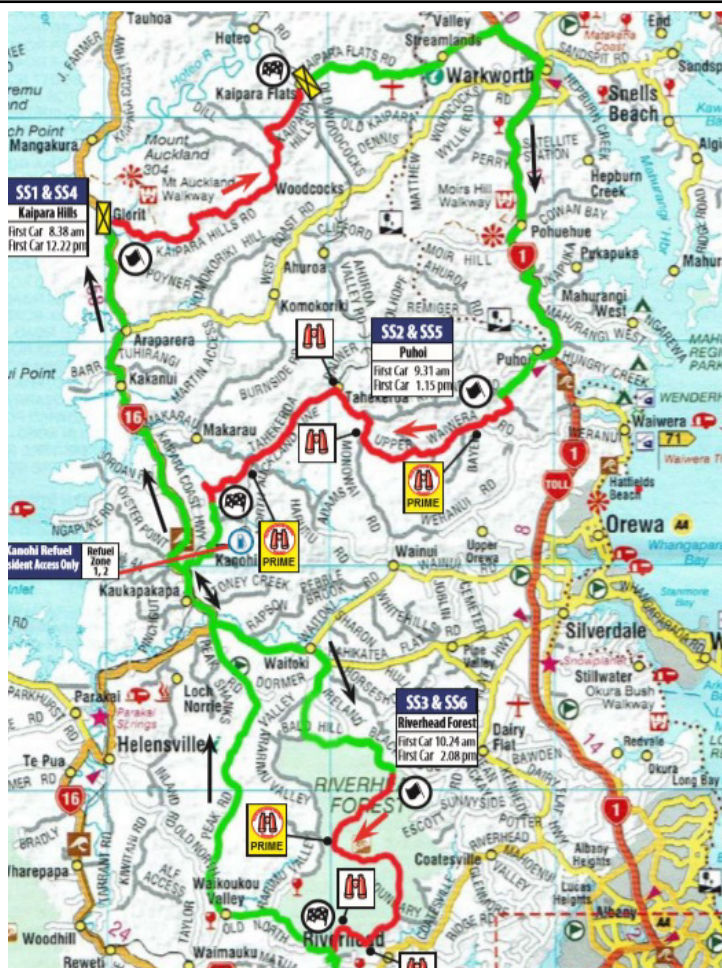
The annual general meeting will commence at 1930 hours.  
Minutes of the 2019 AGM appear in an attachment with this  
edition of QUA. The agenda for 2020 will follow a similar  
pattern. The finance report for 2020 is included in the  
attachment. So far there appear to be vacancies for one or  
two on the committee and AREC Officers.

### General meeting, Tuesday 17 November

In addition to the usual business, there may be an  
opportunity to briefly canvas ideas for the future of AREC  
in the Auckland region. Mike ZL1UOM will conclude with  
a presentation on linear power supplies.

### AREC Regional meeting, Papakura 19 November

All AREC members are welcome. Start at 1930 hours.





**Minutes** of Franklin Amateur Radio Club (Inc) General Meeting held at the clubhouse 19 Stadium Drive Pukekohe, 20 October 2020.

Chairman Mike ZL1UOM opened the meeting at 1934 hours.

Attendance: ZL1UOM, ZL1TO, ZL1PZ, ZL1BQA, ZL1TGP, ZL1DW, Frank ZL1AMQ, also ZL1PJH, ZL1BBZ from 1938 hours.

Apology: ZL1GAC The meeting sends Gary best wishes for a good recovery. Received ZL1TO / ZL1WGL

Minutes of the 15 September 2020 meeting.

The minutes were approved as true and correct.

ZL1UOM / ZL1TO

Noted, again, that it was ZL1UOM who reminded rally operators to bring a picnic.

Correspondence:

Inward - Newsletters from Branches 3, 29, 65, 66, 80, 86 as described in October QUA. Note the Western Suburbs sale on 7 November. ZL1DW and ZL1TGP are likely to attend.

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. Secretary is to reply by

email 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 has been paid. October bill has not yet arrived.

Watercare account is in credit

Receipts - Proceeds of the sale of scrap metal by Gary ZL1WGL yielded \$900.00

The finance report was received.

ZL1TO / ZL1UOM

Reports:

AREC: James Allan Memorial rallysprint at Maramarua on Sunday 25 October is going ahead. The number of stations has been reduced to 10 total. Franklin is providing 4 stations - ZL1PJH, ZL1MFL, ZL1PZ, ZL1BBZ with ZL1DW. ZL1ULK is in reserve. ZL1TO is unavailable.

Rally of Auckland. Peter ZL1PJH and Bob ZL1BBZ are our one team, on Saturday 14 November

Farmers Christmas Parade in the central city on 29 November or 6 December (rain day). Reports received

General Business:

Note the QR code inside our front door.

Annual General meeting will be 1930 hrs on Tuesday 17 November. Nomination forms are available.

The meeting closed at 2030 hours



**Minutes** of Franklin Amateur Radio Club (Inc) Committee Meeting held in the Clubrooms Stadium Drive Pukekohe 3 November 2020

Chairman Mike ZL1UOM opened the meeting at 1932 hours.

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

Apology: ZL1DW who also advised resignation and an imminent shift to Nelson.

Minutes of the 6 October 2020 meeting.

The minutes were approved as true and correct.

ZL1TO / ZL1BQA

Correspondence:

Inward - Newsletters from Branches 29, 65, 80, 86 and note from Branch 03 on the Western Suburbs sale 7 November.

Auckland Council (Kelly Boyed and others) re Asbestos plan sought from 291 tenants. The Secretary is to write confirming the message has been received. Our asbestos risks were informally discussed.

New Zealand Companies Office re annual financial statements are due by 31 December.

Outward - Greg Lowe re thanks for visit.

Correspondence report received. ZL1TO / ZL1WGL

Finance:

Expenditure - \$51.02 Contact bill for October has been paid by Treasurer – reimbursement requested.

Watercare account is in credit.

Insurance bill with FMG \$663.36 which is below the

committee spending limit.

Moved the insurance be paid now. ZL1ULK / ZL1BQA

Receipts - Nil.

Draft of end-of-financial-year report is available.

The finance report was received and bills listed are to be paid

ZL1TO / ZL1WGL

Signatory requirements with the BNZ will need to be fulfilled following appointments at the AGM.

Reports:

AREC: James Allan Memorial rallysprint at Maramarua on Sunday 25 October was cancelled due to the 19 registrations being an insufficient number of competitor entries.

Bridge to bridge boat race 7 November. One station will be attending - Mike ZL1MFL. Organiser Phil ZL1PK.

Rally of Auckland. Peter ZL1PJH and Bob ZL1BBZ are our one team, on Saturday 14 November at a 5 km checkpoint. Coordinator is Richard ZL1BNQ. The team will be at a midpoint near Puhoi at 8am for two runs.

Farmers Christmas Parade on 29 November or 6 December (rain day alternate). ZL1TO and ZL1LL have volunteered.

The AREC report was received.

ZL1BQA / ZL1PJH

General Business:

AGM – nominations received for President, Vice President, Secretary and four Committee. Gary ZL1WGL spoke in favour of the position of President being limited to three years. This may be dealt with by either a change to the Constitution, or a minuted resolution at the AGM.

November topic, Linear power supplies - Mike ZL1UOM.

The end of year dinner for 2020 is being organized by Papakura Radio Club. Date and venue not yet decided.

The meeting closed at 2135 hrs



29. AGM 2 November followed by Dennis ZL1TAY on Barrier Underwater Noise identification. Vadi ZL1BXD life member. AREC – suggestion that all individual Auckland groups amalgamate to one. Alan ZL1AUW awarded certificate of appreciation.

65. AGM 4 November. Change of newsletter content. Reports to AGM by President, Treasurer, Custodian, Examiners. H night 8 December. Ancient human-like DNA found in Tibet. Rock samples taken from asteroid. Doubts over life in Venus clouds.

66. Cover – October microwave contest. AGM 9 November. Reports to the AGM. Soren ZL1SKL spoke on the history of NZ Rail radio communication.

80. Main communication is by Facebook. Mid-winter luncheon 22 November. Affiliation between University and Club for cubesat purposes. Ham cram and examiner initiatives.

86. Cover photo – archive issues of BreakIn for 1946 and 1950s. Two exam passes Malik ZL1MTR and Don ZL3EYE. CCTV. Looking for memory keyer. Hamilton sale – table before and after pictures. Progress with Dansk and T98 transmitters. 5MHz band ceases from 24 October. Straight key night 6 December.

### The future of 19 Stadium Drive

The Committee met with Auckland Council Parks Specialist on 6 October for an exchange of ideas on the Clubs situation at 19 Stadium Drive.

In reporting to the club on 20 October additional comments were offered by members.

The Key points discussed were:

The Council is considering what to do with the 500 m<sup>2</sup> previously occupied on a temporary basis by the Opera Club. This is likely to become additional amenities for the skate park, with a hard surface. Tom ZL1TO has since checked our maps and reported that the total area occupied by our clubhouse plus the Opera Club was 500 m<sup>2</sup>. It is hard to imagine the Opera Club building on a concrete pad was a temporary occupant!

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.

Ted ZL1BQA commented that the Council representative is a good listener. Ted said we have never put up a fence because our area has never been satisfactorily defined. Council created the problem with the skate park, which is a health and safety problem for us. No

The club meeting on 20 October heard the story behind a pleasing addition to the treasury.

Proceeds of the sale of scrap metal by Gary ZL1WGL yielded \$900.00, which has been deposited in our BNZ account. Gary related how the money was presented at the October committee meeting.

Bruce ZL1TDH (a former President and now Silent Key) had a good contact in a factory control room which was in the process of being turned digital. FARC members went down country at least three times. Then Colin ZL3CJS (also Silent Key) came out to Gary's farm undoing screws and bolts to separate the circuit boards (sold to IHC 'Abilities' at a weight price), and various metals into different bins.

Then recently Gary had to do a declutter when leasing the shed out. He took the materials to a local 'Scrappie', getting \$600 for the first lot, then a second load of copper bus bars were 43kg at \$7 per kg, in total yielding \$900 cash.

Gary's truck did three trips for the initial collecting exercise, together with another truck arranged by Bob ZL1BBZ. The meeting congratulated Gary with applause.

### Reminder

Nomination for officers of NZART, and notice of remits to 2021 NZART Conference are due by 31 December.

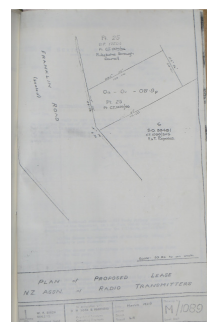
commitment was made by either side.

Ted queries that there ever was a separate surveyed piece of the reserve for FARC – but all of 19 Stadium Drive is recreation reserve. Bob ZL1BBZ said that the Borough had surveyed our piece some years ago, and Ian ZL1PZ agreed. The Secretary is to scan and circulate the map in the Club diplomatic bag. Tom ZL1TO pointed out that the Council is not bound to offer us the lease of the larger piece of land, but likewise we can continue to push for more than just the footprint of our building.

Ted ZL1BQA said that the Council representative had acknowledged there was not any real consultation when the skate park was put in.

The Secretary is still to write, thanking Council's representative for his visit and the sharing of thoughts. We wait with interest future progress.

Your Editor observed that photographs or plans marked 'draft' never surfaced from the representative's clear folder during the discussion.



At right is a thumbnail plan of the 1968 version of our lease

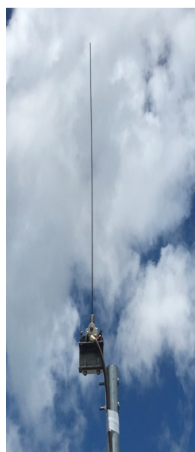
## Grounded: An Anthem for the Antenna

By Peter Henderson (ZL1PJH)

You might ask why an article about an antenna system should be name 'Grounded'. After all, antennas (antennae?) are meant to be high above the ground. Many of the VK and kiwi hams I listen to on the 80m band like to boast of the height of their antenna. Their boasts seem to imply some magic relation between height of the antenna and its general excellence. But reality has a way of leaking back in somehow.

My ham mate Bob ZL1BBZ wanted to make sure his 2 metre rig would communicate well with Kumeu base HQ on the NZ Car Rally around Auckland. He began by placing a half-wave element on top of a telescopic mast.

This was a simple 2-metre antenna that you can buy cheaply from China, below.



Bob connected the central copper wire of his antenna coax to the upright element of the antenna. He joined the braid of the coax to the aluminium metal that fixed the antenna to the upright aluminium pole. The 'earth' or negative component of the AC signal now connected to the pole and indirectly to the chassis of Bob's car.

The telescopic section was joined to the car with a tubular bracket Bob got his son David to weld on the right hand back end of his Nissan Tiida.

Bob powered up his Kenwood 2 metre rig inside the car and attached a VHF/UHF standing wave reflector meter on the antenna line. When he pressed the mike switch, he got a strange result. The Kenwood was creating a reflection ratio of 5 to 1 on the meter dial. Quite a deal of the power the transceiver created did not enter into the antenna at all but dissipated itself against the pushback of the standing wave.

What to do? Bob reports he went to sleep that evening thinking about the issue and in the morning he knew how to fix the problem. He found some thick copper wire and cut four equal length pieces. Next, he soldered these to the outside edge of a large diameter metal washer. This washer was just large enough to fit over a standard antenna plug. He had created an antenna with a ground plane – a metal construct that held the electronic properties of an earth connection but one that was close enough to the location of the positive component of the AC signal to provide an impedance that matched the output of his transceiver.



Left: Pole attached to car  
Above: Mark 1

Here is the solution Bob called 'Mark 1'. You can see in this picture that the 'ground plane' is a little shapeless. This is because the copper wires tended to change position when someone brushed against them or when the wind blew. Bob rightly identified a safety issue with 'Mark 1' and placed tape at the ends of the ground plane to protect hams or others from poking themselves with the sharp ends of the wires.



There was another challenge with 'mark 1'. When it changed shape, it behaved differently in the electronic world. Bending the wires up created a different standing wave reflection number to wires that were bent downward. Bob sensed a 'Mark 2' would be required. You can clearly see how loose this construct appears in the picture above.



Bob's son David stepped in again to help with 'Mark 2'. David attached the upright element of the antenna to the top of a thick plate and welded

four stainless steel weld rods to the bottom of the plate. This ground plane extended downwards at a 45 degree angle. This was a much more robust antenna – not subject to rust, wind or accidental side movement.

So, was Bob pleased with the result of this new ground plane? In the picture below, you can see the standing wave reflection ratio is slightly below 1.4 to 1 at the frequency of 146.225 megahertz. On the power reading to the left, the antenna is developing a healthy 75% of its transmission capability.



The moral of this story? When you think of an antenna, don't just think about the height. Without a proper ground plane your signals might not be going anywhere.

NZART

It's not them

It's us