

# QUA FARC



## FEBRUARY 2023

Franklin Amateur Radio Club Inc. NZART Branch 10

**President:** Gary Landon ZL1WGL

**Vice President:** Peter Henderson ZL1PX

**Secretary:** Tom McDonald ZL1TO Ph. 09 238 8580

**Committee Members:** Mike Jane ZL1UOM, Ted Doell ZL1BQA, Durlene Griffin ZL1ULK, Gary Collins ZL1GAC

**Examiners:** Tom ZL1TO, Peter ZL1PX

**Web page:** [www.qsl.net/zl1sa/](http://www.qsl.net/zl1sa/) **Webmaster:** Peter ZL1PX

**MEETINGS:** The club meets on the third Tuesday each month, in the clubrooms, 19 Stadium Drive Pukekohe, 7.30 pm. Visitors welcome.

VOLUME 31 ISSUE 2

The committee meets on the first Tuesday of each month (excepting January) 7.30 pm in the clubrooms.  
**SUBSCRIPTIONS:** individual \$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 ZL1PX). If repeaters off air, try simplex 145.775 MHz, 146.625 MHz, and 146.900.

**QUA Editor:** Peter ZL1PX [pjh@teachlit.com](mailto:pjh@teachlit.com)  
Sent free of obligation by e-mail to club members and anyone interested. Provided you include authorship, permission to copy material is freely granted.

### Jock White Field Days

We like to think we are ready for that big one. Somewhere in our community a freak natural event has destroyed homes, downed electric cables, splintered water pipes, demasted cell phone towers, washed out roads, de-fibred our Internet. How would we cope with that?

Jock White Field Day is the answer. For two days at the end of every February, we train for that big one. Over nine hours on Saturday and another nine on Sunday, we do without water pipes, mains power and Google. We learn to work as a team as we erect an antenna, test its SWR. We crank the generator into life. We try to talk to as many operators as we can, watch our list of contacts grow. It is enjoyable, undoubtedly, and this is a good reason to do it.

But its real purpose is to prepare us, get us to work together, hone our skills. So when that big one comes, we know what to do.

In the picture below we have last year's JWFD. Tom ZL1TO and Cliff ZL1RP work to hone their skills at 4.11 PM Saturday 26 February 2022.



We need you. See you there - Jock White Field Day event – Gary's Farm, Attewell Road, Puni - Latitude -37.2403, Longitude 174.8846 - begins around 10 AM, Saturday 25 and 12 PM Sunday 26 February.

### Next Club Meeting



Our next monthly general meeting will be Tuesday 21 February at 7.30 PM in the clubrooms at 19 Stadium Drive, Pukekohe. We have ICOM Rep Richard Binns coming for an after-meeting talk on amateur radio hardware for the ham who has everything. If you have just won Lotto and want to spend big on your shack you'll want to hear his presentation. Or, if you are not a Lotto winner, come to fantasize about the big rig you will buy when you do become a winner. Everyone welcome.

### March Meeting

On March 21, we will have David Black MD MIEEE (ZL1MZ), NZART Representative on the NZ Standards Committee TE. His Topic will be "How Electromagnetic Safety Standards are Formed and Application to Amateur Radio". All welcome.

**BE KIND TO  
EVERYONE YOU MEET.**



**THEY MAY BE  
STUDYING TO BECOME  
A HAM.**

## Putting a Spin on Quantum Mechanics

Peter ZL1PX

A hot, humid, February day recently caused me to type into my computer 'WHAT USE IS QUANTUM MECHANICS? I was surprised to find quantum mechanics had helped me personally quite a lot.

In 1983, I complained to my doctor about a pain down the left side of my leg. It was getting worse. I was fit in those days. I regularly ran the triangle of Manukau, Great South and Campbell roads. While running, the pain disappeared. But in resting mode, it grew and grew. I remember that several years earlier I had attempted to lift a load of bricks on the end of a shovel and felt a sudden jolt in my spine. After he heard my symptoms, my doctor sent me to Auckland Hospital for an MRI scan.



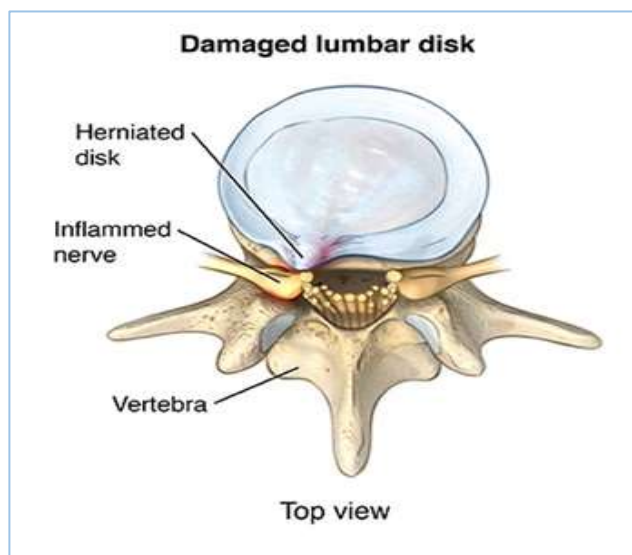
Magnetic resonance imaging scanner – usually installed in the ground floor or basement as they weigh several tonnes.

The machine I faced in hospital looked fearsome. I was laid face down in front of it, wearing only a sheet. One of the nurses patted my back just before she left the room, which calmed me – well sort of. There were a lot of buzzes and knocks as the machine began its cycle.

The Magnetic Resonance Imaging scanner focuses on the hydrogen atoms in the body. Our bodies are mostly water, so there is plenty of hydrogen available. Hydrogen atoms have a proton that spins all the time but the protons align themselves randomly, spinning on whatever axis they happen in. The 'magnetic' part of the MRI machine, a hugely powerful magnet, the part that looks like a large donut, forces these protons to all spin on the same axis. It is the same process seen on a ship's compass when a weak magnet (the compass needle) encounters a strong magnetic field (the earth) and aligns itself in accord with that. I will also add in here the information that protons, being part of the nucleus, carry a positive charge.

Lying under my sheet, I wasn't aware the hydrogen protons in my body were now in perfect alignment. Nor did I feel the radio wave that pulsed through me and knocked my protons out of order. When the radio pulse ended, the machine listened to

how long each proton took to re-align itself to the stronger magnet signal. Protons that were in different kinds of tissue and bone responded at different speeds and at different intensities. As they did so, they became little pulse generators themselves. Each one sent radio frequency signals at differing frequencies and amplitudes. A 'coil' placed on my back picked up these radio frequencies and they were then converted to an image.



A few days later, a back surgeon examined my pictures and saw I had damaged a lumbar disk. An outlying portion of this disk pressed on nerves in the spinal cord and this caused the pain I experienced in my leg. The medical term is a herniated disk. He told me he would remove the disk completely, which he did, and the pain disappeared.

What use then is quantum mechanics? Quantum mechanics, also known as the study of sub-atomic particles has become extremely useful. It is only because inventors Sir Peter Mansfield and Paul Lauterbur studied quantum mechanics as closely as they did and used their knowledge to create the MRI that I have been 30 years pain free. Quantum mechanics isn't just "coming soon" to a hospital near you. It's already there and changing lives.



Quantum mechanic heroes: Inventors of the MRI scanner, Sir Peter Mansfield and Paul Lauterbur receiving the Nobel Prize for Medicine, 2003

## Why do a Facebook page?

Peter ZL1PX

I created a Facebook group for our club last week. You are probably wondering why.

I know there are a Luddite group (smash the cotton mills) that wonders what anyone sees in social media. We hear of data hacks and digital scams almost daily. I am certainly one of those Luddites. It seems weird to me to want to post the stuff your family does, as if it isn't fully fun until you share it with the world. I think family doings should be given more respect than that. But Facebook offers benefits too. And if we want to grow – get genuine amateur radio enthusiasts to join us – we shouldn't ignore Facebook. With these points in mind, I share some thoughts on what our new Facebook identity might do for us...

1. Reach a lot of potential hams. 2 billion users check in to Facebook every day. Okay, most of them are not in Pukekohe, but Facebook algorithms make sure more of them are watch us on Facebook than on any other form of promotion.
2. Turn fans into an email address. When people join our Facebook group, we can message them. This is a powerful tool, not available elsewhere. Right now, 36 hours after our Facebook was created, there are already six members who are not in our club but who can be messaged.
3. Facebook is free. We are getting a huge amount of exposure for nothing.
4. We can target a specific audience. Regular postings of amateur topics will interest a minority but a minority of 2 billion each day is still a big number.
5. Build brand loyalty. If you publish consistently good material you build an expectation in people to want to see what comes next.
6. Reach people on their phones. Most people on Facebook use their phones to see the pages. Seeing our Facebook page allows them to call or email in seconds. And once they call, we have a means to contact them back if we need to.
7. Reward the good. When we have new members, we can showcase them. When we succeed at something we can let others know. All this happens within minutes. No other media can work so fast.

I had a chat to my daughter this morning. She earns a six figure salary in marketing for a large enterprise. I asked her what we should do with Facebook. She said we should post. The more we post, the more we catch the attention of others with interests like ours. She said the most watched posts have a video playing.

Up to us, I guess. There is an argument ham numbers are going down anyway and we should just enjoy the activities we like and ignore membership figures. I think we need new people. I may be in a minority, I don't know for sure. But if you feel, like me, that we need more members, I look forward to your posts on our Facebook pages.

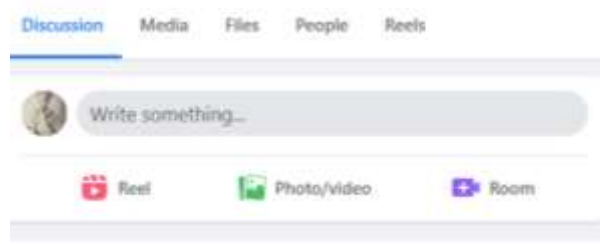
## How to post on Facebook...

Peter ZL1PX

You need to have a Facebook account. Once you have that, you can post on any Facebook site. To find us, go to search and type Franklin Amateur Radio Club and see something like this...



Look for 'Write something' in the centre of the site.



You can either start with a small text message or you can click photo/video and drop in a pic or movie that you have on your phone and add text later. You only need 10 seconds of video to make an impact. Pick an activity you like in ham radio, make a tiny video, write a few words, press enter and poof.... You are posting your hobby for the world to see.

When you look at your entry next, it will have appeared with three buttons below it.



Viewers can click 'Like' or 'Comment' or 'Share'. This is the guts of Facebook and the exciting bit. You will get comments galore here. A good post will start a feeding frenzy...

Enjoy your postings.





**Minutes of Franklin Amateur  
Radio Club (Inc) General  
Meeting held at the clubhouse,  
Stadium Drive, Pukekohe  
17 January 2023**

Chairperson Gary ZL1WGL opened the meeting at 1938 hours.  
Attendance: ZL1WGL, ZL1TO, ZL1PX, ZL1BBZ, ZL1UOM, ZL1GAC, ZL1BQA, ZL1LL, ZL1ULK,  
Apology: ZL1MFL accepted + ZL1ULK submitted an apology to the February committee meeting.  
Minutes of the December meeting. December minutes have been circulated in QUA, and were approved.

**Reports**

Inward - Newsletters from Branch 03 reported in January QUA, plus Branch 03 January edition. 03. 28 January meeting talk by ZL1TLC on end fed half wave antennas. Attachment - brochure on Icom IC-T10 The correspondence report was received. +

**Finance:**

Income - BNZ interest \$462.00 for \$21000 term deposit at 2.2% Subscriptions ZL1RP, ZL1AMQ Subscriptions tonight from ZL1ULK and ZL1MFL  
Expenditure - Power annual credit \$75.55 leaves us \$33.59 in credit after December power bill of \$41.96 There will be a bill for testing the fire extinguishers around mid February. Reimbursement of \$20 petrol voucher for December speaker requested. The term deposit remains at \$21000 and was reinvested at 5.2% interest paid monthly and matures 4 January 2024. The new term deposit certificate has not yet arrived by snail mail.

Thank you to those who have already paid their 2023/2024 subscription or made a donation (ZL1AMQ, ZL1BQA, ZL1LL, ZL1PX, ZL1RP, ZL1TZP, ZL1TO and ZL1WGL).

The finance report was received, and reimbursement above approved.

**Reports:**

**AREC.**

Durlene ZL1ULK reported on the Jacks Ridge Rally of 11 December. The course has many corners and occupies a small area. Radio communications were by VHF simplex and worked well. Franklin was represented by ZL1ULK and ZL1MFL. The track left mud splashes up to window height of operator's cars. Conditions were wet and many operators were wearing AREC branded wet weather protection.

Tom asked what AREC branded gear has been issued to Franklin members. ZL1ULK and ZL1MFL have jerkins. ZL1TO will enquire at the next regional AREC meeting if wet weather protection can be issued to our AREC personnel involved in communication exercises such as car rallies.

**General Business**

**Jock White**

Jock White Field Days are coming up 25-26 February. Venue will be ZL1WGL farm. Volunteers are ZL1PX, ZL1TO, ZL1ULK, ZL1UOM

and likely ZL1RP (if in the area). We will enter phone and CW sections. For future field days we should consider venues with public exposure such as Pukekohe square, the rear of the clubhouse and Ngahere reserve – particularly if the noise level is tolerable.

**Club maintenance**

The fire extinguishers have been replaced by loan extinguishers while ours are tested – and are due for return early February.

Mike ZL1UOM would like to know how the price of buying new extinguishers each year compares with having the extinguishers serviced.

**Bob's Club Status**

Bob ZL1BBZ explained that he is at the meeting tonight as a visitor as he is no longer an NZART member. Bob's decision resulted from interactions over AREC matters.

**Topics for coming general meetings**

February: Richard Binns of RWB Communications will give a talk on current ICOM radios with a theme of: the bells and whistles you can get in a radio if money is no object.

The meeting closed at 2030 hours



**Franklin Amateur Radio Club (Inc)  
Committee Meeting  
held at the clubhouse  
Stadium Drive  
Pukekohe  
7 February 2023**

Chairperson Gary ZL1WGL opened the meeting at 1941 hours.

Attendance: ZL1WGL, ZL1TO, ZL1PX, ZL1UOM, ZL1GAC, ZL1BQA

Apology: ZL1ULK accepted ZL1PX / ZL1WGL

The December minutes have been circulated in QUA, and approved, correcting ZL1WGL callsign. ZL1BQA/ZL1WGL

**Correspondence**

Inward Newsletters from Branches 29, 65, 86

The correspondence report was received. ZL1TO/ZL1PX

**Finance**

**Income**

BNZ interest \$462.00 at 2.2%

Subscriptions ZL1RP, ZL1PX (December)

Subscriptions ZL1ULK, ZL1MF (January)

Subscription tonight ZL1GAC

First monthly interest on new term deposit \$92.75 received 7 February

## Committee meeting minutes (cont...)

### Expenditure

Power \$20.64 which uses up remaining credit with Contact, paid 3 February

Subs paid so far ZL1AMQ, ZL1BQA, ZL1GAC, ZL1LL, ZL1MFL, ZL1PX, ZL1RP, ZL1TGP, ZL1TO, ZL1ULK, ZL1WGL-

The finance report was received ZL1BQA/ZL1UOM

### Reports

A webinar was advertised for 1 February. None of us attended.

AREC ID cards have been posted snail mail to current members who had sent an ID photograph to the AREC administrator.

### General Business

Jock White Field Days 25-26 February. Venue will be Attewell Road. Volunteers are ZL1UOM, ZL1PX, ZL1TO, ZL1ULK. Can anticipate that ZL1TGP and ZL1GAC will make a visit. We will enter both bands, both modes. To consider filters for antennas. Gary ZL1WGL will put poles on tank stand and trailer ready to become antenna supports. Mike ZL1UOM and helpers will have van/trailer at clubhouse around 9.30am to collect the gear. A cabin will be in place. Key in usual place. Generator will be run up prior to event (fresh oil last year) by ZL1TO, who will also prepare the paperwork in advance.

The fire extinguishers have been replaced by loan extinguishers while ours are tested – and are due for return early February.

How do we interest more people becoming members? Gary ZL1WGL suggested that on one Saturday per month we have an open day at the clubhouse – with an advertising sign outside, and morning tea. The practicality of setting up radios in the clubhouse, and providing a hands-on activity were discussed. Tom ZL1TO mentioned that we should be welcoming on-air with three potential new members.

### Topics for coming general meetings

February: Richard and Wendy Bins of RWB communications will give a talk on current ICOM radios with theme 'The money- doesn't-matter rig.'

The meeting closed at 2030 hours.

## Wikipedia notes on the term 'ham'

The rapid expansion and even "mania" for amateur radio, with many thousands of transmitters set up by 1910, led to a wide spread problem of inadvertent and even malicious radio interference with commercial and military radio systems. Some of the problem came from amateurs using crude spark-transmitters that spread signals across a wide part of the radio spectrum.<sup>[1]</sup> In 1912 after the RMS Titanic sank, the United States Congress passed the Radio Act of 1912<sup>[8]</sup> which restricted private stations to wavelengths of 200 meters or shorter (1500 kHz or higher).<sup>[9]</sup> These "short wave" frequencies were generally considered useless at the time, and the number of radio hobbyists in the U.S. is estimated to have dropped by as much as 88%.<sup>[10]</sup> Other countries followed suit and by 1913 the International Convention for the Safety of Life at Sea was convened and produced a treaty requiring shipboard radio stations to be manned 24 hours a day. The Radio Act of 1912 also marked the beginning of U.S. federal licensing of amateur radio operators and stations. The origin of the term "ham", as a synonym for an amateur radio operator, was apparently a taunt by professional telegraphers.



RMS Titanic 1912