

Newsletter

Chesham & District Amateur Radio Society

www.g3mdg.org.uk

March 2022

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

Welcome

February has been an interesting month, with 3 storm systems (and a 4th possible) to deal with resulting in high winds, snow, heavy rainfall and flooding, it's been a busy month for some, at least my antenna's are still in the upright position, hopefully yours are too.

My thanks go to Steve Kavanagh (VE3SMA) for permission to use his "Some FTDX10 Issues and Solutions" article, hopefully those of you with this rig will find this helpful, I certainly did.

It's Peter Hollidays (M7CKP/2E0PTH) turn to tell us about himself this month.

Jeremy gives us another Spotlight QSO of interest, it's amazing what you can find when you dig deep enough.

With covid restrictions lifted on the 24th of February we're getting back to a more normal way of life, I'm confused at no requirement to self isolate should you have covid but I'm sure we'll all be responsible and self regulate.

Thanks to Malcolm (G3ZNU) for the extra content this month.

I listened to the birds tweeting away today, it seems like Spring is just round the corner.

Bryan M0IHY

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Contact details

Chairman - Jeremy Brown (G3XZG)	Secretary - Malcolm Appleby (G3ZNU)	Treasurer - Matt Whitchurch (M1DTG)
Member - Guy Plunkett (M0GUY)	Member - Dave Keston (G8FMC)	

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

Editor - Bryan Page (M0IHY)

Chairman's Ramble

I never know how to start these rambles. I am writing this on the afternoon of 25th February, but wishing everyone good afternoon takes no account of when you might be reading it. Simply saying "Hi" somehow sounds wrong, so I'll just dive straight in.

I hope everyone's antennas have survived a stormy February. We have had Dudley, Eunice, Franklin and now await storm Gladys. I only ever knew one person called Gladys and she was pretty cantankerous as I recall. I don't know whether they have storms like it on Rodrigues Island, but the more I read about it, the more I wanted to live there. Ah well, something of a pipe-dream I'm afraid.

We have had an active month, with two meetings, the start of the new series of UKAC contests and the last of the affiliated societies series, of which we wait the final results. It looks as though CDARS with NRC will have done pretty well, and once again we have taken part in all of the series of contests, which in itself is quite an achievement.

I was unable to take part in the February UKAC 50 MHz event, as my TS570S has developed a fault, or possibly more than one. I am however enjoying using the club's TS590SG for the time-being. It is interesting to see how the models developed from the 570, with some functions being improved, but others, such as message recording, seemingly more complex. Apart from the band selectors, some of the groupings of buttons on the 590SG seem a bit random and less logical than the 570S. Perhaps that is just a reflection of me not being as used to the rig, but it's certainly my first impression of its lay-out. Oddly, where the 570S automatically switches between antenna 1 and 2, that is my HF dipole and 3 element 50 MHz Yagi, the 590SG does not and it is a function on the button which switches the pre-amp on and off. Anyway enough of my amateur rig analysis.

We started cataloguing the club equipment and are now considering which bits we don't need and can therefore sell, with members getting first shout. The next step is to check which antennas the club has, and we aim to do this at the first meeting in March.

Also starting then will be Bryan's tutorials (a good name for them I reckon), for those looking to get their intermediate licence. Many thanks Bryan for organising that.

In our second meeting we took the RSGB convention lecture on the sunspot cycle. Some of us can remember more of those than others. Thanks to Guy and Malcolm for the zoom-link, which took us as far as Matt in Montenegro. It doesn't matter where you are in the world, you can still get to meetings now.

Many thanks to Guy and Dave for joining the committee and to all those who have helped, attended and supported over the month.

Let's hope that we have a year in which Covid does not interfere with our plans.

73, Jeremy.

Editor's Muse

I've tested the clubs FC-40 Yaesu end-fed antenna tuner, it boast's being able to tune in under 8 seconds, when I tested it was more like less than 2 seconds. Extremely clunky, so best put it outside and as Dave (G8FMC) has discovered, although it's a few years old now, it's one of the current accessories for our FTDX10 rigs!

After setting up my FTDX10 with settings described by Steve (VE3SMA) I discovered what he said made sense, now I can transmit without fear of audio harmonics when using digital modes, thanks Steve! Please see details later on in the newsletter.

Bryan M0IHY

Getting to know you

Peter Holliday M7CKP/2E0PTH

As a young teenager in the late 1960's I somehow got interested in DX TV. My source of information was a regular column written by Roger Bunney in the magazine Practical Television. Acquiring old TV sets at the time was quite easy; most neighbours had an old or faulty set lurking in their garage. This was in the days before municipal recycling centres so the neighbours were glad to get rid of the set. The TVs were invariably black & white and all valve designs. I salvaged an old Band I TV aerial and modified it for the lower end of the band. I wish I knew then what I know now as the results would have been better.

Work, buying a house, getting married, etc. meant I didn't have much time for hobbies. My day job was writing software, usually hardware interfaces. Any hobby electric projects were limited to audio and digital circuits. My attempts at RF projects were a failure as they invariably oscillated when they shouldn't.

A few years ago my father was disposing of his old radios, I claimed his AOR 7030 which hadn't been used for years. Listening in on the amateur bands I was interested in contacts being made into Eastern Europe and a special event station so I decided I ought to get a licence and try for myself. At the time the Foundation/Intermediate/Full exam syllabus was being revised so I was finding it difficult to find a club running a training course. Luckily Malcolm spotted my letter in Practical Wireless and introduced me to CDARS. With Bryan's help I passed my Foundation and Intermediate exams and I'm now studying for the Full licence.

Like a lot of newly licenced amateurs I bought a dual band handheld transceiver. I'm currently trying as much as possible with 5W of FM, e.g. FMAC contests and satellite working before going out and buying a bigger and better rig. Finding a good hill top for the FMAC contests is good fun but my main interest is experimentation and construction.

Your rig default settings

Whilst the plan was to sort out the problems associated with the FTDX10 regarding 'non-working' default values with digital modes, after looking at what Adam (M7MSI) had got together regarding the initial setup I thought it might go some way to helping others out, so...

If members sent in the software they use (FLDigi, Ham Radio Deluxe, WSJT-X, JS8CALL, etc.), the settings (they must be tried and tested), rig and mode, it would help newcomers no end, these could be correlated and put up on the club web site. It would also be good if someone with a little spare time could volunteer to maintain that data, if not, could you email me at bryanpage1@btinternet.com with the details and I'll put a document together.

Bryan M0IHY

Some FTDX10 Issues and Solutions

Some FTDX10 Issues and Solutions

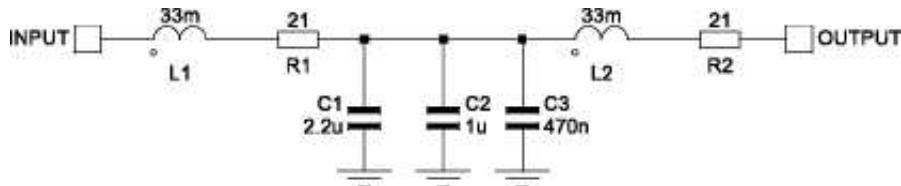
Steve Kavanagh, VE3SMA

Version 1.0 January 27, 2022

Hiss when using Headphones on CW

Some of us find the amount of high frequency hiss on our headphones when operating on CW with narrow filters (500 Hz or less bandwidth) to be annoying. You may also notice clicks in the headphones when switching between transmit and receive. This is highly subjective, and depends on your high frequency hearing, the sensitivity of your headphones and what other gear you are accustomed to using. For some, the solution is just to add some attenuation to the headphones. F5PBG suggested a plug-in in-line volume control. I find I need more, and have been using a homebrew audio filter that I built for another purpose. But it needs to be switched out for SSB/AM/FM reception. W1SRD decided that having to carry an extra outboard gadget was unacceptable for DXpedition purposes.

Here is the schematic of the filter I used. The input is connected to just one side of the headphone jack and the output feeds both sides of the headphones. R1 and R2 represent the DC resistance of the two 33 mH inductors, L1 and L2. Three capacitors (not electrolytics) were used in parallel to tune the filter so it sounded good to my ears on CW signals.



Computer Transmits CW Even with BK-IN OFF

BK-IN OFF normally prevents transmission using a key plugged directly into the key jack on the rig. If you have a computer connected via the USB port for sending CW (so far, all the cases I have heard about are using N1MM+ contest software), sending from the computer will cause the FTDX10 to transmit, even if BK-IN is set to OFF. This is not helpful when trying to test the software or set up recorded messages. PA2ST suggested that you just have to tune outside the ham bands when you want to do this. The FTDX10 will not transmit at all there (unless you have modified it to do so!).

Some FTDX10 Issues and Solutions

Band and Mode Selection Screens Disappear Quickly

Many operators find the time allowed for changing bands (including band stack operations) and modes too short. The December 2021 software update has addressed this, by roughly doubling the time that these screens remain available.

Audio Harmonics in WSJT-X and Related Digital Modes

Many FTDX10 operators have reported high levels of harmonics of their FT8 or JS8CALL transmit audio signal. These can be seen in both the spectrum scope and the AF-FFT display, when transmitting with the audio input via the USB port. The fundamental problem appears to be a combination of two design issues:

- (1) The output of the USB CODEC (transmit direction) appears to go into the low-level audio input stages of the transmitter without any attenuation (as would normally be needed if an analog audio interface was used). This means that these input stages will overload at quite a low signal level, far below the maximum that the CODEC can put out. Overloading is the cause of harmonics, the same as in all rigs.
- (2) The PRESET function sets a default value of RPORT GAIN of 10 (out of a possible 100). This is the gain control between the USB CODEC and the transmit modulator (as far as I can tell). This low value means that the audio level at the computer must be set quite high to get very much power from the transmitter.

The distortion resulting can also badly affect the wider band mode MSK144, used for meteor scatter on 6 metres.

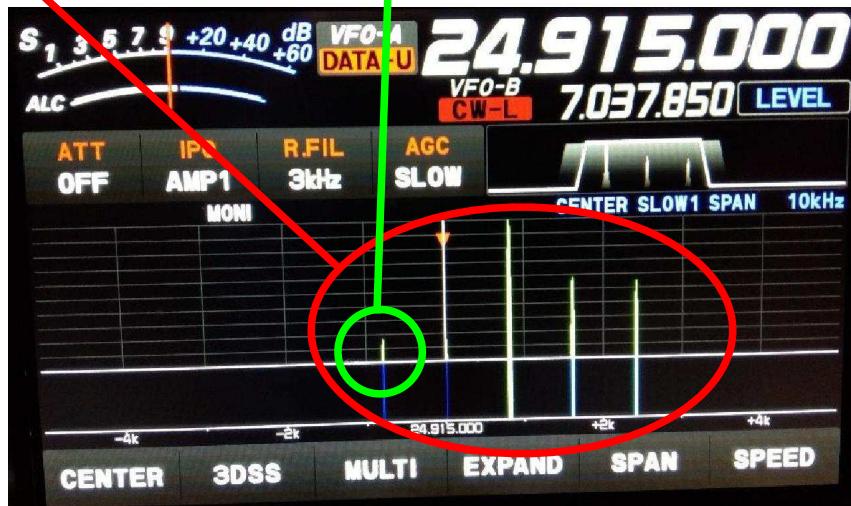
There are a number of internet videos and sets of instructions which show how to set the FTDX10 up for FT8 which do not take these points into consideration. With great care, following their approaches can give an acceptable signal without too high harmonics, but it is quite difficult. One Spanish language instructional video even clearly showed the harmonics on the spectrum displays! As for other rigs, using the split options "Fake It" or "Rig Split" in WSJT-X can help minimize the harmonics, especially in combination with a narrow transmit bandwidth.

However, there does appear to be a better solution. This is to use a higher setting of RPORT GAIN, and a lower transmit audio level setting at the computer. Users employing this approach have reported success with RPORT GAIN between 30 and 70 — in other words not too far from the general (non-PRESET) default of 50. Enough total gain to get some ALC action improves the stability (over audio frequency) and setability of the output power and can be done without introducing audio harmonics. Then using Fake It or Rig Split and a narrow transmit bandwidth can be used to produce a really clean signal. The higher RPORT GAIN does not appear, at this point, to introduce excess noise into the transmit signal. ALC readings above zero may not be usable with other digital modes with non-constant amplitude such as PSK31 - I have not tried them.

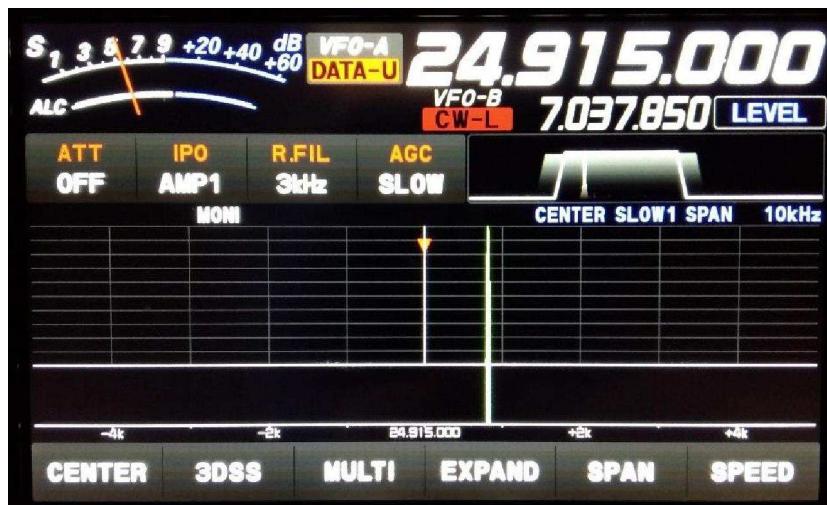
Some FTDX10 Issues and Solutions

Fortunately, the FTDX10 has the test equipment needed to make sure your signal is harmonic-free, built-in to the rig. If you set the spectrum scope LEVEL (while transmitting) so that the main signal just touches the top of the scale, you can see how far down the harmonics are. Here are some examples, using an 800 Hz transmit audio frequency and Split Operation = None on the Radio Settings tab of WSJT-X. First, an example with bad harmonics and even a signal on the wrong sideband, generated by using too high an audio level from the computer through the USB interface.

Ed - I've included the green and red markings to highlight the problem.



The screen should look more like the following one, where the audio level at the computer is increased only up to the point where the RF power output does not increase any further — in this case the ALC reading is near the middle of the white part of the meter scale.



Some FTDX10 Issues and Solutions

The following settings work for me for FT8/FT4/MSK144 and produce a clean signal (Note 6).

Windows 10

Sounds/Playback/USB AUDIO CODEC/Properties/Levels = 29 (See Note 5)

Sounds/Playback/USB AUDIO CODEC/Properties/Enhancements:

“Disable all enhancements” box checked

Sounds/Playback/USB AUDIO CODEC/Properties/Advanced:

16 bit 48000 bps (DVD Quality) selected
Exclusive mode: both boxes checked

Sounds/Playback/USB AUDIO CODEC/Properties/Spatial Sound = Off

Sounds/Recording/USB AUDIO CODEC/Properties/Levels = 47

Sounds/Recording/USB AUDIO CODEC/Properties/Advanced:

16 bit 48000 bps (DVD Quality) selected (as recommended in WSJT-X manual)
Exclusive mode: both boxes checked
Enable audio enhancements box checked

WSJT-X v.2.5.4

Settings/Radio:

Rig: FTDX-10
Poll Interval: 1s
Baud Rate: 38400
Data Bits: Default
Stop Bits: Default
Handshake: Default
Force Control Lines: nothing selected
PTT Method: RTS
Port: COM5 (this is what Windows assigned for the USB audio)
Transmit Audio Source: nothing selected, or even selectable
Mode: None
Split Operation: Fake It (but None also works, haven't experimented with Rig option)

Settings/Audio:

Input: Line (USB AUDIO CODEC) — Mono
Output: Speakers (USB AUDIO CODEC) — Mono

Pwr Slider: -32.0 dB (See Notes 4 & 5)

Some FTDX10 Issues and Solutions

FTDX10

EXTENSION SETTING

MAIN:	V01-08 or V01-09
DISPLAY:	V01-03
DSP:	V01-01
SDR:	V01-00
AF:	V01-00

OPERATION SETTING

GENERAL

CAT RATE: 38400 bps
CAT RTS: OFF

TX AUDIO

AMC RELEASE TIME: MID

RADIO SETTING

MODE PSK/DATA

AF TREBLE GAIN: 0
AF MIDDLE TONE GAIN: 0
AF BASS GAIN: 0
DATA SHIFT (SSB): 1500 Hz
LCUT FREQ: OFF
HCUT FREQ: OFF
DATA OUT LEVEL: 0
TX BPF SEL: 50-3050Hz (see note 1)
DATA MOD SOURCE: REAR
REAR SELECT: USB
RPORT GAIN: 70 (see note 2)
RPTT SELECT: RTS

MODE: DATA-U (PRESET not used) (see Note 3)

R.FIL: 3kHz

WIDTH: 3000

DNR: OFF

NB: OFF

SHIFT: 0

NOTCH: OFF

CONT/APF: OFF

AMC LEVEL: 55

DNF: OFF

Some FTDX10 Issues and Solutions

Notes:

- (1) I use FT8/FT4 and also MSK144, which is a wideband mode that will work better with the maximum transmitter bandwidth setting. However, if you only use FT4/FT8 (with Fake It or Rig split), then the audio frequency will always fall between 1.5 and 2 kHz and using a transmit bandwidth of 400-2600Hz will give more attenuation of the second harmonic of the audio frequency, resulting in a cleaner signal and more margin for setting the audio levels too high while still transmitting a clean signal. If you use Split Operation = None and must cover the full WSJT-X frequency range, then you should probably use 50-3050 Hz bandwidth, but you may need to be more careful in setting the audio levels to avoid generating audio harmonics.
- (2) Others have reported successfully using values of RPORT GAIN as low as 30, with clean signals. I believe you can probably use a value in the lower end of the 30-70 range if you use low transmitter bandwidth and Fake It or Rig split. A value in the higher end of this range appears to be less prone to creating audio harmonic signals, but does appear to increase the level of additional possible spurious signals at 1.0 and 2.0 kHz.
- (3) DO1YHJ reports that to use Split Operation = Rig in WSJT-X, you must set the mode on both VFO A and VFO B to DATA-U before starting WSJT-X if you use Mode=None on the WSJT-X Settings Radio tab.
- (4) WSJT-X Pwr Slider is adjusted to give the power output set on the FTDX10, with ALC meter reading more than zero, but well within the white segment of the scale. Around "S5" works, but isn't too critical.
- (5) Initial indications are that using other combinations of Windows Playback Level and WSJT-X Pwr slider settings that result in the same audio level being sent to the FTDX10 does not result in major changes in signal purity and quality. The spectrum shown on the FTDX10 scope (with Split Operation = None) looks very similar for Windows Playback Level = 5 and WSJT-X Pwr Slider = -10 dB, as compared with the settings in the list above, for example. If the Windows Level is displayed in dB, then I have found the sum of Windows and WSJT-X levels should be around -50 dB.
- (6) Using the FTDX10's spectrum scope, all spurious signals appear to be below -50 dB with respect to the main signal in WSJT-X Tune mode, at any power level between 5 and 100 watts, when adjusted according to Note 4.

Acknowledgements:

Discussions with W5AJ, DO1YHD, AC6BW and W9RTB have been helpful in preparing this list.

Some FTDX10 Issues and Solutions

Unstable Power Output in FT4/FT8

When driving an amplifier, it is usually necessary to have a well-controlled drive power. Some operators have found that the FTDX10 output power varies drastically as one changes the transmit audio frequency in use in FT4 or FT8 modes. This is apparently due to the variation over frequency of the loss in the transmit audio section of the rig. There are two approaches to improving this situation:

- (1) Use Fake It or Rig Split modes in WSJT-X. These restrict the actual audio frequencies used to a small range, over which there will be a small loss variation in the filtering.
- (2) Operate with some ALC action, to provide feedback to control power output (despite what some on-line advice suggests). I have seen no evidence yet that operating with some ALC meter movement is problematical for these modes.

I believe that both these techniques can be employed together without compromising signal quality.

Lack of Low Power “Tune” Function for Adjusting External ATU

The FTDX10 does not provide a single button which results in a low power continuous carrier being transmitted, so one can adjust an external manual antenna tuner. So far there does not seem to be a good simple answer useful on all modes. I find it is helpful to assign the RF Power Output control to the outer ring of the Tuning knob (MPVD) as it operates much more smoothly than the FUNC knob, and is easier than going into menus to adjust power. I just crank it down to 5 W to tune my antenna tuner.

If you operate only SSB, with no key plugged in, then holding down the MOX button apparently should transmit a carrier at the power you have set. It doesn't seem to work on all units, including mine.

If you operate SSB and CW with a straight key, external keyer (with straight key in parallel) or bug, with KEYER set to OFF, then you can set AUTO CW to ON and BK-IN to ON and then just press the key in SSB or CW modes. This transmits a carrier at the power level you have set.

On WSJT-X modes, you can use the WSJT-X Tune button to transmit a tone at the audio frequency set in WSJT-X and the power level you have set in the FTDX10 (assuming you use my settings above, or similar, so that the power setting in the rig actually controls the output power).

In AM or FM, pressing the PTT button on the microphone transmits a carrier at the power you have set. If you are operating on CW using the internal keyer, there doesn't seem to be a good solution yet.

If you are using a computer to generate CW (for example with a contest logging program) via the USB CAT interface, you can consider turning the KEYER setting to OFF, so you can use a straight key (or one side of your paddles) to send a carrier at the power level you have set.

There may be some ways to implement a proper low power “tune” button externally. Use of the TX REQ and ALC inputs deserves investigation, as does a box that sends a series of commands on the RS-232 or USB interface.

Credit for this article - Steve VE3MSA

Ed: My thanks again to Steve for this informative article, hopefully it's of help to you. As suggested in last month's newsletter it would be good if we could catalogue known working settings, not just for the FTDX10, but for other rigs also - “helping ourselves to help others”.

Using Steve's settings I can confirm transmission on FT8 and JS8Call is without audio harmonics.

Bryan M0IHY

FTDX10, FT8 and JS8Call

Using the settings described on page 8 I set about testing FT8 and JS8Call, below are the settings I used.

FT8

Radio Settings

Rig

Yaesu FTDX-10

CAT Control

Serial Port - This is the 'Enhanced' port.

Use

Control Panel ->
Device Manager ->
Ports (COM & LPT) to find which port this is.

Serial Port Parameters

Baud Rate	-	38,400
Data Bits	-	8
Stop Bits	-	1
Handshake	-	None

PTT Method

CAT

Mode

Data/Pkt

Split Operation

Fake It

Audio Settings

Soundcard

Input	-	FTdx10 RX (3-USB AUDIO CODEC) - Left
Output	-	FTdx10 TX (3-USB AUDIO CODEC) - Left

Ed - With Steve's settings and FT8 set up as above (ensure PRESET is switched off) I find transmission is without audio harmonics, turning PRESET back on shows audio harmonics to be present.

Next I tested JS8Call. At the time of going to press, JS8Call did not have FTDX10 rig support, however, I set it up using FTDX101D and it seems to function okay, I believe Jordan Sherer (KN4CRD) is currently working on FTDX10 support.

FTDX10, FT8 and JS8Call

JS8Call

Rig

Yaesu FT-DX101D

Rig Options

- | | |
|-----------------|------------|
| PTT Method | - CAT |
| Mode | - Data/Pkt |
| Split Operation | - Fake It |

CAT Control

- | | |
|-------------|--------------------------------|
| Serial Port | - This is the 'Enhanced' port. |
|-------------|--------------------------------|

Use

Control Panel ->
Device Manager ->
Ports (COM & LPT) to find which port this is.

- | | |
|-----------|-----------|
| Data Bits | - Default |
| Stop Bits | - Default |
| Handshake | - Default |

Audio

- | | |
|--------|--|
| Input | - FTdx10 RX (3-USB AUDIO CODEC) - Left |
| Output | - FTdx10 TX (3-USB AUDIO CODEC) - Left |

Ed - I changed the PRESET values to those defined by Steve and then retested FT8, this time with PRESET switched on, all was good with no resulting audio harmonics, JS8Call (with PRESET switched on) showed a single harmonic but of extremely low magnitude, with PRESET switched off, the harmonic disappeared, something that needs looking into.

Bryan M0IHY

Spotlight

Rodrigues island

QSO 3B9FR, Robert

28th January 2021 on 21 MHz CW at 1454 GMT

QTH Rodrigues Island.

IOTA, AF-017

Population - around 42,000.

Time zone, 4 hours ahead of GMT.

Weather, (17th February), 18°C and cloudy.



Flag



Coat of arms

This is quite a contrast from Magnetogorsk.

Rodrigues island is a volcanic island of 108 square kilometres, lying 550 Km east of Mauritius. It is surrounded by coral reefs and on the south-west has the exotic sounding Francois Leguat giant tortoise and cave reserve.

Over the years, it seems to have been possessed in a fairly casual way by most of the European seafaring powers. Although there is evidence from earlier maps that the island was known to the Arabs, it is said to have been discovered by the Portuguese explorer Diogo Rodrigues in 1528, and is part of the Mascarene islands, named for Mascarenhas, the leader of that expedition.

The dutch started to use the island, mainly for supplies at the beginning of the 17th century, before it was occupied by a small group of French Huguenots lead by monsieur Leguat, who were fleeing persecution in France and hoping to set up a farming community. This, seemingly, did not go well, but the French stayed, importing slaves from Africa, from whom most of the current population are descended.

Following what is described as a brief battle in 1809, the British took over and given the idyllic sound of the island, I can't help wondering if after a few shots, the French commander said something like "yes you can have the island as long as we can stay on the beach."

The institution of slavery was abolished in 1834 and it became part of the independent republic of Mauritius in 1961. One of its claims to fame is that it is the furthest point, (4800 Km), from which the eruption of Krakatoa was heard in 1883. It was loud enough to be mistaken for heavy gunfire and ships were sent out to see if this was a distress signal from a ship at sea. given this distance, the eruption is thought to be the loudest known noise in history.

A Marie Celeste type incident occurred in 1997, when the Russian yacht Admiral Nevelskoi turned up in the lagoon on the north coast. This was a research ship crewed only by professor Leonid Lysenko on behalf of the Russian maritime state university. Following a broken mast and rudder, he had been rescued from it some two years previously by a Ukrainian vessel. He was convinced the ship would sink, but it drifted for two years before fetching up at the island. It is now a museum.

It all sounds a good place to live.

Jeremy G3XZG

AFS Contest results

AFS Contest results – every little helps!

The last leg of this season's Affiliated Societies' Contest (AFS) was the 432MHz contest on 6th February, and the results have just been published. And the entry from CDARS did rather well! For this contest we had the assistance of Roger G3MEH and Matt G0XDI, together with our friends from the Northampton club. Altogether we had two full teams of four, and our "A Team" of Matt G0XDI, club call M1MDG/P (operated by Phil M0NVS), Roger G3MEH and Dave G8FMC came second in a field of 28 Local Club teams. Our "B Team" of Malcolm G3ZNU, John G4CZB, Dave G1MZD and Richard G6TVB came 7th, the highest placed B Team.

All the points from this contest go towards the AFS Superleague, and CDARS was placed 4th out of a field of 61 Local Clubs, and excellent result. It also earns us a special certificate for entering all eight legs of the AFS contests, and achieving over 250 "Super League points" in each leg. It's a credit to the breadth of operating ability and experience in CDARS, across bands and modes. Take a look at our performance across the eight legs in this table – pretty consistent. Maybe just a few points more needed in the 80m CW and 80m Data legs!

AFS Super League 2021-22 2021

Click [here](#) for General Club Scores

Local Club Scores											
Pos	Club	50MHz	70MHz	144MHz	432MHz	160m	80m CW	80m DATA	80m SSB	Total	Pos Cert
1	Camb-Hams	1000	950	1000	1000	1000	947	976	983	7856	
2	Grimsby ARS	962	1000	970	852	971	930	905	948	7538	
3	Tall Trees CG	808	900	909	815	765	860	881	931	6869	
4	Chesham & DARS	885	750	939	963	941	667	690	828	6663	
5	Sheffield & DWS	769	850	879	889	794	737	738	914	6570	
6	Bristol CG	923	700	485		882	965	952	603	5510	
7	Norfolk ARC	462		667		853	912	1000	966	4860	
8	West Kent ARS	692	250	636	74	382	649	643	845	4171	
9	Colchester RA	269		455	333	588	807	786	897	4135	
10	Echelford ARS				296	559	684	619	793	2951	

The title of this piece is "every little helps", and in the AFS series it really does. Due to the way the overall scores are worked out, the score from each person in a team is normalised against corresponding competitors from other teams. So it's quite possible for a lower scoring entrant to get a higher normalised score. And the more people who enter, the more points we can accumulate for the overall competition. Even if you make just a few QSOs, it might surprise you just how much that can add to the total score.

You have until the autumn, when the 2022/23 season kicks off, to get your station ready. See you on the air!



AFS Contest results



Contest Corner

March

HF

Day	Date (2021)	Time UTC	Contest Name
Mon	07 Mar	2000-2130	80m CC DATA
Sat-Sun	12-13 Mar	1000-1000	Commonwealth Contest
Wed	16 Mar	2000-2130	80m CC CW
Thu	24 Mar	2000-2130	80m CC SSB
Mon	28 Mar	1900-2030	RSGB FT4 Contest

VHF

Day	Date (2021)	Time UTC	Contest Name
Tue	01 Mar	1900-1955	144MHz FMAC
Tue	01 Mar	2000-2230	144MHz UKAC
Wed	02 Mar	1900-2100	144MHz FT8 AC
Sat-Sun	05-06 Mar	1400-1400	March 144 432MHz
Tue	08 Mar	1900-1955	432MHz FMAC
Tue	08 Mar	2000-2230	432MHz UKAC
Wed	09 Mar	1900-2100	432MHz FT8 AC
Thu	10 Mar	2000-2230	50MHz UKAC
Sun	13 Mar	1000-1200	70MHz Cumulatives #2
Tue	15 Mar	2000-2230	1.3GHz UKAC
Thu	17 Mar	2000-2230	70MHz UKAC
Tue	22 Mar	1930-2230	SHF UKAC

April

HF

Day	Date (2021)	Time UTC	Contest Name
Mon	11 Apr	1900-2030	RSGB FT4 Contest
Wed	20 Apr	1900-2030	80m CC SSB
Thu	28 Apr	1900-2030	80m CC DATA

VHF

Day	Date (2021)	Time UTC	Contest Name
Tue	05 Apr	1800-1855	144MHz FMAC
Tue	05 Apr	1900-2130	144MHz UKAC
Wed	06 Apr	1900-2100	144MHz FT8 AC
Sun	10 Apr	0900-1200	Spring 50MHz Contest
Tue	12 Apr	1800-1855	432MHz FMAC
Tue	12 Apr	1900-2130	432MHz UKAC
Wed	13 Apr	1900-2100	432MHz FT8 AC
Thu	14 Apr	1900-2130	50MHz UKAC
Tue	19 Apr	1900-2130	1.3GHz UKAC
Thu	21 Apr	1900-2130	70MHz UKAC
Sat-Sun	23-24 Apr	1400-1400	MGM Contest
Tue	26 Apr	1830-2130	SHF UKAC

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

Welcome Adam to Air-Miles.

So, how have we done this month?

40m is the favoured band and FT8 the favoured mode.

(Running totals in red)

General

Most Miles

G3XZG		74,826	159,887	
G3ZNU		16,997	19,004	
M7SMI		2,007	1,203,400	

Most QSO's

G3XZG		35	70	
G3ZNU		24	33	
M7SMI		9	1,057	

Longest QSO

G3XZG		AA3DF(7616)	AA3DF(7616)	
G3ZNU		VE2ENN(3197)	VE2ENN(3197)	
M7SMI		ZL1VAH(11428)	ZL1VAH(11428)	

Shortest QSO (miles)

G3ZNU		G4HGV(19)	G4HGV(19)	
G3XZG		DK1BU(423)	F6GNG(394)	
M7SMI		G0BLQ(28)	G0BLQ(28)	

Average per QSO (miles)

G3XZG		2,284	2,137	
G3ZNU		575	708	
M7SMI		1,138	1,138	

Maidenhead Squares

G3XZG		33	60	
G3ZNU		17	24	
M7SMI		0	380	

QSO Economy Drive

High miles per Watt

G3XZG		76.16(100)	76.16(100)	
G3ZNU		31.97(100)	31.97(100)	
M7SMI			1142.80(10)	

Low miles per Watt

G3ZNU		0.19(100)	0.19(100)	
G3XZG		4.23(100)	3.94(100)	
M7SMI		2.80(10)	2.80(10)	

By Band

160m

30m

12m

2m

80m

20m

10m

70cm

60m

17m

6m

23cm

40m

15m

4m

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

By Mode



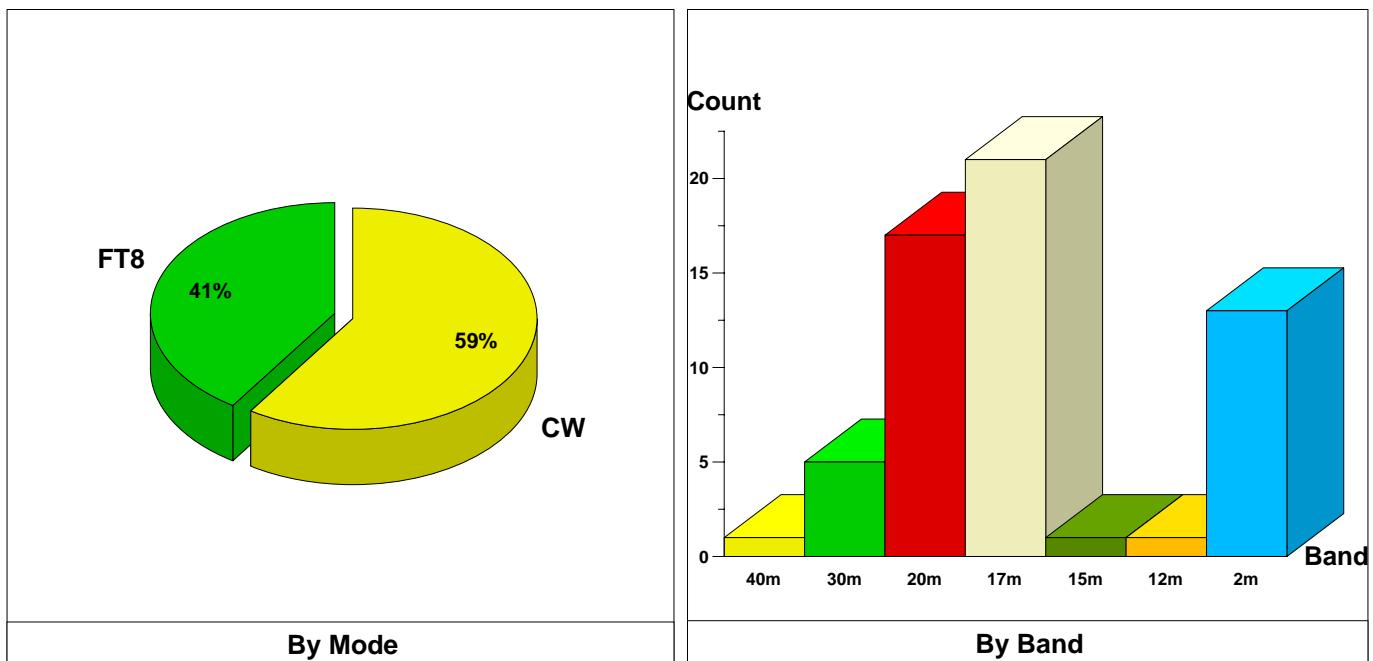
By Country



Countries visited	-	25
Most visited Country	-	Canada - 2 times
Total Mileage	-	91,823
Total QSO's	-	1,160
Average miles per QSO	-	79.16
Total locators visited	-	50
Most visited locator	-	IO93 4 times

'Air Miles', February at a glance

This month at a glance (accumulative)



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

England	10	Lithuania	1
United States	7	Croatia	1
Germany	6	People's Republic of China	1
Russia	4	Finland	1
Hungary	3	Romania	1
Bosnia and Herzegovina	3	Czech Republic	1
Denmark	3	Slovakia	1
Poland	2	Bulgaria	1
Canada	2	Switzerland	1
Spain	2	Italy	1
Ukraine	2	United Arab Emirates	1
Netherlands	2	Kazakhstan	1
Kuwait	1		

Any other business

Ukraine

With war being declared in Ukraine there has been a 30 day ban on operation of amateur stations beginning the 24th of February, this would explain the absence of QSO's from the region. Below is an email attachment I received.

To: Region 1 Member Societies
Subject: [IARU R1 Member Societies] Situation in Ukraine

Dear friends,

Early this morning Russia launched a war with Ukraine.
Military facilities and airfields in some cities, including Kyiv, were shelled.
Also Ukraine was attacked from the east from the territory of Russia, from the north from the territory of Belarus, from the south from Crimea.

Martial law has been imposed in Ukraine today.
There is a ban on the operation of amateur stations in Ukraine for 30 days beginning today.

Anatoly Kirilenko, UT3UY
Vice-President UARL

National Radio Centre

The National Radio centre is now being manned 7 days a week, both Angie and I have resumed volunteering. Whilst it's no longer compulsory, the RSGB requests people to wear a mask, and about 90% have done so voluntarily. Visitor numbers are on the increase with the relaxation of covid rules.