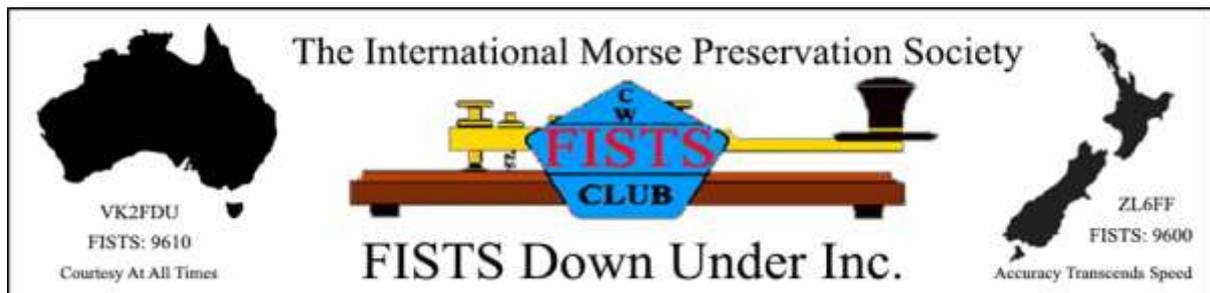


September 2021

Key - Down Under



From the shack of VK3QB

2021-2022 Committee

President	Chris VK3QB	Vk3qb@hotmail.com
Secretary	Phil VK3VB	secretary@fdu.org.au
Vice President	Derek VK3KX	
Committee	David ZL2WT	Zl2wt@outlook.com
Treasurer	John VK2JSE	
Committee	Graeme VK5GG	

 <http://www.fdu.org.au>

 <https://www.facebook.com/groups/349974226381281>

Recommended FDU calling frequencies (MHz)

1.818	3.528	7.028	10.118	14.058	18.085
21.058	24.908	28.058			

The Swedish Pump – from 1900 – 2019 (Begali Blade)



Welcome to our September Newsletter.



On behalf of the committee, I hope that all our members, their families and friends are healthy and coping with the extended Covid-19 restrictions. With about half the country subject to some form of restrictions it can be stressful. Please reach out to committee or other members if you'd like a chat, or to arrange a QSO.

I'm confident FISTS members would be more than willing to provide a caring ear as well as a rag-chew on-air. If you're alone and struggling please reach out <https://www.ruok.org.au/>

Well, our AGM is behind us for 2021 and I'm pleased to introduce the new committee; I'm staying on as President, and I'm very pleased to advise that John VK2JSE has taken on the role of Treasurer. Derek VK3KX continues as Vice President, and Phil VK3VB stays as Secretary. I extend a very warm welcome to two new committee members, Graeme VK5GG and David ZL2WT. David has been working informally with committee for a couple of years now, but it is great to have him onboard as our ZL representative.

I extend a big thank-you to both Graeme and David for stepping forward to assist in running FISTS. I'd also like to thank out-going committee member Glenn VK4DU for his contributions over the course of 2020.

An important item for ZL members. FISTS Down Under in NZ will sponsor a Reverse Beacon Network node to the amount of NZ\$800. If you (or your club) would like further information, please send us an email. And visit [this web page](#) for more information. If you need technical help, we have members who have setup an RBN here in VK3 – so just reach out.

The new committee met recently to review the club's finances and consider plans for 2022. I'm pleased to report that our finances are in very good order and as a result, **committee voted unanimously to set membership subscriptions at \$0 once again.** So please, no subs payments and no donations.

In this edition, we have some articles on QRP operation which will hopefully inspire some members to give QRP a go. It can be extremely challenging but rewarding, and as the warmer weather approaches, you can go portable and find locations that lend themselves to low power operation.

If you're looking for a bit of inspiration to learn or improve the code, we've got a brief review of CW Academy.

Phil VK3VB, Graeme VK5GG and I (Chris VK3QB) continue to scratch our collective heads as to how we can make on-air events more appealing – out of over 200 members we rarely get more than 10-15 participants. We'd like to hear from you – the members. Stand-by for a survey we'll be sending out in a few weeks.



In other news, yours truly was interviewed by ABC Canberra recently. You can listen to the interview [here](#).

I know I ask this every edition... (and again) but please send me an email with your news, stories or even photos of your radio, favourite Morse Code key/paddle, or even an interesting project you're working on. We're also after photos of you and your key/paddle/shack for the website.

<http://www.fdu.org.au/members-gallery/>

And if you're on Facebook, but haven't yet joined our page, just follow this link.

<https://www.facebook.com/groups/349974226381281>

Finally, a warm welcome to our new members. If you hear them on-air, please give them a call and say g'day or kia ora

VK8MC	Phil	Brennan	20696
VK3DPH	Damion	Hadcroft	20697
VK5JAK	John	Tudor	20698
VK6PII	Christopher	Brandon	20699
VK3AUR	Mike	Wimborne	20985
ZL4KX	Bede	Mccormick	20986
VK5IT	George	Stewart	20987
VK7CH	Corey	Harris	20988
VK2JA	Ben	Cosier	20989
VK5UW	Brian	Wilson	20990
VK2LI	Leighton	Judd	20991
VK5ZIM	Ian	Maxted	20992
ZL1RA	Mike	Overington	20993
VK3TCP	Alan	Harper	20994

Just a reminder on membership renewals; Committee resolved to maintain membership fees at \$0. So, no fees are payable and no donations please.

And, if you have any questions, comments or suggestions please send me an email or give me a call.

73 es cu on air,

Chris VK3qB (#9085)

President



Member survey

In February 2019 the committee conducted a survey of all VK and ZL members to determine how Fists Down Under could better meet members' needs. Eighty-seven percent of members responded, and the results were subsequently published in the Fists Down Under Newsletter.



Your responses assisted us in our actions and focus areas since that time.

Times have changed and we also have many new members since the last survey was conducted. The committee recently decided to conduct a new survey which will be held in the first two weeks of October. A particular focus of the survey will be to discover how best to encourage members to get on air and to enjoy more CW activity. At the moment, club events are not particularly well patronised and committee would like to gain a greater insight into how we can get more members on air more often. In other words, how can we help you to enjoy CW events, improve your CW and meet other members on air.

You'll receive an email with instructions on how to complete the survey early in October. Please take some time to think about the questions and complete the survey.

FDU Committee

Event Calendar

The next Bug Off event is Friday – 17 September. Don't miss it!

We thought we'd try a different format with Bug Off. This is a social on-air activity to encourage members and friends to get on air, using whatever you like to send your CW; key, bug, cootie or paddle.

We're going to revert to three bands this time, 40 and 80 and 160 metres. 40m from 0800-0900UTC, 80m from 1000-1100 UTC (you get a one-hour break for dinner) and then 160m from 1100-1200UTC.

The rules are simple. Get on-air per the schedule above and work as many stations as you can. Exchange FISTS numbers (if you have one) and have a chat. You can work dupes. Try to gather around the FISTS frequencies so it's easier to find one another.

Please remember to QRS as required and encourage newcomers to join in our events.

- 160, 80 and 40 metre session (centre around 1828 kHz, 3528kHz and 7028kHz but look in the CW segment for activity)
- Get on-air with your key/bug/paddle. Exchange FISTS numbers where possible. Repeat QSOs are fine if it means you're keeping that key or bug busy.
- Try to have a bit of a chat if conditions are quiet.

Entry: Summary of your log, commentary of band conditions and contacts, description of your station & antenna and photos of your bug or key.

Send entries to [secretary\(at\)fdu.org.au](mailto:secretary(at)fdu.org.au)

If you want to see where your signal is being heard, call CQ (or TEST) and then check the Reverse Beacon Network. There are instructions on how to use this resource [here](#)

Other calendar events are:

Every Sunday 0600-0800Z is the [Sunday Sesh](#)

18-19th September – [FISTS Weekend Warrior](#)

9th October - [Oceania Dx Contest CW](#)

15th September Bug Off 0800-0900Z for 40m, 1000-1100Z for 80m and 1100-1200Z for 160m

20-21st November – [FISTS Weekend Warrior](#)

5th December - [Straight Key Night](#)

December – Bug Off – details to follow

RBN Activity

By Chris VK3QB

By now I hope all members are aware of the Reverse Beacon Network and are using it to their benefit. For those of us in VK3, the RASA RBN, VK3RASA, has been doing a great job since its installation late last year.

Phil, VK3VB brought this useful web site to my attention recently – a great way to get a pictorial representation of your activity.

To check it out and get your own report visit this website.

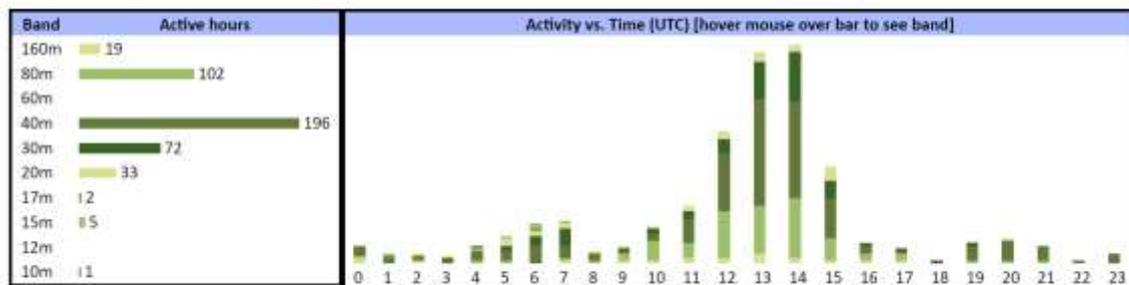
<https://rbn.telegraphy.de/activity>

RBN activity of VK3QB

The heatmap shows the activity as reported by the RBN (CW/PSK/RTTY, no FT8) of the last 12 months. You can scroll back to January 2015.



Hours (in 365 days) with at least one RBN spot: 348 (1h / day). EU: 50, NA: 127, AS: 26, SA: 0, AF: 7, OC: 329. [Rank: 3136](#)



Generate this report for any call: - [FAD - Data Removal - etc.](#) - You can generate joint reports for two calls, e.g. [DJ1YFK+SQ5CW](#)

With thanks to Phil VK3VB for alerting me to this useful resource.



New FDU Sked & online messaging app

By Chris VK3QB

(This is a reprint from last edition – we’ve had a lot of interest in Discord with 27 members registered. The messaging/alerting app is used regularly so I thought we’d reprint the article again this month for those who may have missed last month)

The FDU Sked page has been discontinued. Technology changes required a re-write of the code, and the author doesn’t have time. So, we thought we’d try a new technology called **Discord**.

The **Discord** app enables users to chat with friends and participate in group messaging. We’ve created a **Discord** group for “FISTS Down Under”.

You can install **Discord** on your PC, Mac, smart phone or iPad and be alerted by push notifications when a message or “chat” is sent to you.

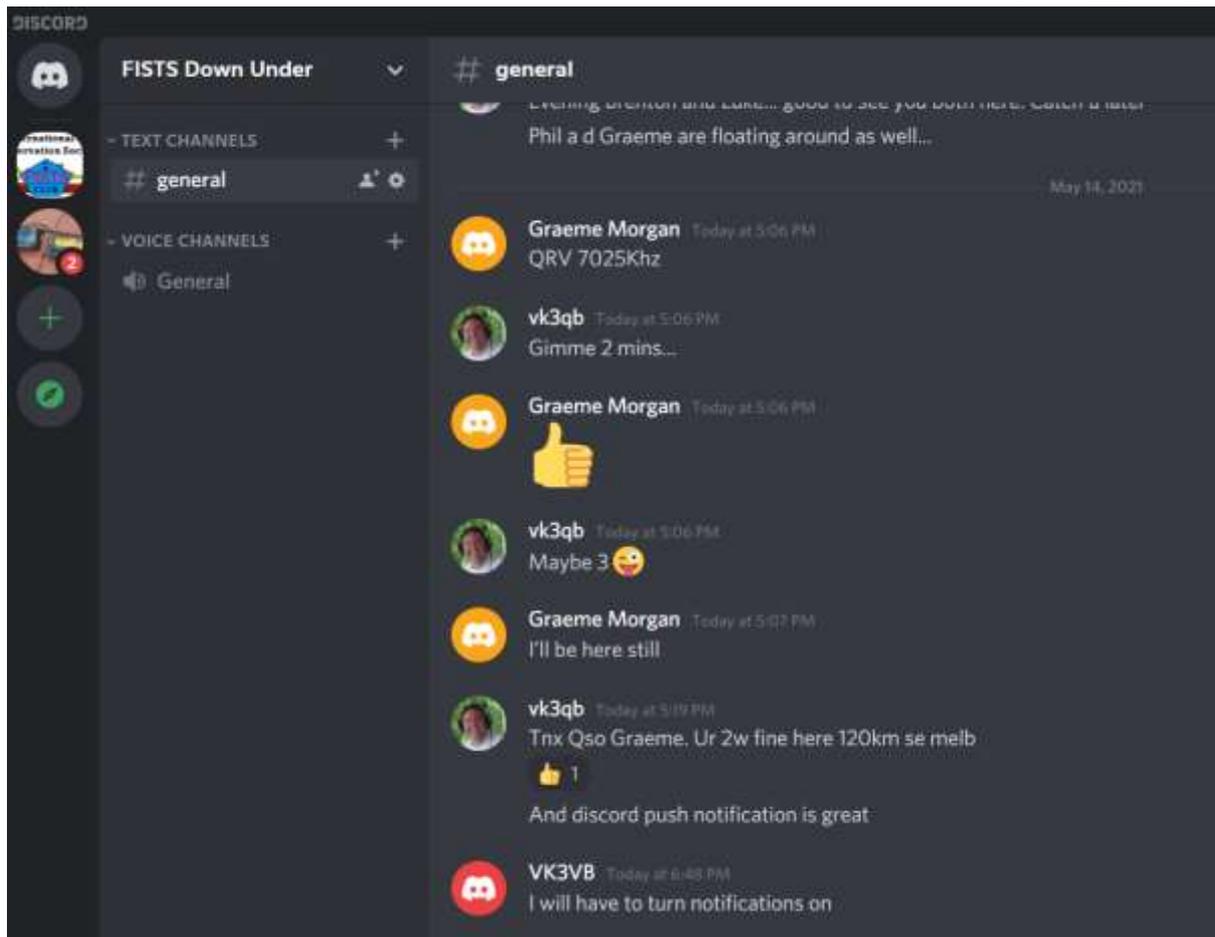
You can read more about Discord on their web page:

<https://discord.com/>

With **Discord**, every user can send general messages for the whole group to see. You can also break-out and have one-on-one chats. It’s an ideal way to announce your availability for a sked to the group, and then break into a private discussion to agree on the frequency, or even to provide feedback on sending and receiving.

Discord is an ideal way to let others know you’re in front of your radio and looking for a QSO. Equally, with push notifications, you can be alerted to messages from other users and take the opportunity to jump on-air and have a QSO.

Below is a screen shot from **Discord**. Graeme, VK5GG announced he was QRV on 7025kHz. Chris VK3QB received a “push” notification on his mobile phone (a bit like receiving a text message) and was able to wander into the shack and give Graeme a call.



You can also see (at the bottom of the messaging screen) that Phil, VK3VB only became aware of the message from Graeme after he logged on... so, he needs to turn on notifications for the app (on his phone) to alert him to new messages.

If you'd like to participate in our trial of this new app, please follow this link and create an account.

<https://discord.gg/zkdjHgHbag>

Now, **Discord** should not discourage you from calling CQ or just having a listen around the bands.. but it adds a great level of convenience if you're away from the radio but keen to hear when others may be looking for a contact.

If you'd like more info, please drop me an email.

73, Chris VK3QB (#9085)

A little bit about our new Committee Members

By Graeme VK5GG

My history with CW goes back to 1989, where joining the RAN as a 16-year-old I trained as a radio operator. So, for around seven months I learned morse code, passing out at 12 words per minute. After my training I was posted to HMAS Harman in Canberra, where my work included operating ship-shore CW which increased my proficiency very quickly.

(Editors note: I'm reliably informed Graeme is at the front of the this photo, and that's a bottle of Indian Whisky, not a Morse Code Key)



The fleet standard for Morse Code proficiency for radio operators was 18 WPM, and we were tested weekly. The key used in that era was the Royal Navy's NATO straight key, a very nice straight key in my opinion. Morse Code was abandoned by the RAN in 1996. Despite my previous experience, I must confess to growing lazy in my old age though, having used a paddle now since late 2019.

Additionally, being someone who was prone to sea-sickness, I must say it's much more pleasant operating Morse Code at home compared to a ship in rough seas – in those times I could often be found with my left hand holding a bucket, and the key at the right hand. Hi Hi.



An interest of mine with Morse Code is operating QRP and QRPP. With my main QRP rig being an Icom IC-703, when conditions have been good enough I've had some success, including working DX into North America and Eastern Europe. My antenna is a very basic W3EDP end-fed wire. I have also enjoyed making 1,000 mile per watt QSOs, with contests providing good opportunities.

I've attached a 1,000 Miles Per

Watt certificate from the North American QRP CW Club.

I'm very much looking forward to conditions improving on the higher bands in the coming years.

(Editor's Note: Graeme is a keen QRP operator these days and I (Chris VK3QB) often have a good conversation with Graeme on 40m – he is usually running 5W and sometimes only 2W. Graeme reached out to Chris G4UDG for the next story – thanks Graeme!)

—

By David ZL2WT

The editor has asked me to write a few words to introduce myself. I have the privilege of being the ZL representative on the FDU committee.

My name is David Smith, originally from England. In 1973 I emigrated to New Zealand – which has proved to be an excellent move. I was first licence as G3VBJ and now have the call ZL2WT.

Twenty years ago I recreated a ship's radio room at the back of my garage and occasionally use the equipment on 80 metres. This has been supplemented by an Icom IC-7100, as a crystal-controlled transmitter and drifting uncalibrated receivers can be hard work.

With the exception of one weekly D-Star net, all my operating is on CW.

My hobbies include cycling and motorhoming. I am very active in Rotary community work, am a member of Rotarians Of Amateur Radio and currently president of the International Caravanning Fellowship of Rotarians.

I have six grandchildren living locally. Our family and our community always take precedence over my hobbies, so amateur radio activities can sometimes take a back-seat.

Like most of us, I am looking forward to improvements in the solar flux index, which will extend opportunities to get on the air.



Now some history about my radio career.....

At the age of 16, I went to a technical college to train to become a merchant navy radio officer. My first day at the college was also the first day on the staff for ex Royal Navy CPO Telegraphist Len Townsend. Len was a brilliant telegraphist, a true gentleman and was totally unflappable. I remember my end-of-term Morse test at Christmas 1964. I had just sent the zero character as a string of 6 irregular dashes. Len looked up from his desk and said: "Mr Smith, during the war I was sent back to naval telegraphy school to learn Katakana Morse code. I found it very difficult, as International Morse was so ingrained in my brain. However, Mr Smith, you are absolutely brilliant, here am I teaching you International Morse and you have learnt Japanese Morse!"

Well, Len and I struggled with Morse code for two and a half years before a sympathetic PMG examiner got tired of giving me retests and awarded me a 2nd Class PMG certificate.

Nobody expected that Len could get me up to the 1st Class standard, but once I had passed the Part One theory examinations, he spent hours giving me extra tuition. When the day for the examination arrived, we found that there were two examiners – the senior PMG examiner and a trainee. At the end of all the formal testing, it was no

surprise to be called back into the Morse room to be retested on my sending. After a minute or so of excruciating 25wpm, the senior examiner held up his hand and said “Can we have it at 23 words per minute please?” So I started to send a little slower and he interrupted saying, “That’s better, you’ll find your speed will increase once you get to sea”. A couple of weeks later I was in possession of a coveted red 1st Class certificate.

Len said “You better join the Royal Fleet Auxiliary – they use teleprinters instead of Morse”.

So I did.

In 1967 most RFA ships used RTTY for reception of naval traffic but Morse was still the primary mode for transmission. The first few years were quite a struggle – with one exception, I never felt at ease with Morse communication.

The one good period of successful and enjoyable operating happened in the South Pacific. The tanker RFA Orangeleaf was assigned a few easy duties, such as supporting the RFA Sir Percivale and HMY Britannia. Sir Percivale was stationed off Muroroa to monitor the French atomic bomb tests and Britannia was on her way home from New Zealand.

We had five R/Os on that ship – I had the graveyard watch. We had a wide variety of choices of stations to clear traffic through, but I discovered the joys of working the New Zealand Navy radio station at Irirangi. Each night I would have a pile of navy and commercial messages to clear, I would call Irirangi on 6 or 8MHz and he would reply straight away and take the messages in a friendly and unhurried way.

They became very good mates indeed when they gave us a message to proceed to Pago Pago and then lost the message telling us to sail. If it wasn’t for our Captain going ashore a week later to send a telegram to London, we might still be there, tied up alongside the Rainmaker Intercontinental Hotel and not having a care in the world!

After that trip I was selected to spend the best part of a year on the RFA “Long Course” which was held at Marconi College, HMS Mercury, HMS Collingwood and Creed Teleprinter School. Subsequently I became a “Radio Maintenance Officer” and rarely had to keep watches again.

One day I received a letter from the Radio Officers’ Union asking me to apply for the position of Junior Lecturer in Marine Electronics at Brunel College in Bristol. I applied, was selected for the job and was given the course notes to study so I’d be ready to start teaching on the first day of the next term.

I dutifully studied the syllabus and was confident of being able to teach would-be Radio Officers all about radio and electronics. On my first day at the new job, I went to the staff room and searched for my name on the staff allocation list. Other tutors were teaching the two new entrant classes, Phil Brouder had the second year electronics, Lofty Allen had second year telegraphy, someone else was assigned to radar, and then I found my name – right at the bottom of the list – Mr David Smith – First Year Telegraphy. I could have cried – how on earth did the worst telegraphist to sail the seven seas get to be assigned such a role!



As I walked to the telegraphy room I thought of the teaching methods of Len Townsend. “Dit dah – write down A, dah dit dit dit – write down B, dah dit dah dit – write down C” Within two terms, many of the students could receive my Morse at 20wpm. I started having nightmares – perhaps I had taught 40 new R/Os to send and receive Japanese Morse – I knew that they could read my Morse and read each other’s sending, but would they be able to communicate with all the other telegraphists out there?

There was only one thing for it. I resigned, caught a plane to New Zealand and signed on a ship on the trans-Tasman run. Maritime Morse communication “down-under” was easy, unhurried and most enjoyable.

(Editor’s note: Thanks David and Graeme for your stories – its always nice to learn about other members’ stories and background. I’m always looking for similar stories from members, so please, sit down in front of the computer and send me your story and a few photos)

-.-

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Neil Sanderson ZL1NZ, Net Manager
New Zealand Net (NZ NET)
3535.0 kHz at 9pm NZT Mon-Fri
[Website](#)

QRPp - Big results with little signals

By Chris G4UDG

I have been an avid QRP operator (5 Watts CW) for a good few years now. I have operated from various locations in the UK, Greece and Malta with great results and have always been amazed at some of the DX contacts I've made. Over the past 4 months I have reduced the RF power down to 100mw and less. (QRP-X).

I use an Elecraft KX-3 (100mw steps) and my antenna is nothing special. It's a home made Rybakov vertical (7m tall fiberglass flag pole with wire attached, fed with RG58 to a 4 : 1 UN-UN, with one 30 feet wire radial bent at 90 degrees to fit into my small garden). I also have a Kenwood TS590SG. Its lowest power is 5 Watts so i have made an RF stepped attenuator for this radio (see pictures) ..operating from 7Mhz. and up CW only....

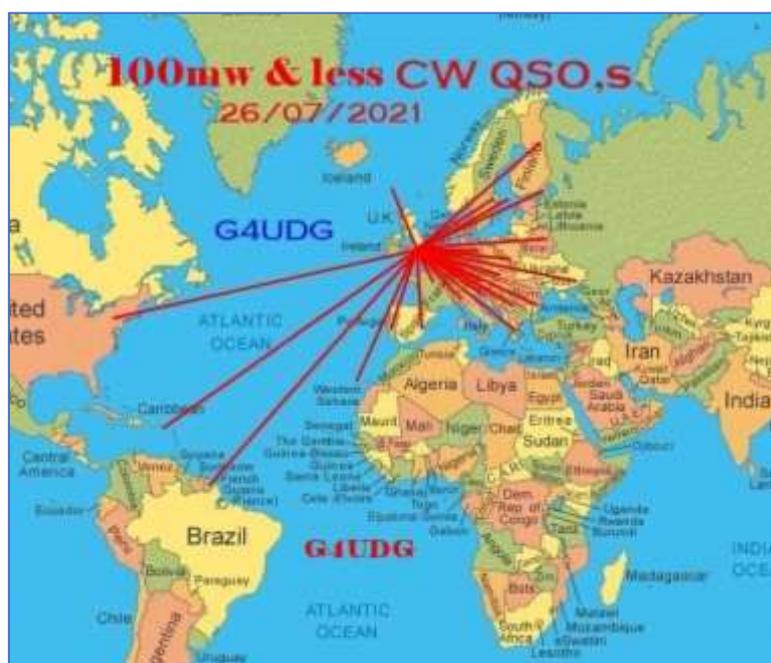
So, how are my QRPP efforts going?

A quick check of my paper logbook tells me I have 148 QSOs with this very low powerin fact, 40 DXCC countries with 100mw or less....to OH8, LZ5, UE2, SX200, KP2, EA6,OY, CT9, US8, YL, W2, HB9 and others. The best DX so far is FY5KE (French Guiana) at 7013Km.

I've also worked ES0 with just 9 mw (0.009W. TS590SG and RF stepped attenuator) at 1836Km.

QRP-X is not for the faint hearted but with a little patience (and loads of luck) ham radio can still be enjoyed at these very low power levels..... I like a challenge 😊

73 de Chris G4UDG.



Unexpected QRPp DX from a rare QTH

By Chris VK3QB

Some years ago on my annual DXpedition sojourn I had a very nice but unexpected experience with QRPp from Norfolk Island.

Each year we always set up the radios on a cliff-top about 120m ASL and 20 metres back from the Pacific Ocean on Norfolk Island. The outlook is to the North. The radio is an Elecraft KX3 and we generally start at about 1700 local time and work the DX on 20 and 17m for an hour or so. The antenna is a 40m dipole fed with open wire line.

As the night approaches and signals begin to fade, we pack up and head back to the main station (and house) for dinner.

This particular year (2013) conditions were especially good. It was getting dark, and the pile-up was showing no signs of abating. There was little chance of us escaping the many operators wanting to get us in the log. Rather than just QRT, we decided to try a different approach and gradually wind back the power back until we'd no longer be heard.

Starting at 10W we halved the power out to 5W. There was no change in demand. We halved again to 2.5 and then 1W. Stations continued to hear us and our QSO rate was good – clearly the DX was still hearing our signal loud and clear.

My fellow expeditioners, Brenton (VK5BJ) and Luke (VK3HJ) were becoming impatient (and hungry), so Brenton leaned over and wound the power back to 500mW. No change. Stations continued to acknowledge our reports.

Finally, we wound the power back to 100mW and still they called. We worked a few stations at 100mW and then called it a day. In spite of being cold and hungry we were ecstatic with the QRPp contacts. No doubt the QTH assisted, and of course the rare location. But, nonetheless, it proves what can be achieved with low power.

QSOs with N6WM, RD0L and JA1PIN were submitted to the CW Operators QRP Club. The best QSO was N6WM at 11,622kms. The certificates are on the next page.

MILLIWATTS PER KILOMETER AWARD
 ~ Certificate # 58 ~
 CW OPERATORS' QRP CLUB Inc.
VK QRP CLUB



VK3QB / QRP
 Chris Chapman (operating as VK2NT)
 Mode CW Section B
 On the 17 Meter Band
 With: Masahiro Miyaji - JA1PIN
 Location: Japan
 Power 100mW Distance 7,845 km
 0.0127 mW / km & 78.45 km / mW
 QSO Date: 08th May, 2013





Garry Cottle VK2GAS
 For CW Operator QRP Club Inc.

72. Garry Cottle
 VK2GAZ #121
 Contest Manager

MILLIWATTS PER KILOMETER AWARD
 ~ Certificate # 57 ~
 CW OPERATORS' QRP CLUB Inc.
VK QRP CLUB



VK3QB / QRP
 Chris Chapman (operating as VK2NT)
 Mode CW Section B
 On the 17 Meter Band
 With: Chris - N6WM
 Location: USA
 Power 100mW Distance 11,622 km
 0.0056 mW / km & 116.22 km / mW
 QSO Date: 08th May, 2013





Garry Cottle VK2GAS
 For CW Operator QRP Club Inc.

72. Garry Cottle
 VK2GAZ #121
 Contest Manager

MILLIWATTS PER KILOMETER AWARD
 ~ Certificate # 56 ~
 CW OPERATORS' QRP CLUB Inc.
VK QRP CLUB



VK3QB / QRP
 Chris Chapman (operating as VK2NT)
 Mode CW Section B
 On the 17 Meter Band
 With: Sergey - RD8L
 Location: Russia
 Power 100mW Distance 8,823 km
 0.0113 mW / km & 88.23 km / mW
 QSO Date: 08th May, 2013





Garry Cottle VK2GAS
 For CW Operator QRP Club Inc.

72. Garry Cottle
 VK2GAZ #121
 Contest Manager

Building the QRP Labs QCX+ CW Transceiver

By David VK3RU

COVID lockdown presents a challenge for everyone and in retirement finding something to do, especially during winter, can be difficult. I decided to find a radio related project and after some research decided to further advance my CW interest and build a 40M CW kit. The kit chosen was the QRP Labs QCX+ which was ordered in early May from their online shop and delivered out of Turkey in 10 days at a total cost just under AU\$140.

This kit was chosen because its extensive range of frequency options and features listed below. I especially liked the inbuilt keyer and decoder -:

- Easy to build, spacious 13 x 10cm main board, separate front panel board with all controls board-mounted
- Professional quality double-sided, through-hole plated, silk-screen printed PCBs
- Choice of single band, 80, 60, 40, 30, 20 or 17m
- Approximately 3-5W CW output (depending on supply voltage)
- 7-16V recommended supply voltage
- Class E power amplifier, transistors are bolted to the PCB as a heatsink, though heat dissipation is minimal
- 7-element Low Pass Filter ensures regulatory compliance
- CW envelope shaping to remove key clicks
- High performance receiver with at least 50dB of unwanted sideband cancellation
- 200Hz CW filter with no ringing
- Si5351A Synthesized VFO with rotary encoder tuning
- 16 x 2 blue backlight LCD screen
- Iambic keyer or straight key option included in the firmware
- Simple Digital Signal Processing assisted CW decoder, displayed real-time on-screen
- On-screen S-meter
- Full or semi QSK operation using fast solid-state transmit/receive switching
- Frequency presets, VFO A/B Split operation, RIT, configurable CW Offset
- Configurable sidetone frequency and volume
- Connectors: 2.1mm power barrel connector, 3.5mm keyer jack, 3.5mm stereo earphone jack, 3.5mm stereo jack for PTT, 3.5mm stereo jack for CAT control, BNC RF output
- Built-in test signal generator and alignment tools to complete simple set-up adjustments
- Built-in test equipment: voltmeter, RF power meter, frequency counter, signal generator
- Beacon mode, supporting automatic CW or WSPR operation
- [GPS](#) interface for reference frequency calibration and time-keeping (for WSPR beacon)
- CAT control serial data interface
- Optional [50W PA kit](#)
- Optional Enclosure
- Optional TCXO module

- Optional Dev kit

A fair bit of information on QRP Labs can be found on the net including YouTube and it is an interesting story, but suffice to say the kit was delivered well packaged and complete. In my case, the 40m circuit board kit with components plus optional TCXO and case.

Construction did not start immediately and typically my kit matured in the bottom drawer for a few months but in early August, work commenced and continued intermittently over the next 6 or 7 days.

Day 1 -



Figure 1 shows the status at the end of my initial afternoon on the board. What is not clear is my earlier effort to wind T1 transformer shown installed roughly centre of the board. The 40m version comprises four windings, three lots of 5 turns and one 38 turns. The instructions listed T1 as the first item to complete and I must say it was the most difficult. Pulling at least 2m of .33mm enamelled wire through a small core 38 times was difficult to say the least, then the three extra windings became very time consuming, maybe 2 hours. Building the board to this stage was straight forward except for the couple of times I found myself down on the floor looking for dropped resistors and capacitors. It is worth noting those SMD devices were presoldered with the kit. Let's call it up to this point 3 hours.

Day 2 -



Figure 2 shows another 3 hour effort and good progress. I encountered a couple issues along the way. Firstly I managed to install the power switch backwards and then, wound the first L1 toroid 3 times before I got it right. And that switch was a bugger of a job to extract too. The solution is to read the instructions before applying solder to the power switch and have a good look at positioning in the board before winding L1-4.

Interestingly all the components seem to be present which is a welcome relief but I can't stress enough to use a tray to store your components and only take out items per the instructions as you progress. At one stage I thought I was missing a 270R resistor, but it was hiding in a corner of my tray. So tomorrow, install the display and start testing. At this point a good 4 hours bringing our total to 7.

Day 3 –

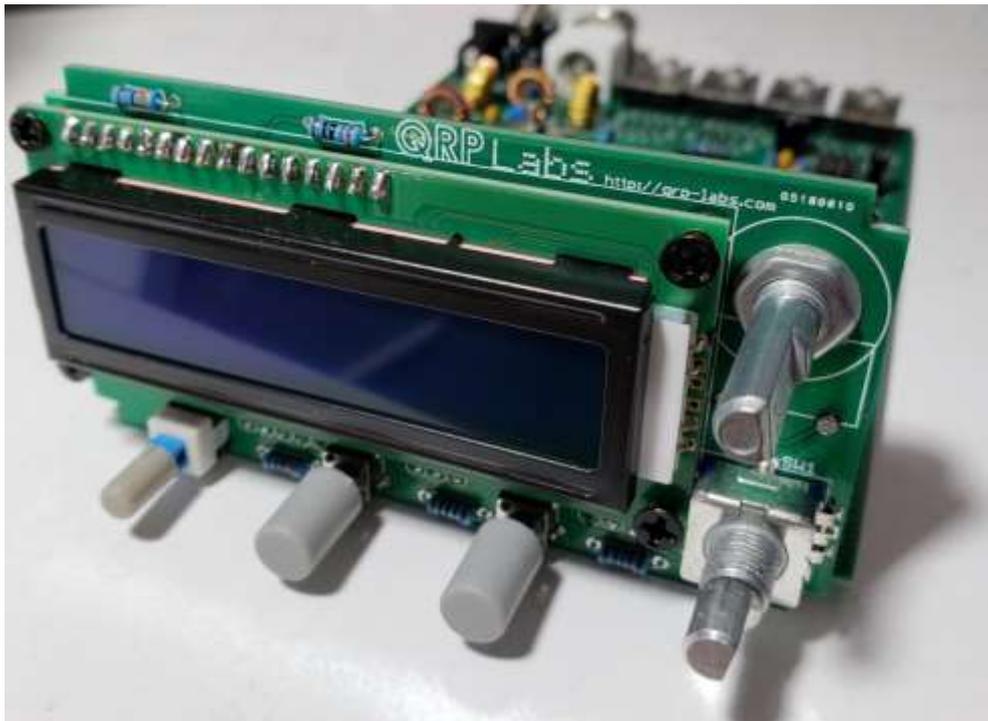


Figure 3 Just a couple of hours today. Putting the front panel and display together is a time consuming job but the instructions do say it's fiddly. Drilling the intermediate nuts and spacer threads is recommended and advised, plus filing the sides off a couple of nuts makes life a bit easier. So it's all together, even the rubber feet. Time to apply power and see what happens.

Good news the display lights up and tweaking the brightness brings up the top row, but nothing on the bottom. The instructions say if this happens, it probably means the processor is not talking to the display, check device orientation. Mine was correct but wondering if I had a bent pin, decided to extract IC2 and check. All good and it went back into the socket nicely, so power up. This time the display came up as expected and it appears to work, probably a poor socket connection. So tomorrow will be test and alignment day. Lets call it 9 hours so far.

Day 4 -



Figures 5 and 6 Not a lot of time spent today but I did manage to fire it up and start testing.

The first task was to peak the BPF. No special test gear is required as the rig contains some neat setup functionality and BPF tuning can be straight forward. Initial testing did not seem to produce much of a peak and after poking coil T1 (that's the 4 winding one that took a couple of hours to wind), I did manage to see a bit of a peak, but not good enough. The instructions do advise to be careful to remove enamel from the wire as part of installation and in my case, it did seem to check with a meter, but I decided to resolder all T1 connections. Some careful scraping and a little solder, good news and problem solved. Next test function, both Hi and Lo phase shift adjustments. It's a bit back and forth but it tuned up fine. Time to plug in an antenna, have a tune around and see what it hears.

Very pleased to report hearing plenty of CW signals during the afternoon at the lower end of 40m, so I am pleased to report the RX working fine. The set up menu is extensive and now fired with enthusiasm, decided to put the instructions aside and plug in my key along with power meter and dummy load. Good news, we have about 2 watts out and that's without tweaking anything. A job for another day. Say a total of 10 hours on the project.

Day 5 -



Figure 6 Yesterday I had a look at a couple of YouTube videos as there is not that much on transmitter tuning in the instruction manual. As it turns out there is not much to do. Tuning the toroids by sliding windings apart or closer together is about all and failing that, removing turns. I fired up into a dummy load and managed to see 3W max. Looking at the toroid and considering the effort to pull a turn plus the notion it might actually need that turn reinstated, I figured a dB or two will not make much difference in the scheme of things, so decided to leave it as is.

Being keen to see how it works, powered up and tuned around to find plenty of CW action, even some very strong signals. I came across Rex VK5FA calling CW and nervously connected my key. Hovered over the key several times as he called and called. Finally the courage and I responded. Rex was great and we conversed for a few minutes but my QRP signal was struggling into Adelaide with considerable QSB and just over his noise level, so we gave up.

Rex did say QRO and now fired with new found enthusiasm, I decided to plug the paddle into my IC 706 and there was VK5FA calling CQ again, so I went back. Great fun and we conversed for the best part of 20 mins. It was my first time in CW conversation and it is not too difficult to come up with a few words. Not necessarily following CW convention I gathered a few words in my head, words, not abbreviations. Off we went but a few times I struggled to remember the next letter within the word. As a result I missed letters and sent the same letter a couple of times, but Rex was good to me and we eventually concluded.

Feeling pretty chuffed, rolled back in the chair with a smile on my face .. hey was that someone calling me?? No, don't think so. The callsign was close, but not being prepared, decided he was calling someone else. Hey there he goes again .. yep he is calling me VK3HY .. OK. I went back in much the same way as VK5FA and we had a chat for some 10 mins before wrapping up. Hey this is fun!

That night an email arrived from Gavin VK3HY asking the question .. Did I work you on CW earlier tonite? It was addressed to VK3AV and VK3RU opening Hi Dave. How about that? No wonder the callsign did not seem right. Obviously I need to space my characters a bit better, at least I managed to get my OPT name and QTH across.

That's it for the project. It was fun to build and expect it will provide lots more fun in the future. The kit itself was reasonably priced from QRP Labs and delivered promptly from Turkey. The kit is comprehensive and can be configured to suit your preferred band (40m in my case). I have built several kits in the past where components have been missing, this time only one case screw was missing plus there were a few left over parts intended for different configurations. Importantly I found the instructions comprehensive and easy to follow. One needs to allow a good solid day or at least 10 hours to build using basic tools.

I guess it was fortunate mine fired up without an extensive fault chase and the tune up came together with little effort. Just a small tip, the decoder needs really good Morse to decode effectively. Drew VK3XU has been my best test case but I am sure there will be others down the track.

I would certainly recommend this kit to anyone with reasonable leaded component soldering skill and if you want to skip that step, the kit is available for a few extra dollars built, tested and ready to go from QRP Labs <https://www.qrp-labs.com/> but where is the fun in that?

FDU Calling frequencies

Many members in VK and ZL hang out on the frequencies listed on our “About us” page.

<http://www.fdu.org.au/about-us/>

During the day (at least here in VK3 and the states surrounding us) it seems we have two popular frequencies on 40m. 7.025 and 7.028MHz.



As many of us are either retired or working from home these days there tends to be a fair bit of day-time activity – so spin the dial, have a listen.... BUT... put out a call also.

The regulars to look out for include VK5GG, VK2CCW, VK2ARZ, VK2ASB, VK2GBR, VK5CZ, VK3VB and VK3QB –

I'm sure I've missed a few but it's usually easy to get a response to a CQ call on 7.025 or 7.028 sometime through the day.

In recent times, ZLs are also being heard well here in VK3 at various times throughout the day.

And don't forget the FDU nets on 3.528kHz on Tuesday and Wednesday evenings at 1000UTC.

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Would you like a FDU Coffee Mug?



Just email committee and we can send you the artwork. You can then order your own coffee mug from Vista Print for \$20 delivered. Whilst not exactly cheap, you can enjoy your morning (or evening) brew in your own FDU cup.

Improving Morse Code with CW Academy

By Chris VK3QB

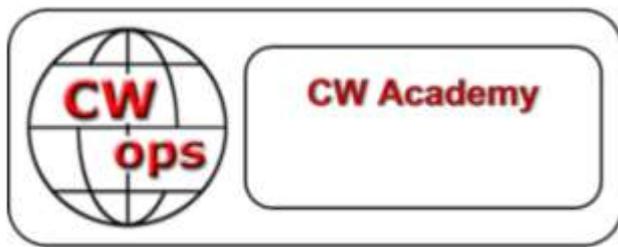
Learning or improving Morse Code is an ongoing battle for many of us. As it is no longer a requirement for attaining an amateur radio licence it has become a skill that people learn by choice.

But... what's the best way to learn and/or improve your Morse Code skill?

I learnt the old-fashioned way with a tape from the WIA. 5WPM... and it was painful. The methods used today are far easier and get you up to speed with greater accuracy and fewer hurdles. A little earlier this year I undertook a course with CW Ops.... A club not unlike FISTS, CW Ops is dedicated to the unique art form of Morse Code.

From their web site:

"Welcome to CWops! We bring together and support amateur radio operators who enjoy communicating by Morse Code (CW). We offer free CW training to those who want to learn this special skill that reaches back to the very beginning of ham radio and remains vital today. Learning and operating CW is fun and you can do it!"



CW Ops offer CW Academy. CW Academy is a well-structured and delivered training course run over eight weeks. Classes are delivered twice a week via online conferencing facilities (like Zoom, Google Meet, Skype) and a thorough schedule of

homework is provided – and expected! The Advisors (not teachers) are extremely supportive and go the extra mile to keep you on track.

I missed a class and my Advisor phoned me (from America) to make sure I was alright... hint hint, why wasn't I in class.

The classes are very well structured, and the homework expectations are very clear, and very achievable. You simply need to commit to 30-60 minutes per day to practice. The coursework includes using computer programs to assist with the learning process, and they're also fun.

If you really are serious about wanting to learn the code, or improve your code, I cannot recommend CW Academy highly enough. But you will need to commit yourself to the program. Make no mistake, this means eight weeks of dedication to attending classes twice a week and doing the homework.

If you want to learn more about CW Academy, click this link or email me for more information.

www.cwops.org/cw-academy

Heard around the bands

Have you heard something interesting on the bands in recent times? If so, please drop the editor a note and we'll publish your observations here.

from Brenton VK5BJ

I have been watching 17m and up throughout the day, from around 8am local (2200UTC).

North Americans have been coming in loud from 0130UTC on 21.260. On the 13th May I heard all the beacons on 15m at around 1pm local.

17m has also been active with beacons activity. I have heard all beacons at varying times of the day.

12m has been very spasmodic though, and nothing on 10m.

You can read more about the international beacons here:

<https://www.ncdxf.org/beacon/intro.html>

17,15,12m bands have only had lots of FT8 activity. Today there was one lonely JA calling CQ on CW on 15m, at the bottom end.

Heard regularly on 40m at around 4pm local onwards was Europe. I heard an F6 on my "5 watter home brew" while tuning through the band. AREG's SDR radio is about 150km from me so it's a good indicator of what's happening in VK5.

You can check out the AREG SDR receiver here:

<https://www.areg.org.au/areg-remote-hf-receiver-kiwisdr>

from Chris VK3QB

I have been watching 15m just after lunch, say around 0300-0400. There have been some openings to Asia, JA and DS. I worked DS5USH this week with a vertical and 100W, so its worth having a listen and putting out a call even if you have a modest setup. Call CQ and check the RBN to see if you're being heard... if you are then persevere and keep calling!

FISTS Down Under DXCC Awards

This is another initiative by FDU to encourage more activity now Sun-Spot Cycle 25 is with us and conditions are picking up. There are few different awards you can apply for and we've decided to use Club Log as our official online award tracking system. This way, you can easily upload your logs and keep track of your progress whilst checking out how other FDU members are going.

Check it out at

<http://www.fdu.org.au/awards/>



FISTS Down Under Worked most Band Slots Award

Once again, this award is designed to encourage more activity. The conditions are the same as the DXCC Awards.... Get your logs loaded onto Club Log and track your progress along with other members.



All FDU awards will use Club Log for verification, ease of administration and transparent tracking. Visit these pages for more info:

<https://clublog.org/>

<https://fists.co.uk/dxccleague.aspx?c=du&fbclid=IwAR3tiwr1TtysBwD1J2r-r5qi ygFQeI7ISLPNiX5tDdCNDv3gkRSNiXWuryE>



Reverse Beacon Network Grant

FDU still has approved funding for one more RBN Grant. We'd really like to see something in VK2. So, if you think your club might be interested, please send us an email and we'll reach out to them. You can read more about RBN here.

<http://www.fdu.org.au/reverse-beacon-network/>



Next edition – Summer 2021

Please send us through any news, stories or pictures that other members may be interested in.

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That's a wrap for this edition.

Please email us with your feedback, questions, ideas and articles for the next edition. And don't forget to send us a few photos of your favourite keys, paddles, bugs, shack and your good self.

73, es c u on air from the FISTS Down Under Committee

Chris VK3QB, Derek VK3KX, Phil VK3VB, John VK2JSE, Graeme VK5GG es David ZL2WT

September 2021

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