

Newsletter

Chesham & District Amateur Radio Society

www.g3mdg.org.uk

September 2020

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

Welcome

This month we have a new series to the newsletter, "Do something new" from a phrase coined by Malcolm (G3ZNU), he's given us an outlook on receiving Slow Scan TV from the ISS, hopefully we'll have input from several of you for this series in the months to come.

For those of you pointing out spelling mistakes in previous editions of the newspaper, you'll be pleased to know that I've purchased Desktop Publishing software to replace my graphics package to generate the newsletter, it comes complete with a spellchecker, so no excuses now!

We have Intermediate Licence exams up and coming this month, we also have our own version of SSB Field Day due to what I call unfair bias (my own personal feeling) towards the larger clubs, where would the RSGB be without the smaller clubs?

Rain appears to have replaced the sun with temperatures down to half of what they were at the beginning of the month, seems like Autumn is well and truly here with maybe winter on its heels, time to get the jumpers out!

Bryan M0IHY

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Contact details

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

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

Chairman's Ramble

It hardly seems any time since my last ramble in the newsletter. August has just produced a lot of rain, though thankfully we had a dry evening for our first meeting at Ashley Green. We had planned to have part of the meeting outside, though as it turned out, we started by being unable to get in. Once that was sorted out, I think those not previously been up to the hall were impressed by the venue, and we have now booked the hall through to next year's AGM. Obviously any plans we make at the moment are subject to sudden changes in covid restrictions, but I guess that is the way of things for the foreseeable future.

We have now heard, as expected, that no multi-operator stations are allowed in SSB field day. The rules provide for members within a club to operate individually, for however much time they wish during the 24 hours of the contest, with the scores being totalled up for the club and normalised. This obviously favours clubs with larger memberships, and I think some more equal system could have been devised, possibly along the lines of the VHF field day in July, where operation on each band was limited to a set number of hours. As I write, we have yet to discuss how the club can participate.

We can look forward though to the affiliated societies series of contests starting in the autumn, with the help of some of the Northampton members as well. These start with 70 Mhz, then 50 Mhz, top-band and 144Mhz before the end of the year. Over the past few years, we have been very successful in this series, and may plan to run a station from Ashley Green as part of the team.

This weekend, there have been a number of stations on the air from lighthouses. This has always seemed to me at the spartan end of radio, particularly given the high winds and rain that we have had. Today I had QSO's with a German station in a lighthouse in Cuxhaven, and even more dicey, a Dutch station on the Noord lightship in Hellevoetsluis, for which I definitely claim the month's most unpronounceable QTH worked. Some operators are less dedicated, as I worked a German station last year which claimed to be from a lighthouse on an island, though he admitted when I asked about the weather, that he was in fact sitting in a hotel room, close to the lighthouse. I couldn't really blame him.

In closing, I want to thank everyone who has done so much to keep the club's activities going and to publicise them over the course of the month. Also to wish the best of luck to those who are taking their Intermediate exams in September.

73, Jeremy.

The Editors Musings

We've had our first meeting at Ashley Green Village Hall, the turnout was quite good, hopefully as things COVID-19 quieten down more members will attend, at least now when we meet we won't be wondering which corner we've been put into (Whitehill Centre experience) as there is only one room!

I've been quieter on the air this month due to devoting my time to repairing the roof of our lean-to, it was made of corrugated acrylic and was smashed by the marble-sized hailstones the other week, both Angie and I can now add 'roofers' to our CV's!

The Long Grass Contest has occupied my time also, my computer has been doing overtime with coding for the reports, hopefully we'll have some takers.

Bryan M0IHY

Do something new.

SSTV from the ISS - Malcolm G3ZNU

There are some benefits from using Facebook – no, really. For one thing there are plenty of specialist user groups that can carry useful information, if you are prepared to sift through the copious requests for information and the sometimes not-too-useful replies. I'm a member of "Amateur Radio UK", "UK VHF/UHF Contesting", and the rather more anarchic "Radio Society of Great Britain – unofficial group". The real Radio Society of Great Britain page carries news and information from the RSGB, and one post last month caught my eye. The International Space Station (ISS) was due to transmit SSTV images during its passes over a period of several days. A golden opportunity to try out hearing the ISS and receiving SSTV.

Sources of more information in order to get set up were the AMSAT UK web site (<https://amsat-uk.org/beginners/iss-sstv/>) which has plenty of guidance about ISS amateur radio activity, and the ARISS (Amateur Radio on the ISS) web site (<https://www.ariss.org/>). The European Space Agency has also produced a video with basic information about the ISS and orbits as well as how to receive SSTV.

As I'm already equipped with a VHF transceiver with audio connections to my laptop, it was just a matter of downloading and installing the right software. I downloaded MMSSTV from hamsoft.ca and setting it was straightforward. What is less straightforward is understanding which mode is being transmitted. There's an old saying amongst telecoms people that the great thing about standards is there's plenty of them to choose from – take your pick! The same applies to SSTV as new modes are developed to optimise quality, time of transmission, bandwidth and so on. The ISS currently transmits PD120, a mode written by G4IJE in 1997 (<http://www.classicsstv.com/pd120.php>). This has a two-minute transmit period, a reasonable compromise for ISS passes. Fortunately MMSSTV has an auto receive function, so you can leave it in that setting and it works out what's being received.

I had already downloaded the app ISS Detector on my phone so it was easy to see when the next pass would be, how high, which direction and so on. Typical passes are 6 minutes long, so that should be enough time for one or two pictures.

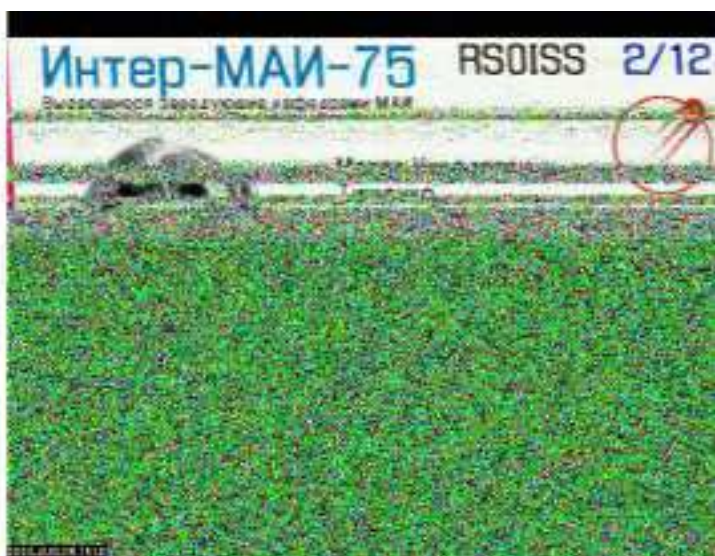
When the first pass came I was still downloading MMSSTV, so I just listened to the signal on 145.800MHz. It's really loud! By the time of the next pass I was up and running and was rewarded with two complete images almost noise free. On the next pass I was not so lucky, there was more fading (most likely cross polarisation) and the timing of the pass and transmission cycle not so well aligned.

It turned out that the ISS does not transmit continuously. There is something like a one minute gap of silence between pictures, maybe to allow the PA to cool down between the 2 minute transmit cycles, so I was quite lucky to get two complete pictures on one pass. I was using my 2m beam – horizontal of course – so there was some cross polar loss causing fading. A small circular polarisation beam would be better in practice, and the signal is so strong you don't need much antenna gain. Also if the ISS is nearly overhead my beam doesn't pick up much signal, so near-horizon passes are actually better! It's also noticeable that high altitude passes end much more abruptly as the ISS sinks quickly below the horizon, whereas low altitude passes sink into the noise more gradually.

A word about the picture content. Don't get too excited with thoughts of seeing pictures of the astronauts / cosmonauts in the ISS. These SSTV sessions are run by the Russia ARISS team under the callsign RS0ISS, and the pictures are mainly of Russian helicopters! There's a carousel of 12 pictures that's sent on a cycle with one QSL-style as picture 1. It seemed when I was watching that the same pictures came round each time, which must be a result of the periods of passes.

Do something new.

If you're only equipped with a 2m FM radio and a vertical, you'll still receive the ISS when it's on. And you can even use loudspeaker / PC microphone coupling too – you just need the software. Give it a go!



PS. SSTV from the ISS is not a regular activity - so don't just expect to just listen and it's there! The website <http://ariss-sstv.blogspot.com/> is a useful place to see when upcoming activity is planned.

ISS archive images can be found at https://www.spaceflightsoftware.com/ARISS_SSTV/index.php

The Dennis Kind Shield.

Chesham & District Amateur Radio Society (Region 9) have re-started face-to-face club meetings at a new club QTH – Ashley Green Memorial Hall (IO91QR). We had been looking for a new venue for some time before the COVID pandemic, and were pleased when we heard the Memorial Hall was reopening in August. We had visited the site when government restrictions allowed us to emerge from our homes, and checked it out for use as a radio location. We even managed to operate for an hour in the 80m Club Championship – totally al fresco!

At our first meeting proper in August we completed some unfinished business from our AGM in January, when our chairman Jeremy G3XZG presented the Dennis Kind Shield to club member Terry G4UEM in recognition of outstanding services to the club. Terry had handled some recent SK sales which greatly benefited club funds. The presentation of the shield was managed with social distancing of course, with the assistance of Jeremy's white stick!

We now plan to meet twice a month at Ashley Green for the remainder of the year. The picture shows Jeremy G3XZG (right) presenting the Dennis Kind Shield to Terry G4UEM (left)

Jeremy G3ZNU



*Social distanced handshake (of a different kind!)
(picture courtesy of Malcolm (G3ZNU))*

The Dennis Kind Shield.

As was said on the previous page, Terry took onboard the difficult task of cataloguing and dealing with the contents of a silent key (SK) sale last year, thanks for your efforts Terry.

Bryan M0IHY



Picture courtesy of Malcolm (G3ZNU)

A build project for the Autumn/Winter months.

At our last club meeting we briefly discussed having a build night with a majority of people wanting to try to build a J-pole antenna, or its variant the 'Slim Jim antenna'. The J-pole antenna is more properly known as the J antenna, it was invented by Hans Beggerow in 1909 for use in Zeppelin airships.

A snip from wikipedia.org may guide us on what to build... *"In the copper pipe variation, the Slim Jim uses more materials for no performance benefit. Slim Jim antennas have no performance advantage over the conventional J-pole antenna"*. This might suggest we try the J-pole antenna first!

The purpose of the build night will be to give people an antenna that they can use on their current equipment, I will try to get build plans and parts lists raised by the next club meeting.

Bryan M0IHY

The Pi 4 is back in the shack.

After suffering with intermittent blanking on my 2nd monitor I decided to retire my Quad-core PC and resurrect the Raspberry Pi 4, and yes, it's up to the job.

With Raspian installed I currently have Mike Richards (G4WNC) Pi-Data Modes SD Card software installed onto a 32GB Micro SD Card (plenty of space for what I want/need), the suite comprises of FLDIGI + WSJT-X + QSSTV + Fimesg + FLrig and JS8Call (all for a bargain price of £9.50), I have WSJT-X and JS8Call set up and will endeavour getting FLDIGI and its associated software up and running in the next week or so, no excuse not to do so as rain appears to have replaced the sun!

I have a 10" (254mm to the younger ones reading this) HDMI monitor (with built-in speakers) which suffices for the Data Modes software, I use the 2nd monitor for callsign look-ups (QRZ.com, QRZCQ.com and others) these will give me the 6-character Maidenhead locator, from there I can fill in the locator on the screen before logging the QSO.

The Pi 4 has no SD card, it boots from a Patriot 120GB SSD, much faster and more reliable than an SD card, or USB stick.



A little less cluttered than prior to going HF only.

The Pi 4 is back in the shack.



Here we have WSJT-X running on the small monitor and QRZ.com running on the large monitor.



To the left you'll note an Ethernet lead, I prefer 'hard-wired' (even though the Pi4 is very good at wireless), the USB 3.0 lead goes to a 7-port USB 3.0 hub to which I have my SDRPlay (RSP1a), Patriot 120GB SSD and TS590SG connected.

One very 'small' package but more than capable of running the 2 monitors, a word of caution though, the Pi 4 runs hot, especially if you ask it to do lot's on the monitors - I have a Fan SHIM fan from Pimoroni fitted (it slides over the GPIO pins, no soldering required), you'll also need software from Pimoroni (free) to drive the fan, all great stuff to keep the Pi4 running a little cooler!

Bryan M0IHY

It's not always what it appears to be...

With the Raspberry Pi 4 back in the shack I set about getting all the digital data modes up and running, WSJT-X for FT8, and JS8Call were already installed, I just had FLDigi to go. I always back up the SD card on successful installation of any software suite so by the time I'd got to FLDigi I'd backed it up twice. As it was late I decided to finalise FLDigi the next day so saved my work and shut down.

The next morning I happened to be up at 4:15am, I decided to see what was about on the air-waves at that time. You could have knocked me over with a feather duster (as they say), the waterfall was wall-to-wall with signals on 20m, it was unbelievable, time to get a few QSO's under my belt. After 2 hours I had bagged 26 QSO's from various parts of the world on everything from 160m to 10m, my little Raspberry Pi 4 was doing me proud, then as I shut WSJT-X down I had an error showing Hamlib couldn't communicate with the radio, not good.

I loaded up JS8Call and had the same problem, time to check the settings on the TS590SG, all seemed above board, what now? I disconnected the Pi 4 and reconnected the cables back to my PC, I loaded up the PC version of WSJT-X and ran it, all was well, this pointed to a possible problem with the Raspberry Pi 4, or was it?

Running WSJT-X for a while on the PC, all seemed okay, until I shut it down, I was presented with the Hamlib error again. I tried JS8Call, the problem was the same, nothing seemed to work even though it was fine a couple of minutes ago.

Thinking what was common to both the Raspberry Pi 4 and the PC told me it was the rig. I reloaded settings that I knew were good (I'd saved them a while ago) and hoped this would cure the problem, which it didn't! Then it dawned on me that there was another item '*common*' to both computers, namely the USB lead from the back of the rig to the computer for CAT control and data. I found a spare USB lead and used that, hey presto, everything worked okay, as the heading says, "it's not always what it appears to be...".

It's one of those things, "***out of sight, out of mind***", connecting from one computer to another meant I had moved the USB lead, this was probably enough to make a good connection.

Now I've ordered 4 Tripp USB leads with ferrites (expensive, but great quality, guaranteed for life), hopefully I'll not have that problem again!

Bryan M0IHY

This months contests

September

HF

Day	Date	Time UTC	Contest Name
Mon	05-Oct-2020	1900-2030	Autumn Series CW
Wed	14-Oct-2020	1900-2030	Autumn Series DATA
Thu	29-Oct-2020	2000-2130	Autumn Series SSB

VHF

Day	Date	Time UTC	Contest Name
Tue	01-Sep-2020	1800-1855	144MHz FMAC
Tue	01-Sep-2020	1900-2130	144MHz UKAC
Sat	5/6-Sep-2020	1400-1400	144MHz Trophy Contest
Sun	06-Sep-2020	1100-1500	5th 144MHz Backpackers
Tue	08-Sep-2020	1800-1855	432MHz FMAC
Tue	08-Sep-2020	1900-2130	432MHz UKAC
Thu	10-Sep-2020	1900-2130	50MHz UKAC
Tue	15-Sep-2020	1900-2130	1.3GHz UKAC
Thu	17-Sep-2020	1900-2130	70MHz UKAC
Sun	20-Sep-2020	0900-1200	70MHz AFS Contest
Tue	22-Sep-2020	1830-2130	SHF UKAC
Tue	29-Sep-2020	1900-2130	144MHz MGMAC
Tue	29-Sep-2020	1900-2130	50MHz MGMAC

October

HF

Day	Date	Time UTC	Contest Name
Mon	05-Oct-2020	1900-2030	Autumn Series CW
Wed	14-Oct-2020	1900-2030	Autumn Series DATA
Thu	29-Oct-2020	2000-2130	Autumn Series SSB

VHF

Day	Date	Time UTC	Contest Name
Sun	18-Oct-2020	0900-1300	50MHz AFS Contest (AFS Super League)

Not SSB Field Day

CDARS Long Grass Contest - by Jeremy (G3XZG)

As a club, we have participated in SSB field day, and will do so again this year. However, we feel that this year's rules, give a disproportionate advantage to large clubs and groups.

Because of this, we invite those in smaller clubs, as well as entering field day, to take part in the CDARS Long Grass Contest.

This will run alongside field-day and with the following rules:

1. Two categories of operation, fixed and portable;
2. Maximum power 100 watts;
3. No limit on antennas;
4. Operation for a maximum of 6 hours over the 24, with an hour's gap between each time slot if more than one;
5. Operation on any band on which SSB field-day is taking place; more than one band can be used in each time-slot;
6. Scoring - the same as SSB FD Rule 6.
7. Winner will be the one with the most points, but also with honourable mention for the most points on each band;
8. It is planned to also give 'Club' scores based on the average of any clubs contributing members.
9. Normalised scores will not be taken into account.

For those of you who would like to take part in this contest, please email our club secretary Angie on (angela.page12@btinternet.com), by 7PM on Friday 4th September with your club callsign and the callsign(s) of participating members, if you are an individual taking part with no club please supply your callsign with "no club" in the email.

We want to stress that this is not intended to be in opposition to field-day, but to give those who may otherwise feel discouraged from entering, the chance to make their entry more enjoyable and worthwhile.

For those partaking, the results will be available on <http://g3mdg.org.uk> when the RSGB SSB Field Day results have been finalised.

73, the Chesham and District Amateur Radio Society.

Jeremy G3XZG (Chairman CDARS)

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

This month has been quieter for many reasons, but we're sticking with it and continuing...

So, how have we done this month?

(Running totals in red)

General

Most Miles

G3ZNU	85,516	740,917
M0IHY	77,409	608,010
G3XZG	66,727	237,552

Most QSO's

G3ZNU	137	830
M0IHY	76	629
G3XZG	50	237

Longest QSO (miles)

G3XZG	OA1F (6130)	OA1F (6130)
G3ZNU	KP4SE (4224)	JR3ZNC (5909)
M0IHY	UN7ZV (2967)	CP6CL (6099)

Shortest QSO (miles)

G3ZNU	4	0
M0IHY	5	4
G3XZG	145	2

Average per QSO (miles)

G3XZG	1,334.5	1,002.33
M0IHY	1,018.54	966.63
G3ZNU	624.2	892.67

Maidenhead Squares

G3ZNU	81	429
M0IHY	62	350
G3XZG	46	185

By Band

160m

M0IHY	1	1
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80m

M0IHY	4	13
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40m

M0IHY	22	117
G3XZG	8	12
G3ZNU	8	8

30m

M0IHY	36	97
G3XZG	2	2

20m

G3XZG	24	49
M0IHY	13	166
G3ZNU	4	14

17m

G3XZG	6	10
G3ZNU	5	71
M0IHY		186

15m

G3ZNU	10	11
G3XZG		4
M0IHY		25

10m

G3ZNU	3	128
G3XZG		25
M0IHY		13

6m

G3ZNU	55	543
G3XZG	10	135
M0IHY		11

2m

G2ZNU	51	51
M7CKP		2





70cm

G3ZNU	1	1
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'Air Miles', how far have we gone? / results

By Mode

CW

G3XZG		49	235	
G3ZNU		1	4	





FM

G3ZNU		2	2	
M7CKP			2	

MFSK

G3ZNU			123	
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FT8

G3ZNU		121	670	
MOIHY		73	625	

SSB

G3XZG		1	2	
G3ZNU		1	19	

MSK144

G3ZNU		12	12	
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JS8

MOIHY		3	3	
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Olivia 8/250

MOIHY			1	
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By Country

G3ZNU		29	105	
G3XZG		21	70	
MOIHY		21	89	

Any other business

Up and coming Intermediate exams

Good luck to both Peter and Guy with their Intermediate Licence exams, hopefully we'll have a couple of 2E0's later this month!