

May 2023

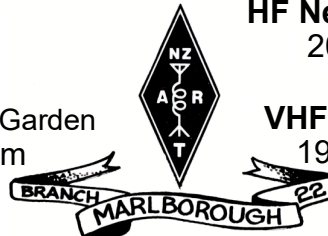
INTERFACE

MONTHLY BULLETIN

MARLBOROUGH AMATEUR RADIO CLUB INC. P.O. BOX 432 BLENHEIM NZ

CLUB CALENDAR

General Meeting;..... 11 May, 7.30pm, EOC
Social Group;..... 18 May, Dodson St Beer Garden
Committee Meeting;25 May, 7.30pm, via Zoom



HF Net Tuesdays & Saturdays
2030 hrs 3876kHz

VHF - USB Net Wednesdays
1930 hrs 144.150MHz

BRANCH 22 NOTICES

1. Antennas Part 2 (waterproof joints) 11 May
2. Antennas Part 3 (antenna software) 8 June
3. Nick Batt WSPR (Weak Signal Propagation Report) 13 July
4. Volunteers? Suggestions? 10 Aug

VHF Mondays 1930 hrs
146.950MHz, 145.600MHz,
147.225MHz

Net Controller; Rob Carter, ZL2IW

Website: www.zl2ks.org.nz

Editor: Caryl Simpson caryl@simtronics.co.nz **MARC Contact:** marcbranch22@gmail.com

WHO ARE THESE TWO PEOPLE??



A few clues;
The year is 1951.
He was a Branch 22 member for many years.
She was an Irish-born naturalised American actress and singer.
Answer is in the centre of the bottom of the next page.

The photo was found recently during our latest Big Garage Clean-up. No idea how/where we got it, or why. It will forever be a mystery, along with finding some electric dog clippers (we have never owned a dog) or a book we think is written in Arabic!

A lot of amateur radio magazines went to the Resource Recovery Centre (aka the dump), along with car, computer and electronics magazines, old books and cardboard. This took multiple trips and I worried the poor Puma's axle might give out under the weight!

Paul Rennie asked, on day 3 of the clean-up, if we had found any wood from the ark yet - no we didn't.

Our daughter came home for a week to lead the cleaning team and bully her father into chucking out years worth of junk. Every time he wasn't looking, she tossed more bits out. Noel Leeming now accepts e-waste but we filled their bin! We have to wait until their bin is emptied until we can fill it again. They are free, unlike the e-waste facility run by the council who charge by weight. It took several car trips to Noel Leeming and I am sure they were glad to finally see the last of me.

In the end, we had another 280kg of e-waste that went to the Transfer Station and a lot more just went in the skip as it took too long to sort. First car load cost \$28 but the next one he only charged us the minimum \$5 for general waste. Pays to be nice to the man in the kiosk ;-)

Just for the hell of it, I saved some Break-Ins. Two from 1932 and 1933 and the other June 1952. I might put bits and pieces from them in future Interfaces.

**MARLBOROUGH AMATEUR RADIO CLUB GENERAL MEETING
at EOC, 13th April 2023 at 19:30 Hours**

Present: Stuart Watchman (Chair), Don Laing (Secretary), Ken Menzies, Graeme Dillon, Paul Rennie, Gerard Van Antwerpen, Bill Cousins, Grant Simpson, Rob Carter, Graeme McKay, Antony Whitaker, Ian Conway, Nick Batt, Wayne Parker, Don Jamieson

Apologies: John Errington, Greg Barton, Helen & Ron Harris

Visitors: Ian MacPherson, Mark McGowan & Mayo

Silent Key: Memorial silence in respect to the passing of Chris Grant ZL2CHG

Health & Safety: No issues raised

Correspondence: (since Committee Meeting 21/03/23)

Inward

22/03/23	NZ Companies Office	Law changes review
25/03/23	Richard Smart CARC	Comments re MARC repeater functionality
27/03/23	Marlborough Weekly	Contact person for community notices
02/04/23	Colin Ballentyne ZL2CJB	Kaikoura repeater operation inquiry
04/04/23	Richard Smart FENZ	Alternative repeater site inquiry response
07/04/23	Richard McGowan	Reception inquiry

Outward

03/04/23	Ian MacPherson NZART Midland Councillor	Confirmation of meeting attendance
04/04/23	Richard Smart FENZ	Alternative repeater site inquiry
05/04/23	Richard Smart CARC	MARC repeater functionality offer to help
10/04/23	Richard Smart FENZ	Alternative repeater site antenna specs

Distribution of above correspondence as applicable

Matters Arising: None

Finance & Membership: Membership 54 paid, 1 unpaid

Accounts (available upon request)

Income Interest, Wine & Food festival & subs

Payments Carluke reimbursement & Annual accounting fee costs

Events:

Carluka BBQ event with Nelson Branch 24 – went well with MARC retaining trophy

Repeaters & Systems:

Kaikoura - P Rennie visited site and took some measurements. Keys wouldn't open cabinet door padlock

Repeater Development

D. Laing

- Functionality description written up, shared with & commented by CARC. Offered further input
- Alternative repeater site – been in contact with FENZ who have a repeater at same location. They have offered coverage calculation maps and their owner contact info.

Speaker Schedule

Tonight - Marlborough Lines Comms system

May - David Rothwell on waterproof joints (Antennas Part 2)

June - John E - Antenna software (Antennas Part 3)

July - Nick B - WSPR (Weak signal propagation reporter)

SAR / AREC

P. Rennie

Callout Monday 10/04/23 however couldn't provide comms required.

AREC CEO, Don Robinson, meeting 27/04/23 at 3pm, EOC.

GENERAL BUSINESS:

Ian MacPherson ZL3TAO, NZART Midland Councillor, addressed the meeting.

Meeting closed: 19:45

Next Committee meeting: 27th April 2023 by Zoom, 7:30pm

Next General meeting: 11th May 2023 at EOC, 7:30pm

Presentation:

Brendon, from Marlborough Lines, provided a very interesting and informative presentation about the Marlborough Lines DMR system.



Ian Conway, ZL2BGL

The photo on the front page is Bert Smith, ZL3GZ with Maureen O'Hara.

Written on the back of the photo is:
Bert Smith & Maureen O'Hara.
Nandi Airport
Drama Club 1951

6m Beacon & Kaikoura Digipeater

Please be advised that the Committee has decided to discontinue the RSM licenses for the 6m Beacon & Kaikoura Digipeater due to their unavailability for many years.

MARLBOROUGH AMATEUR RADIO CLUB COMMITTEE MEETING
via Zoom 27th April 2023 at 19:30 Hours

Present: John Errington (Chair), Don Laing, David Rothwell, Nick Batt, Stuart Watchman, Greg Barton, Graeme McKay

Apologies: Gerard van Antwerpen, Paul Rennie

Health & Safety: No issues identified

Matters Arising: None

Correspondence: (since GM MOM 13/04/23)

Inward:

14/04/23 Secretary CARC Activities week 16
16/04/23 Hamish Young Vintage radio for repair
19/04/23 Mark McGowan Membership application
20/04/23 NZART April branch newsletter
23/04/23 Secretary CARC Hamlarks newsletter
24/04/23 Richard Smart Repeater site coverage plot

Outward:

20/04/23 NZART Chris Grant silent key notification
22/04/23 Caryl Grant Interface notice for EOC radio check volunteers

Matters Arising

- CARC be included on the Interface distribution list

Finance: (In Committee)

Treasurer presented his report

Membership 53 (paid)

- Membership invoice to be sent to Mark McGowan
- NZART membership list to be checked for correct current email addresses
- Revised Constitution - Await NZART model Branch constitution

Events:

NZART Conference - Stuart W confirmed that he would be attending

Motion: That Stuart be Branch 22 delegate Moved: JE / Seconded: DL / Passed: All

Remits published in Break-In to be voted upon by full membership at next General Meeting (*Remits on next page*)

Repeaters & Systems:

Site Licenses

- Confirmed that not raised at last General Meeting
- Notice to be put in Interface
- To cancel with RSM
- Kaikoura To reconvene action group to update & progress

DL
GB
JE

Repeater Development

- To follow up with Richard Smart ZL4FZ Branch 05 CARC.

DL

Proposed Repeater Site

- Follow up with Richard Smart FENZ their site owner contact details to ascertain site access.

DL

Repeater System

- To arrange meeting with Grant Simpson after 4/5/23 to document and record software etc regarding the present repeater system design & operation.
- Also to ascertain software license for Remote-Hams system at Brayshaw Park

JE/SW/DL

Speaker Schedule:

May Antenna Part 2 – David Rothwell on waterproof joints
June Antenna Part 3 – John E on antenna software.
July Nick Batt -WSPR (Weak Signal Propagation Report)
July Mini-presentations – to request Presenters
August ??
September Constructors Award
Speakers for remainder of 2023 to be arranged

AREC:

- AREC CEO Don Robertson visit 27/4/23 attended by most of AREC members.

PR

GENERAL BUSINESS:

- Nick B advised that he will absent July ~ September due to working in Europe
- Notices for Interface as above

Meeting Closed: 20:20

Next Committee Meeting: 25th May 2023 (via Zoom)

Remits For NZART AGM 2023:

- 1) NZART to create a digital only membership, for those wanting a digital only copy of Break-In with discounted membership fee.

NZART needs to get with the times with increasing costs, several members don't need or want a paper copy of Break-in these days. There needs to be a cheaper option for those wanting a digital version. A digital version can be searched and indexed with a couple of mouse clicks unlike the paper copy. This also helps to save the planet with reduced paper use.

Christchurch Branch 05

Council Comment:

Council does not believe that opting out of a hard copy subscription of Break In would lead to reduced costs. It would likely lead to increased costs. Council does not support this remit.

- 2) NZART to reduce membership fees for members associated to clubs that are charities or the club does not meet the criteria to be covered under NZART public liability insurance.

Recently it's been discovered that several clubs are not covered by the NZART Public liability insurance policy. These branches need to know that they are or are not covered before any event, so that no one assumes they are covered when in fact they are not.

Christchurch Branch 05

Council Comment:

NZART has no control over whether branches do or do not meet the requirements to be covered under NZART's insurance. Therefore, NZART does not believe it should reduce the membership as it may lead to perverse outcomes with clubs opting out of insurance cover to reduce costs. Currently there are only 5 branches to which this may apply. Council does not support the remit.

YAESU FTDX10 - WIRED FOR SOUND - Grant Simpson, ZL2BK

After watching the progress of the SDR technology in the latest HF radios available, I decided I had to have one. Many hours watching YouTube reviews and how to set the radio up for the various modes, it seemed to be easy enough to use. FT8 appeared to be easy to experiment with and I wanted to try it. All that is needed is a USB cable to connect the radio to a computer with the appropriate software.

Ordering from Australia was easy. I phoned Andrews Communications and, with credit card in hand, ordered my new toy. A week later it arrived but, as I was away, it would be another week before I could play.

I unpacked the FTDX10 and connected it to a 12 volt supply and what passed as an HF antenna. It worked. A quick tune around the various bands but had to do something better than a random wire about 15m long and all of 2m above ground.

I increased the wire to about 5m high at one end and about 3m near the operating room. Coax was then attached to the wire and routed in to the radio. I could now hear some signals but they had to be very strong to overcome the very high noise levels. I expected high noise levels as it's been very noisy here for many years. Back to researching how to reduce the noise on a random wire. The answer, it seemed to be, that a 9:1 matching transformer would help a lot. I did not have one or the required ferrite toroid to make one. A manual antenna tuner was going to have to do.

A quick read of the FTDX10's manual and the radio was set to 10 Watts out on CW. This level would do no damage to the radio while I was trying to make a match. Eventually had the SWR down to zero. The receiver was still very noisy though.

More reading and YouTube. The answer this time was that I had to eliminate the common mode noise on the antenna coax.

One way that might help would be to use removable ferrite beads on the coax. These beads had to be clamped on for a trial. I had a drawer full of various ferrites and four of them were the right size for the RG58 cable I used. Back inside and not expecting much, I was most surprised at the improvement. It was still a bit noisy but the noise reduction systems in these new radios are magic too.

A quick tune up on 20m and heard someone calling CQ with many others trying to work him. Gave him a quick call and he answered with a 5x7 report. Gave him a 5x7 also and left him to all the others trying to work him.

This was going to be a review of the Yaesu FTDX10 but seems to be how I used a random length of wire and made it work.

A 3 wire terminated dipole (tripole?) is to be installed on three 9m lengths of pipe. This should mean I can then write a decent review of the radio. All I can say so far is that I am very happy with my choice of radio! There's plenty to read in the 120 page Operation Manual.



The club has radios available, as well as an antenna analyser, for members to borrow when required. Contact a committee member for more details if you would like to avail yourself of any of these.
marcbranch22@gmail.com

SILENT KEY - CHRISTINE HELEN GRANT, ZL2CHG

Tony Whitaker G3RKL / ZL2RKL writes;

"I don't know much about her early life, growing up as a country girl on a farm in Matakana, then training as a nurse, some of which was in the UK. She then transferred to Social Services, rising to a senior position before taking early retirement. This enabled her to combine world travel with individual caring in the UK during the 90's, before our paths crossed for the 2001 group walk from The Bluff to Cape Reinga and three subsequent walks.

When deemed too old for her caring duties, she spent several years as a volunteer with the community on the Scottish island of Iona. She wanted a position in the souvenir shop, but was allocated domestic and kitchen duties, before she finally made it there. Unfortunately, although she achieved her aim of being able to talk to all the visitors, especially concerning books, she was utterly defeated by the electronic cash register!



It is probably fair to say that some aspects of practicality were not her strong points, radio being one of them, so I was surprised when she said that she wanted to obtain her amateur radio licence. However, perseverance, a good memory and a computer programme I wrote, resulted in ZL2CHG.

This she put to good use for the social side of the hobby and club, for example the monthly social lunches. She was an avid reader, with a book always to hand, although certain programmes on Netflix were beginning to command attention. Caring was still a major part of her life, from visiting and helping friends, both individual and those in residential homes, to her Tuesday volunteer sessions at Johns Kitchen (Crossroads) and I am sure that it is this aspect for which she will be remembered and most missed."

Chris was involved in AREC for a few years and helped mostly doing fire comms. When in NZ, she was a regular meeting attender and helped organise people and rosters for Grape Ride and Wine and Food. Pic on right was during comms for a Horse Trek I think. She was the original contact person for the Social Lunches and a regular attender. Chris always made people welcome and spent time with older members or their spouses when they no longer came to meetings.



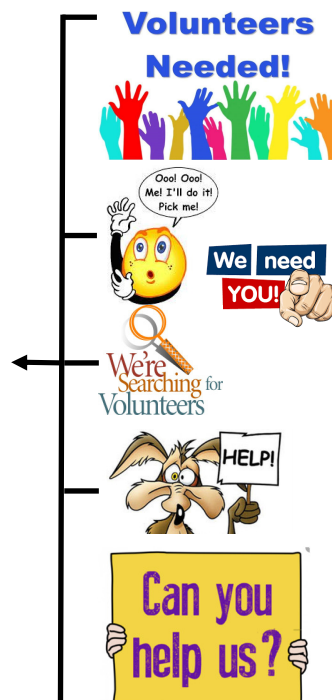
As a long time member of St Andrew's Church, Chris was very involved, often reading lessons at weekly sermons, and always the first

to volunteer when help was needed. She was also co-organiser of their very successful Garden Tours.

A memorial service for Chris will be held at St Andrew's Church, Monday, July 31, at 2.00pm. This allows time for distant friends & relatives to attend.

(Thanks to Tony, Helen Harris, and St Andrew's member Noeline Rasmussen, for the rest of the information)

WANTED
EOC CD
RADIO CHECK
VOLUNTEERS
ONCE OR TWICE MONTHLY
THURSDAY MORNINGS
FOR 1 HOUR
DURING SCHOOL TERMS
MORE VOLUNTEERS NEEDED
TO SPREAD THE LOAD



Back in March, Bill Cousins was in contact with David, ZL2DW, in Napier after all the flood damage they had up there. He thought some of you may be interested in their exchange...

Hello Bill

CFYI, All fine here during/after our floods. The only thing we personally suffered was a 90 min power cut on the Tues morning. Very lucky us. While the rain amount was overwhelming the real problem(s) came when the stop banks overflowed. The stop banks remain intact today. Perhaps also contributing was the slash etc that banked up against the bridges (eventually breaking three of them on one river) causing a damn like effect upstream from them and a big lake that overflowed the stop banks.

The Transpower sub station that drowned has been there for 100 years and never looked like ever drowning before, it seemed to suffer from the "lake" mentioned before. So, the answer, build bridges way higher than the stop banks so that everything (including containers) can scoot under them.....oh and perhaps higher stop banks wouldn't go amiss either, although they have been there doing an OK job since post 1931. DW

Bill: Relieved to hear that you didn't suffer any damage. I was saying to someone on Sunday at our JWFD site that I was very concerned for you up there but wasn't going to attempt to contact you for a few days in case you were inundated with silt and goodness knows what else!

David: Not silt (thankfully) but certainly was busy with ham radio Welfare Traffic and keeping Com's systems going with my work. Internet went out early Tues morning for Napier and about 10am for Hastings (along with the cellphone services, surprise, surprise)

Bill: When we heard on broadcast radio that Gisborne and Wairoa were isolated and without communications we wondered what AREC were up to.

David: AREC was active with radio comms with people who were doing search work for missing (some dead) people in the river and coast areas.

Bill: Assuming that the "professionals" didn't want to engage the "amateurs".

David: As far as I'm aware we were never asked, certainly as welfare enquiries came our way we just handled them and got on with the job (via 2m repeaters and 40m HF) in view of the adverse publicity.

Bill: Media often equate cell phones with radio communication, period. However, we have since heard that there was quite a bit of useful amateur radio involvement, just no related publicity.

David: Correct

Bill: We were active in Field Day. I have organised it in the past but gave it away after last year, so Stuart Watchman saw to it and it went off very well.

David: Yes I got tired of it too, some years ago. Great to hear it went well.

Bill: We had some steady rain overnight on Sat/Sun but nothing to get excited about - only about 12mm apparently. Little wind, fortunately. Obviously, a number of stations weren't on that might otherwise have been, but the activity seemed well supported despite the problems up that way. It's going to be a huge clean-up!

David: Yes indeed. Almost without exception town folk were not flooded but were hit by the loss of power (for days) and cellphone/internet loss (for days) however the rural areas are another matter as you no doubt saw in the news. Destruction everywhere the poor buggers.

I told my wife that she should embrace her mistakes... She hugged me.

Happy 51st wedding anniversary Ron & Helen Harris



Welcome to new member Mark McGowan, who lives in Havelock. He doesn't have his amateur radio licence yet but is working with Bill to fix that.



NEW ADVENTURES IN HAM RADIO: THE FIRST TWO YEARS FOR MATT KERR, ZL4HZ

Part 3: A foray into the world of QRP.

While my Yaesu FT-891 is a reliable and capable, if not simple and aged, workhorse, it is better suited to desktop or vehicle use than portable use beyond a park bench. While certainly able to be used for QRP or casual portable HF purposes, there are smaller and lower-powered alternatives available that will take up less room in a backpack and feel lighter climbing a hill.

One such example is the (tr)u SDX - a hobby-grade QRP radio designed by two HAMS and available online as a kitset or completed radio. Having no experience in QRP, but knowing I wanted backcountry HF comms in a lightweight package, I turned to this wee radio to see what all the online fuss was about. After being held up at NZ Customs for a week or so, it was released with no issue. While it is a 5 band radio (with other band boards available for purchase outside the standard (10,15,20,40,80m)), I'm a bit of a creature of habit and tend to sit on 20 and 40m, and 80 from time to time.

Wanting to embrace the simplicity aspect more fully, I turned to the antenna. While I did bring in a small 1:1 balun for a low power dipole, I purchased an end fed 1/2 wave unun board to run a wire with no counterpoise.

My first QSO with this wee radio was on 40m after I gracelessly threw the endfed wire up over a branch up at Pine Valley and tuned onto an operator down in Oxford who was calling CQ. We were both probably equally surprised to find out he was operating 1kw and I was operating 4w over a poorly tuned end-fed. To overstate this point, I was sitting in my tent, under a tree, with this very small radio and its tiny buttons and inbuilt-mic in my hand, talking into the orange box while also trying to hold the PTT button in and keep the makeshift battery connection in place. Suffice to say, I was very pleased with the performance of my wee station - less so for my poor organisation and shambolic state of readiness to use the radio in a QSO!

With work getting in the way of life, it was many weeks before I was able to get it out into the field again, but what better opportunity than while camping with the family over the Christmas period. The airwaves were relatively quiet as people put time into their families, but I was aware there was a bit of a push happening for a QRP / SOTA day on New Year's Day. While a couple of QSO's were achieved in the lead-up to New Years by lacing my 40M EFHW around the outside of the tent, the "graceless tree-chuck" would again be the key to success on New Year's Day.

So off I went into the Tahunanui Beach pine trees and strung the camouflaged brown wire up into an old pine tree and sloped it back down to the unun board and the little radio. It made for a nice couple of hours in the shade contacting stations in Auckland, Marlborough, Dunedin, Central North Island and others. Again, for a mid day effort on QRP/P, I was very pleased. In fact it was quite satisfying having an Auckland station laugh back at me when I told him I was coming to him on 3W for my 5x9. The highlight however, was catching up on the air with fellow branch members ZL2BNE, ZL2NEB and ZL2GVA for a quick gas bag back into Marlborough from the beach in Nelson.

Power supply was my next challenge. With small size and low weight the aim of the game, my 12AH LiFePO4 battery - as light as it is - was far more than required for this radio which draws 500mA on tx. After doing some research and making a Trade me purchase, I wired up a USB-C trigger board to trick my phone's powerbank into putting out 12V rather than 5V. While the radio will run on a 5V USB input, it is very low power (500mW), whereas the 12-13.8V desired input allows 3-6W tx power (depending on the SWR and the quality of the coils as wound from the factory).

I have yet to do further testing and take the radio back country in the truest sense, but at this point I am very happy with its performance to-date and look forward to packing it on a multi-day back-country hunt. I suspect I'll barely notice I'm carrying it!



First time in the field with my main 12AH LiFePO4 battery - way too much for such a small radio



The (tr)u SDX in use for QRP/P at Tahunanui over the holiday period

Part 4: QRP/P HF Digital

Having discovered the power of QRP with my (tr)u SDX (An oxymoron? A dad joke? You be the judge...), I began to understand that there was potential for digital modes through this little radio.

The radio is well supported by its designers on Youtube (google "(tr)u SDX") with good information on how to wire the audio into a USB sound card and how to establish full CAT control via USB. I started with using my laptop as

proof of concept and was amazed to have this radio streaming FT8 onto my screen and being able to be controlled by the laptop using the appropriate CAT settings. Honestly, the rest of it was clicking the mouse as for other HF digimodes. But this is not where I was aiming to be. I needed smaller. I needed backcountry portable.

While building my 100W medium deployable HF digi-box for my FT891, I procured a used, low performance mini-PC for a very reasonable price. While I felt its performance was below that for a pseudo home station, it would probably be adequate for my 3d printed QRP radio from China. Two important factors really sealed the deal for me. Firstly, the mini PC is a native 12V so I could power it from my USB-C PD battery bank using a trigger board to trick the bank to providing a 12V output. Secondly, the current draw of the mini-PC is only 750-1000mAH when running any of the software such as VaraHF modem and Winlink etc. Add to this, a peak current of 500mA for the radio, it became apparent I could power my computer, a USB screen, keyboard & mouse AND the radio from my single USB powerbank.

Following my previous efforts with the FT-891 to shoe-horn all this trickery into a protective black plastic case, in the end I decided to ditch the 1.5kg box and go for a bagged option. Doing so brought the weight of the entire package down to 2.5kg for a QRP/P digital HF capability. This excludes the powerbank and any solar capability to maintain operation over multiple days. This is a weight that, while certainly noticeable on a multi-day tramp, is entirely suitable for throwing into a day bag, the boat, caravan or vehicle for some portable HF digital work.

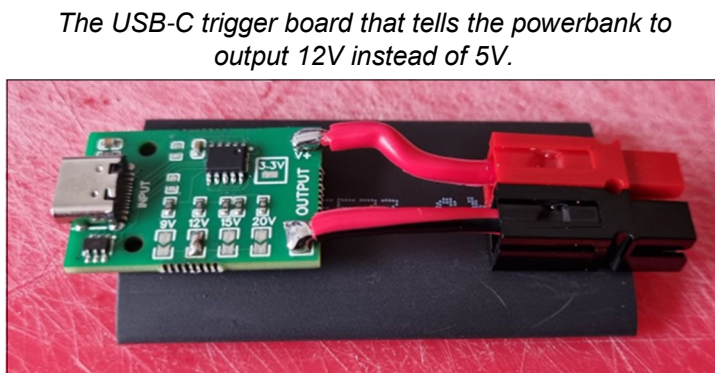
While I have yet to complete my EFHW tuning at the time of writing, I have tested this radio at home using my inV on 40m and 20m. I have been amazed to QSO with Australia on 500mw and Poland and Switzerland on 5W using VarAC - a rapidly developing HF chat mode. I'm sure the EFHW will have something different to say in the field environment, but it is great to know I can dial up an email and provide updates on as little as 500mw up to ZL2SEA; our closest winlink RMS station at a little over 700km away!

I guess the journey doesn't end here - not by any stretch. 2.5kg for a portable HF digital station is too heavy! I suspect it won't be too hard to dispense with the 7" USB powered screen and use a direct WIFI connection between my smartphone and the mini-PC to use as a screen.

I also suspect I could repackage the mini-pc without its weighty aluminium case, although it does serve as the heatsink. Raspberry pi may well be the way forward to further reduce energy consumption and weight. But for now, I am happy with where I have got to and can now spend some time wondering what might be next!



The mini-PC and 7" USB powered screen with Bluetooth keyboard & mouse. Running off a 12v USB powerbank.



The USB-C trigger board that tells the powerbank to output 12V instead of 5V.



Trigger board testing after being shrink wrapped



(tr)uSDX with audio to the PC through a USB soundcard. Keyboard and screen fitted to protective box, running WSJT-X on FT8. Fully self contained and powered by USB powerbank



Running the FT8 waterfall on WSJT-X

**But wait!
There's more!**
Next month's Interface will have Part 5 - the final frontier episode!

Running winlink to check email and pull down weather updates from remote locations

