

C.D.A.R.S.

NOVEMBER 2023

CHESHAM & DISTRICT AMATEUR RADIO SOCIETY MONTHLY NEWSLETTER

With the last of the HF contests this month for 2023, VHF takes over the mantle until 2024.

We meet the 2nd and 4th Wednesdays of the month at the Ashley Green Memorial Hall, Ashley Green, HP5 3PP

Cobweb(b) antenna's



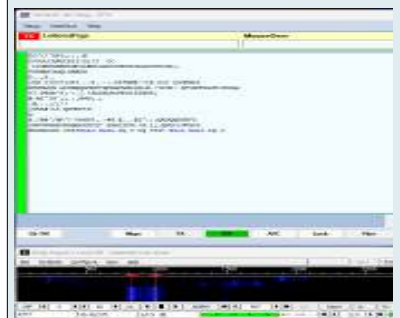
3 variations + one using a CG-3000 a.t.u.

Jeremy (G3XZG)



This month we pay tribute to Jeremy, who passed away on the 26th of October 2022.

Datamodes contesting



Malcolm (G3ZNU) guides you through setting up and using datamodes for contesting.

Morse Code

Sadly I've come to an end of finding interesting things regarding Morse code for the newsletter, should anyone find anything interesting that I've not already covered, please contact me.

Spotlight

This month we look at another of Jeremy's QSO's - Almaty, the largest city in Kazakhstan.



Morse links

If you're interested in Morse code, here are a few useful links:



FISTS CW Club

Promoting Morse Code for 36 years 1987-2023

<https://fists.co.uk>

WIKIHOW

How to learn Morse Code

<https://www.wikihow.com/Learn-Morse-Code>

The Ham Whisperer

Morse Code Course

<http://www.hamwhisperer.com/p/morse-code-course.html>

LEARN MORSE CODE

LEARN MORSE CODE in one minute !

<http://www.learnmorsecode.com/>

Welcome to LCWO.net

Learn Morse Code (CW) Online!

<https://lcwo.net/>



Tools for learning Morse Code

<https://www.aa9pw.com/morsecode/>



Celebrating the unique art form of Morse Code

<https://cwops.org/>



Morse Code by Ray Burlingame-Goff (SK - 29th July 2021)

<http://www.g4fon.net/>

Regulars

Welcome	4
Chairmans Ramble	5
The Cobwebb antenna A different approach to tuning.	8
Contests/Operating	14
Spotlight Another of Jeremy's QSO's, this time from Almaty, Kazakhstan.	22
Contest Corner Contests for November and December.	24
For sale and wanted Nothing this month	25
Any other business Nothing this month	26



Other

Morse Links Useful links if you want to learn Morse code.	2
---	---

Tribute

Jeremy, G3XZG One year on, we look at some of his musings.	6
--	---

How To

Operating Data modes in contests (part 1) Malcolm (G3ZNU) shows how to set up for these modes.	15
--	----

Chairman - Dave Keston (G8FMC) **Secretary** - Malcolm Appleby (G3ZNU) **Treasurer** - Matt Whitchurch (M1DTG)
- Guy Plunkett (M0GUY) - James Stevens (M0JQC) - Peter Holliday (2E0PTH)
- Roger Fellows (M7RMF)

All the above are members of the committee and can be contacted on cdars-committee@googlegroups.com

Editor - Bryan Page (M0IHY)

Welcome

My apologies for the delayed newsletter, I've been otherwise occupied at home this month.

With Jeremy (G3XZG) becoming a Silent Key this time last year, I thought it might be nice to pick a couple of his musings over the years, so I've included "**Doppleganger**", which I came across whilst looking up SV1CQN on QRZ.com (for one moment I thought I was actually looking at Jeremy!), "**Snakes and Ladders**" was a game discovered by Jeremy when in a QSO with an Italian station on CW, maybe we should try it one day. And finally "**A story from Turkey**" the tale of someone who ended up looking for himself, not radio related, but interesting none-the-less.



Bryan M0IHY

Thanks to Dave (G8FMC) on his Chairmans Ramble and the article on his VK QSO, Jeremy (G3XZG) never seems to be far away in our thoughts and day-to-day operations.

The last HF contests this month for 2023 (none in December).

My thanks to Malcolm (G3ZNU) for his excellent article "Operating datamodes in contests (Part 1)", step-by-step instructions on how to set up your rig.

With my QRM problems not getting any better I looked up the Internet and found an article by Jean-Paul Suijs (PA9X), the article is covered on page 8, this tempted me to remove my inverted-L vertical antenna and use the CG3000 a.t.u. on a 7-band (now reduced to 6) cobweb, it tunes 80m thru 10m, it just needs thoroughly testing, obviously not as good as my inverted-L but maybe better with the QRM?

Looking at mag-loops for portable operation I came across an article by the Richmond Amateur Radio Club of Virginia, it covers 40m-10m continuously, and is based on the Chameleon "P" commercial model, other models had been checked out to clone but this one (in their opinion) was the best of the bunch, this is my 'winter' project with minimal cost (I have most of the components in my shack), more on that in another newsletter.

Unfortunately I've come to an end when trying to find different interesting articles for the CW Corner page, reluctantly I have to go to press this month with no CW Corner, should anybody want to investigate Morse code for a newsletter article please let me know.

Next month's edition is the Christmas edition, every year I try to find something amateur radio-wise such as a little ditty and so far I've been successful, how about you the readers chipping in for the next edition with Christmas poems, or stories relating to amateur radio at Christmas, it would be much appreciated.

And lastly, with storm Cairan looming make sure your antenna's are secured correctly.

Bryan M0IHY

Chairmans Ramble

(A tribute to Jeremy G3XZG, with much respect and fond memories from around the World)

Well last months HF contest session with 'guest operators' at my shack seemed to go rather well and was thoroughly enjoyed by all.

There was another event coming up on the weekend of 30th Sept - 1st October. This was a re-vamp of the RSGB DX contest, now run by the UKEI CC group. I decided to again make my shack available to anyone interested to have-a-go on HF with full power.



Dave (G8FMC)

Mark M7EFR was available this time and was interested to witness 'what goes on' in an HF contest. No other takers, so Roger M7RMF Jumped in for another session as well. Roger arrived early to help me put up the Cobweb for 10m, 15m and 20m, this time on my patio as we did not need to provide separation from the VHF antennas.

Roger and Mark enjoyed the afternoon making contacts with various parts of the world, mostly on 20m and 40m, with Roger staying into early evening. Mark was due Sunday morning for a while, primarily to help me 'break-camp' so to speak.

So although not a serious entry I had a bit of a bash myself on Saturday evening.

Awaking early(ish) Sunday I decided to see what was on before getting breakfast. Flicking over to 20m I found the band wide-open to VK (Australia). None of the stations were giving contest-points, so I did not want to pester them. Looking at the clock I decided I needed to have some breakfast and get dressed before the 'morning-shift' arrived! Whilst preparing breakfast I heard another station; VK3CWB calling CQ almost exactly on my RX frequency. A quick sprint next door and a touch on the tuning knob and Moz was 5and9 + 10dB. Another EU station went back to him before I could sit down and they had a fairly short QSO. "VK3CWB CQ" and I jumped in with G3MDG. Moz responded immediately with a 5and7-8. He then said "G3MDG sounds familiar, have we worked before, maybe on CW?" Ah, not me but maybe Jeremy G3XZG? It turns out that Moz had been in touch with Jeremy on several occasions, mostly on CW, using both G3XZG and G3MDG and had wondered why he had not heard him lately! I conveyed the sad news about Jeremy having gone SK before his time, almost exactly a year ago. Moz was very sorry and asked for me to convey his condolences to Jeremy's family. Hilary will be getting a copy of this 'Charman's Ramble'. A sobering and slightly emotional experience for me. We have such fond memories of Jeremy and he is sadly missed by so many. I am doing my best to follow as Charman, but am not in the same league as Jeremy.

What are the odds of the 20m band being wide-open to VK and to hook-up with someone who usually uses CW and knew Jeremy? I would imagine several million to one?

For me that is what Amateur Radio is all about; world-wide friendship.

I then had a scramble to have breakfast and get dressed before Mark arrived. I almost made it, still doing buttons up as I answered the door, which gave Mark something to chuckle about!

Lots of changes going on at G8FMC QTHR:

Changed car to something more suitable for the medium-term, that I can easily get in and out of even in a tight car-park, when my iffy back is not so good!

Had all my windows replaced. The old ones were 20+ yrs old, of variable and dubious quality, some with an awful installation that did not seal properly. All cosy now!

Getting more involved with the local community and people outside of Ham Radio, now that I am not tied down as a 24/7 carer.

73 all, Dave K, G8FMC (Chairman and Contest Coordinator)

Jeremy G3XZG

I thought it would be appropriate to look back on a couple of interesting items about/from Jeremy, so here goes.

Doppelganger

While checking out the locator for SV1CQN I came across his picture, I had to do a double take as the resemblance to Jeremy (G3XZG) is quite remarkable. They do say we all have a 'double' somewhere.



Bryan M0IHY

Snakes and Ladders

I recently had a slightly surreal QSO with an Italian station on CW. This was on 10 MHz and I was surprised when he asked if I knew my maidenhead locator, as that is not often used on HF. I did, and he explained that he needed it for a game of snakes and ladders run by EU CW. Apparently squares can be either snakes or ladders, or just normal squares and greater London, particularly JO1 is usually a snake. Ladders in the UK, tend to be in Scotland where less people live I guess.

This got me thinking, with Christmas being the traditional time for family games, whether any other games could be adapted for amateur use.

One possibility is Cluedo. I could picture a game in which G3ZZZ was found murdered in the shack, using an AR88. There are a number of flaws in this idea of course. All radio amateurs would be murdered in the shack. Suspects would be limited to those who could actually lift an AR88 and anyway the prime suspect would always be the ham's partner. So I discarded that idea.

Monopoly is another possibility. You could progress round the board with rarer DX countries having higher value. Say France and Germany could be at the beginning, graduating to some of the more esoteric islands rather than Park Lane and Mayfair.

Devising Community Chest and Chance cards would not be too much of a problem.

Examples.

You are stuck in a pile-up trying to work a station in Uganda, miss three turns.

You are informed by another amateur that your signal is spreading, go two squares back, while you fail to find out why and decide to carry on.

You increase power to the point where the nearest lamppost comes on when you key up, go forward 3 squares.

You erect an antenna without realising that it requires planning permission. Either miss two turns, or just keep going, but be aware that if you do, your opponents can choose when you miss the turns.

But then I hit the problem of what to do with the corners. Go to gaol didn't seem appropriate somehow, nor free parking.

In the end I decided that the only thing to do was to try and invent a game. This would be called "full licence" and players would compete to move round a board, first obtaining a foundation, then intermediate, then finally a full amateur licence.

Various pitfalls could be introduced, such as, in current circumstances, the internet failing part-way through your exam, the antenna that you erect on getting your foundation licence, collapsing on to the garden shed, Your neighbours going on to a government website and reporting that you are contacting aliens, etc.

There would of course be quicker progress for those who learned CW.

Sadly that is as far as my invention has gone at the moment and I don't think I will be suggesting to the RSGB that it is a good way of marketing the hobby.

I must find out more about this Snakes and Ladders game though.

Jeremy, G3XZG

A story from Turkey

Finally, and nothing to do with radio, a story from Turkey caught my eye. A man who lives in the south-east of the country had spent a convivial and long evening drinking with friends. He was making his way, meandering and mellow, towards his home through a small forest when he came across what evidently a search party and thought he should volunteer to join in and help, which he did. After a little while and responding to shouts from one of the other members of the group, he realised that he had spent the last half-hour or so helping a search party who were looking for him. Apparently his wife had become worried when he did not return home. The police took him home, and I expect the conversation would then have been interesting.

Jeremy, G3XZG

Cobweb antenna's

A different approach to tuning the Cobwebb antenna

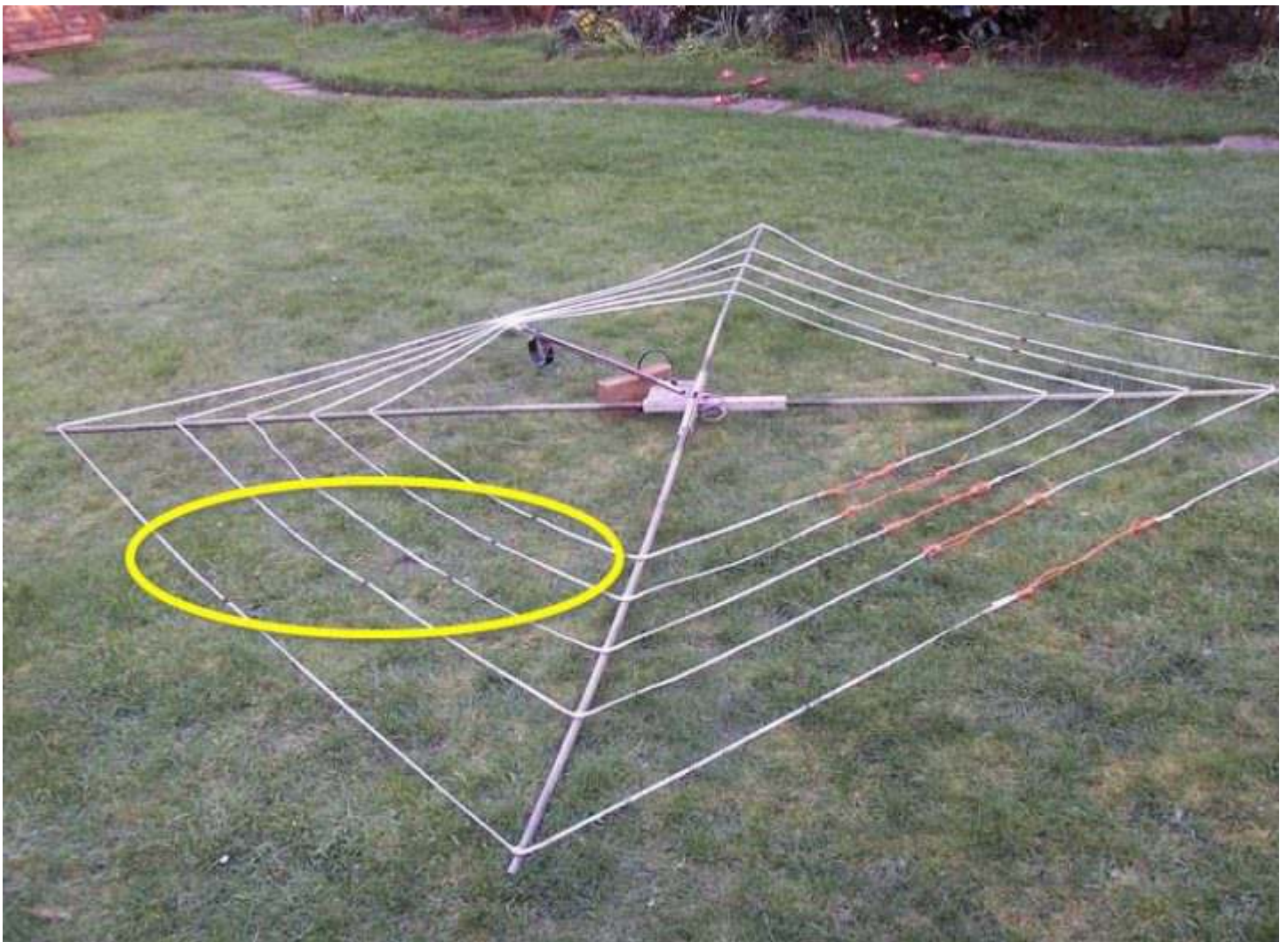
Source: Jean-Paul Suijs - PA9X

The Cobwebb is an antenna that has gained in popularity in recent years. The horizontally polarized omnidirectional antenna is suitable for the 10m, 12m, 15m, 17m and 20m band. All elements are fed through one single feed line. At only half wave length above the ground, it will outperform any vertical antenna. Measuring only 2.8 by 2.8m, the Cobwebb is the solution for the DX'er with limited space. But the Cobwebb design has some disadvantages: it's narrow bandwidth and tuning it to a acceptable SWR.

The three variants of the Cobwebb antenna

The Cobwebb antenna comes in three variants:

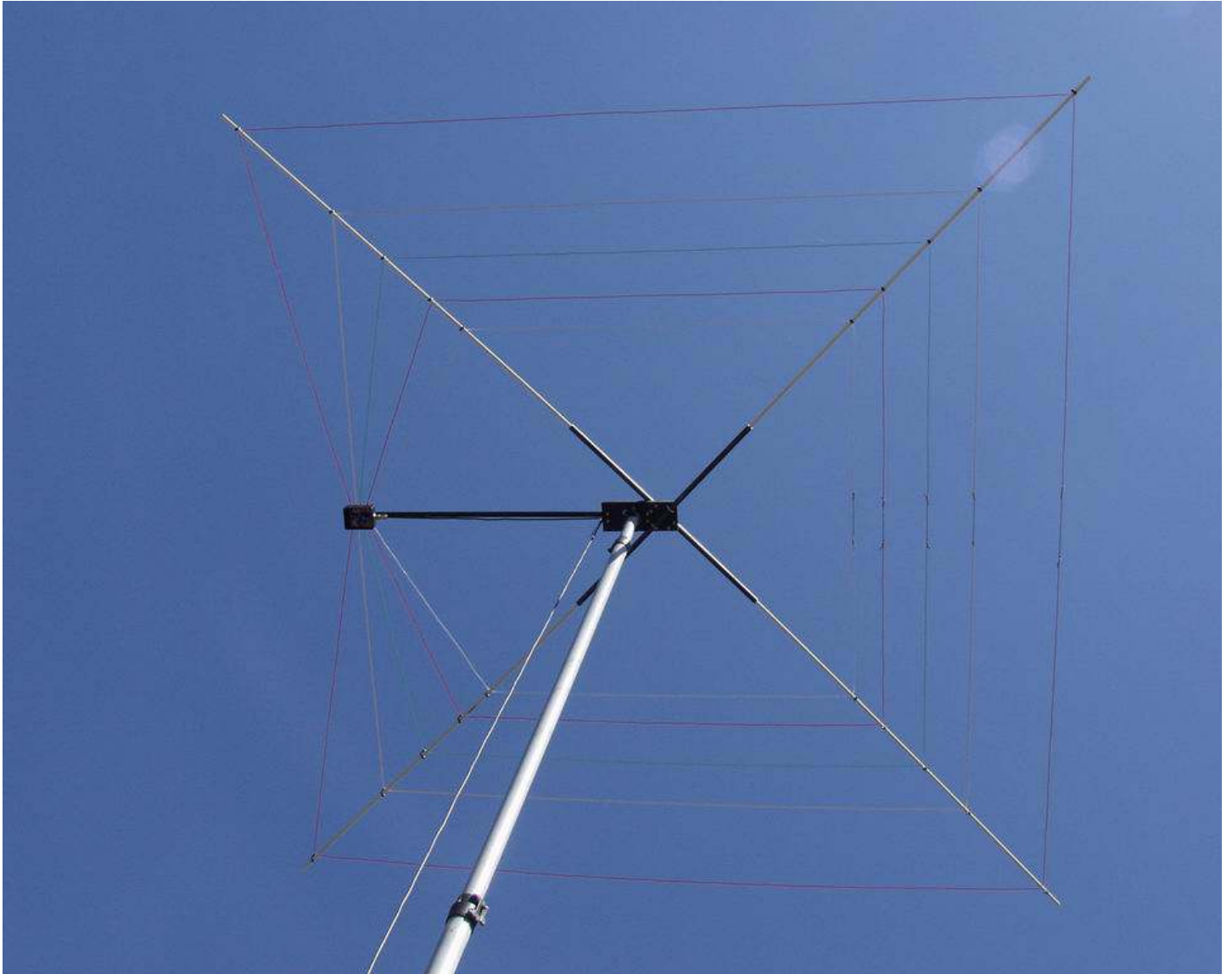
No.1: The G3TPW from Steve Webb is the original design of the Cobwebb. The elements are folded dipoles with open ends, usually made from figure 8 speaker wire. Exactly in the middle of the folded dipoles, the two parts of the dipole are interconnected. This shorting point creates a kind of T-match to bring the impedance to 50 ohms.



A Cobwebb original design antenna. Notice the the short circuited points about halfway each element, this is the most challenging to tune, it has improved bandwidth (approx. 15%) than the G3TXQ variant.

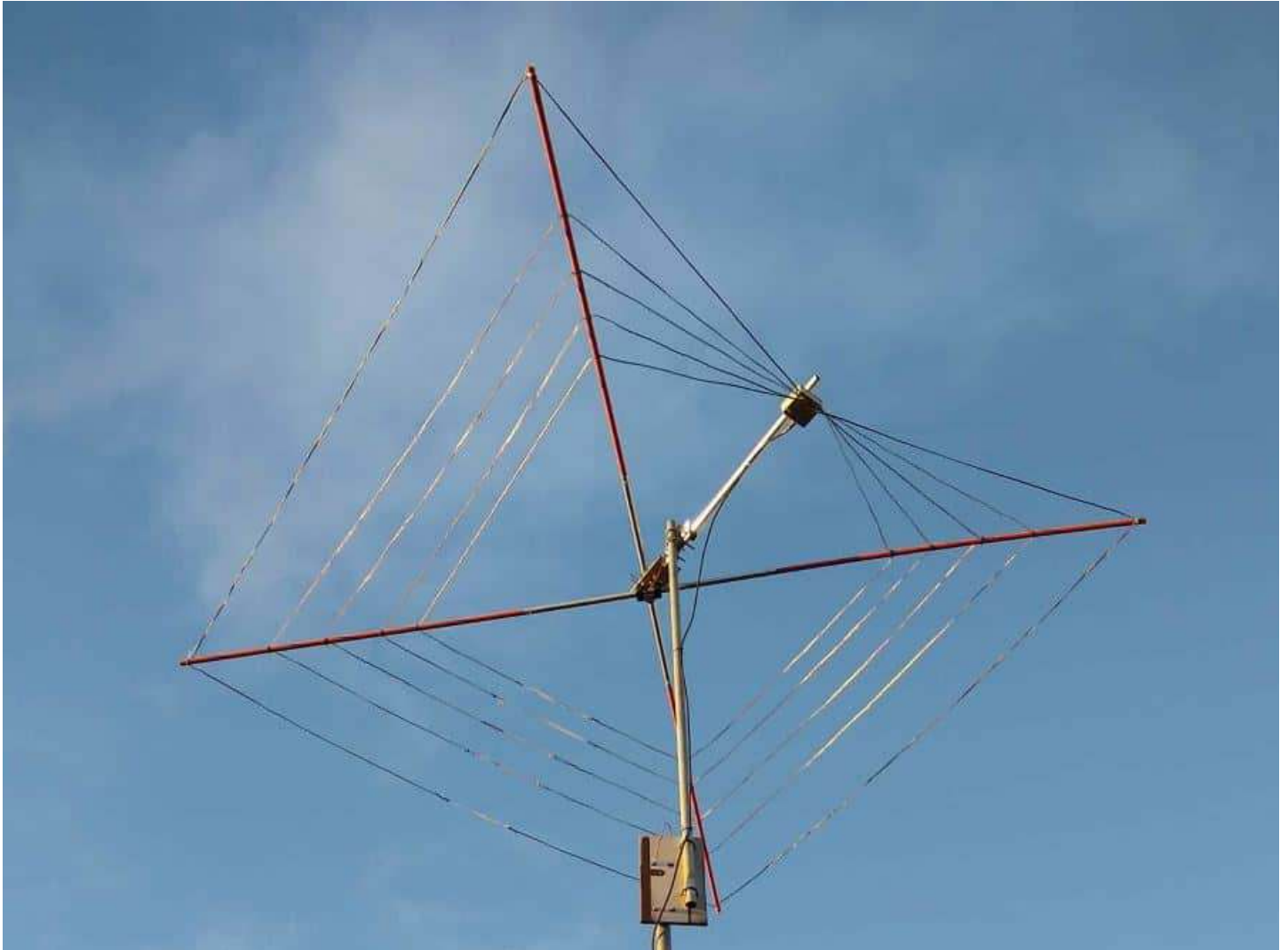
No.2: The G3TXQ variant from Steve Hunt (sk), also called Cobweb (with one letter 'b'), uses open dipoles, single wires. The impedance is brought to 50 ohm by means of a 4:1 balun. It is the most commonly built or purchased Cobweb and commercially available variant (like MFJ, EAntenna).

The Cobweb uses single wire open dipoles. The feedpoint box holds a transformation balun combined with a common mode choke. Image from G3TXQ.



The G3TXQ is a lot easier to tune, but in terms of bandwidth the G3TPW offers about 15% more.

No.3: I call this third variant the Multiband Square Halo, based on the classic Halo design. It uses closed-ended folded dipoles, also from figure 8 speaker wire. This is the same principle as the classic Halo antenna, known from VHF. The impedance of this variant is 50 ohms and therefore does not need matching. Thanks to the closed-ended folded dipoles, the Square Halo offers about 15% more bandwidth over the G3TXQ Cobweb.



The Haloweb uses folded dipoles with closed ends for increased bandwidth.

Square Halo, the best of both worlds

I built all three variants. They are almost identical in construction. The G3TPW is the most challenging in terms of tuning. That is because in addition to tuning by means of the element lengths, also the shorting points have to be moved. The G3TXQ is a lot easier to tune, but in terms of bandwidth the G3TPW offers about 15% more bandwidth. The variant with probably the best of both worlds is the Square Halo. This Cobwebb variant combines the bandwidth of the G3TPW, with the ease of tuning like the G3TXQ.

Choose between Phone and CW section of the band

The bandwidth of the Cobweb (with the one letter 'b') is limited. At 20m and 15m it is about half the band and at 10m no more than 500kHz. When tuning to 20m, for example, you have to choose between the "Phone" and "CW" section of the band. You would need a tuner to increase bandwidth with an acceptable SWR.

A test of your patience

There is another 'challenging property' to all three variants. That is the 50 ohm adjustment of all elements to resonance and SWR when using the 5-band version. This is truly a test of your patience. With an MFJ-259B analyzer in hand I managed to get all bands resonant, but in no way did I get the SWR to an acceptable level < 2:1. In all variants I only got the 20m element resonant with a good SWR. All other elements were all above 2.5:1 SWR.

My challenge with multiband antennas

Now I have always had a 'tuning challenge' at my location. For example, I was never able to get my Hustler 5BTV trap vertical to an acceptable SWR on 15m band. I also never got a homemade WARC vertical for 12m and 17m adjusted to a decent SWR. It must be the location. I suspect that some metalwork in the roof of my house is the cause.

The best way to adjust impedance

Since I got all the elements resonant, I thought it was a shame to not use those bands on because SWR was bad. The solution is to tune each element separately for those bands, for example via the built-in tuner in your transceiver. But that results in a lot of loss in your coax cable, especially on long runs. The best way to match impedance is to do as close as possible to the feedpoint of the antenna.

CG-3000 automatic antenna tuner

Now I have worked with a 13m long vertical antenna for a long time. I used to tune it with a CG-3000 automatic antenna tuner directly at the feedpoint the vertical. This antenna was quite a good performer in transmitting from 60m band up to 17m band. But the local noise was always awful. As a receiving antenna it performed rather poor.

With the dismantling of this antenna, to make room for my Square Halo, I had the CG-3000 remote tuner laying in the shack, doing nothing. So I decided to put it up in the Halo and experiment with tuning that antenna.



The CG-3000 autotuner tunes from 160m to 10m handling 200 watts PEP.

The tuner at the feedpoint of the Square Halo

With some pieces of aluminum from my scrap metal collection, I made some brackets and mounted the tuner where normally the feedpoint would be mounted. The tuner itself weighs about 2kg. Not too heavy to put it on the boom. The extra bandwidth with folded dipoles is canceled out now by the tuner, so I presumed open dipoles would do fine and would reduce total weight. So I stripped the folded dipoles to open dipoles. When determining the wire lengths, I took the length of the internal wiring of the tuner (approx. 20cm) into account.



The CG-3000 remote tune at feedpoint of the Cobweb antenna.

ZL with 25W FT8 on 20m band via long path

As I expected, I could now tune the antenna to any frequency on 10m, 12m, 15m 17m and 20m. After about four weeks of testing with WSPR and FT8, I could not notice any significant difference in performance compared to the Square Halo for 20m, 17m and 15m. For example, ZL with 25 watts FT8 on 20m band via the long path, went quite easy. But it seems that 12m and 10m are performing less good in RX, however it's a gut feeling still. I suspect that radiation pattern is disturbed on these bands. PA0JBB Hans mentioned in a post that the power supply cable of the tuner could be participating as active part of the antenna. Something I need to research.

212245	Tx	496	~	ZL2BX PA9X JO21
212300	-21	0.6	1743	~ PA9X ZL2BX -08
212316	Tx	496	~	ZL2BX PA9X R-21
212330	-20	0.6	1742	~ PA9X ZL2BX RR73
212345	Tx	496	~	ZL2BX PA9X 73

ZL via the long path end of April 2021 using 25 watts in FT8.

Surprised me in a positive way

I found the combination of Cobweb antenna with autotuner, a successful setup to solve my impedance matching issue. It also allows me to work each earlier mentioned band entirely. I only need to retune when it's close to band edges. In terms of performance this setup surprised me in a positive way.

Easily tune it on all other HF bands

Although the Cobweb antenna is not built for other bands, the CG-3000 can tune it on all other HF bands as well. The tuned Cobweb did surprisingly good at 30m. Even on 160m band with 25 watts I was received in more places in FT8 than ever in the past with the 13m long vertical with auto tuner.



The Cobweb tuned to 160m band outperforming the 13m vertical

Test with folded dipoles for less noise?

Nevertheless, I am also going to test with the folded dipoles. These would be less sensitive to manmade QRM than the open dipoles, some say... I have plenty of manmade noise to test it in practice.

My (M0IHY) approach to the Square Halo

I replaced the original dipoles with figure of 8 speaker wire, but instead of shorting out on the long side of the dipole (as in the G3TPW Cobwebb), I shorted them out at the very end (as in the Square Halo). The length of each dipole was the same as the original single-wire (as per G3TXQ dipoles), Initially I wasn't too worried about being 'exact' as I was going to use my CG-3000 a.t.u., which I mounted on the mast, just below the Cobweb, however, since testing I can only tune from 80m-10m, maybe tuning each dipole for the best SWR before connecting to the CG-3000 might help.

As yet I have to test it and see if it handles the QRM from my neighbours house, fingers crossed.

Bryan M0IHY

Contests/Operating

VHF Championship – AFS (Affiliated Societies) section;

Still 2nd place out of 86, just awaiting the results of the final 23cm & 13cm events, to see if we can still hold 2nd or if Sheffield have overhauled us?

The 144MHz Trophy results were very satisfactory, enabling us to hold the 2nd spot comfortably. John G0ODQ bagged 2nd spot in the 6hrs Single Op fixed spot category, well done John. Our combined effort at G8FMC got 19th out of 31, pretty much as expected for a part-time training exercise & with my poor/screened take-off to the EU.

The UKAC's (under the Northampton banner): We should hold 3rd place out of 43 until the end of the year, as 4th is some way behind us?

Dave's Delta-loop experiments continue, during UKEICC DX contest at G8FMC:

Yet another opportunity to compare the Delta-Loop with my Cobweb, during the UKEICC contest of 30th Sept - 1st Oct. (Cobweb in a slightly different location this time)

For this event Roger M7RMF again helped me set-up & operate. Mark M7EFR also came over for some HF experience. (See my Charman's Ramble at the beginning of this News Letter.) Again there was very little difference between the 2 antennas most of the time. My lengthy chat with Moz VK3CWB included a direct comparison between the two, with negligible difference. So if I can get a few more bands on the Delta-loop we could be in business. One benefit is the very broad bandwidth, negating the need for an ATU, once optimised.

The SSB FD (Fixed station) results are published and we achieved a very respectable 10th out of 48 in the Fixed category. Since it was a part-time training session & with resources split between HF & 144MHz, I think this is rather good? Well done Roger M7RMF & Matt M1DTG for your contributions. (A reasonably well equipped shack & choice of antennas helped?)

Affiliated Societies (AFS) Superleague:

This started with the 70MHz event on 17th Sept. We fielded a team of 6 & the top 4 of G0ODQ, G0SKA, G8FMC & G3MEH, secured 3rd place behind Camb-Hams & Grimsby (the 'usual suspects!').

The 50MHz was on Sun 22nd, when we again had 6 on, although 2 part-time.

The next one is the 'Club Calls' (160m) event on Sat 11th November when we hope to have a team possibly at the Ashley Green Hall using the club call of G3MDG?

I expect to have a full size Dipole in the paddock behind my garden (must remember to ask permission again!) which has produced great results in the past.

73, Dave K, G8FMC

Operating datamodes in contests (Part 1)

At a recent CDARS meeting at Ashley Green I demonstrated using data modes – specifically RTTY and PSK63 – in contests. I covered how to set up a station – which software to download and configure – and how to make contest QSOs. This article will cover setting up a station to operate on RTTY and PSK63. It will also cover setting up full CAT control of the radio by the PC, always best if you can so that the radio and PC software are keeping in step with one another. Operating in a contest is really a matter of practice and is best learned “on the job”, and a subsequent article will cover what I’ve learned from operating in RSGB and CQWW datamodes contests.

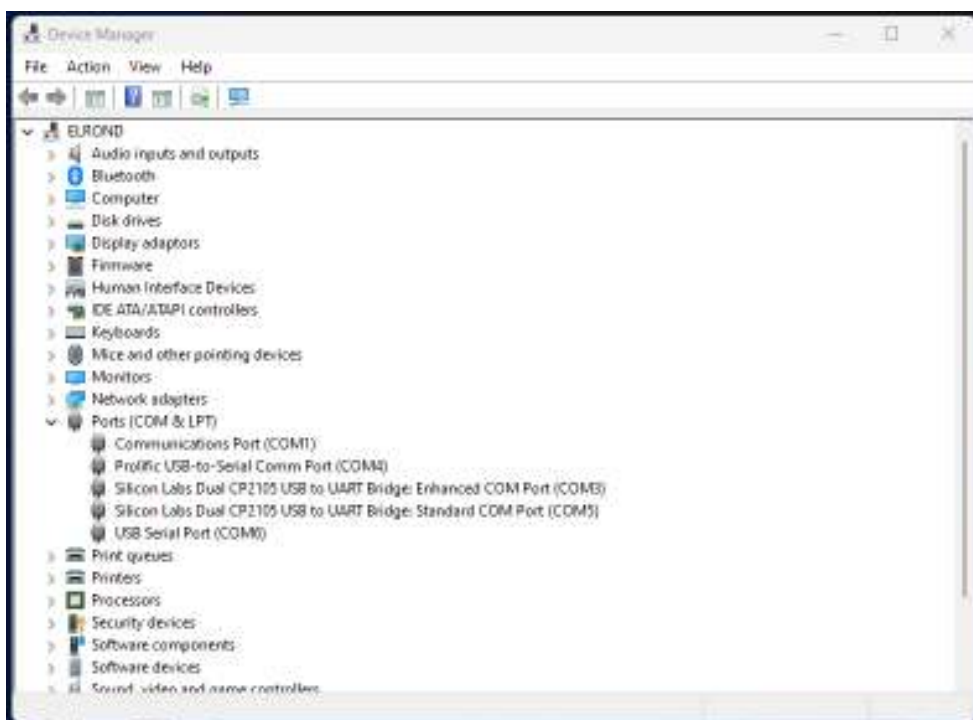
I’m going to describe my setup of a Windows PC connected to a Yaesu FTdx10, but many of the descriptions will apply to other rigs. Where possible I’ll set out what to look out for when starting out with your own rig.

Most (if not all) recent transceivers need only a single USB connection between PC and radio that provides audio and control connections. This makes the connection very easy physically, and pushes all the complexity into the software and its configuration. Older radios will need some way of interfacing the audio paths and, at a minimum, TX/RX switching. One convenient way of doing this is to use a Tigertronics Signalink – but more on that later.

INSTALL DRIVERS: Before you connect your radio and PC you will need to install drivers on your PC so that it will recognise the radio and know how to talk to it. It’s best to head to the manufacturer’s website to find these – generally look for the support pages and you find the appropriate drivers to download and install. It’s quite possible that the drivers will be the same for different manufacturers – in my case it appears that the drivers for the FTdx10 were the same as those for the Icom IC-9700, but don’t take my word for it, find the right ones just in case!

Once the drivers are loaded (you may need to restart the PC) plug in the USB. The PC will then do two things – it will set up one (or more) serial ports and the equivalent of an external sound card. We’ll now look at how to find what the PC did, and to identify the serial port numbers and the identity of the sound card.

LOCATE YOUR PORTS: To find what ports the PC has installed, start the Windows Device Manager – click on the Windows Start button and type “device”, and click on Device Manager. Click on the little arrow to the left of the word “Ports” and it will open up a list of the active ports on the PC.

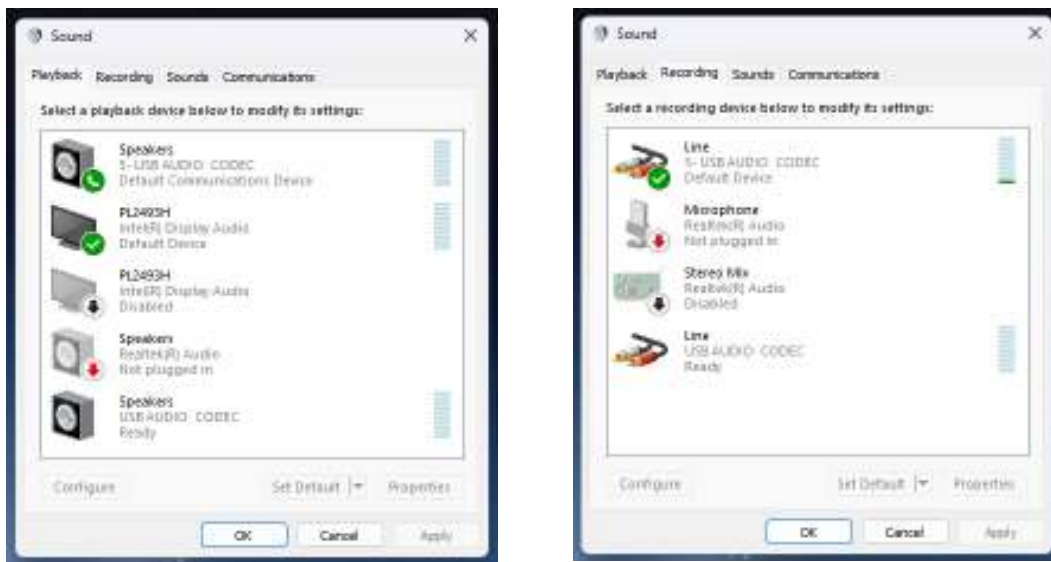


There may be one or two entries in the list that relate to your radio. For the FTdx10 there are two – one labelled “Enhanced” (Port 3 in my setup) which carries the main CAT control data, and another labelled

“Standard” (Port 5 in my setup) which can be used to carry CW keying and TX/RX switching. Your port numbers may be different, so make a note of which port is which as we’ll need this later.

If it’s not clear which are the correct ports, unplug the USB and plug it in again – the ports will be “uninstalled” and “reinstalled” each time so it’s easy to see the ones you need.

LOCATE YOUR SOUND CARD: Next start up the Windows Sounds control panel. I find the legacy panel that’s part of Control Panel easier to use than the new “Windows 10” Settings. To get to it, click on the Windows Start button and type “control”, and then click on Control Panel. If there’s only a few items listed you are in Category mode, so head towards the top right of the Control Panel screen where it says “View by:” and select Small Icons from the drop-down list. Much easier! Now click on Sound, and the Sound control panel will open up.



Clicking the Playback tab at the top shows the settings sent from the PC to the peripheral devices (the left-hand image above). On my setup you can see that there are several audio devices enabled; the radio is listed as “5 – USB Audio Codec”, the ones labelled PL2493H are the two HDMI screens plugged into the PC. You want to select the radio connection as the “Default Communications Device” – right mouse click on that entry and you should be able to select that option. Don’t select “Default Device” or all the system audio will also be sent to the radio! It may take a few right mouse clicks on the devices to get this right – be patient and try different options until you get it right.

Now click on the Recording tab at the top (the right-hand picture above) and select the connection to the radio (also 5 – USB Audio Codec) as the Default Device. You want this to be the Default Device (rather than Default Communications Device) so that the PC is only listening to that interface and not (for instance) the built-in microphone.

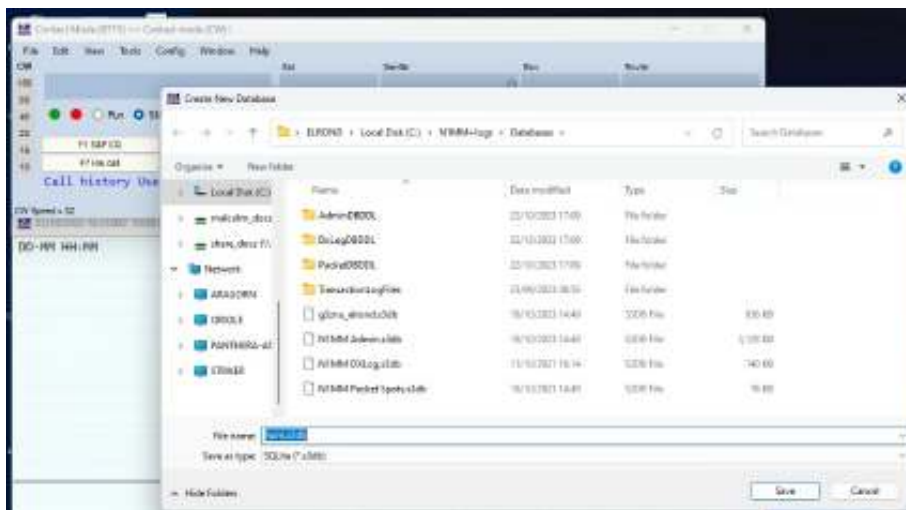
At some point you might need to adjust the sound levels on send or receive. If that’s the case double-click on the entry you want to change and it will bring up the Properties panel where you can adjust levels up or down.

LOAD THE SOFTWARE: Now all the PC to radio connections are sorted, we’ll move to the software you need. There are two key programs – the N1MM+ logger and the Fldigi modem/codec. Download and install both – a web search will find them both, and make sure you install them in the default directories offered.

Start N1MM+ - it will almost certainly tell you there is a new version available, even if you’ve only just downloaded it! Click on yes and wait for it to download the latest update and restart – this might take a minute or two with little indication anything is happening, so be patient.

CREATE AN N1MM+ DATABASE: in common with many logging programs, N1MM+ stores all its data in a database. So the first thing you need to do is create a database. With N1MM+ running, click *File* -> *New Database*. A dialogue box will open up, choose a name for your database – I suggest putting your callsign in there somewhere and maybe the date – and click Save. You can store any number of logs (one for each

contest you operate in) in a single database, so you won't need to create a new database in the future unless, for instance, you're using your PC for a club contest.

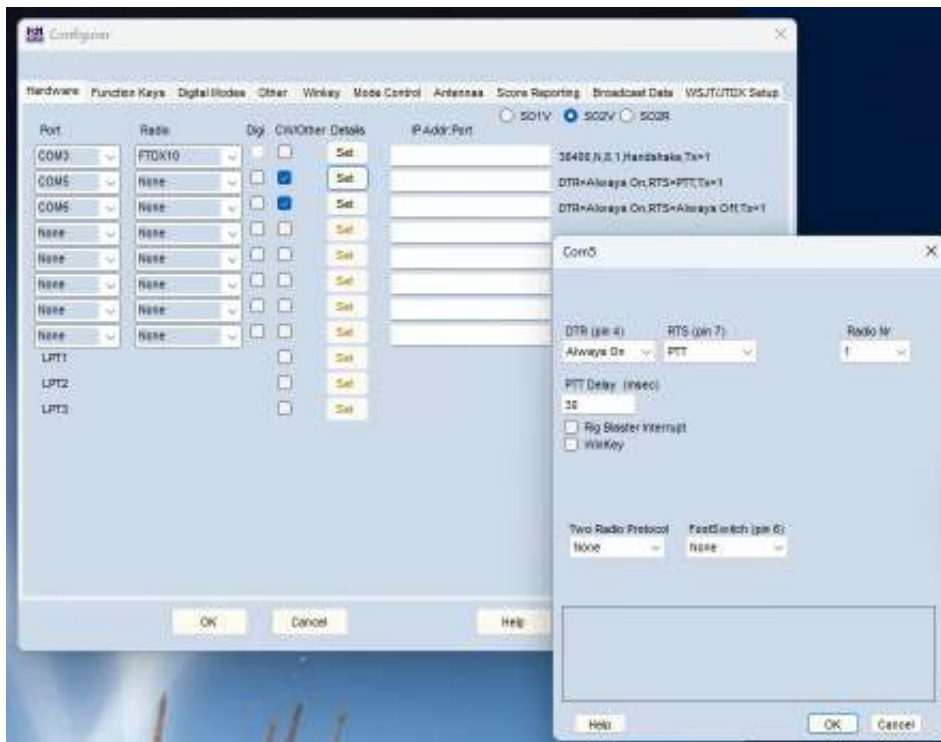


CONFIGURE N1MM+: Once N1MM+ is running you can set up your station information – click on Config -> Change Your Station Data and fill in the details. After clicking OK, click Config -> Configure Ports, Mode Control, Winkey etc. On the config screen that pops up, select the COM port number you found previously and the radio type you have in the drop-down boxes (in my case, COM3 and FTdx10). Then click the Set button to bring up the detailed settings for that port. Here you can set the data rate for the COM port, parity, number of stop bits etc. Helpfully some suggested settings are in the box at the bottom, N1MM+ is quite good at this.

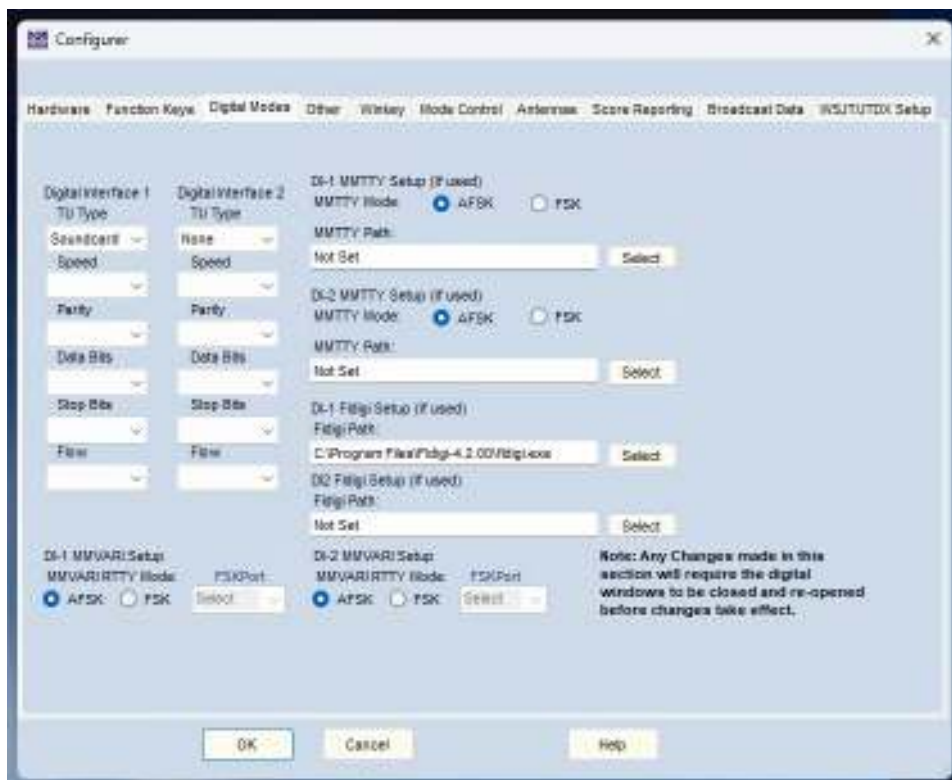


In my setup COM3 carries the main CAT control data, and COM5 carries the PTT keying, so you will see that the next entry in the configuration screen is COM5. I've clicked the CW/Other box to tell N1MM+ this is not a general CAT control. Then click Set.

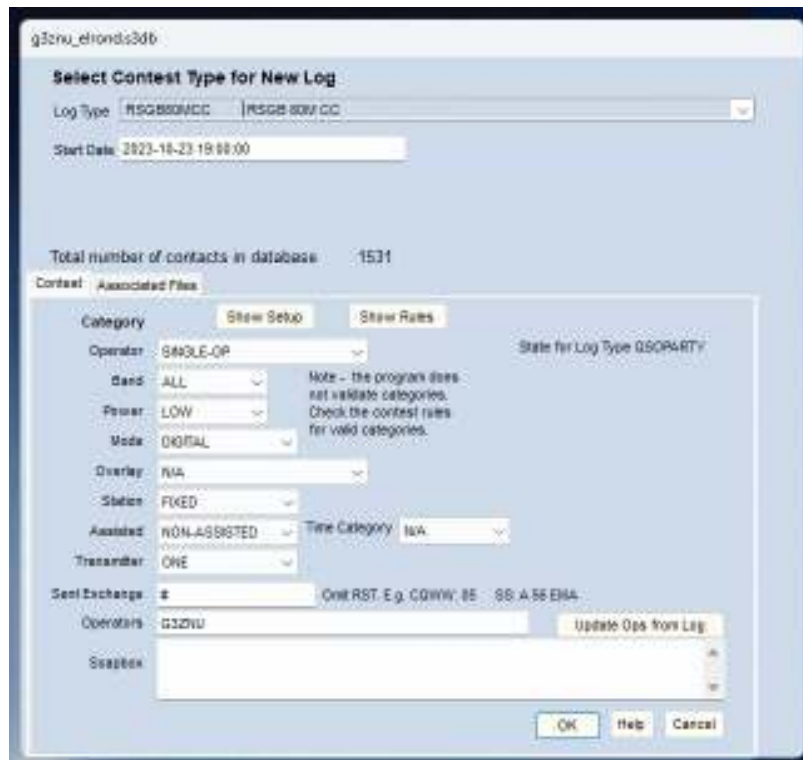
To make the PTT keying on the FTdx10 work I have set DTR to Always On, and the RTS to PTT. If you're not sure of your own radio's settings, a web search will probably find the answer.



The last thing to set up in N1MM+ is to tell it how to start up Fldigi when using datamodes. On the configuration screen click on the Digital Modes tab. On the Digital Interface TU Type select Soundcard, and in the Fldigi Path enter the address of the Fldigi program you've installed. There's a handy Select button that brings up an Explorer window so you can navigate your way to the install directory. A warning here – if you update Fldigi it irritatingly puts it in a new directory so you'll need to update this field each time.



TEST IT OUT: If it's not already running, start N1MM+. You now need to tell N1MM+ to set itself up for a datamodes contest. Click on File -> New Log in Database and a dialogue box opens up. N1MM+ "knows" about a vast range of contests from countries across the world plus the big international events such as CQWW. The trouble is, it doesn't know about all the details of some of the more parochial contests (such as RSGB ones!) so you'll need to adjust some parameters.

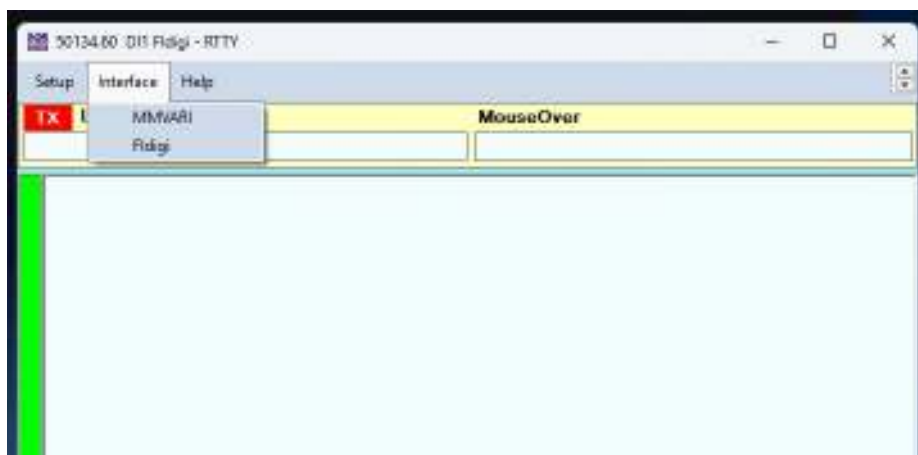


In the top drop-down box, select RSGB80MCC – that’s a basic setup for the RSGB evening series contests. In the following drop-down boxes, select:

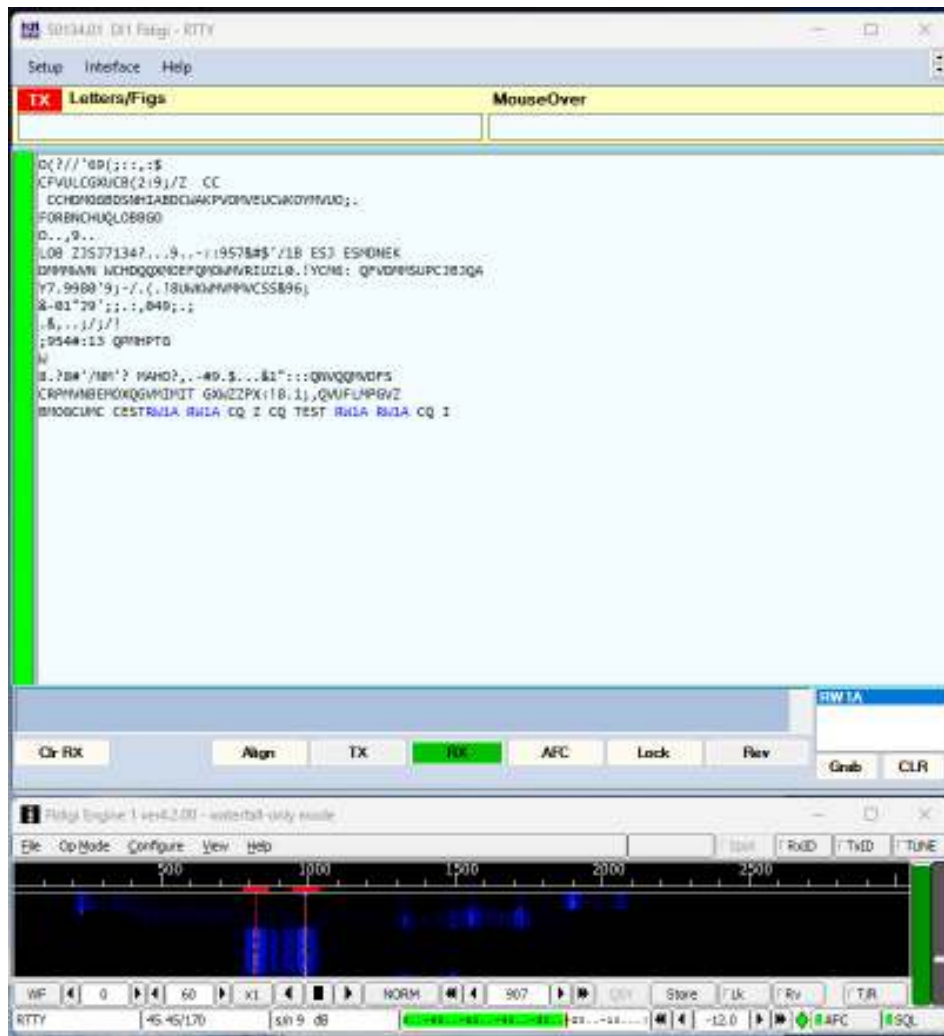
- Operator: SINGLE-OP
- Band: ALL
- Power: LOW (that’s 100w)
- Mode: DIGITAL
- Overlay: N/A
- Station: FIXED
- Assisted: NON-ASSISTED (not very important anyway)
- Transmitter: ONE
- Sent exchange: # (this is important)
- Operators: Your callsign

Then click OK. You’ve told N1MM+ you want to operate digimodes, so it will start up the digital interface. If it doesn’t then click Window -> Digital Interface and that should do the trick.

It’s possible that the default modem/codec in your setup is not Fldigi, but MMVARI (an alternative that I’ve not really used). To make sure you’re using the right one, click on Interface and select Fldigi.



If all is well, your digital interface panels should look like this:



The panel at the top shows the decoded data received and will also show the data you send. The panel below shows a waterfall of the received audio and also has the settings for selecting the data mode you are using. As shown here, it's set to RTTY 45.45 baud – to change this click Op Mode and a drop-down list appears with all the modes that Fldigi supports. The main two you need are RTTY 45.45 and PSK63 – these are the ones used in most contests.

In the waterfall display above you can see the blue trace of an RTTY signal, with the two tones clearly showing. The red lines indicate the actual frequencies that Fldigi is decoding – you move your mouse until the red lines are on top of the required signal and click, and Fldigi gets to work. When you transmit you will send at exactly the same tone frequencies, so you'll respond to a station exactly on the right frequency.

You can check if the TX/RX switching is working by clicking on the TX button on the digital interface panel – but make sure you are on an unused frequency or into a dummy load first! If all is well your transmitter should produce power; if not you may need to adjust your audio levels in the Sounds control panel. If your radio does not go into transmit mode you may need to make some changes to the CAT interface settings. If in doubt, start with a Google search – someone somewhere will have had the problem before!

NON-USB RADIOS: Earlier I mentioned about what to do if your radio does not have a USB interface. My Kenwood TS2000 is like this. It does have an accessory socket which gives access to audio in and out, but when connecting up you may well find that PCs and radios don't mix too well. Typically when transmitting there will be stray RF on the cables which tends to crash PCs, or at least their interfaces. One way to avoid these problems is to use an interface that someone has designed and built – such as the Tigertronics Signalink I mentioned earlier. This unit plugs into your PC via a USB lead (from which it gets power too) and has a range of leads to connect to radios. Inside there's a strappable header that can be set up to support the interface to many radios. It has isolating transformers for the audio connections and opto-isolators for the control signals, so you're unlikely to have RF problems.

Although my TS2000 doesn't have a USB socket, it does have an RS232 socket for CAT control, so I have an

interface lead for that into my PC too. One curiosity with the TS2000 is that if you tell the radio to go into TX via the CAT interface, it always takes audio from the mic socket on the front! A known limitation. Fortunately the Signalink has provision to key the TX via the accessory socket using a VOX circuit built into the Signalink, so when the PC sends audio, it keys the TX.

COMING UP NEXT: If all is well you now have a working setup to run the RTTY and PSK datamodes in contests. Next month I'll give some more information on operating in a contest, including all the shortcuts that make using N1MM+ as not just a logging program, but also the core of your operating.

Malcolm G3ZNU

Spotlight - Almaty, Kazakhstan

QSO with Gennadiy V. Khonin, UN7QF

Band: 20m	QTH: Almaty, Kazakhstan
Mode: CW	Coordinates: 43°16'39"N 76°53'45"E
Date: 27 th March 2022	Time Zone: UTC+6
Time: 12:00z	Population: 2,147,233 (October 2022)



Flag

Source: Wikipedia

Almaty is the largest city in Kazakhstan, with a population of over 2 million. It was the capital of Kazakhstan from 1929 to 1936, while the country was an autonomous republic of the Soviet Union, then from 1936 to 1991, a union republic and finally from 1991, an independent state. In 1997, the government relocated the capital to Akmola (present-day Astana).

Almaty is still the major commercial, financial, and cultural centre of Kazakhstan, as well as its most populous and most cosmopolitan city. The city is located in the mountainous area of southern Kazakhstan near the border with Kyrgyzstan in the foothills of the Trans-Ili Alatau at an elevation of 700- 900 m (2,300-3,000 feet), where the Large and Small Almatinka rivers run into the plain. The city, just like Astana and Shymkent, does not belong to any region and is officially a “city of state importance”.



Coat of arms

The city has been part of the UNESCO Creative Cities Network in the area of music since November 2017. The city was the host for a 1978 international conference on Primary Health Care where the Alma Ata Declaration was adopted, marking a paradigm shift in global public health.

Theatrical art began to develop in the city of Verny a few years after the construction of the Russian fort. On 21 November 1872, the Society of Dramatic Art Lovers staged the first production in the city: A. N. Ostrovsky’s play, “Stay in Your Own Sled”. Later, plays were performed at public, military, and commercial gatherings. An abridgement of Glinka’s opera “A Life for the Tsar” was the first opera staged in the city, by the Kolpakovsky three-year city school on 23 February 1913 at the Commercial Assembly, to commemorate the tercentenary of the Romanov dynasty.



The International conference on Primary Health Care in 1978, known as the Alma-Ata Declaration



Abay Opera House

The flowering of theatrical art in the city began during the Soviet period of Alma-Ata, resulting from the transfer of the capital of the Kazakh Soviet Socialist Republic from Kyzylorda to Alma-Ata. Thus, the Kazakh Drama Theater, the first Kazakh professional theater, moved to the city. In the 1930s, the Opera and Ballet Theater (1934) and the Puppet Theater (1935) were established in the city. Also, theater companies founded in different cities of the republic began to move to the capital: the Russian Drama Theater (moved from Semipalatinsk in 1934), the Uyghur Musical Comedy Theater (from Chilik, 1962), the Korean Musical Comedy Theater (from Kyzylorda, 1968), and the German Drama Theater (from Temirtau, 1989).

After Kazakhstan regained independence in 1991, a large number of new independent theaters appeared in the city. Often these are modern youth concert venues created by enthusiasts. They face funding problems, as maintaining a permanent theater company is costly.



Entrance to the First Presidents Park, 2010

The First President’s Park is an urban park located in Almaty at the intersection of Navoi Street and Al-Farabi Avenue in the Bostandyq District. The park was opened in July 2010.

Creation of the park began in 2001. The park is broken into three main areas—the avenue, boulevard, and dendrological areas. Greenery was planted according to dendrological plan. In honor of the participation of the city of Almaty in the Olympic torch relay of the Beijing Olympic Games, approximately one hundred spruces and birches were planted. In 2011, a hundred Tien-Shan spruces were also planted. Plans include a set of water projects over an area of 9.5 hectares.



Zenkov Cathedral, a 19th-century Russian Orthodox cathedral located in Panfilov Park, is the fourth tallest wooden building in the world.

Almaty remains the largest, most developed, and most ethnically and culturally diverse city in Kazakhstan. Due to development by the Soviet Union and relocation of workers and industries from European areas of the Soviet Union during World War II, the city has a high proportion of ethnic Russians and Uyghurs. The city lies in the foothills of Trans-Ili Alatau (or Zailiysky Alatau) in the extreme south-east.

It has a relatively mild climate with warm and dry summers and quite cold winters. Since the city is in a tectonically active area, it has an endemic risk of earthquakes. Although most tremors do not cause any significant damage, Almaty has suffered some large destructive earthquakes.

The name Almaty has its roots in the medieval settlement Almatau, that existed near the present-day city. A disputed theory holds that the name is derived from the Kazakh word for ‘apple’, and is often translated as “full of apples”. Originally it was Almatau which means Apple Mountain.

There is great genetic diversity among the wild apples in the region surrounding Almaty; the region west of the Tian Shan mountains is thought to be the apple’s ancestral home. The wild *Malus sieversii* is considered a likely candidate for the ancestor of the modern domestic apple



Panoramic night view of Almaty from Kok-Tobe, 2012

Jeremy G3XZG

Contest Corner

November HF

Day	Date (2023)	Time UTC	Contest Name
Mon	06 Nov	2000-2130	Autumn Series DATA
Sat	11 Nov	2000-2300	Club Calls (1.8MHz AFS)
Wed	15 Nov	2000-2130	Autumn Series SSB
Sat	18 Nov	1900-2300	2nd 1.8MHz Contest
Thu	23 Nov	2000-2130	Autumn Series CW
Mon	27 Nov	2000-2130	RSGB FT4 Contest

VHF

Day	Date (2023)	Time UTC	Contest Name
Wed	01 Nov	1700-2100	144MHz FT8 AC (4 hours)
Wed	01 Nov	1900-2100	144MHz FT8 AC (2 hours)
Sat-Sun	04-05 Nov	1400-1400	144MHz CW Marconi
Tue	07 Nov	1900-1955	144MHz FMAC
Tue	07 Nov	2000-2230	144MHz UKAC
Wed	08 Nov	1900-2100	432MHz FT8 AC (2 hours)
Wed	08 Nov	1700-2100	432MHz FT8 AC (4 hours)
Thu	09 Nov	2000-2230	50MHz UKAC
Tue	14 Nov	1900-1955	432MHz FMAC
Tue	14 Nov	2000-2230	432MHz UKAC
Thu	16 Nov	2000-2230	70MHz UKAC
Tue	21 Nov	2000-2230	1.3GHz UKAC
Tue	28 Nov	1930-2230	SHF UKAC

December VHF

Day	Date (2023)	Time (UTC)	Contest Name
Sun	03 Dec	1000-1400	144MHz AFS
Tue	05 Dec	1900-1955	144MHz FMAC
Tue	05 Dec	2000-2230	144MHz UKAC
Wed	06 Dec	1900-2100	144MHz FT8 AC
Tue	12 Dec	1900-1955	432MHz FMAC
Tue	12 Dec	2000-2230	432MHz UKAC
Wed	13 Dec	1900-2100	432MHz FT8 AC
Thu	14 Dec	2000-2230	50MHz UKAC
Tue	19 Dec	2000-2230	1.3GHz UKAC
Thu	21 Dec	2000-2230	70MHz UKAC
Tue	26 Dec	1400-1600	50MHz Christmas Contest
Wed	27 Dec	1400-1600	70MHz Christmas Contest
Thu	28 Dec	1400-1600	144MHz Christmas Contest
Fri	29 Dec	1400-1600	432MHz Christmas Contest

For sale and wanted

If anybody has anything for sale, or wants anything, then this is the place to ask, photo's and descriptions will help, email me at bryanpage1@btinternet.com.

Any other business
