Newsletter

Chesham & District Amateur Radio Society

www.g3mdg.org.uk   November 2021

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

Welcome

Nights are beginning to draw in quite quickly now, time to find indoor activities.

This month sees the last of the HF contesting this year, VHF takes up the slack in December with 13 contests in all.

Thanks to Matt for his talk on HF verticals and for the use of his slides (now included in this newsletter) and John Kilcoyne on his talk about designing and building his own digital data interface instead of purchasing the more expensive SignaLink USB unit and cable, details of which will hopefully be in the next newsletter.

We're starting a 'Getting to know you' section this month, just 200-250 words to introduce ourselves to you, hopefully introducing one member a month, so be prepared to be asked, Jeremy's turn first!

Thanks go to Malcolm (G3ZNU) for his introduction to Log4OM this month, more to come in future newsletters.

I've embarked on a project similar to John's but for those who fight shy of too much soldering and technical stuff, hopefully it will be in one of the following newsletters.

Bryan M0IHY

In this issue

Contact details

Chairman   -   Jeremy Browne (G3XZG)   Secretary   -   Malcolm Appleby (G3ZNU)
Treasurer   -   Matt Whitchurch (M1DTG)   Editor   -   Bryan Page (M0IHY)   Angie Page (M6WTL)

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

Chairman's Ramble

I have to admit that there is very little positive to be said for November as a month. In October there is still the possibility of warmth in the sun and we can look forward to the spectacle of the leaves turning, but, let's face it, November is just damp, cold, windy and dreary. I know there is Guy Fawkes night. Gone are the bonfire parties at home, hosted by a mildly eccentric and pyromaniac relative who would set off a jumping Jack behind your sister, only just adhere to the somewhat archaic instruction on fireworks to "light the blue touch-paper and retire", and fail to secure the Catherine Wheel to the fence. I'm not decrying their loss exactly as they also had their annual toll of life-changing injuries and even deaths. But somehow, the public performances don't have the same atmosphere.

So what have we got at CDARS to brighten the month? Well, there is a dazzling display of knowledge, a demonstration of expertise and ingenuity and antenna manoeuvres in the dark.

The dazzling display of knowledge will come at the annual quiz, (though not held since 2019 because of Covid), with the Aylesbury club for the G6NB trophy on 10th November, which this year we are hosting. The expertise and ingenuity will be provided by Bryan with his talk on SDR with a Raspberry Pi on the 24th, and the antennas will be erected and taken down in the dark on the 13th, when we have booked the hall for the evening to take part in the affiliated societies and club falls contest on 1.8 MHz. We are going to practice in daylight first. Honestly. This, and the DX bands continuing to show promise, particularly 14 and 18 MHz, should help to cheer us all up. We will also of course be continuing with the club net and it was very interesting to hear more about the Amersham repeater group from Chris, G0WTZ, at our last meeting. The club will be making a contribution to the group bearing in mind particularly the use we make of GB3TU.

Many thanks to all those who have contributed in many ways during October and a welcome to the new members who it is great to see. Also congratulations to John for obtaining the Intermediate licence and Ben for the Foundation licence. People coming on the air really gives the club a shot in the arm. Thanks too again to the committee, and to prove that we are doing something, you will see the minutes of our last meeting in this newsletter.

Have a good month and I look forward to seeing you.

73, Jeremy.

Editor's Muse

Thanks Jeremy, this month sees my 'slot' a little taller, more to say methinks...

Yes, I remember bonfire night as a child with potatoes put into the burning embers as part of the ritual, todays offering I feel is too clinical, too distant, too impersonal.

The Memorial Hall (Ashley Green) has been booked (19:30-23:00) for Saturday the 13th of November, the club will be taking part in the Club Calls (1.8MHz AFS) contest from 20:00pm till 22:30pm, all those interested are welcome to attend. Firstly we must arrange to get together beforehand to get something in the air representative of an antenna, get it tuned and then taken down, there just won't be time on the day as the village is holding a craft fair that finishes at 6pm, I expect them to still be around at 7pm, which will not give us much time to get the antenna erected.

I will be giving a talk on SDR with a demonstration on my laptop in November, hopefully showing that you don't have to be armed with expensive gear to get on the air, I would also like to give the same talk (maybe next year) on using a Raspberry Pi as your 'shack' computer, not impossible by all means, check out Mike Richards (G4WNC) and his talks on the Raspberry Pi.

Bryan M0IHY

Committee Meeting Minutes

Present: Jeremy Browne; Malcolm Appleby; Bryan Page; Angela Page; Matt Whitchurch

1. **Welcome and apologies**
   All present

2. **Minutes of previous meeting**
   No corrections

3. **Matters arising**
   Jeremy did not get a response from the Wigginton Trust about interference from our 50MHz transmissions. However the trust did agree we could use the field for SSB Field Day, so we assume the matter is closed.

   Malcolm had made contact with the Ashley Green Parish Clerk about using The Glebe, but has not had a response. He will pursue for any potential future activity.

   Action: Malcolm

   Jeremy spoke to Terry G0VFW about the poles, however Terry was going away, so the action is still outstanding. It may be better for someone to visit Terry to inspect the poles
   Jeremy will drop him an email.

   Action: Jeremy

4. **Treasurer's report and membership**
   Since the last finance update in July we have had field day expenses and insurance, and some income from the sale of Jim's beam and subscription from some new members.

   There is an outstanding payment due to Ashley Green, but they have been slow to invoice.

   There are some new members who have not yet paid a subscription, Matt will send a global email with the club bank details and request new members to make a payment.

   Action: Matt

5. **Club project and programme**
   John Kilcoyne had suggested a club project to build an interface for connecting a PC to a rig for running data services. Bryan pointed out that the SignaLink interface is very expensive, although G4ZLP offers a similar unit at much lower cost. For the club's TS590 this is not needed as it has a built-in sound card. It is not clear what market there would be for building an interface, as most modern rigs also have built in sound cards. It was agreed that we would use next week's club meeting to poll members, alongside us listening in to the 80m Autumn Series data contest (RTTY and PSK).

   The programme is now complete until the end of the year, with the last in-person meeting as the club social on 8th December.

   We will have another committee meeting in December to fix the dates for 2022.

6. **Future contests**
   We are participating in the Autumn AFS series, together with our friends from Northampton. Dave G8FMC is coordinating our participation. So far we have committed participants for all the upcoming sessions. The 160m session is on Saturday 13th November, and the question is whether we might put on a station from Ashley Green. We would need to have a working antenna - possibly M0JCQ. We might need to have a trial run one afternoon. Initial step is to find if Ashley Green Hall is available that day „ Matt to find out and book the slot if available, on the basis that it can be cancelled if we decide not to go ahead.

   Action: Matt

   We have had an email from the Harrow club about activity periods, although the suggested times and bands were not that good for us. Malcolm will reply to Peter Marchant.

   Action: Malcolm

7. **Club Newsletter**
   Jeremy suggested that we have brief (200 - 250 words) contributions from members as quick biographies, setting out our interests and activities. This would be of interest to new members, and we should also encourage new members to contribute.

   Bryan would like to get some more input from members, although it was recognised that the editor generally has to end up writing a lot of content.

   Malcolm has offered to write a series of articles based on the talk he gave on logging, with one article on each of the three logging programmes.

8. **Club equipment**
   Regarding sorting out the equipment at Ashley Green and deciding on what to retain and what to dispose of, Bryan suggested we do this one afternoon as a committee. Malcolm will find out which afternoons are available at Ashley Green.

   Action: Malcolm

9. **Date and format of the 2022 AGM**
   Date will be the last Wednesday in January - i.e. 26th January. We could either hold the AGM in person at Ashley Green, or on Zoom. Malcolm said that a hybrid meeting was possible, but involves a lot of equipment. It was agreed that we would hold the meeting on Zoom as more members could then attend.

10. **A.O.B.**
    Local repeaters - Chris Taylor will be talking about the group at the October meeting. We will give a donation to the group, and see if there are members who would like to get involved with running the repeaters.

    Re Jim G3VRY, Jeremy will try again to contact the care home after their COVID outbreak.

    Action: Jeremy

11. **Date of next meeting**
    Proposed: Thursday 16th December @ 8.15pm, via Zoom, although this is likely to change as the National Radio Centre (N.R.C.) have their annual volunteers Christmas dinner that day at 8:00pm in Milton Keynes.

Characteristics of a vertical HF Antenna

Vertical

- Quarter Wave

- Low Radiation Angle

- Omnidirectional

- Occupies a small space

- Can be Ground Mounted

- Direct Coax Connection

Dipole

- Half Wave

- High Radiation Angle

- Perpendicular to elements

- Large space required

- Mounted above ground, minimum ¼ Wave

- Requires Balun

Installation of a Hustler 5BTV Vertical Antenna

Design & Structure

- Trapped Vertical Antenna

- Coverage 80,40,20,15, & 10 Metre Bands

- 21 Ft (7 Metres) Tall

- Imperial Dimensions (Manufactured in USA)Installation

Installation

- 3 Options

  - Ground Mount Without Radials

  - Ground Mount With Radials

  - Roof Mount With Radials

Ground Mount Requires a 4ft pole 2.5ft into the Ground

80M Whip

80M Resonator

3 Blade Spider

56" Section

Band Clamp

20M Trap

Band Clamp

6 Blade Spider

20" Section

Band Clamp

15M Trap

Band Clamp

20" Section

Band Clamp

10M Trap

Band Clamp

72" Section

Band Clamp

Hustler 5-BTV

Vertical HF Antenna's
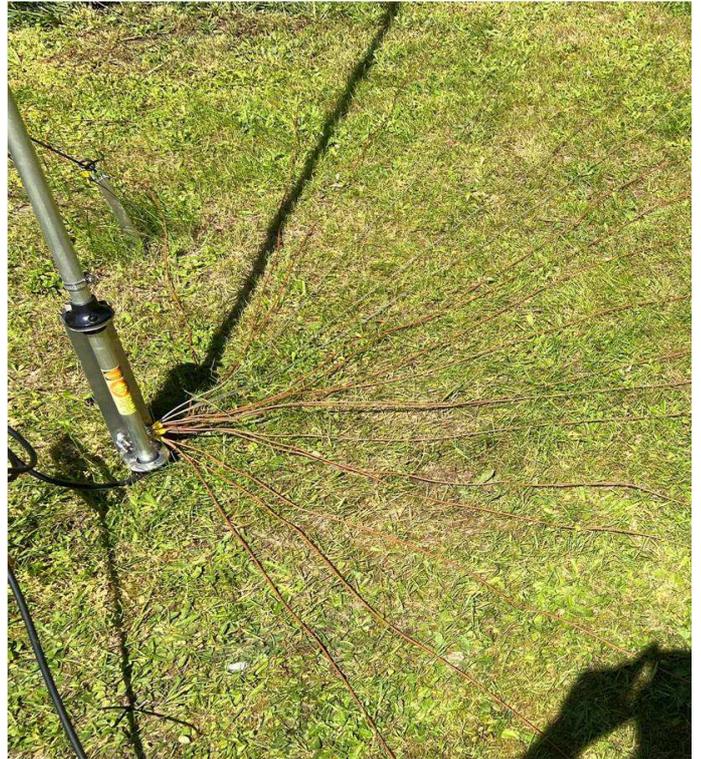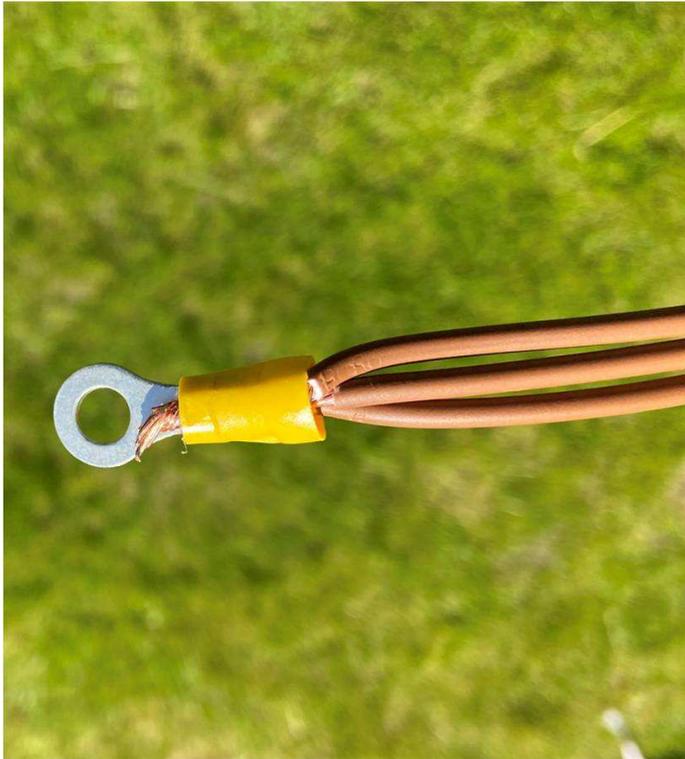

Radials

- A Vertical Antenna Without Radials is ½ an Antenna - They are Necessary!

- Radials can be either above or on the ground

- Radials above ground need to be a ¼ wave of each band (minimum 2 per Band)

- Radials on the ground do not have to be 'Tuned‹

How Many Radials?

- Law of Diminishing Returns Applies

- Based on Research by Rudi Severns N6LF, 64 Radials only provides a 0.4DB increase Over 32 Radials.

- I use 36 Ground Radials at a length of 3 Metres = 108 Metres of Wire

- The Radials Extend 360 Degrees Around the Base of the Antenna.

Vertical HF Antenna's

Performance

- Based on the Installation and Radial System Described, the Following Performance Was Achieved

- Across all Bands, Except 80M, an ATU is Not Required

- 80M has a very steep SWR curve either side of the Resonant Point. This can be Improved by Cutting a Section of the Whip at the Top of the Antenna to Raise the Resonant Frequency.

Band	Lowest SWR	Frequency
80m	1.26	3.550 MHz
40m	1.08	7.180MHz
20m	1.04	14.160MHz
15m	1.28	21.360MHz
10m	1.09	29.260MHz

Performance across 5 bands.

Vertical HF Antenna's

Conclusions & Discussion

Performance
- Similar to or Slightly Better Performance to a Wire Dipole, Both RX and TX.
- Covers 5 Bands without an ATU
- Band Noise is Not Noticeably Worse than a Dipole
- More DX Stations are Audible With the Vertical (e.g Australia, Kuwait, Jamaica)

Other
- Good Value for Money £249
- Reasonably Straightforward to Assemble
- Much Smaller Footprint than a Wire Antenna
- Add on Kits for 60M and 17M Available

Matt M1DTG

Getting to know you

G3XZG

My first contact with amateur radio was whilst I was at boarding school in the mid 1960's. I was tuning my transistor radio (lift-up lid and all), round medium wave and suddenly heard a voice which was clearly not a commercial station, talking to someone who I then couldn't hear. I was intrigued and found out that this was one of the older pupils who was a licensed radio amateur and that the school possessed a radio station. Later, when a former pupil held radio classes in the evening, I joined and was licensed in 1968. The only modes then were AM and CW. The school possessed a KW Vanguard transmitter and Eddystone 888a receiver. A very good set-up in those days for gaining experience and I much enjoyed using it.

Although I did get a rig at home, an old Geloso G222, with a Trio receiver, I was only there during holidays and though I joined the radio club at university, found there were many other things to do as well.

I have always been more of an operator than someone with great technical knowledge and after starting work in Hemel Hempstead and getting a flat, I decided to try and get back on the air.

I was doubtful about antennas being allowed, so bought an IC202S for 144 MHz, which at least got me back on the bands. I brought the old Geloso down from home, but too much RF was getting into the system, which resulted in my CW note being more of a buzz. After seeing some TenTec equipment I bought an Argosy and managed to get a wire antenna out, in a sort of loop from my window, over that of the flat above and down. This worked surprisingly well and by this time I was almost exclusively using CW. I wont go into the virtues of that as a means of communication here, but usually don't need an excuse to do so.

On getting married and moving to Chesham, I was able to put up a G5RV which served me well for many years.

HF bands and DX were my main interest, though I have never collected DXCC awards. I continued to use the Argosy, followed by a TenTec Jupiter, and now a Kenwood TS570S, which gives me coverage for 50 MHz as well, a fascinating band when open.

What would I like to do? VHF is not really worthwhile from this QTH and the power I use is restricted by the proximity of houses and the EMC regulations. I think though that I would like to try 70 MHz to see how that works, and do some pedestrian portable work. That's for next summer though.

Jeremy G3XZG

Club meeting of 13th October

The club meeting was well attended by some 10 members.

The theme for the evening was RTTY and PSK digital modes, the equipment used was:
- Kenwood TS590SG
- Active antenna (mounted on a 6m push-up mast) with 20m of coaxial cable and preamplifier

Whilst this was a 'receive' only operation it was to show members who had not been exposed to digital modes some of the aspects of these modes, thanks Malcolm (G3ZNU) for leading it, the frequency used was the 80m Autumn Series data contest frequency.

Peter Kilcoyne (2E0HMK) discussed his designing and making of a cheaper replacement for the SignaLink USB digital interface, Peter will provide me (if he hasn't already by the time this goes to press) a parts list, which I can shop around for the best prices for those interested in building one, Peter will also provide me with a presentation, which I can include in the next newsletter.

Leading on from Peter's talk it was discussed to put it to the members for interest in building a SignaLink 'like' project and that such a project would probably take place after Christmas.

On the subject of digital interfaces these are a few websites to visit:

Digimaster from ZLP Electronics.
A variety of interfaces and connecting cables are available.

\- https://www.g4zlp.co.uk/index.shtml

Microkeyer USB interface from Microham.
Other models are available.

\- https://www.microham.com/

SignaLink from Tigertronics.
Two models available, one that used the computer soundcard and DB9 connection, the second has a built in soundcard and connects via USB

\- http://www.tigertronics.com/index.htm

Rigblaster from West Mountain Radio.
Has interface models with both USB and RS232 DB9 connections. Includes inbuilt rig control capability.

\- http://www.westmountainradio.com/rigblaster.php

RigExpert USB interfaces and MixW software.

\- https://rigexpert.com/

VA3TO linking interface.
Operates under EchoLink software and doubles as a soundcard interface for various digital modes.

\- https://www.amateur-radio-wiki.net/echolink/

Prices vary considerably (for example, SignaLink direct from Tigertronic costs £139.99 whereas from Martin Lynch it's £99.95 (at time of going to press)), the cheapest interface I found was on eBay at £30.99 + £2.50 postage and package with the most expensive topping out at over £250.00, it all depends on your needs/wants.

Some suppliers prices include a data cable for your rig (ZLP Electronics, Tigertronics), whilst others charge (Martin Lynch, £15.95 - £23.95, depending on rig) so bear this in mind when calculating the cost.

Whilst most modern rigs include a built-in digital interface, the above will help those with the 'older' rigs and after checking out what it might cost you to purchase a ready made item, you might be persuaded to build your own!

Even if you don't want to build your own, an understanding of how they work will undoubtedly improve your knowledge radio-wise.

Bryan M0IHY

After I gave the workshop on computer logging at a recent CDARS meeting I said I would write an article for the Newsletter as a download of what I had learned when getting to grips with logging. I then realised that the three programs I covered in the workshop – Log4OM, Minos and N1MM+ each deserved an article. And then when I started this article on Log4OM I realised there is so much in it, I could only make it a starter guide!

If you decide to use Log4OM as a general-purpose logger I hope this will be of interest; if you've been using it for some time it may cover parts you've not found yet, as there is plenty to discover. The Log4OM user guide is very comprehensive and runs to 230 pages, so it can be a bit daunting at first. But have faith, you can get up and running with a really good logging program quite quickly and turn on more features as you need or want.

I should point out this article is based on my person experience and journey using Log4OM. It's not comprehensive, the 230 page user guide is for that.

Downloading: just go a Google search for Log4OM and you'll get to the website with download links. It's on version 2 (Log4OM 2), and although the previous version 1 is still supported there are significant differences. There is also a portable version, but I've only used the full version so far.

You'll also notice a Donate button on the download page. Log4OM is free to download and use, but if you get value from it, you may feel you wish to donate to the team that wrote and support it.

Support: I mentioned that the user guide is 230 pages long, and can be downloaded. Another very valuable resource is a series of YouTube videos by Terry Genes G4POP – just go to YouTube and search for Log4OM and you'll find them. Terry takes you through various steps to set up and use the program and I thoroughly recommend them.

Databases: once you've download and installed Log4OM, start it up and you'll get the main screen. The program holds all the data in a database, so the first thing you need to do is create that database. Click on Settings -> Program configuration and open the Database page (under User Configuration). For most general usage you can select SQLITE as the type of database, then click on New and a dialogue box opens asking for the name and location of the database. Think of a suitable file name – I use the starting date for that database plus my callsign. For the file location I use a folder in my OneDrive so that a) it's in the cloud so gets backed up by Microsoft and b) I can open the file from other computers. Keeping the database on a local drive risks losing it if there's a disk fault, and ties it to one machine.
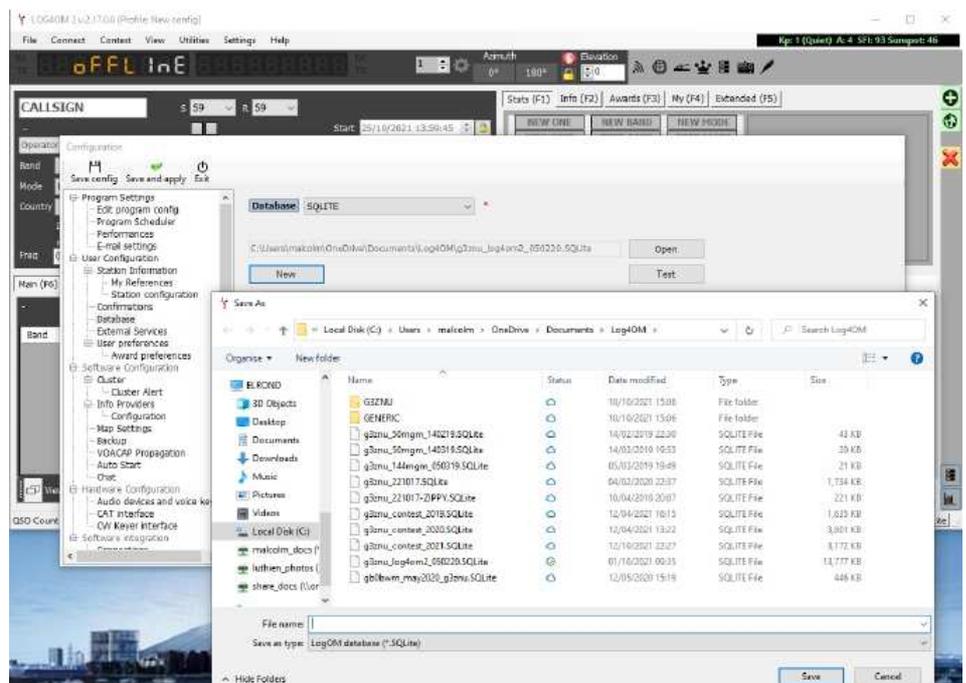

SQLITE can hold a huge number of QSOs, so you don't really need lots of databases in practice. I have created a separate database for our GB0BWN QSOs at Brill, and have now started holding contest QSOs in a separate database from my general QSOs, but choose whatever works for you.

Log4OM – a starter guide

User information: the next thing you need to do is tell Log4OM who you are and where you live / operate. Click on Settings -> Program configuration and open the Station Information page (under User Configuration). Here you enter your callsign, country (England), IARU Region (1), ITU Zone (27) and CQ Zone (14). Also put in your full six-character locator. You can add your full address if you wish, but it's not essential. Also add the operator callsign and Owner callsign – likely to all be the same but for Special Event, Club or Contest callsign's it can be useful.
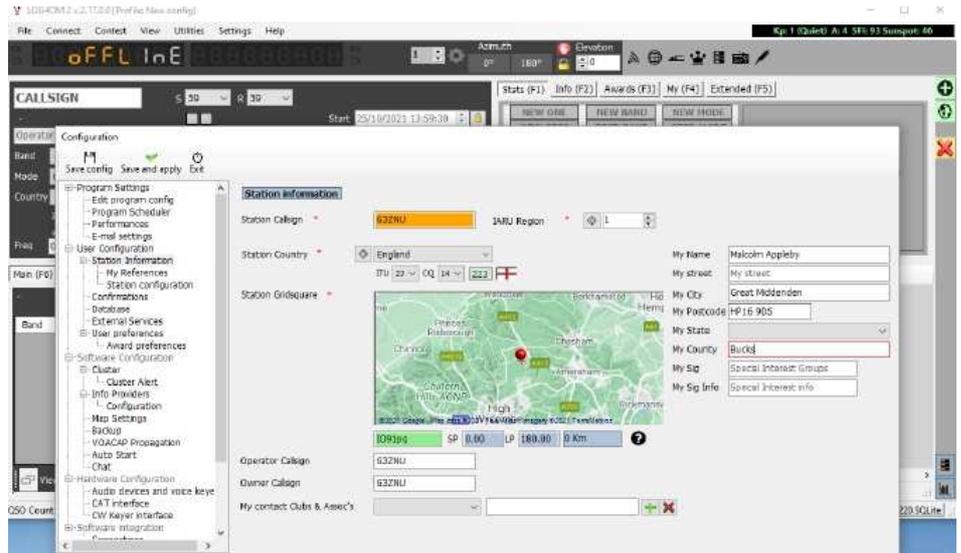
If you click on Station Configuration you can add some details of your rig, antennas etc. You start by defining a rig, then each antenna connected to the rig, and for each antenna, which band it is used for. This is not essential, but does mean that station information relevant for each band for each QSO will be recorded.
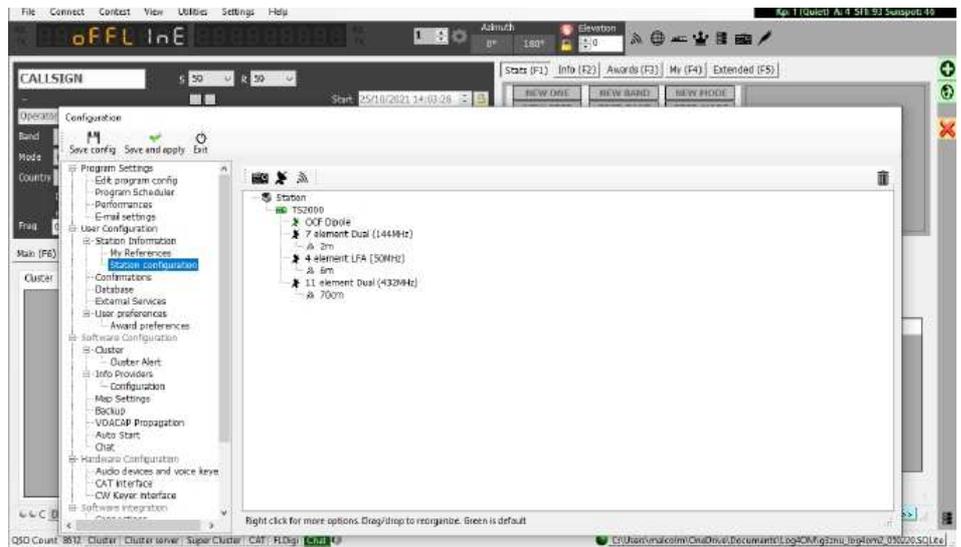
Remember when adding or editing any configuration information, click on Save and apply (if you've finished) or Save config (if you're doing more editing and don't want to risk losing anything).

Get logging: You're now ready to go. So now a few tips:

The default main screen for Log4OM is quite busy, so it's best to turn off the panes you don't generally need. Head down to the bottom right of the screen and click on the two icons – one has the pop-up "Show/hide band map" and the other "Show/hide statistics". You now get two good-sized maps, one showing the world with night/day showing, and the other a more local map with your own station centred.

The biggest field on the QSO entry pane is the Callsign field, where you put in the call of the station you're working. The other main fields are for the report you give the station you're working, and the report they give you. Remember too that you'll need to select the Band you're operating on, and the Mode – both of

these are drop-down boxes so just select the one that's appropriate. If you have CAT control working, these fields will get filled in for you, but that's for later. You can also add the name and locator of the station you're working – and if you have QRZ.com connected, these will often also get filled, but again more on that later.

On the QSO entry pane, as well as the callsign field you'll see two date / time clocks ticking away, one Start and one End. The idea here is that you click on the padlock beside the Start time when the QSOs starts, but I never remember to do this. So head back to **Settings -> Program** configuration and open User preferences (under User Configuration). Click on "Set QSO start time when leaving callsign field", and you'll then find when you enter a callsign and Tab to the next field, the Start time will be locked – much easier.

Incidentally, whilst you're in the User preferences page you can select your preferred bands so that other bands don't appear in the drop-down box you use to indicate the band you're working on. You can similarly set your preferred modes, again simplifying the drop-down box on the entry pane.

Back to the main screen: You have a choice as to what you display on the main screen along with the QSO entry information. Just below the QSO entry pane are five tabs that you can either click, or use the function keys on your keyboard:

Main (F6) – displays the world and local maps

Recent QSOs (F7) – displays QSOs you have added to the database
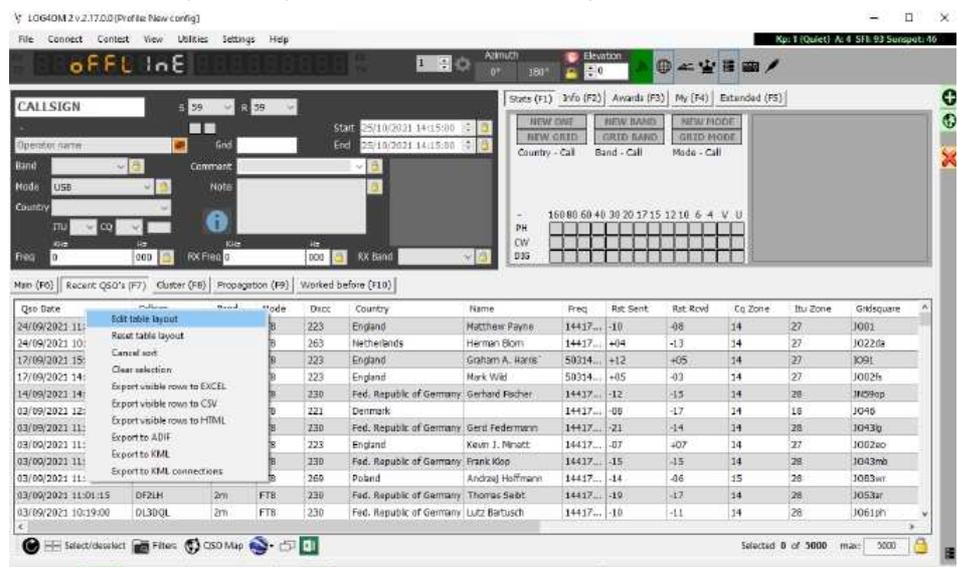
Cluster (F8) – displays "spots" that people have added to the DX Cluster system

Propagation (F9) – displays propagation information

Worked before (F10) – when you enter a callsign it will show previous QSOs

The Cluster and Propagation information we'll come back to in a further article, so for the moment we'll cover how best to use the other two tabs.

When you first select the Recent QSOs screen you may think the information presented is not that useful. It's likely that the columns are not showing what you really want to see. Remember that the database holds a huge amount of information for each QSO? But probably you just want to see a fraction of this on the Recent QSOs screen. If you right-click in the header row and select Edit Table Layout, and you'll get a pop-up box titled Grid configuration. In the Columns tab, untick all the fields you never want to see, and tick all the useful ones – like QSO date, Callsign, Band, Mode, Country, (operator) Name,

Report sent, Report received etc. Click ok and you'll get a more useful edited display of the QSO information. Next, if you don't like the order that the columns are in, click and hold on the header in any column you want to move and drag it sideways to where you want it. When you release the column will move. You can similarly resize any of the columns (how wide do you really need the RST Sent field to be?).

You can also re-order all the entries displayed based on the content of any column. Normally you'd want to display your QSOs in date order, so click on QSO date in the header row – one click and it will sort in
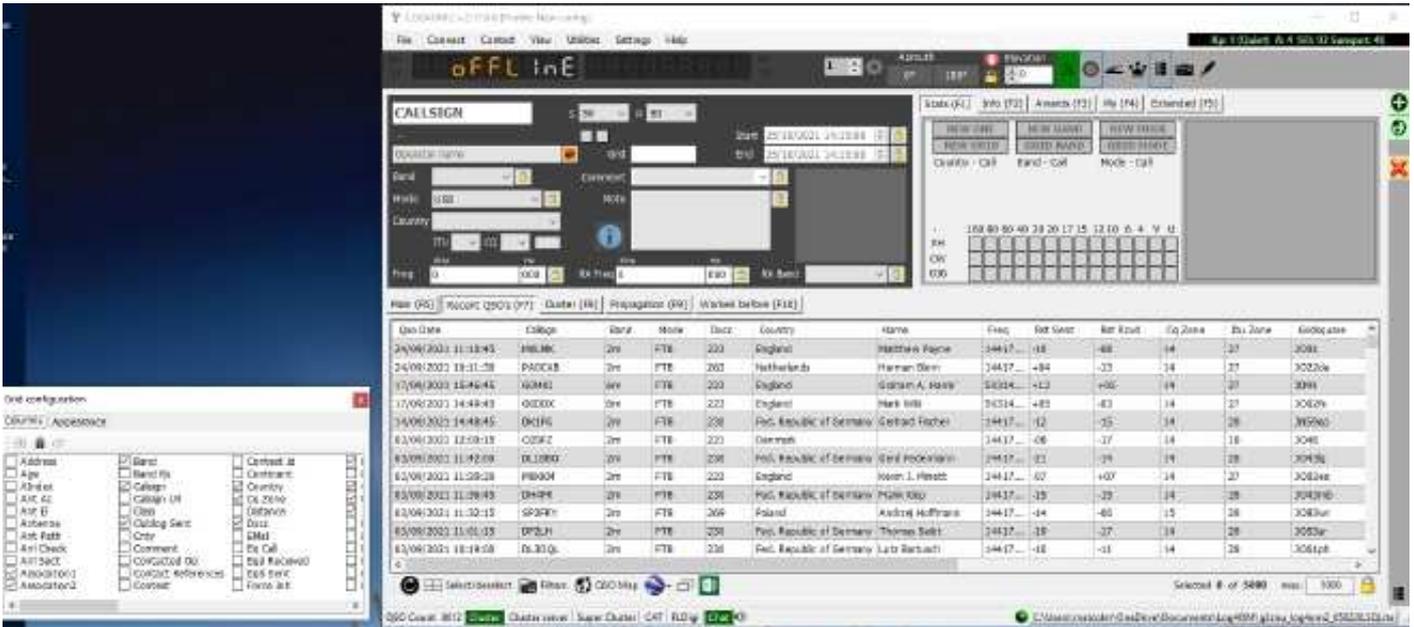
descending date order, another click and it will sort in ascending order. Want to sort by Mode, or Band? Just click on those in the header field. You can even sort by Callsign, but I can't quite see how useful this could be.

The **Worked before** screen works in a very similar way, but if you want you can have different columns displaying on this screen. Again right-click in the header and select Edit Table Layout, then select what you want to see in the Grid configuration box. You can also re-order and re-size the columns as you wish.

Conclusion: there is no conclusion to a description about a program like Log4OM, as there is always something more you can find and do. In this article you've had enough information and tips to get up and running, but you'll notice that we're just using the program in stand alone mode. When it gets really interesting is when Log4OM gets connected to your rig (or rigs), and to internet-based services. Next month I'll cover getting the CAT connection running, so Log4OM can record exactly what frequency and mode you're using, plus connection to the external services QRZ.com and the DX Cluster.

QSLing is another big topic, so we'll leave that for another episode.

Malcolm Appleby G3ZNU

Contest Corner

No HF in December...

November

HF

Day	Date (2021)	Time UTC	Contest Name
Mon	01 Nov	2000-2130	Autumn Series DATA
Wed	10 Nov	2000-2130	Autumn Series SSB
Sat	13 Nov	2000-2300	Club Calls (1.8MHz AFS)
Sat	20 Nov	1900-2300	2nd 1.8MHz Contest
Thu	25 Nov	2000-2130	Autumn Series CW
Mon	29 Nov	2000-2130	RSGB FT4 Contest

VHF

Day	Date (2021)	Time UTC	Contest Name
Tue	02 Nov	1900-1955	144MHz FMAC
Tue	02 Nov	2000-2230	144MHz UKAC
Wed	03 Nov	1900-2100	144MHz FT8 AC
Sat-Sun	06-07 Nov	1400-1400	144MHz CW Marconi
Tue	09 Nov	1900-1955	432MHz FMAC
Tue	09 Nov	2000-2230	432MHz UKAC
Thu	11 Nov	2000-2230	50MHz UKAC
Tue	16 Nov	2000-2230	1.3GHz UKAC
Thu	18 Nov	2000-2230	70MHz UKAC
Tue	23 Nov	1930-2230	SHF UKAC

December

VHF

Day	Date (2021)	Time UTC	Contest Name
Wed	01 Dec	1900-2100	144MHz FT8 AC
Sun	05 Dec	1000-1400	144MHz AFS
Tue	07 Dec	1900-1955	144MHz FMAC
Tue	07 Dec	2000-2230	144MHz UKAC
Thu	09 Dec	2000-2230	50MHz UKAC
Tue	14 Dec	1900-1955	432MHz FMAC
Tue	14 Dec	2000-2230	432MHz UKAC
Thu	16 Dec	2000-2230	70MHz UKAC
Tue	21 Dec	2000-2230	1.3GHz UKAC
Sun	26 Dec	1400-1600	50MHz Christmas Contest
Mon	27 Dec	1400-1600	70MHz Christmas Contest
Tue	28 Dec	1400-1600	144MHz Christmas Contest
Wed	29 Dec	1400-1600	432MHz Christmas Contest

'Air Miles', how far have we gone? / results

It would appear James has too much time on his hands!!! He's taken 1st place in the General section and 1st in all but one of the bands, where he came 2nd, well done.

So, how have we done this month?

MFSK rules the roost, FT8 is in 2nd place and SSB very close behind, 20m is again the favoured band

(Running totals in red) **General**

Most Miles

M0JCQ		2,622,109	6,823,008
G3XZG		80,921	712,794
G3ZNU		63,594	915,718

Most QSO's

M0JCQ		691	2,832
G3XZG		37	472
G3ZNU		12	867

Longest QSO

M0JCQ		VK2LAW(16963)	VK2LAW(16963)
G3ZNU		NS4X(6944)	YB1BML(7316)
G3XZG		HS0ZJF(6055)	**VK4DX(10286)**

Shortest QSO (miles)

M0JCQ		M0JBF(13)	G3MEH(0)
G3XZG		ON6NW(214)	G4UZE(8)
G3ZNU		SV9GPV(2698)	G4WJS(7)

Average per QSO (miles)

G3ZNU		5,300	1,056
M0JCQ		3,795	2,409
G3XZG		2,187	1,510

Maidenhead Squares

M0JCQ		691	1,956
G3XZG		37	414
G3ZNU		12	571

QSO Economy Drive

High miles per Watt

M0JCQ		652.87(15)	161.92(15)
G3ZNU		69.45(100)	73.16(100)
G3XZG		60.55(100)	102.86(100)

Low miles per Watt

M0JCQ		0.13(100)	4.10(100)
G3XZG		2.14(100)	0.08(100)
G3ZNU		26.99(100)	0.07(100)

By Band

160m

30m

12m

M0JCQ		27	61
G3XZG			3

2m

80m

20m

M0JCQ		281	1,198
G3XZG		23	180
G3ZNU			35

10m

G3ZNU		8	9
M0JCQ		1	13
G3XZG			11

70cm

60m

M0JCQ		10	10

17m

M0JCQ		213	601
G3XZG		10	22
G3ZNU			44

6m

23cm

40m

M0JCQ		66	91
G3XZG		4	13

15m

M0JCQ		93	120
G3ZNU		4	11

4m

'Air Miles', how far have we gone? / results

By Mode

CW

G3XZG	37	472
G3ZNU		30

FT8

M0JCQ	167	941
G3ZNU		739

MFSK

M0JCQ	392	1,204

SSB

M0JCQ	132	658
G3ZNU	12	96

By Country

M0JCQ	36	90
G3ZNU	7	69
G3XZG	9	54

This month's totals

Countries visited	-	62
Most visited Country	-	United States - 144 times
Total Mileage	-	2,766,624
Total QSO's	-	740
Average miles per QSO	-	3,738.68
Total locators visited	-	434
Most visited locator	-	KO85 13 times

'Air Miles', September at a glance

This month at a glance (accumulative)

By Mode

By Band
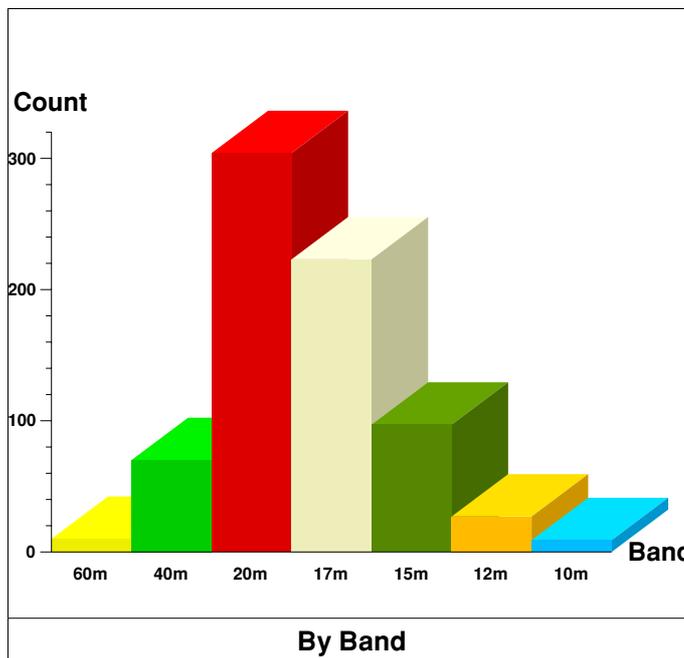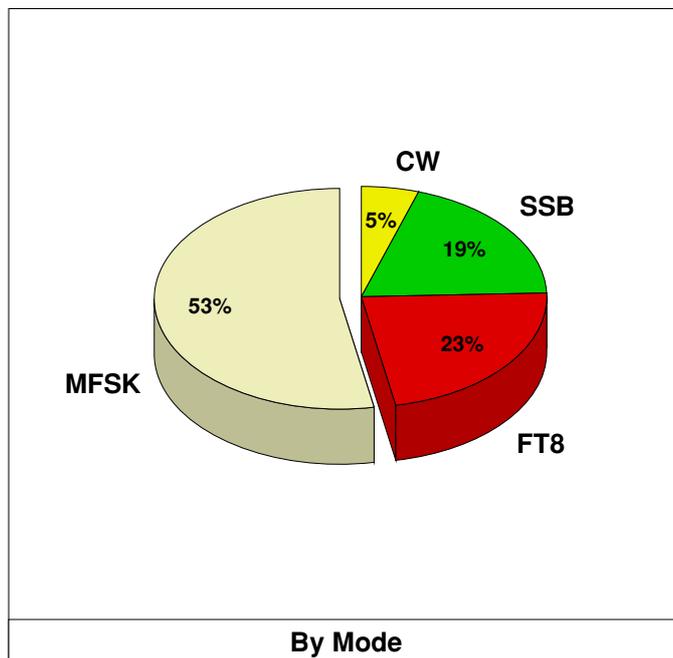
No pretty display this month, far too crowded requiring a magnifying glass to see the results!

Country	Count	Country	Count
Japan	58	Canada	3
Russia	57	Bulgaria	3
United States	37	Norway	2
Ukraine	21	Hungary	2
Germany	15	Czech Republic	2
Italy	12	Belarus	2
Greece	11	Austria	2
Poland	10	Sri Lanka	1
England	9	Republic of China (Taiwan)	1
Netherlands	7	Qatar	1
Indonesia	6	People's Republic of China	1
Spain	5	Mongolia	1
Romania	5	Malta	1
Denmark	5	Latvia	1
Thailand	3	Iran	1
Switzerland	3	France	1
Sweden	3	Estonia	1
Finland	3	Algeria	1

QSO Countries

'Air Miles', bands by the month

80m-40m Statistics for October 2021

80m - **40m**
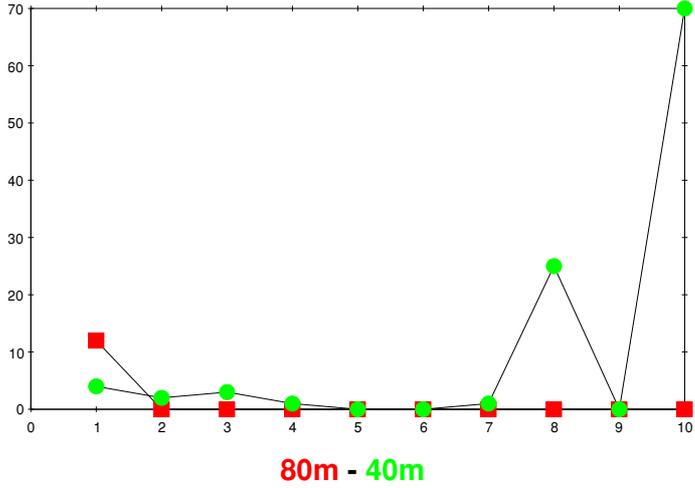
30m-20m Statistics for October 2021

30m - **20m**
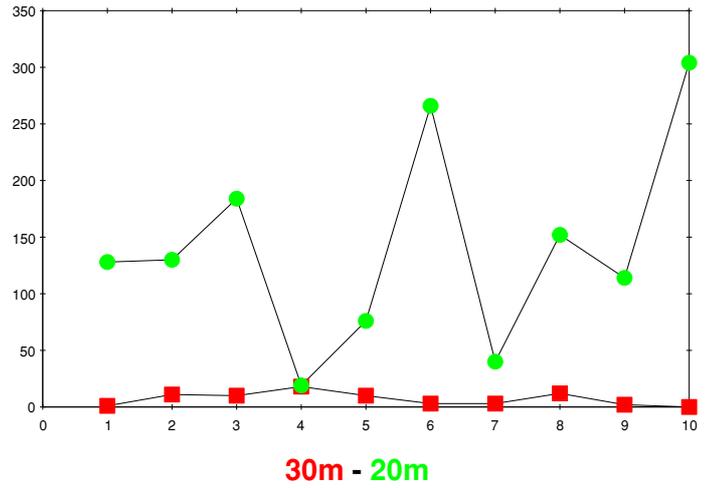
17m-15m Statistics for October 2021

17m - **15m**
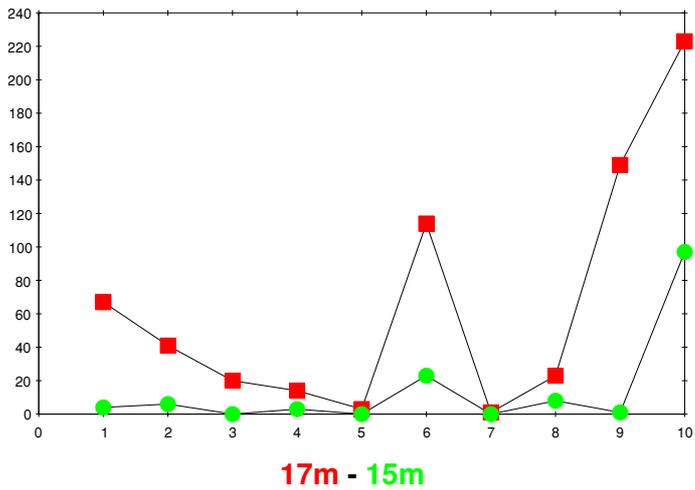
12m-10m Statistics for October 2021

12m - **10m**
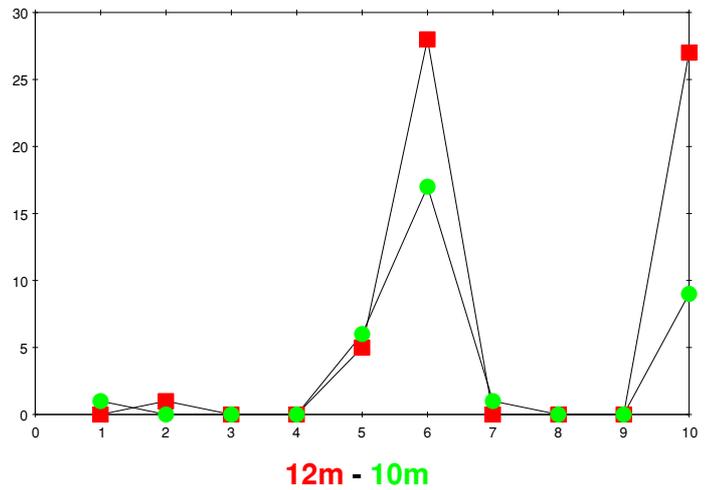
6m-4m Statistics for October 2021

6m - **4m**
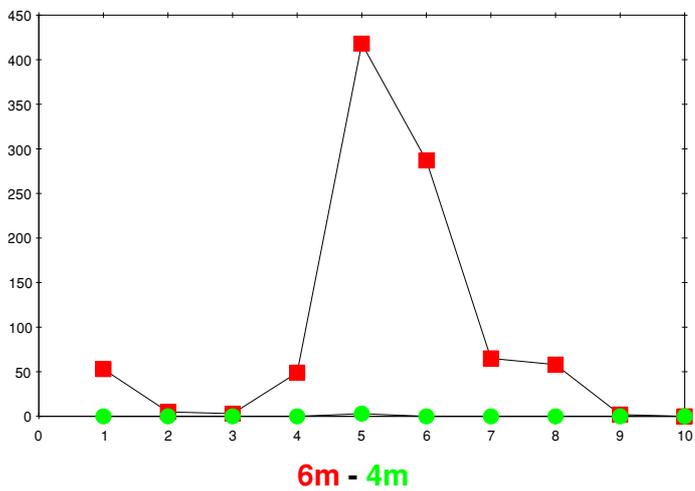
2m-70cm Statistics for October 2021

2m - **70cm**
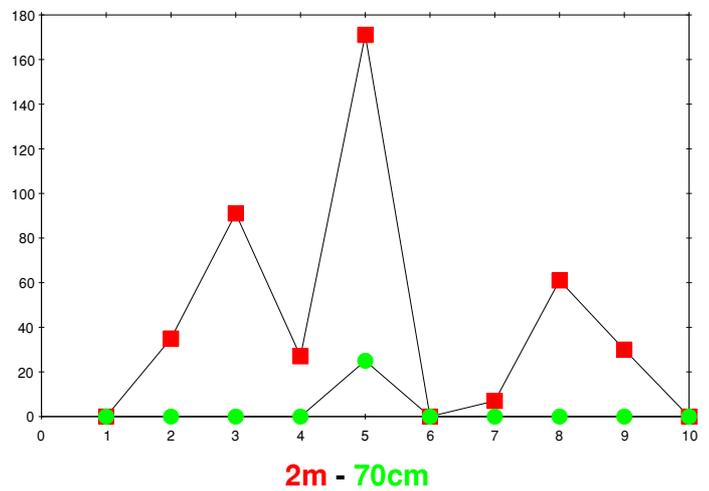
Any other business

More licences gained

Well done to Ben on passing his Foundation exam, I understand he is still waiting on his callsign.

Well done also to Peter Kilcoyne on passing his Intermediate exam, his callsign is 2E0HMK, Full next??

Club Calls (1.8MHz AFS) contest

Whilst we have booked the Memorial Hall for Saturday the 13th of November, we note the locals also have a function on during that day which finishes at 6:00pm, this will not give us time to erect and tune an antenna before the start of the contest, to this point it was agreed for a 'skeleton crew' to attend Ashley Green prior to the 13th of November and set up the appropriate antenna and tune it. Once done it could be taken down in readiness for the day.