



Six News

Number 139

May 2019



**Journal of the UK Six Metre Group
Dedicated to promoting 50MHz
activity around the world**



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Contents



Editorial	John Rivers, GØGCQ	3
UKSMG Annual General Meeting 2019		5
Chairman's Corner	Chris Deacon, G4IFX	6
Secretary's Page	David Bondy, G4NRT	7
UKSMG August BBQ 2019	Chris Gare, G3WOS	7
What's on Six	Chris Patterson, W3CMP	8
Late News	Chris Patterson, W3CMP	34
Update GB3HX ~ A New 6m FM Repeater for Hastings, East Sussex	John Rivers GØGCQ	35
Looking for a Membership Secretary	Chris Deacon G4IFX	38
Minutes of UKSMG AGM 21 October 2018 by Conference Call		45
UKSMG Accounts 2018	Mike Wills G3OIL	47
Voluntary Operating Code of Practice for Six Metre Operators		45
UK Six Metre Group		46

FRONT COVER

Our front cover of this edition shows the current NI6E Six metre station for portable/hilltop use.

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For the latest news visit our website at <http://www.uksmg.org>**

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Deadline for the next issue is 12 July 2019

Editorial

John Rivers, GØGCQ



Greetings Everyone!

I hope you are all well and looking forward to the Es-season that will surely be upon us very soon? I am writing this on Easter Saturday where the weather is just glorious: 21C, a cool light breeze off the sea, and wall-to-wall blue sky with bright sunshine! Feels like the Mediterranean.

This issue is just a bit thinner than usual. Six Metre activity has been down of late, which is not surprising, and so there is less to report on. Nevertheless, there is still a lot of interest in the band and, in this region of the UK, there is a new operational 6m repeater that has begun to excite many new and old Hams in the area. The corresponding article, in this issue, hopefully goes some way to illustrate just what is involved in such a project, from conception to fruition, and how it relies on the hard work and dedication of just a few active radio amateurs, supported by an active Repeater Group. I am hopeful that this will encourage many more local Hams to experiment further with the 'Magic Band' and, ultimately, join the UKSMG!

As you will read in Chris Patterson's '*What's On Six*', elsewhere in this issue, there is an interesting debate to be had over whether we are yet at the bottom of Solar Cycle 24 or not? There is some expectation that Cycle 25 could be better for us, and I guess we all hope for that! Doubtless, modes such as FT8 will help many of us to continue to make DX contacts at a time when, using Phone, we might expect very little in the way of success? Those of you who prefer to use CW and/or EME might smile at this point. There is no doubt, though, that modern data modes do keep the band more active than during previous Cycle minima.

I hope to be far more active on the band this year. That is both FM mobile, and SSB from a couple of hilltops in the County of Kent. I also have everything set up ready in my rather modest QTH. No beams for me, sadly.

Maybe I'll work you? Until next time 73, John

Six News Needs Your Contributions!

We hope you enjoy Six News, but please remember the success of the magazine depends on our members contributing articles for publication. We are always interested in your;

Articles Reviews News Items Letters Photos

on any aspect of 6m operation, propagation, reviews or techniques.

Please send your DX news items to Chris, W3CMP via email DXNews@uksmg.org

Please send all other items to John, GØGCQ, via email Editor@uksmg.org

Do not worry if your English is not perfect as we can help tidy up any submitted article.

If you have any good photos relevant to 6m, then please email them to Editor@uksmg.org.

Please remember that for use in a printed magazine the photos should be in high resolution.

Whatever you can contribute will be gratefully received.

Chairman's Corner

Chris Deacon, G4IFX



As I reported in the last issue of Six News, we've decided to appoint a separate **Membership Secretary** who will manage relations with our members and perform routine tasks like keeping our semi-automated membership database up to date, processing renewals, chasing subscriptions and producing the labels/renewal letters on a quarterly basis.

A really good candidate did come forward after the announcement in the last Six News but unfortunately his personal circumstances have changed, and he now can't take on the role. A great shame, but such is life.

So, could **you** be our Membership Secretary? The only qualifications are a thorough approach, good IT skills (our membership database is built using Microsoft Access) and the time to give the job regular attention. And I should point out, in case it's putting you off, that you do **not** need to be a Microsoft Access expert to do this job! You just need to be willing to poke around in the system and do things like updating the addresses that get printed on renewal letters, correcting issues with the membership data, and so on.

This role is more critical than you might think. To be frank, our membership has been dropping over the last couple of years and we need to do something about that. We're not at the point yet where our viability as an organisation is seriously threatened, but we certainly can't afford to take our eye off the ball as far as our members are concerned, and we need to be able to reach out to newcomers too.

The reward for the new Membership Secretary will be regular contact with our members in 45 countries and the opportunity to contribute to the world's leading 50MHz organisation. If you think you might be interested in getting involved, please get in touch with me via chairman@uksmq.org.

Personally, I haven't been on 50MHz much over the winter, but I have been pressing forward with my research into the polarisation of 50MHz signals, analysing the data I collected last summer. The results are certainly looking interesting and I can say that polarisation clearly has a big effect on the signals that we receive. I'm hoping to be giving an update talk at the RSGB Convention in October and by that time there should be some really interesting findings to discuss.

UKSMG will, as usual, also have a stand at the RSGB Convention and I'm also hoping that we will be represented again at the Newark Hamfest at the end of September.

And finally, as was announced in the last Six News, the UKSMG 2019 AGM will be held at 10am on Saturday 10th August in conjunction with the G3WOS 50MHz BBQ at Chris' home in Farnborough, Hampshire UK. Staying for the BBQ itself, which starts immediately after the AGM, is not essential but I'd really encourage you to consider it because it is a fantastic opportunity to meet and chat with other six metre enthusiasts from around the world. And there will be a series of fascinating talks and some excellent food and drink to go with it. It's well worth a visit, whether you are a newcomer to the Magic Band or indeed an 'old lag' like me.

It would be good to meet UKSMG members at any or all these events and meanwhile, see you on the band!

73, Chris, G4IFX

Secretary's Page

David Bondy, G4NRT



Elsewhere in this edition of Six News, you will find the minutes of the AGM held by conference call in October 2018 along with the financial statement presented at that meeting.

This year's AGM will be held in the morning of Saturday 10th August 2019 before Chris Gare G3WOS's 6m BBQ at his home QTH in Farnborough, Hampshire. A formal calling notice will be issued by email once the agenda has been finalised.

Please join me in welcoming the following new members:

Alistair	MØYDK	Nick	2EØOHN	Peter	OZ1PBJ	Geoff	G8BML
Viv	MØIEP	Mike	G3XDV	Robin	MØVBD	Ned	AA7A
Paul	G8AQA	Benoit	F8GRY	Mike	SA3AZK	Gerard	F4LKG
Richard	G6JWR	John	KD8BIN	Alan	2MØVPM	Andy	UB7K
				Chris	W1TE		

Sorry if this is getting repetitive, but if you change your address or other contact details, please do let me know. If you have a PayPal subscription, please check that the credit card associated with it is still current and that there is a backup source of funding. We have had a few members whose payment has 'bounced' due to expired cards or whose regular payment has just been cancelled by PayPal due to lack of a backup funding source. This is causing some headaches with our membership renewals.

We are still seeking to recruit a Membership Secretary. Please contact Chairman Chris G4IFX's for further information. (*Ed: See separate article*)

David Bondy, G4NRT, Business Secretary

UKSMG August BBQ 2019

Chris Gare, G3WOS

After the great success of all the previous 6M BBQs, I am holding another on Saturday 10th August 2019 in Farnborough, Hampshire UK - so make a note in your diary and let me know if you think you will be able to attend.

Take a look at the 2005 BBQ web site if you want to see what it's all about. As we have always had a good number of non-UK 6m hams attend, I am sending this now so that you can plan your summer around the event by visiting the UK!

There will be plenty of food and drink, lots of 6m guys to talk to and argue with and XYLs are positively encouraged! I hope that we will see an even better turn out of non-UK 6m enthusiasts. For those wanting to stay over on Friday night, many will be able to stay in the same hotel (The Falcon as in 2017) and I will organise another great 6m dinner for the Friday evening!

The cost of the BBQ is 25 UK Pounds per person and will need to be paid in advance of the event. I know it's a long way off, but if you are interested in attending PLEASE send me an email stating your level of interest. If I don't hear from you then I could assume there is no interest!

73 Chris G3WOS - chris@gare.co.uk

What's on Six

The world of six metres with band reports, DX News, propagation and topical information for every operator, compiled by Chris Patterson, W3CMP



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Opening Remarks

Hello from pleasantly warm southeastern Pennsylvania. After what seemed to be an endless winter, spring weather returned about 10 days ago. The warm weather is especially welcome this year. I was getting tired of comparing the weather report provided by my surgically repaired knee with what the TV weather person said. Despite a late start, the orchard is almost pruned, and the fruit trees are starting to bloom. Unfortunately, the six metre propagation has not followed suit, at least in this area.

The Southern Hemisphere SSSP, which began at the end of November, finished up in mid-January. The last significant opening I am aware of occurred on the 14th. However, the end of the SSSP season did see a very good opening from VK to the western and southeastern U.S. on the evening of 11 January (12 January UTC), as AC4TO and W4UDH report. Although the vast majority of contacts were made by digital modes, the signals were strong enough for CW or even SSB. Here are the DX Summit postings of the event:

<i>Stations</i>	<i>QRG</i>	<i>UTC</i>	<i>Date</i>	<i>Comments</i>
W4UDH VK4MA	50.313	02.10	12 Jan	EM52AG - QG64
W5LUA VK4HJ	50.313	02.06	12 Jan	and many others Australia
KC5WX VK4HJ	50.323	02.02	12 Jan	Australia
KV5W VK4WTN	50.313	01.58	12 Jan	EM22VH - QG64KQ Australia
AA5AM VK4WTN	50.100	01.47	12 Jan	519 Tnx Wayne!!!
KC5WX VK4MA	50.313	01.45	12 Jan	Australia
VK3WE AI5I	50.276	01.41	12 Jan	cg cq United States
VK4MA W5VY	50.313	01.36	12 Jan	tk s qso United States
AC4TO VK4WTN	50.314	00.52	12 Jan	Thanks QSO Australia
AC4TO VK4MA	50.313	00.39	12 Jan	Thanks QSO Australia
AI5I VK4WTN	50.276	00.37	12 Jan	DM65XR - QG64 Australia
VK4CZ W9RM	50.313	00.35	12 Jan	QG62LP - DM58 FT8 Thx United States
K1TO VK4MA	50.313	00.30	12 Jan	EL87VI-QG64 1 decode 0010Z -1 Australia
WB5HJV VK4MA	50.313	00.24	12 Jan	into EM20hb Australia
VK4MA W4TAA	50.313	00.10	12 Jan	17 rx only United States

Since the end of the Winter E season, there has been very little in the way of six metre propagation. The north - south openings that usually occur from North America to South America around the Spring Equinox were noticeably absent this year. In past years, even with at low levels of solar activity, in the Mid-Atlantic we would get at least two or three TEP openings to LU, CX, CE, PY, and ZP. Hopefully this spring was an anomaly and the TEP will return.

8 Six News

My station, which was torn apart when I sold my LA-62 amplifier, has yet to be put back together. I have managed to move the KPA-1500 amp from my office to the house; I just have to get inspired to install it.

I promise it will be ready soon.

There are a number of items of general interest in this column. Regrettably, the Texas Six Metre BBQ is no more. On 28 March Flex Radio and DX Engineering announced that the event, which started many years ago and was graciously hosted by Dick K5AND and Jimmy W6JKV until 2017, was being cancelled. This leaves the G3WOS BBQ in August as the lone opportunity to get together and enjoy face to face contacts with six metre enthusiasts from all over the world. Having attended the last two WOS BBQs, I can say it is an enjoyable event and worth attending.

Howard AE3T has provided an update on the 4U1UN situation; unfortunately, it does not look as though a serious six metre effort will be possible in the immediate future. Lionel VE7BQH has recently updated his antenna comparison tables for six metres. Lionel's work, which also includes comparison tables for 144MHz, and 432MHz antennas, provides a great means to compare different antennas when considering which ones to put up.

We are fortunate again to have some interesting reports. Bob K6QXY, whose interest in the six metre band knows no bounds, has sent some pictures of his custom four pallet LDMOS six metre amplifier. I am sure that Bob is serious when he says it is a "fire breathing monster." New members Pete N16E, Les, ZL1KF, and John GM4SJB have kindly submitted reports about their stations and activities. There are reports of several interesting DXpedition in the upcoming months; don't forget the previously announced PJ5/W9DR and CP/W7GJ operations.

By the time you read this I hope we will be in the midst of a busy summer E season. There should also be some new equipment announcements from the Dayton Hamvention. Even at the bottom of the solar cycle, there is a lot going on. Enjoy.

March 2019 Solar Report to Six News KH6/K6MIO 04/11/2019, Solar Cycle 24

In some sense, waiting for solar minimum is a lot like watching grass grow, however with grass – it *is growing*. However, on a monthly basis, the average solar indices *may* still be *shrinking* in the near-term average!

In my last report, I said the minimum was "close by". That is certainly true for the amplitude. The tricky part is the actual timeline. The last couple of solar cycles have had longer-than-average periods with very low values, before a clear trend of increased activity could be established, and thus allow reasonable predictions of the "mid-maximum" date.

I chose the phrase "mid-maximum" carefully, because we saw a double maximum – with a noticeable dip in the middle – and then it rose to the second peak. Of course, the dip was the result of the skewed timing between the northern and southern solar hemispheres, because they were somewhat out of phase with each other. This stretched out the timing and produced the longer-than-average cycle length.

Today, it is hard to know whether the two new Cycle-25 solar hemispheres will begin to get back into sync, and if so, how rapidly that will occur, i.e. immediately, or over a few more solar cycles. History suggests that at least two underlying factors may play into the cycle peak value: The underlying overall amount of produced solar activity energy; and the timing of the changing hemispheric phase shift. The general patterns seen in previous cycles suggest that Cycle 25 will be moving in that positive direction, but only time will tell.

Very recently (April 2019) the NOAA Space Weather Workshop predicted that the current Cycle 24 will end with a deep minimum, which we are approaching now. Further, it also predicts that Cycle 25 will be similar to Cycle 24, *except* that the downward activity trend, seen over the last few cycles, is thought to be coming to end now. This would be good news for propagation!

Furthermore, they concluded that the Sun is not approaching a Maunder-type minimum, which has been a specter hanging over the future for some years. A number of recent individual predictions, from various groups, suggest that Cycle 25 will reach a somewhat higher peak than Cycle 24. If so, then that is also good news.

Now moving to the most recent solar data: The Figure shows a little over the last five years of Solar Cycle 24*. The plots show the public data provided by Royal Observatory of Belgium, Brussels, specifically from their WDC-SILSO programs. The values presented are for the northern solar hemisphere Rn - blue, the southern solar hemisphere Rs - red, and the combined sum of both hemispheres Ri - green.

(Please see Photo A in the centre colour section on page 25)

The activity in the solar northern hemisphere -blue - continues to be systematically higher than that of the southern hemisphere, as shown by the solid lines which are 12-month averages. The colored dots show three additional months – with rather *shorter* averaging times. Finally, the open circles show completely averaged raw monthly values. Of course, the short-smoothed and unsmoothed values are just for the curious. They are only hints of what the future might actually show.

The 12 month averaging smooths out the often wild single-month fluctuations in order to show the underlying picture of *long-term* progress in the activity cycle itself. So, the official standard values are the moving 12 month averaged ones. As a consequence, it takes *more than* six months *after* a given date to even begin to see a possible candidate for a final minimum date.

And in spite of all this, there is DX to be found, especially with the evolving of clever computer processing systems and constantly improving software.

* Source: WDC-SILSO, Royal Observatory of Belgium, Brussels

General News

3F3XUG SK

Louis Anciaux, 3F3XUG, ex HP3XUG, HP3TA, KG6UH, HL9UH, and WB6NMT, of Boquete, Panama, passed away on October 20, 2016 at the age of 78. Louis was a pioneer VHF enthusiast who gave many individuals their first country on 50MHz, 144MHz, or 432MHz. He was born in Boston, Massachusetts on August 30, 1938. During his lifetime, Louis became a Navy Captain that spent time in Vietnam, South Korea, and was attached to the American Embassy in the Philippines. Louis was one of the first amateurs to successfully complete a 432MHz EME contact. While licensed as WB6NMT he owned Lunar Electronics and designed a number of the company's products. Louis sold the company in the mid-1980s and was recalled into the military. He retired from the military and was active from Panama.

4U1UN (update provided by AE3T on 1st April 2019)

My wife was a delegate for seven days to a meeting at the UN headquarters three weeks ago. I tried with no success to contact the UN radio club president and club trustee six months in advance to obtain permission to operate on HF from the station. My wife may return next March for another week. Staying a block away, I only saw a vertical on the roof; not sure if it was for amateur HF. The station hardware is located on the top floor but due to the high security it is now remote controlled from a small room in the basement. If I was granted access, I planned to inquire about future VHF MS and EME activity.

There is a large outdoor area adjacent to the main building that can be used for portable operation, but you have to first get in the heavily guarded gate and have permission to operate. Good luck for the next one to give this a try. I would be very happy to be one of the operators.

5T Mauritania

Johannes, PA5X is QRV as 5T5PA from Nouadhibou, grid locator IL10, and will be

10 Six News

there here for six months. Activity is in his spare time on 160 - 6 metres. Modes include using SSB, RTTY and FT8. QSL via LoTW.

EA Spain

To celebrate the 70th anniversary of the IARU Society Union de Radioaficionados Espanoles, or the URE, special event stations AM7ØURE, AM7ØA, AM7ØC, AM7ØD, AM7ØE, AM7ØF, AM7ØI, AM7ØL, AM7ØN, AM7ØO, AM7ØP, AM7ØR, AM7ØS and AM7ØU are QRV until June 9. Activity is on 160 - 6 metres. QSL via bureau.

Texas Six Meter BBQ Cancelled

“For Immediate Release” 28 March, 2019. “It is with sadness that Flex Radio and DX Engineering announced that they have decided to cancel hosting the Six Meter BBQ going forward. Dick, K5AND and Jimmy, W6JKV were the founders of the Six Meter BBQ and almost all of the past BBQ’s were held at their QTHs. The Six Meter BBQ was held for over 30 years in the Austin, Texas area, with Flex Radio and DX Engineering co-hosting in 2017 and 2018 at the Lone Star Court in Austin. The 2017 and 2018 Six Meter BBQ videos and files will continue to be available at: <http://sixmeterbbq.com>.”

VE7BQH Antenna Comparison Tables Updated

For those looking for information about six metre antennas the tables prepared by Lionel VE7BQH provide a good source of information. Lionel’s table for six metre antennas, as well as the tables for 144MHz and 432MHz, were updated on 26 March, 2019. The six metre table includes five additional antennas and the G/T for all six metre antennas has been calculated. The updated six metre table can be accessed at: <http://www.bigskyspaces.com/w7gj/6mTable.htm>.

DXpeditions

5W Samoa 5WCX

Uruguay DX Group’s members Gus CX2AM, Bert CX3AN and Rainer CX8FB will be active holiday style from Upolu, Samoa on 1-10 June, 2019. They will operate mainly CW and SSB on 80 - 6 metres. Call sign and QSL route to be announced in due course.

A2 Botswana (EME)

The A21EME eight band EME DXpedition will take place from 20th - 29th October 2019. Grid locator is KG25WK. Six metre operation will take place from 20th - 25th October. Operation on 144MHz and 432MHz will also occur on those dates. Operation on 23, 13, 9, 6 and 3 cm will occur from 20th October - 29th October. Modes will be JT65 and CW.

Group members include Lins PA3CMC, John ZS6JON, Chris PA2CHR, Paul ZS6NK, Andrew ZS6AVH, Bernie ZS4TX, Sam HB9COG, and Dan HB9CRQ. Station will be 6M8GJ on six metres, 2 x 12 element Xpol I3DLI yagis on 144MHz, 2 x 28 element M² yagis on 432MHz and 1.5 metre dish on higher bands.

Any donations are welcome. QSL direct or via Bureau. More information will follow on my website www.pa3cmc.nl.

CY9 St. Paul Island (Lee WW2DX reports)

We are back for round two. Most of the same team that operated as CY9C from St Paul Island in 2016 will return as CY9C in August 2019. Transportation arrangements have already been made with Paul Fitzgerald, who will provide boat transportation and Pat Dolan N2IEN, who will provide helicopter support.

Our 2019 team will again utilize the Northeast Island and Atlantic Cove as the two operational sites. The team will consist of 12 operators and will be primarily the same operators as were there in 2016. This will be an all band-all mode operation, including EME by WW2DX.

The plans are going to be very similar the second time around. We plan on using more space/weight efficient gear for easier transport to and from the island. For those who remember or perhaps like me, try to forget, the two metre array from the 2016 expedition was destroyed by gale force winds on the 2nd moon pass and only 96 QSOs were completed. You can read all the details about the last operation on my blog: <https://www.wv2dx.com/2016/07/15/cy9c/>. This time around a much stronger tri-pod and extra guying will be used to secure the array from the harsh environment.

The plan is to use a Elecraft K3 with internal two metre transverter feeding a IT-Labs

Atlas 1000 1kW SSPA into a pair of custom designed EME optimized 10 element yagis from DUAL out of Serbia <https://www.antennas-amplifiers.com/on144MHz>. On 50MHz I will use the same K3 and an Expert 1K with 500 – 800 watts output, into a six element yagi for both terrestrial and EME contacts. The goal will be to make between 250-350 QSOs over the moon that week



CY9C 2016 Atlantic Cove operating site.

FW/GØVJG Wallis Island

Nobby GØVJG now expects to be active as FW/GØVJG from Wallis Island, grid AH05, starting on or around 8th May for two weeks, with the possibility of a short side trip to Futuna Island. He will operate SSB and FT8 Fox & Hound on 40 - 6 metres, and maybe on 60 metres. Before the FW operation he will be QRV as 3D2AS from Fiji starting on 3rd May for five days. QSLs via MØOXO's OQRS.

GJ Jersey

Marek, MJØILB, home call OK1BIL, Alois MJØIKL, home call OK1DOL, MJ/OK1FIK, MJ/OK1FWM, MJ/OK1NP and MJ/OK3RM plan to be active from Jersey on 19-28 July 2019. They will operate SSB, CW and digital modes on the HF bands, with some activity on six and two metres. They will participate in the IOTA Contest as MJØICD. QSL via OK1DOL, direct or bureau.

S79 Seychelles (Lance W7GJ reports)

Just a heads up. I will be operating six metre EME from S79 Seychelles, grid LI75RG, from 21st September to 1st October 2019. I have not put up the web page yet, because I am still waiting for the license. However, the airline tickets have been purchased, and the license application has been received by the authorities there. I know S79 is rare in North America because according to the "Six Metre Firsts" list on the ARRL, nobody has ever worked it on six metres. I understand it is also needed by many in Europe. So, mark your calendars and watch my website for more information!

V31 Belize

Joseph EA3AKY will be active from the Maya Hill Lodge, grid locator EK57NF, from 23rd

12 Six News

to 27th May for the CQ WPX CW contest. He will be on six metres using FT8 mode on hours outside the contest.

VP6 Pitcairn Island

In early January Lance W7GJ emailed me to let me know about an upcoming VHF DXpedition to Pitcairn Island: "I just heard the great news K9CT and AA7A will be operating EME on both 2m and 6m during the Pitcairn Island next October =Ø P. So you have an entire year to get your stations tuned up for them! We will be hearing more information in the coming months. GL and VY 73, Lance"

On 11 January Ned AA7A replied to my inquiry:

"Chris, All good here. Yes, Craig and I are on the Pitcairn team scheduled for mid-ish October 2019. Craig and I chatted today about including EME on this trip. What we can say is that we have it in the plan to include 6 and 2 meter EME on this operation. The timing of this DXpedition is not firm at this time. It is entirely dependent upon the availability of the Braveheart for passage from French Polynesia.

So, we cannot say too much more at this time. We have antennas and high power amplifiers available for a high performance operation if it all comes to pass. Craig and I are quite familiar with JT65-style EME and we are up for training as many of the other VP6 operators as we can to share in the experience".

Member Band and Other Activity Reports

Europe

DK8NE (Uli reports from JO50AL near Würzburg, Germany)

Here is my short report about activity on six metres and some information about my station and my plans for this season. I took part in the UKSMG Winter marathon, with good success. Although I had big icing problems during late December and early January, I was very pleased. Congratulations also to all others who took part.

That was all I did on six metres lately. Noticeable was of course UG1FG/mm who crossed the North Sea in January and was heard from rare grids. He was heard here shortly as well, but no QSO made. I'm always monitoring his trips. Look out for him on the Vessel "Goldeneye."

Since about two weeks I'm able again to get access to my QTH in JO50AL at about 1000 metres ASL. There was snow up to two metres all around, so it took a while to melt away. Repairs are ongoing, nothing special, just the normal damage after winter in such an environment. I'm running a three element LFA at the moment while getting my 2 x 5 elements LFA Quads ready again (see picture).

They should be up by the end of April, so ready for the several DXpeditions starting in May. Justin GØKSC is working on my special-repair-package right now.

I'm looking forward to working a lot of TA this year, as six metres is free to everyone there lately. No more special permits needed. So, while waiting for DX my antennas will park that direction for sure. Lots of new grids to work.



Dual InnovAntennas LFA Quad array at DK8NE.

Season last year was great here – 14 new DXCCs and about 100 new grids. Highlight was of course the QSO with Paul, VK4MA. But especially the big openings to North America were amazing. Some of them until 2.00 a.m. in the morning – amazing. I worked about 130 QSOs to North America last year, with about 40 new grids. My grid standing is now at 878.

I'm also working on my monitoring system right now. New PCs with more CPU power, which are needed for monitoring FT8 this summer. With such a QTH, you have problems in summer to decode everyone you hear at the same time. Looking forward to report some DX for the next column.

DL8YHR (Frank reports from JO41GV)

All well here. Nothing new here. Array is ready for the coming season. I hope to get some new ones and really pray for some CW activity. Life is too short for only FT8. Great mode for sure but I still love the da dit da dit /da da dit da. Yesterday [6th April] first Es to EA and IT9, so season is starting.

EA7KW (Jose reports from IM67XI)

I'm off on six metres for the moment. I will inform you if there is a go on a planned DXpedition this summer.

GØJHC (Neil reports from IO83PQ)

My first report for a while. Took a break from six metres for a couple of years. Although was surprised when I returned last summer to try FT8 for the 1st time, I could work over 100 North American stations, including California, with the two element SteppIR HF beam configured for six metres and 80 watts. Best DX was 9400km, HC5VF. This inspired me to put something else up for this summer, a short OP-DES 6 element yagi on a five metre boom around 15 metres high. I can't get the big 9.5 metre antenna back up without sacrificing HF and with the lack of winter time DX the last few years, feel I need some other antennas too. It's a reasonable compromise at only 5kg. Hoping to do a bit better this summer. I pretty much missed all the Far East stuff in recent years due to work commitments and other weekend hobbies. And am still 15 years off retirement I'm afraid. Now FT8 has taken over I'm hoping to work a bit more DX as have set things up to operate fully remote from my mobile phone. This includes rotator, amp and rig band changes etc. I recall last summer working my first Z6 on six metres while out shopping. I guess all you have to do is "TeamViewer" back home and press F1 so no big technical challenge. But using smart Wi-Fi plugs can switch everything on and off at will, so I'm hoping to catch a bit more on FT8 while busy. I have also put an amp back in line.

Four metres has seen new 0.5" hardline and a new five element OP-DES. This is also all remote. I like the OP-DES as they keep their bandwidth over the entire band with good performance. That is important now if you want to operate the CW end and data. Both antennas are 1:1VSWR over 1MHz., credit to GØKSC for the designs and production.



DL8YHR six metre array consisting of four M² 6M5X yagis.



InnovAntennas six element OP-DES yagi at GØJHC



Four metre OP-DES five element yagi at GØJHC.

G8BCG (Peter reports from IO70RK)

Hi Chris,

For many reasons I have not been very active in the past three months but hope to be more so in the next three. I don't need to prepare a summary for you – below is the total of my activity:

January

20th Brought the 50MHz array out of hibernation today for my first six metre QSOs of the year. EME conditions were quite good. Worked five JAs of which four were new, plus KL7HBK and VK4MA. VK4MA was also a new initial.

February

12th A few FT8 QSOs into Europe to warm up the amp then V84SAA on 50MHz EME for initial #210 and DXCC #247. I was delighted to have worked the Brunei Team on 160 metres and 80 metres CW, 80 metres FT8 plus of course six metre EME.

16th New 50MHz EME initial # 211 with VK5ARG club.

20th New 50MHz EME initial # 212 with Ken AC4TO. Welcome to EME Ken.

March

Not been on the radio much. Antennas tied down as very strong winds for half of month.

19th A hard won 50Mhz EME contact for EME country #84 and new initial #214 with Gene KB7Q at PJ2T in Curacao.

G8VR (Kerry reports from IO91WP)

Thanks for writing. I hope you are well. I have not been active on six metres since I worked Warwick, E51WL late last year. The Es season is just around the corner, so I expect an upswing in my own and general activity.

GDØTEP (Andy reports from IO74SD)

Nothing to report here for 2019 yet; repairs to my GS35b amplifier continue. Human error on the rebuild some years ago. I omitted a HV fuse; just had a glitch resistor. Yeah

I know, my bad. A tube flash over took out the rectifiers and one or two other items, most of which have been replaced now. Hopefully back on and working soon.

GI6ATZ (Gordon reports from IO74AJ)

Sadly, very little to report. I've had a few FT8 contacts into Europe but nothing worthy of note! The new synchronised GB3NGI Beacon on 50.006MHz and 50.462MHz continues to work well and I'm curious to see where it will be heard this year. It's also changed from vertical to horizontal polarisation and had the feeder replaced. Old feeder was saturated with water.

GM4SJB (John reports from IO88BA)

Fairly new to seriously operating on six metres. Licensed since 1980 and QRV on most of the bands. I've dabbled on six infrequently over the years until 2017 when a move to a new QTH near Brora, Scotland, allowed me to put together a great shack and space for a few antennas. My main radio interests are VHF having used two and four metres extensively over the years with both fixed and portable stations. My location is the Scottish Highlands, IO88 square and a good take-off from north through east to southwest.

For six metres I am using an Icom 7300, running barefoot at present, to a six-element dual band six/four metre yagi at 40 feet when the mast is extended to maximum height. Running approximately 100 watts with SSB and FT8 being the two modes I use the most.

This summer will be the first year of operating with the completely new set-up and I'm looking forward to the Es season opening shortly. I've worked a few European stations over the last few months on tropo, Es and aurora.

IKØFTA (Sergio reports from JN61GV)

Band is dead for 99.9% of the time, so no report. I'll be there as usual for some days during the summer for sure. I will use a not usual QRG to avoid to do QRM to local hams, probably 50.333MHz.

Only funny things I can do for you is send the enclosed picture. It was taken during a dinner in Rome on 5 April, from left to right: Lee KZ4RR, Cindy Lee's wife, me, and Antonio IØJX.



Lee KZ4RR, Lee's wife Cindy, Sergio IKØFTA and Antonio IØJX during recent dinner in Rome.

S57RR (Bert reports from JN65UM)

My activities in six metres were only via EME for now, closed for terrestrial DX. I will give you news for the next report, hoping that the first DXs will start in May. Good luck for the season and see you soon.

Africa

ZS6NK (Paul reports from KG46RC on activity of South African stations in JF96, KF59, KG44, KG46 and KG47)

January

18th ZS6NK worked V51PJ JG82 by meteor scatter and ZS1NAZ, ZS1TAF both JF96,

and V51JP (JG87) by Es from KG47.

21st Two wide spread Es openings occurred in ZS. First opening 11.17z to 13.55z, KG 30 to JG80, KG43 to JF96, and JG80 to KF59. Second opening 16.10z to 19.36z KF59, KG44 and KG46 to JF96, KF16 and KG30. Stations active included ZS1TA, ZS1TX, ZS1TAF, ZS1NAZ, ZS1REY, ZS2CC, ZS3JPY, ZS4TX, ZS5DCF, ZS6AI, ZS6NK and ZS6OB. ZS4TX reported both my CW and SSB signals were copied in KG30 on back scatter only with a rough tone, almost like Aurora, during the second opening. I cannot recall two Es openings in one day in ZS in the 29 years that I have been active.

25th Es opening KG46 to KF16 and JF96. ZS6NK worked ZS2CC KF16 and ZS1NAZ and ZS1TA JF96.

29th Another Es opening. ZS6NK worked ZS1NAZ and ZS1LS, JF96. The band was open from KG46 to JF96 from 14.30 to 14.48z.

February

13th ZS4TX worked V84SAA by EME.

15th ZS6NK worked V84SAA by EME.

March

16th ZS4TX worked WP4G by EME.

17th ZS6NK worked PJ2T by EME.

20th ZS4TX worked PJ2T by EME.

North America

AC4TO (Ken reports from EM70XL)

The New Year of 2019 started with a fair bit of Winter Es, primarily in a westerly or southwesterly direction from here, which brought an unexpected surprise on 12th January.

On 3 January 2019 I had a brief opening to XE1 and XE2 beginning at 01.36 UTC.

On 5 January I had a brief mid-day opening to Texas and XE2

On 10 January I worked TI5/N5BEK. I believe it was via Es.

Unfortunately the evening of 10 January local time, early 11 January UTC, I was away from home while I saw that VK was being worked into W4, but when I got home around 01.25 UTC on 11 January I saw we still had strong Es to Texas for a while but no VKs. Not sure if any of the VKs worked in the Atlanta area could have been worked here too.

The next night, on 11/12 January UTC, we again had an Es opening to the west starting with double hop to K7JA at 17.42 UTC on 11 January. It continued into early 12 January with Es to XE1 and Texas and then happily, for the first time in 18 years for me, an opening to VK. I worked VK4MA 14,450 km at 00.37 UTC on the 12th, and VK4WTN at 00.50 UTC. Both were worked with FT8, but they were quite strong. VK4MA peaked at -2db. I am sure that I could have worked both VKs on CW. Amazingly, the SFI that day was 70. I never dreamed it would be possible to work VK from here on six metres with a solar flux at 70.

On 19 and 20 January we had a little more west and southwest Es to XE and also TG9, but no extension to VK.

Since January, it has been quiet here as one would expect at this time of year. I have been listening toward South America most evenings simultaneously on 50.110MHz and 50.313MHz and have heard nothing to date.

That's it from here; I look forward to seeing you and all the others at the BBQ in the UK in August.

(Please see Photo B in the centre colour section on page 26)

K1HTV (Rich reports from FM18AP)

I haven't done any six metre DXing so far this year; concentrating on FT8 on the HF bands. My FT8 DXCC total so far on the HF bands is 240 countries with 75 watts and A3S tribander and wires. Looking forward to this summer's Es and SSSP season. Last year I caught five days of SSSP openings to Japan and caught a number of new ones, bringing my DXCC totals to 161 confirmed.

K1TOL (Lefty reports from FN44VG)

Nada. I have not even turned radio on. Sorry.

K2ZD (Mario reports from FN21NR)

On 15 February at 18.34z I completed a six metre EME QSO with V84SAA. Operator was Andy LZ2HM. His moon was setting and mine was rising. The QSO was completed at four degrees elevation at both stations. This is my DXCC # 205. I have attached a screen shot of the QSO.

(Please see Photo C in the centre colour section on page 26)



V84SAA antennas at Seri Kanangan Beach in the Tutong District of Brunei, grid locator OJ74HS. Six metre antenna is in background. Right: V84SAA operating position under umbrella.

On 13 April at 17.14z I completed a JT65 EME QSO with UB7K Andy for my six metre DXCC #206. Andy's best signal was -23db. He is using a 10 element yagi with manual elevation and full legal power. I thank Andy for being QRV on six metre EME from a rare DXCC.

(Please see Photo D in the centre colour section on page 27)

K5AND (Dick reports from EM00XH)

Nothing new here, sadly. You might make mention that the BBQ sponsored by DXE and Flex has been discontinued. More info on their website: <https://www.sixmeterbbq.com/>

K5QE (Marshall reports from EM31CJ)

We are working on a DXpedition, but I don't think that we are ready to announce. We will be doing six metres in support of FFMA [Fred Fish Memorial Award - <http://www.arrl.org/ffma>]. We had all the personnel committed to this project and were ready to announce when both of the other guys had to back out for health reasons. I don't fault them; they need to take care of themselves first.

We have picked up one Top Notch VHFer, but we still need at least one and preferably two more. This will be in west Texas. Our plans are to depart here on 5th July and drive through 6th July. I hope to setup the night of the 6th, but maybe it will be the morning of the

7th. We hope to operate from one grid for three days and then move to another grid out there for 10th July through 12th July. Then the morning of the 13th we will pack up and drive out. We will be doing SSB if we can, FT8 and MSK144 the rest of time. We may do a bit of EME if things work out just right.

Do you know of any serious VHF operators that might want to make this trip? We will be operating from Bill's toy hauler RV, so we won't be camping out with the bugs and no air conditioning. We plan to take the pickup with the tower fixture and QRO power.

K6IJ/KH7Y (Fred reports from CM98PJ)

Well sorry I have not turned on the FT-5000 in the last three months.

K6QXY (Bob reports from CM98QL)

I have a four pallet W6PQL amplifier [for six metres]. It is a real fire breathing monster. I still have my Commander VHF 2000 as a standby amp.

January

02 KH6HME/B tropo
144.277MHz. Rare for January.

03 KH6HME/B tropo
144.277MHz; VK7AC 00.41z,
VK3OT 00.48z, VK3BD 00.52z,
VK4HJ 01.10z, KH6HI 01.23Zz,
VKs decoded on 50.276MHz
JT65. KH6HI worked on CW.
KH6HI/B 01.26z KH6HME/B
02.54z Winter Es. KH6HME/B
tropo 16.00z.

11 Es W5 New Mexico and
Texas, W7 Arizona, at 16.42z.

20 KH6HI/B 04.33z Es.

K7CW (Paul reports from CN87LJ)

Not much to report this time.

January

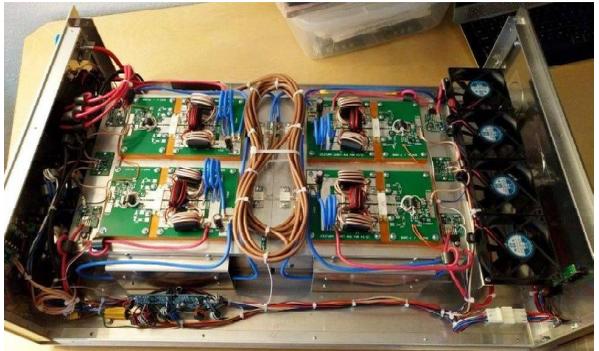
02 Sporadic E to W9

03 Sporadic E to KH6

11 Sporadic E to W6 and W7

17-19 ARRL VHF contest -
W6, W7 and KH6 mostly via FT8

I received a certificate for coming in First in the World in the single operator 50MHz category in the ARRL 2018 EME contest. I had worked VP6D on EME during the contest period, so I sent in a very short Cabrillo file as my entry. One QSO got me the win. My friends tell me to frame the certificate.



K6QXY's custom four pallet six metre amplifier by W6PQL.



Front panel of K6QXY's "fire breathing monster" six metre amplifier.



Rear panel of K6QXY four pallet six metre amplifier.

K7JA (Chip reports from DM03XS)

January 11: We have double hop today, here around 16.30 - 17.00 UTC. So far, I have worked AC4GW/EM77, K8LEE/EM79, AD4TJ/FM08 and K4WMS/FM17. All on FT8. I'm going to check CW now.

On 12th January Chip added:

Six was open here yesterday for over 13 hours. It started around 16.00 UTC, and soon went double hop to the east coast. Many W3 and W4 stations, plus eastern W5, were worked with good signals. Later in the day, it went west, and I logged VK4WTN at 00.15 UTC on JT65. Many other stations were better situated than I was, including W9RM, many W5s, and AC4TO. K1TO at least heard some VK2 too.

A consistent theme seems to be that the VKs hear lots of USA, but the USA guys can't hear the VKs. Maybe more power is run over here, but I don't use an amp and quite a few guys give me better reports than I can give them. Noise?

KA9CFD (Jay reports from EN400M)

I think the most notable contact for me was already reported. VK4MA worked on 2nd January at 23.45z on FT8. Otherwise I played a little with six metre EME with seven QSOs completed with S5, JA, W. Noteworthy was an EME contact with ZS4TX on 23 January at 01.26z for a new DXCC for me.

There are also the usual msk144 meteor scatter QSOs but nothing new there.

N5JEH (Ed reports from DM65RD)

Sorry not a thing to report from DM65RD. Quiet fall and winter. Hope things will pick up soon so I will have something to report.

NØJK (Jon reports from EM17BE)

March was a slow month for propagation in North America. There was an Es - TEP opening from Florida to South America 12th March. I worked KE8FD in EM64 Alabama on MSK144 at 14.15z on 23 March on six metres.

My FT-897 broke. Now have a FT-991a.

K6KLY will be operating from VP9GE's QTH in June for the ARRL June VHF Contest. He will be QRV from Friday through Monday that weekend.

NI6E (Peter reports DM13BP)

I was first licensed in 1961. My call, W9DHK, was retained long after I moved to California in 1968. I'm a California native now, having been here for more than 90 days. NI6E was held by Sheldon Remington, my six metre Elmer, for many years until he moved to Hawaii and took the call KH6SR

My claim to fame is WAS on six metres from California back in the days when SSB was the mode and a genuine, paper QSL card was required for an award submission. The award was a year-and-a-half effort, spinning the tuning knob on the Swan 250C with one ear on 28.885MHz and WWV at 18 minutes past the hour, all the while hoping the two metre packet-cluster didn't disconnect. And then, more months of waiting to receive the final cards. You really had to work for what you achieved.

Times have changed. The rig now is a Flex 6500 and the mode is FT8. My computer makes the contact for me and a LotW QSL is only a mouse-click away. My station now includes former TV news van with a 50-foot pneumatic mast, a 7000 watt generator and a really comfortable operating chair. And it's mobile so I can go to a mountain-top location with little effort.

(Please see Photo E in the centre colour section on page 27)

This has been a successful combination for the ARRL June VHF Contest, the culmination of many years of station upgrades, as can be seen here: <http://ni6e.com/VHF2012/>, <http://ni6e.com/VHF2013/>, <http://ni6e.com/VHF2014/>, <http://>



Peter NI6E and his mobile amateur van.



Current NI6E Six metre station for portable/hilltop use.



Above: Adapter plate allowing attachment of rotor to top of pneumatic mast on NI6E portable/mobile station.

Right: NI6E, K6EPP and AF6RT 2013 ARRL June VHF Contests station in DM23 south of Joshua Tree National Park. Six metre antenna is M² 6M5XHP at 20 feet; two metre antenna is 11 elements at 13 feet.



ni6e.com/VHF2015/ , <http://ni6e.com/VHF2016/> , <http://ni6e.com/VHF2017/> , <http://ni6e.com/VHF2018/>

Sadly, much of the magic has been drained from the “Magic Band.” Gone is the Sporadic-E that offers only one quick QSO, the ping of a passing meteor, the auroral buzz and the hollow sound of backscatter. The fine points of operating on six metres have been rendered irrelevant by the power of bits of silicon.

It's time to fire up the Swan 250C again to search for another soul for whom the bloom is off the digital rose, but I'm keeping the van because a hilltop will never go out of style.
73, Peter

Columnist's Note: The links Peter has provided above contain a treasure trove of pictures showing helpful information for hilltop and portable information. There are too many to print but they are worth viewing.

W4UDH (Smitty reporting from EM52AG)

Was a slow summer on six for CW or SSB - I did manage to work TF3SG on CW and TF3ML/P on SSB.

The 11th January was indeed a fantastic day. It started in the early morning with Es from coast to coast - EL95 to EN19 and DL80 to CO90. Several of the Pacific Northwest stations were +18 to +20 on FT8. The same evening, I copied CT3 and several VK's in the same interval. VK4MS managed to copy my 35 watts and we completed for his first Mississippi and my first VK.

W7EW (Lew reports from

The 6 x 7 element array has survived the winter well. Now to wait for some propagation involving the West Coast. No DX from here so far this year. I'm planning on putting up a dedicated six metre CW skimmer hoping to get it functional by June 1. I guess I could just sit on the FT8 frequencies but hope to catch DX beacons when they first appear. It'll be seven years in June since we had that huge opening into Europe from here and it is time for another opening where I can work another 100 plus European uniques.

I looked into the possibility of operating from ZD7 for a couple of weeks on six metres through the end of June but got started way too late for this year. I don't know of other six metre operations.

Everything is ducky here and anticipating a strong year on six metres from West Coast. Hope this finds you well and ready to work a lot of the stations this year on six metres.

W7GJ (report 2/18/19)

Over the weekend, a group of VK5 stations set up a portable six metre operation to test out the station for VK5GR's upcoming six metre EME operation from Tonga in September. They worked eight stations with their six-element beam when the moon was near their horizon. The attached photo was taken around 4.00 am on moon set by Scott VK5TST.

On 13 March Lance added:

Starting our drive from CT home to Montana Monday so I doubt I will be home before your deadline. Yes, there are lots of six metre EME DXpeditions coming up, and some very exciting ones just past. T7 in April, CP in May, N2EME in FM13 in



Six element antenna at VK5GR portable site.

May, Cuba in July, CY9 in August, S79 and A35 in September, VP6R in October and more. details about my CP and S7 six metre EME DXpeditions are on my web page.

Most of the recent and many of the upcoming six metre EME DXpeditions are using the 6M8GJ because it is a couple of dB more gain than the little 6M5XHG. I consider the 6M8GJ to really be too small for a real EME antenna, although I do seem to be able to work some equivalent sized stations with it under ideal conditions. I know KB7Q borrowed my 6M6XHG for his recent PJ2 EME operation, and he did work 19 stations, but that antenna is really too small for a serious EME DXpeditions. It is nice because it is easily transported as checked luggage, just like the 6M8GJ.

However, for home use I always recommend stations get antennas that are higher gain and built for more permanent installations - like the 6M9KHW. If a DXpedition is not limited by airline regulations, then they should consider taking a bigger and less expensive antenna like the 6M9KHW. That is getting to be harder to elevate on a short portable mast, though.

W7XU (Arliss reports from EN13LM)

Sorry, but there is nothing definite to report currently. I'm signed up to go on a DXpedition to the South Orkneys next February/March, but the possibility of six or two metre EME is undecided at this point.

VE9AA (Mike reports from FN66NA)

My report is sadly: Nothing to report from FN66. Looking forward to another Es season starting in May sometime.

TI/N5BEK (Phil reports from EK70CK)

Absolutely nothing to report. Six metres is totally dead here. I did have a small opening to the north on 10th January, which is not unusual here. I worked eight eastern U.S. and one Cuban station from 19.03z to 19.56z. I remember the strange thing about it was that the band would be dead between contacts and that they were spread out from three to five minutes. I almost turned the rig off several times thinking it was over. Well, not too exciting but something anyway.

XE/EA3AKY (Josep reports from EK09)

Only to report I will be QRV as V31AK from the 23rd to 27th May to work CQ WPX CW contest. QTH is in Maya Hill Lodge. Outside the contest I will be most time on six metres FT8. I hope to work you. BTW no license here in XE.

YS1AG (Andy reports from EK53QJ)

Always glad to hear from you albeit I have nothing important to report. Alas, the tragic band seems to be DOA. Despite the spring equinox the only point of interest is the YS beacon, YS1AG/B on 50.022MHz is back on the air. I have not even switched on the radios. I am struggling with several projects not related to the tragic band: trying to use an Arduino to obtain digital readings on the control box of my old Ham IV, rebuilding the power supply for my old Collins S Line and making a converter to copy six metres with an old HF receiver. I am fancying to get on the air with an old Hallicrafters HT-40. It is capable of putting about 60 watts CW on six. Also, my son bought for me one of these jewels and I am learning to use it:

<https://www.sdr-kits.net/VA5-Antenna-Analyzer-Kit>

South America

CX8DX (Oscar reports from GF15VG)

The propagation in South America has been very bad in the long distance. Only a short distance away and you will see that many months ago. These are my last contacts:

<i>Date UTC</i>	<i>Station</i>	<i>TX</i>	<i>RX</i>	<i>Mode</i>	<i>Date UTC</i>	<i>Station</i>	<i>TX</i>	<i>RX</i>	<i>Mode</i>		
January											
19 th	15.56	LU1WFU	59	59	SSB	27	14.44	LU1WFU	59	59	SSB
	15.58	LU2WC	59	59	SSB		15.06	CE6UFF	59	59	FM
26 th	22.23	CE6TK	59	59	SSB		15.11	LU6DRV	59	59	SSB
	22.26	LU1WFU	59	59	SSB		15.20	LW5EJU	59	59	SSB

OA4TT (Jack reports from FH16TW)

I have been mostly in the States and when in Peru have been working 160 metres. Nothing to report for six metres.

Oceania/Pacific

3D2AG (Antoine reports from RH91FV)

Many thanks for your mail. Nothing much happening on six metres here since the end of January; our Es season is over in the southern hemisphere until the end of November.

There may be some chance of USA openings in April/May but remains to be seen. Also, some contacts with Europe may happen around July/August at the peak of the northern hemisphere Es season.

BV6CC

Justin GØKSC sent some pictures of Jack BV6CC, working on his InnovAntennas seven element 50MHz LFA Q antenna at his QTH in Tainan City, Taiwan, PL03CA. QTH.

DU/PAØHIP (Willem reports from PK10XH)

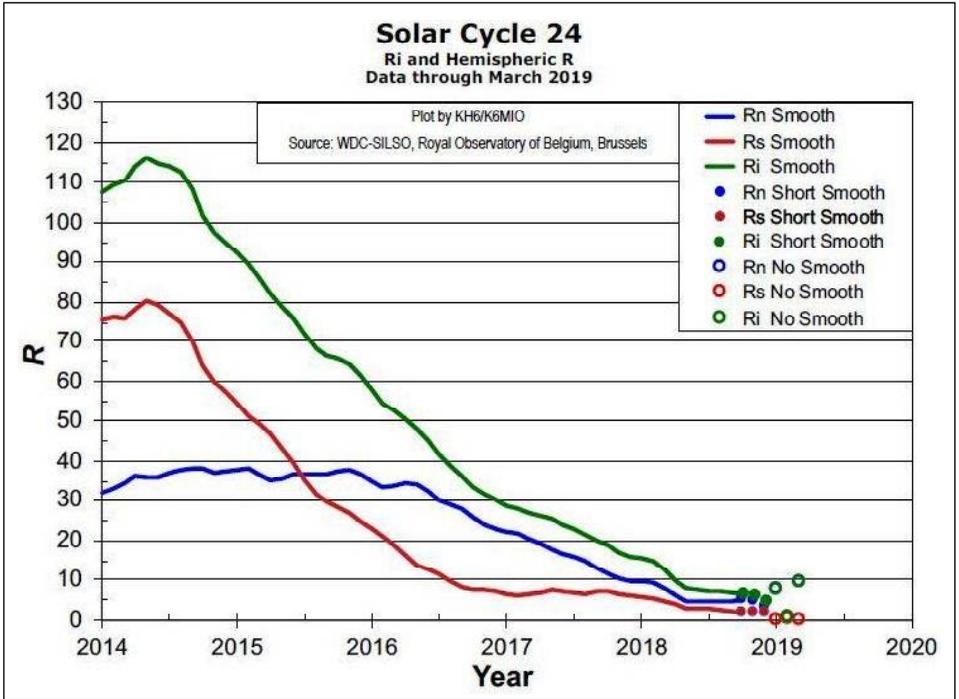
Hope you are fine. I have nothing to report this time, because of two reasons: I have been in the Netherlands for medical checkup for a month, and I had equipment



Jack BV6CC installing feedline on his 50MHz quad at Tainan City, Taiwan QTH.



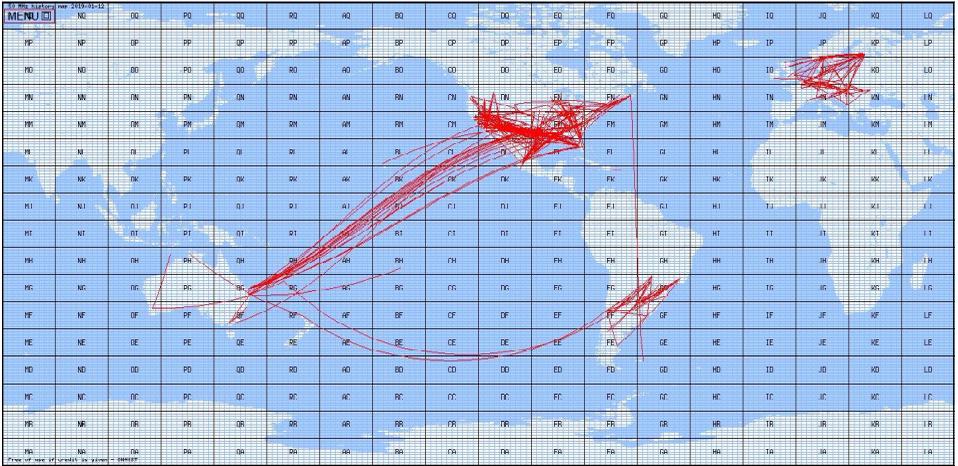
Jack BV6CC working on installation of seven element 50MHz LFA quad.



PICTURE A (page 10): Solar Cycle 24 activity for northern and southern solar hemispheres.



PICTURE (page 36): GB3HX repeater take-off to the north.



PICTURE B (page 17): ON4KST screenshot showing VK-FL opening 12th January 2019.

WSJT 10.0 r6088 by K1JT

File Setup View Mode Decode Save Band Help

Moon
Az: 65.45
El: 3.71
Dop: 3
Dgrd: -5.0

7.2 Time (s) V84SAA_190215_183400.WA

FileID	Sync	dB	DT	DF	W
182600	0	-33	-0.1	202	39
182800	0	-33	6.4	48	10
182800	0	-29	8.2	94	3 #
183000	0	-29	3.0	48	1 #
183200	0	-33	4.7	57	3
183400	3	-29		48	3 RRR

183400 1 6/15

Log QSO Stop Monitor Decode Erase Clear Avg Include Exclude Tx Stop

To radio: V84SAA Lookup
Grid: OJ74hs Add
Az: 347 9175 mi

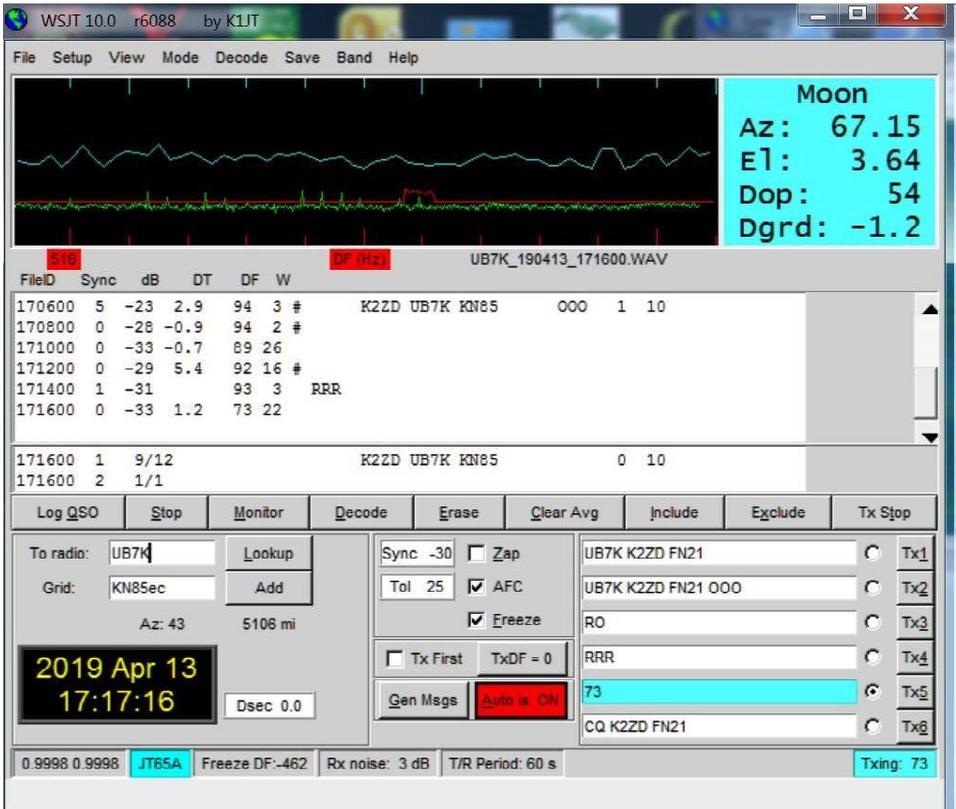
2019 Feb 15
18:35:58
Dsec 0.0

Sync -30 Zap
Tol 25 AFC
Efreeze
Tx First TxDF = 0
Gen Msgs Auto is ON

V84SAA K2ZD FN21 Tx1
V84SAA K2ZD FN21 OOO Tx2
RO Tx3
RRR Tx4
73 Tx5
CQ K2ZD FN21 Tx6

1.0000 1.0000 JT65A Freeze DF: 48 Rx noise: 3 dB T/R Period: 60 s Receiving

PICTURE C (page 18): Screenshot of KL2ZD - V84SAA EME contact.



PICTURE D (page 18): Screenshot of K2ZD - UB7K EME contact.



PICTURE E (page 20): NI6E mobile / portable station.

Type of antenna	Length (mm)	Length (λ)	GAIN (dBi)	GAIN (dBd)	θv (°)	θh (°)	F/R (dB)	Z (Ohms)	VSWR Bandwidth	Δf for SWR=1.5	
										Low	High
										MHz	MHz
X60812X14Q	4505	0.75	11.95	9.80	48.8	47.8	22.2	201.3	1.04:1	49.250	50.620
X60815X14Q	4505	0.75	12.01	9.86	48.6	47.2	21.4	202.4	1.07:1	49.100	50.560
X61012X11Q	7085	1.18	13.43	11.28	42.8	40.0	20.5	198.3	1.05:1	49.300	50.600
X61015X13Q	7085	1.18	13.50	11.35	42.8	38.7	20.5	204.3	1.07:1	49.200	50.550
X61212X13Q	9465	1.58	14.34	12.19	39.4	35.2	20.9	197.4	1.08:1	49.650	50.550
X61215X12Q	9465	1.58	14.43	12.28	38.0	34.2	21.7	199.6	1.06:1	49.730	50.650
X61412X14Q	11705	1.96	15.15	13.00	36.2	30.8	27.1	197.0	1.04:1	49.600	50.580
X61415X13Q	11705	1.96	15.19	13.04	36.2	30.5	26.4	199.9	1.05:1	49.640	50.560
X61612X14Q	13965	2.34	15.62	13.47	34.2	29.4	39.7	197.0	1.06:1	49.550	50.570
X61615X12Q	13965	2.34	15.74	13.59	33.6	27.8	41.4	198.0	1.04:1	49.650	50.600
X61812X14Q	16105	2.69	16.15	14.00	32.2	27.0	25.0	200.3	1.01:1	49.550	50.680
X61815X12Q	16105	2.69	16.15	14.00	32.0	26.2	24.5	197.2	1.04:1	49.520	50.550

PICTURE F (page 31): YU7XL twinboom 50MHz antenna designs.

PERFORMANCES:

No of ele	L (mm)	G (dBi)	G (dBd)	F/B (dB)	F/Sh (dB)	F/Sv (dB)	Hor (°)	Ver (°)	Tlos (K)
8	4505	12.01	9.86	21.36	none	18.98	48.6	47.2	2.8

These are true values (loss included for aluminum, KF2YN correction applied)

WORKING CONDITION:

Frequency for SWR=1.5 (MHz)			Z (Ω) at 50.150 MHz	SWR at 50.300 MHz
Lowest	Highest	Bandwidth		
49.100	50.550	1.455	202.4	1.07:1

DIMENSIONS:

	Ref	De1	D1/D2	D3/D4	D5/D6	All elements made of Al tubes Ø15 mm All dimensions given in millimetres
Position	0	762	1548	3322	4505	
Length	2980	2660	2710	2706	2702	
Height	0	+180	+605	+1225	+1585	

No boom correction included.

PICTURE G (page 33): YU7XL twinboom 50MHz antenna designs.

COMPARISON

TYPE OF ANTENNA	SINGLE ANTENA				OPTIMAL STACKING						75% STACKING			
	L (λ)	GAIN (dBd)	Z (ohms)	VSWR Band width	Spacing (m)		4 ant	E 2 ant	H 2 ant	Spacing (m)		4 Ant	E 2 Ant	H 2 Ant
					E	H	Gain (dBd)	Gain (dBd)	Gain (dBd)	E	H	Gain (dBd)	Gain (dBd)	Gain (dBd)
X60815X14Q	0.75	9.86	202.4	1.07:1	9.40	9.40	15.99	12.91	12.97	7.05	7.05	15.55	12.70	12.68
N6CA 4	0.76	8.72	20.1	1.32:1	7.02	5.76	14.65	11.67	11.60	5.27	4.32	13.25	11.21	11.00
GDKSC5 4.6m LFA	0.76	8.65	48.5	1.10:1	6.97	5.60	14.72	11.63	11.70	5.23	4.20	13.62	11.18	10.82
GDKSC5 4.7m LFA	0.79	8.86	50.4	1.02:1	7.08	5.74	14.85	11.82	11.82	5.31	4.30	13.67	11.37	11.29
Telrex 5	0.80	8.88	20.3	1.28:1	7.24	5.98	14.82	11.83	11.78	5.43	4.49	13.39	11.37	11.09
M2 6M5	0.80	8.93	36.1	1.35:1	7.27	6.04	14.91	11.89	11.89	4.54	4.53	13.60	11.41	11.26
InnoV 6 OP-DES	0.80	8.94	50.7	1.03:1	6.98	5.59	14.98	11.98	11.95	5.24	4.19	13.85	11.44	11.45
IUJXX 5	0.81	9.03	18.1	1.37:1	7.53	6.33	14.98	11.98	11.95	5.65	4.24	13.24	11.49	11.11
GDKSC5 LFA 4.9m	0.81	8.87	49.7	1.08:1	7.02	5.69	14.88	11.83	11.87	5.27	4.27	13.72	11.37	11.32

Z(ohms) - measured on 50.150 MHz
Bandwidth - VSWR measured on 50.300 MHz
Loss included for Aluminum, KF2YN correction applied

PICTURE H (page 33): Comparison of YU7XL 50MHz X60815XL4Q to other antennas of similar length using VE7BQH G/T table data



Seven element 50MHz LFA Quad installed at BV6CC.

problems. Linear blew up but is now repaired. Also, someone here nearby found it funny to rip off the coax from the antenna. It is very difficult to repair, and I have to wait for new coax which is not available here.

Hope I can get it fixed before the Es season

E51WL (Warwick reports from BI00XX)

Very quiet here. My Acom 1500 has a fault. When work load drops, I'll get onto it but this stops six metre EME until it's fixed. I'm still on HF.

From 1 January a little Es for several days. I worked some VK/ZL stations. Until 22nd January I worked five stations on EME, most notable LY2IJ who clocked up hundreds of km driving and many, many incomplete skeds to finally work. Conditions were great in early January but alas, the amplifier failed me.

I attached email for you to see how LY2IJ persevered to get a QSO with E51WL. Here is email from Arunas LY2IJ to Warwick:

"Hi Warwick,

'Together we made it' sounded in my head all the way home yesterday. Even stopped my car to find this song, didn't succeed. Refrain from Linkin Park, just no idea what this whole song is about.

I didn't make any screenshots yesterday, and WSJT-10 stuck in middle of QSO - had to restart and lost 'OOO' screen.

But I have WSJT-X 'all.txt' file copied on Sunday - I counted 252 lines with my TX1 or TX2. 20 'RO' lines when I saw your "OOO" 272 minutes each, 9 hours of TX. Plus 1 hour yesterday. Thanks for dedication! QSO to remember! I didn't see anything from you till my 7 deg when got your '000'. Then you were visible till KL7 QSO end.

N. Cook was always big DX form me. First time heard and QSO ZK1XL in 1984. 2nd QSO was in 2007, then E51MAN covered almost all bands in 2011. E51WL "closed" 80m and 6m) Few more and 14 QSO in total. Now need 160 and 2m only."

JE1BMJ (Han reports from QM05BR)

Thanks to you and all I have just enjoyed the SIX NEWS #138. Sorry, no news for the six metre on my location.

One thing from Saty Nakamura, 9M6NA, also JE1JKL, on the twitter. He will be QRV shortly from his shack on Labuan Island, East Malaysia, IOTA OC 133, grid locator OJ75, around May to July. He is planning FT8 DXpedition mode operation on 50.303MHz or 50.318MHz. His QRV will be announced on the ON4KST chat and his page: <https://jsfc.org/je1jkl/9m6na.html>.

I will begin some maintenance of my six-metre system for the Summer Solstice season.

JP1LRT (Yoshiharu reports from PM95TQ Tokyo)

Spring is coming soon. And soon our season of multi-hop Es will come. Thank you very much for your cooperation in the experiment for dedicating 50.323MHz last year to intercontinental QSO. How was your achievement? Because there was little QRM, I had the impression that QSO will proceed smoothly.

I had contributed to *CQ ham radio*. https://ham.cqpub.co.jp/wp-content/uploads/2019/02/MCQ201903_Furoku-725x1024.jpg. I informed widely amateur radio operators in Japan about how to use 50.323MHz. The *CQ ham radio* magazine is the most popular radio magazine in Japan. I wrote an article on page six in the separate appendix of the March issue of this magazine. [The article included] the history of 50.323 MHz, how it was decided, and how it was used

in 2018. I wrote that it was included in the default frequency of WSJT-X, and as a result, there is a danger of being used for near field communication without knowing the history of 50.323MHz.

The monthly circulation number of this magazine is approximately 15000 to 16000. By this article I think many six metre band enthusiasts in Japan have understood about 50.323MHz.

I hope that this intercontinental QSO dedicated frequency 50.323MHz will work well again this year 2019.

Please cooperate so that many people will know about this 50.323MHz and use it only for intercontinental QSO.

Thank you for reading my poor English. I hope to see you on six metre band in 2019.

ZL1KF (Les reports from RF72OE near Hamilton, New Zealand)

Probably not much to tell really. I am new to six metres as we have only in the last few years had access to this band. I am putting together a six metre station using a KENWOOD TS60, and a simple rotatable dipole. I have constructed a three-element beam that I intend for portable hilltop operation.

I was a big fan of 10 metres but believe six metres is more of a challenge.

ZL3NW (Rod reports from RE66HO)

January continued to support Sporadic E contacts to VK including VK6, with most contacts using FT8. The last SSSP contacts I made to South America were made using JT65a on the 14th January with LU7FIN and LU8YD. Then on the 16th with CE2SV. On the 25th of January I made a new initial EME contact with Arunas LY2IJ.

Up until the 17th February there were openings to VK most using FT8 with a few on SSB. JT65a EME contacts were made with Geert ON4GG on 20th February and the next day with Drago S59A. A new initial eme contact was made with Phil W6UC on 5th March. Since then the band has been very quiet.

New Equipment

Acom A1200S Solid State Amplifier

Acom of Sofia, Bulgaria, has announced a new HF-six metre amplifier, the A1200S. The unit features a five inch (108x65mm) high resolution color display and uses LD MOSFET transistors type BLF188 from NXP. It is compatible with all transceiver models available on the market. It does not need any special signals, only "ground on transmit" PTT. The input circuit is broadband, and the input SWR is below 1.2:1, typically 1.1:1, from 1.8 – 54 MHz without retuning or switching. Fifty watts of RF drive power is sufficient to drive the amp to full rated output of 1000 watts +/-0.5dB PEP or continuous carrier, typically 1200 watts. Dimensions not including projections are 418 mm (16.5") D x 372 mm (14 9/16") W x 162 mm (6 3/8") H. Weight is 14.5 kg (31.97 lbs.). It is convenient for expeditions and field operation. Input voltage range to the internal switching mode



Acom A1200S amplifier front view.



Acom A1200S rear panel.

power supply is 93-265 Vac. More information and all its features can be found at: <http://www.acom-bg.com/>.

Acom A700S Solid state amplifier

Acom is also replacing the A600S amplifier with the A700S. The A700S replaces the 600-watt MRFE6VP6300H device used in the A600S with a single BLF188 LD MOSFET. It covers the 1.8MHz - 54MHz amateur bands. It uses the same display as the A1200S, and is rated at RF output of up to 800 watts PEP SSB output. RF power gain is 14dB +/-1dB, and 25 watts input will produce 700 watts. Dimensions not including projections are 330 mm (13") W x 165 mm (6.5") H x 380 mm (15") D. Weight is about 12 kg (26 lbs.). Price and availability have not yet been announced.



Acom A1200s interior.

Equipment Modification

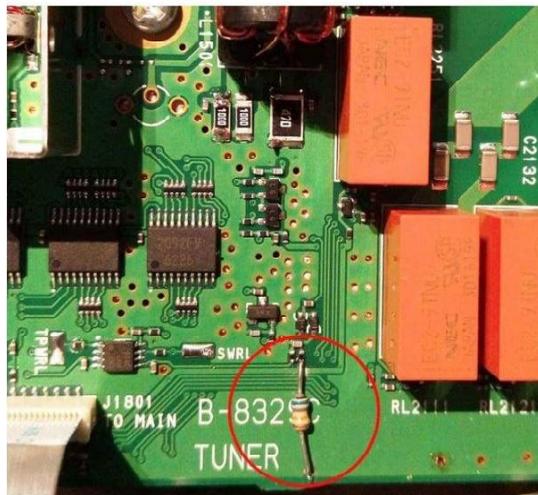
Icom IC-7300 Tuner Range Modification

Alex SP9SOY has described an easy modification to increase the impedance range that the internal tuner in the IC-7300 can match at http://radioaficion.com/cms/ic-7300-antenna-tuner-range-modification/?fbclid=IwAR0CXhjZaeGb_So1w8YcEwJqu8-GEskMfUXtLgvtlaxggLzJ6IXmWuv0vA.

MODIFICATION USING A THT RESISTOR:

(here a 68K Ohm THT resistor shown)

The modification consists of adding a single 100k ohm resistor in parallel with an existing 180k ohm resistor to ground. According to Alex the modification enables the tuner to match a 6:1 SWR. If you have questions Alex can be contacted at SP9SOY@iteria.pl.



YU7XL Twinboom Yagi for 50MHz

For those antenna experimenters who are interested in trying something different, Bukvic YU7XL has designed a number of twinboom (double boom) yagi antenna models for 50 MHz. The designs follow his previous designs for 144MHz.

(Please see Photo F in the centre colour section on page 28)

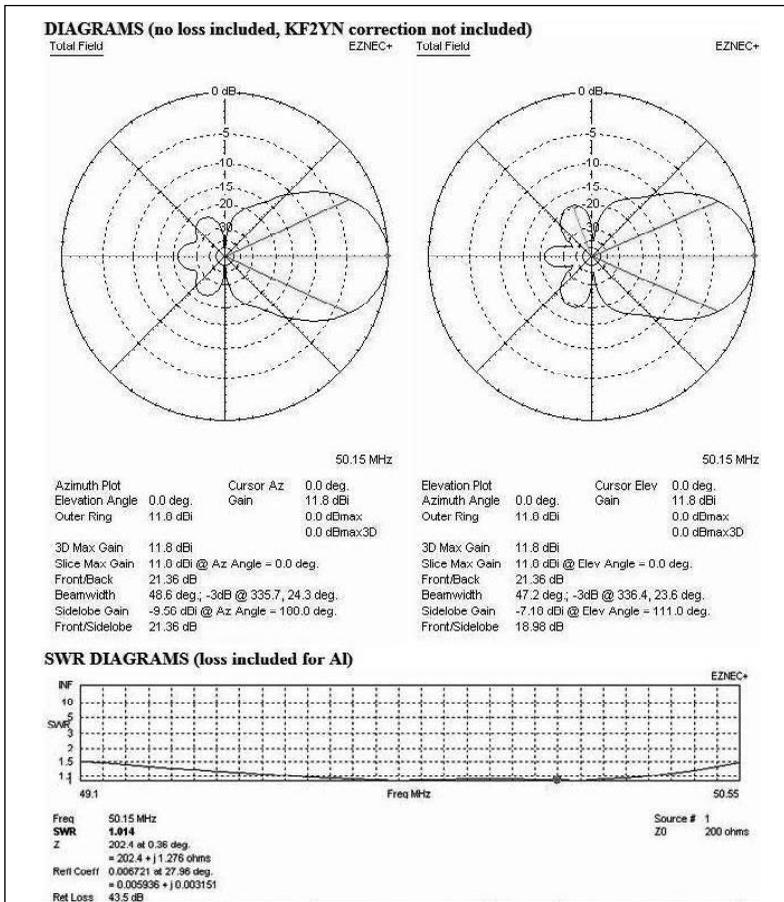
Modification to increase internal ATU range of Icom IC-7300.



YU7XL twinboom yagi for 144MHz.

According to Bukvic, "[w]hen the 50 MHz band is considered, one thing is different regarding higher bands. That is noise. There is much, much more noise on this band, coming from all around, which makes low antenna temperature unimportant. However, I still insist on low temperature characteristics.

The basic favour of low temperature antenna is that energy is more concentrated in wanted direction. The main lobe, in this way, gives more gain or wider pattern. Therefore, noiseless reception (which is lost on 50 MHz due to high level of sky and earth natural noise)



Pattern and SWR of YU7XL X60815XL4Q eight element twinboom 50MHz yagi.

is not the only advantage of low temperature antenna.

Because noise characteristics are not important, T_{sky} and T_{earth} are omitted. Instead, I give the data of main lobe width. Here the twinboom antennas are placed into VE7BQH G/T table where they belong according to their length, so that they can be compared with antennas of different authors. You can see that the twinbooms are better for 1 to 2 dB, sometimes even more, than the classic style yagis.“

To illustrate the performance of the twinboom designs, the information for the eight element X60815XL4Q design is shown in the following pictures:

(Please see Photos G & H in the centre colour section on page 28)

“Some words about construction: Just look at the photo on my page http://www.qslnet.de/member1/yu7xl/my_tween_boom_yagi_antennas_for.htm.

and everything will be clear. Both booms should be bent toward each other, following dimensions given for the particular antenna. A small error in bending is negligible, but positions of elements must be precisely marked on the central boom and, at right angles, projected on the upper and lower booms. For short antennas, up to some 7 meters length, booms can be made of tiny aluminum tubes (Ø25 mm). No fear, the construction will be strong enough. For longer antennas, use thicker tubes.

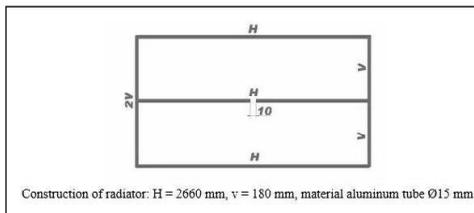
The radiator is in form of double rectangle. For every antenna, it is separately described. The joints should be welded or hard soldered. The impedance at the feeding points is 200 Ohm. You can bring a 50 Ohm coaxial cable to the feed points and apply a 1/2ë [symmetrizing] balun.

“KF2YN correction is applied on all my models. The formula should be applied because the antenna modelling software (NEC/EZNEC) does not contain the KF2YN formula and cannot fight off the convergence error caused by tapered or sharply bent elements. After applying, antenna data are standardized and can be put into VE7BQH table alongside with other competing antennas. Therefore, do not be confused with different results of gain in tables and in diagrams! This correction gives the real gain for ALUMINUM, and the correct data are shown in green fields. Except for gain, the differences in other parameters (F/B, F/S etc.) are minor and can be neglected. Finally, all elements must be isolated from the boom. Enjoy”.

Full information about the twin boom designs can be viewed at: http://www.qslnet.de/member1/yu7xl/my_twinboom_yagis_for_50_mhz.htm.

Parting Remarks

That's about all there is to report for now. It's time to begin mulching flower beds, mowing grass, and repairing winter damage to antennas. Baseball has begun, and the EPL will be finishing just in time for the E season. I look forward to receiving reports of long-distance Es and SSSP contacts, DXpeditions, and other six metre related activities. The next issue of *Six News* should be out in August. I want to thank the following: 3D2AG, BV6CC, CE2SV, CX8DX, CQ Six - 50 MHz DX Information, DX Summit, DK8NE, DL8YHR, DU/PAØHIP, E51WL, EA3AKY, EA7KW, EI7IX, G3WOS, G8BCG, G8VR, GØKSC, GDØTEP, GI6ATZ, G8VR, GØKSC, GM4SJB, HH2JR, IKØFJA, JE1BMJ, JP1LRT, K1HTV, K1TOL, K2ZD, K5AND, K5QE, K6IJ, K6QXY, K7CW, K7JA, KA9FCD, KG6DX, KH6/K6MIO, NØJK, N5JEH, OA4TT, ON4KST, *SixItalia Weekly*, DX Summit, S57RR, TI/N5BEK, VE3IKV, VE9AA, W4UDH., W7EW, W7GJ, W7XU, YS1AG, YU7XL, ZL1KF, ZL3NW, ZS6NK, *Ohio/Penn DX Bulletin*, and everyone else who contributed to this column. If I forgot anyone, please excuse the omission.



Driven element dimensions for X60815XL4Q twin boom yagi.

Since income taxes are due here in the states on 15 April, I believe the following to be apt: "This is the season of the year when we discover that we owe most of our success to Uncle Sam." – The Wall Street Journal.

If you have anything you would like to see in upcoming columns, or anything to submit, please contact me at DXNEWS@UKSMG.org, or W3CMP@comcast.net. This is your column, and your reports, comments and ideas make it what it is. I welcome all reports.

Late News

Chris Patterson, W3CMP

DXpeditions

HBØ Lichtenstein

On 26 April Drago reported to Lance W7GJ: Please do not forget another excitement six and two metre EME activity in September from HBØ (Lichtenstein). Details in a few days. 73 Drago, S59A (one of the T77C crew)

Columnist's note - More information will be included in the August column.

Update on Pitcairn Island Six Metre DXpedition VP6R

On 25 April Lance W7GJ reported:

This is just a heads up about this very exciting upcoming DXpedition so you can mark your calendars. The six metre EME operators will be W8HC and WØVTT; if you have any questions or comments, please feel free to contact them directly. I will be here at home and also hope to work them from here for an ATNO on six metres. Due to a change in the DXpedition team members and the equipment being taken, their only EME operation will be on six metres. Their entire period of operation includes October's best days for EME (lowest Degradation). =0. Over the course of their operation, it looks like they will have excellent common moon windows with all continents and active EME stations. This should be a very successful operation, provided their receiver isn't degraded by simultaneous HF operation. Here is their VP6R Pitcairn Island six metre EME plan summary:

Dates: 21 - 27 October 2019. Hope to be active for our moonrise at 09.15z on 21 October

Grid: CG44WW. **Power:** 1500 watts output

Antenna: Single 6M8GJ yagi with elevation fed with LMR600 coax

Mode: JT65a with VP6R always transmitting *first sequence*

Frequency: 50.200MHz with 1271Hz offset (DF=0 on JT65a from WJST10)

Procedure: W7GJ EME DXpedition protocol. **Radio:** Flex

More information will be coming soon on their dedicated webpage. Notice also that they will have elevation, so if you are horizon only, they can match your moonrise and/or moonset. All their moonrises will be out over the ocean, so look for them to have a ground gain lobe between zero and -2° elevation. Because their antenna will be over 750' above the ocean, expect numerous sharp ground gain lobes up to their broader ground gain lobe starting around 7°. I expect they will probably elevate to track the moon when their moon is above 17°. At this time, they do not expect to be able to see the ocean on moonset because of a slight rise toward the west. Their lowest lobe during moonset will probably be around 7° elevation. However, if their operating site changes, they may also have a negative horizon to the west; if this turns out to be the case, I am sure it will be announced. However, even if they are limited to operating above 7° elevation during their moonset, they still will have excellent common moon windows with all Region III stations. They also will have the capability of operating FT8 mode and plan to monitor for any TEP during the DXpedition when the moon is not up.

Update GB3HX ~ A New 6m FM Repeater for Hastings, East Sussex

John Rivers GØGCQ

I hope you find this an interesting insight into the depth of planning and effort that goes into getting a 6M repeater operational, by an active Repeater Group in the south-east of the UK?

RILGES Repeater Group was founded in 2013 in order to support Amateur Radio and many education properties that the hobby enjoys. RILGES have repeaters in Eastbourne, Hastings, Uckfield and Broad Oak (*County of East Sussex*). These include: GB3EB (2M FM); **GB3HX (6M FM)**; GB3HE (70CM FM Currently Off air); GB3JT (23CM D/ATV); GB7ES (70CM DSTAR G3); GB7HE (70CM DSTAR G3); GB7RY (70CM C4FM/FUSION); and MB7UE (2MAPRS).

After a gap of some years, the return of a 6m FM repeater, close to the original site, has been eagerly awaited. For those that are not aware, GB3HX is based on an old TAIT T335 RX and T336 TX, both of which are now working close to the original spec, together with homemade cavity filters. The repeater itself is the old GB3HF Tait, and homemade cavity filters, which were put out to pasture in Yorkshire and subsequently rescued and brought back to Sussex for serious restoration.

The repeater is interfaced to the G4TKR Repeater Logic, together with Echolink Interface. The logic and display are mounted in the re-purposed remote interface module. All modules were then remounted back in the original chassis.



Fig.1

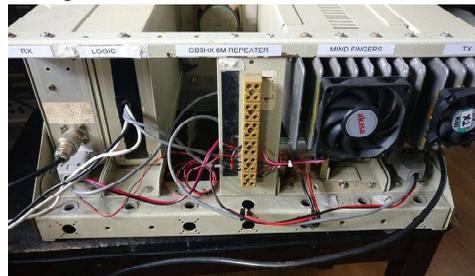


Fig.2

STAGE 1: This was to get the old TAIT TX and RX working. This was completed thanks to Fraser G8FEZ.

STAGE 2: The repeater was being worked on (RF/Audio/Interfacing/Logic) by Dave (G8PUO), as the TAIT is quite vintage!

The repeater transmitter is only rated at max 10W continuous, so this was reduced and fed into an external PA to provide full licence power, through the cavities and filters. It was bench tested for increased TX power, and the fan for temperature and stability, prior to going to site. [*The Tait TX PA is rated at 25W 50% duty cycle for 15 mins max, which is no good to run a repeater on!*]

The 6M Cavity filters were brought back to life after a fair amount of engineering (Shane M1BFH) and RF tender loving care (Dave G8PUO).

STAGE 3: Initially GB3HX was configured in beacon mode, whilst the filters were worked on. This allowed signal reports to be gained and general coverage established. Echolink was then enabled during this time (*see below*).



Fig. 3

The repeater was taken to the school, on which it is sited, once their Easter holiday had started, and the beacon TX mode was enabled.

Dave (G8PUO) took a signal strength from HX to Eastbourne, and then inserted attenuation in order to just break the squelch on the existing Sigma Euro 360, mounted on a wall bracket. It wasn't that great. He then swapped the antenna, using the same cable, for the Comet GP15N. This resulted in the signal strength now full scale, even with attenuation. Dave was impressed with the improvement but felt that it just goes to show how 'poor' the 360 is and/or how efficient the GP15N is on 6M. The new repeater antenna (Comet GP15N) has made a massive difference to coverage and everyone is really pleased with it. Whilst it is meant to have the same 'gain' as the old one, the differences are like 'chalk and cheese'. Just goes to show the more metal in the sky the better!



Fig. 4

STAGE 4: Various updates, for the filters and the receive, will be made during the school summer holidays (July 2019).

STAGE 5: Future improvements will include a low-noise pre-amp, such as the excellent AR P50VDG, cavity filter, Band Pass Filter additions and tweaks. Hopefully, depending upon funds, this could be completed during this summer as well?

RILGES wonder if anyone has an unwanted 6M Band Pass Filter, an AR P50VDG Preamp or a 25W-ish 6M Power Amp, that they are willing to donate?

[AR P50VDG <http://www.advancedreceiver.com/page5.htm>]

Take off from the new repeater site, overlooking Hastings, is amazing, Figs. 5 and 6.

(Please see Photo 1 in the centre colour section on page 25 and back inside cover)

At the time of writing, the filters are not quite ready, so the repeater is operating in beacon mode to get coverage feedback. Echolink is fully operational on the repeater:

Echolink Node Number 'Seven 1066' = **71066**

Once the cavity filters have been connected, and GB3HX is fully operational, RF access will require a CTCSS of 103.5Hz and at least 2 seconds of carrier:

Keeper/NoV holder: Dave Williams (G8PUO).

Output frequency: 50.7600 MHz. RX Frequency: 51.2600 MHz. CTCSS tone is 103.5 Hz

Location: Hastings NGR: TQ8212. Locator: JO00HV. Latitude/Longitude: 50.88 / 0.59

Echolink Node: 71066. Group web site: <http://rilges.org.uk>

My Thanks go to Dave Williams (G8PUO) for the information and photographs. I hope the resurgence of 6m FM in SE-England will go some way to giving a boost to the 'Magic Band' in this part of the UK?

Consolidated 50MHz Band Plan

50.000 - 50.100 CW only	50.000 - 50.080	Beacons
	50.060 - 50.080	Beacons (USA)
	50.090	CW calling frequency
50.100 - 50.500 SSB and CW only	50.100 - 50.130	DX window (IARU R2 to 50.125, Australia to 50.150)
	50.110	Inter-regional calling frequency
	50.125	Domestic calling frequency (IARU R2)
	50.150	SSB centre of activity (IARU R1)
	50.185	Cross-band centre of activity
	50.200	MS reference frequency (IARU R1)
	50.210	Calling frequency (France)
	50.250 - 50.280	Narrow band digital modes
50.500 - 52.000 All modes	(IARU Region 1)	
50.500 - 54.000 All modes	(IARU Region 2)	

Notes:

The DX window is *only* to be used for QSOs between stations in different regions.

The 50.110 inter-regional calling frequency is *not* to be used for QSOs. Please QSY even when working inter-regional DX.

Digital Subscriptions

Since the successful roll out of 'Six News' online, we are now offering full membership of the UKSMG at a reduced rate for those able to download their copies of the magazine from the members-only section of the website and opting not to receive a paper copy. There is potential for large savings compared to the standard subscription, particularly for members overseas who pay a higher rate to cover postage costs.

The rate for the internet-only subscription is **£10.00** (or the equivalent in your local currency) wherever in the world you live.

New and returning members are now able to opt for this method of joining online at the UKSMG website. There will be no need to inform UKSMG if you wish to change from your current subscription to the online service, as renewals made at the reduced rate will automatically be assumed to be for the new service.

Don't worry, we are not intending to stop the printed version of the magazine! This is purely a sensible and cheaper alternative for those who are willing to do without it.

If you are happy to read your 'Six News' online, this new membership rate will save you £2 per year if you are UK-based and significantly more if you are overseas.

Everyone wins, as UKSMG will still have the same amount from your subscription for six metre good causes as it did before and you will still have the best magazine dedicated to your favourite band.

Different editions may be downloaded to either Android, iOS, or Kindle devices for easy reading"

Looking for a Membership Secretary

Chris Deacon G4IFX

Just a reminder that there is now another opportunity for the UKSMG community to step up to help the group! Our current secretary, David, G4NRT and I came to the joint conclusion that with all his globetrotting, for work and to his second home in Zimbabwe (105,000 km flown in 2018 alone), it is simply not possible for him to carry on managing our membership records.

So, what I've decided to do, with the approval of the committee, is to split our traditional 'Secretary' role into two parts:

- 1) A 'Membership Secretary' who manages our membership database, processes renewals, chases subscriptions etc and produces the labels/renewal letters (in electronic form) on a quarterly basis;
- 2) A 'Business Secretary' who makes arrangements for and produces the minutes for the AGM and committee meetings, helps to promote UKSMG, and deals with other administrative matters.

David has kindly agreed to continue on the committee in the 'Business Secretary' role but we're now looking for a **Membership Secretary** to join us **as a matter of urgency**.

If you've ever wondered about getting more involved with the UKSMG, but weren't sure what you could do, this could be your chance. The only qualifications are a keen interest in Six and the enthusiasm to share that interest with our members, a thorough approach, good IT skills (our membership database is built using Microsoft Access) and the time to give the job regular attention.

The reward for the new Membership Secretary will be regular contact with our members in 45 countries and the opportunity to contribute to the world's leading 50MHz organisation. If you think you might be interested in getting involved, please get in touch with me via chairman@uksmg.org.

The W3BO Flyaway Pack

Are you going on a trip or planning a special event station? Could you could be active on 6m if only you had a suitable rig? If so, we have answer:

The "**W3BO Flyaway Pack**" - an FT857D is available from UKSMG on loan. If required we can also loan a 230v PSU, cables and a simple antenna all well packed for ease of transport.

In support of this we have received a 6m/10m GM3VLB mini delta from Sandpiper Aerials. It telescopes down to 75cm and weighs less than 1kg!

Please contact sponsorship@uksmg.org for details or see www.uksmg.org/w3bo/memorial.php

The FT4 Protocol for Digital Contesting

Joe Taylor, K1JT, Steve Franke, K9AN, and Bill Somerville, G4WJS

April 22, 2019

Introduction: FT4 is an experimental digital mode designed specifically for radio contesting. Like FT8, it uses fixed-length transmissions, structured messages with formats optimized for minimal QSOs, and strong forward error correction. T/R sequences are 6 seconds long, so FT4 is $2.5 \times$ faster than FT8 and about the same speed as RTTY for radio contesting. FT4 can work with signals 10 dB weaker than needed for RTTY, while using much less bandwidth.

Basic parameters: FT4 message formats are the same as those in FT8 and encoded with the same (174,91) low-density parity check code. Transmissions last for 4.48 s, compared to 12.64 s for FT8. Modulation uses 4-tone frequency-shift keying at approximately 23.4 baud, with tones separated by the baud rate. The occupied bandwidth (that containing 99% of transmitted power) is 90 Hz. Threshold sensitivity for 50% decoding probability is $S/N = -16.4$ dB, measured in the standard 2500 Hz reference noise bandwidth. *A priori* (AP) decoding can push threshold sensitivity down to -18 dB or better.

Installation and Initial Setup

To join the FT4 test group and participate in one or more upcoming "mock contest" practice sessions, follow these steps to install and configure a release candidate for *WSJT-X 2.1.0*:

1. Download the installation package from a link to be provided.
2. Install the program in the usual way for your operating system. To avoid conflict with your normal operation, you may wish to use a different installation directory from that used for *WSJT-X 2.0*.
3. Start the program as you normally would for FT8.
4. From the **Configurations** menu select **FT8 | Clone** (or **Default | Clone**).
5. Rename the resulting new configuration to **FT4**, and select the new configuration.
6. Select **FT4** from the **Mode** menu.
7. On the **File | Settings | Frequencies** tab, right-click any line in the **Working Frequencies** table and press the **Reset** button. This action will pick up the recommended working frequencies for FT4.
8. Check the box **Special operating activity** on the **Settings | Advanced** tab. Then select **RTTY Roundup messages** and enter your proper contest exchange in the field **RTTY RU Exch**.
9. Instructions for connecting *WSJT-X* to *N1MM Logger+* can be found in the *WSJT-X 2.1 User Guide*, [Section 4.5](#).

You now have a release candidate for *WSJT-X 2.1.0* configured for FT4 operation. You might find it useful to download and examine an FT4 sample file. Select **Download Samples** from the **Help** menu and tick the FT4 box. Configure the **Wide Graph** controls as shown in Figure 1 and select **Deep** on the **Decode** menu, then open the sample file from the **File** menu. The recorded interval should produce 19 decodes, as seen in Figure 1. Most of the decoded signals are inaudible or barely audible in the audio file. Fewer than one-third are strong enough to be reliably decoded if they had been RTTY signals — and only then if they were spread out over a much wider frequency range.



Figure 1. — Screen shot showing simulated FT4 signals and their decodes.

Operation: Aside from its much shorter T/R sequences, FT4 behaves essentially the same way as FT8. One new on-screen control is available for FT4 operation, a button labeled **Best S+P**, just below the **Call 1st** checkbox. Clicking this button during an Rx cycle arms the program to examine all CQ messages decoded at the end of the 6-second Rx sequence. The program will select the best potential QSO partner (from a contesting perspective), and treat it as if you had double-clicked on that line of decoded text. Here "best potential QSO partner" means "New Multiplier" (1st priority) or "New Call on Band" (2nd priority). "New Multiplier" is currently interpreted to mean "New DXCC"; a more broadly defined multiplier category (for the ARRL RTTY Roundup rules) will be implemented soon. We may also provide additional priority rankings, for example "New Grid on Band" (useful for North American VHF contests), sorting by signal strength, etc.

For keyboard control of transmitted messages, check the box **Alternate F1–F6 bindings** on the **Settings | General** tab. In typical contest-style operation you can then hit function key F1 to solicit a QSO by sending CQ. To respond to a CQ and send your contest exchange, double-click on the decoded message. Alternatively, you can click on **Best S+P** and let the selection algorithm choose a station to call. **Auto Seq** and **Call 1st** checkboxes behave as in FT8, and thus the remainder of a minimal QSO can continue without further operator action. Function keys F2 – F5 may be used to send messages displayed in entry fields for Tx2 – Tx5 on tab 1, at bottom right of the main window. Function key F6 toggles the checked status of **Call 1st**, and key combination **Alt+B** can be used to toggle the armed status of **Best S+P**.

FT4 is presently configured so that a station operating in Search-and-Pounce ("S+P") mode logs a QSO when RR73 is transmitted, and the CQing ("Run") station logs a QSO when RR73 is received. Like FT8, FT4 makes little distinction between an S+P station and a Run station. An operator can switch easily and frequently between these two ways of initiating QSOs, and contesting skill will depend on optimizing these and many other operating decisions. With a steady stream of available stations to work, single-radio QSO rates well above 100/hour are possible using FT4.

Transmitted signal: FT4 uses a modulation technique known as Gaussian frequency shift keying, or GFSK. The generated audio waveform consists of 105 symbols (tones) sent in sequence at one of four frequencies. The encoded series of distinct tones for part of a transmission might originally look like the upper (red) curve in Figure 2. However, in FT4 the sequence of frequencies is smoothed by convolution with a Gaussian function before being sent to the software modulator. The blue curve shows the corresponding smoothed sequence of frequencies actually sent to the modulator. The transmitted sequence no longer has any stepwise discontinuities.

Differences between the red and blue curves seem rather small, but spectra of the resulting audio waveforms are remarkably different. Figure 3 shows spectra for an FT4 signal (blue) and a standard continuous-phase FSK signal (red) for the same encoded bit sequence. The GFSK spectrum has steep skirts, occupying a bandwidth of only 75 Hz at –6 dB, 200 Hz at –60 dB, and 260 Hz at –80 dB. No additional filtering is applied to the audio waveforms.

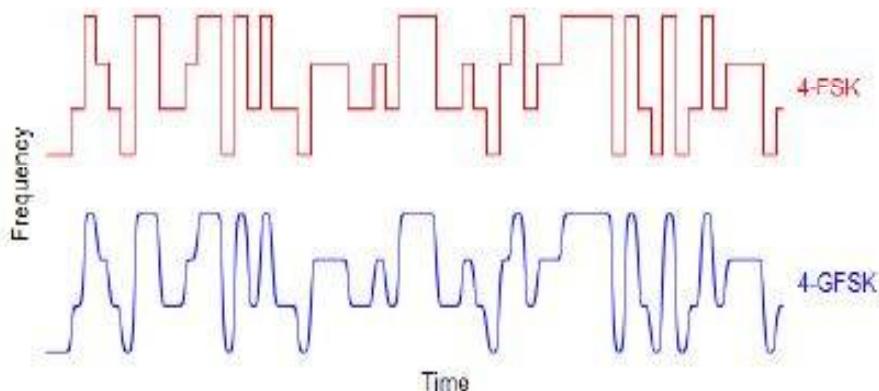


Fig 2. — Example of the encoded (red) and smoothed (blue) frequency sequences for part of an FT4 message.

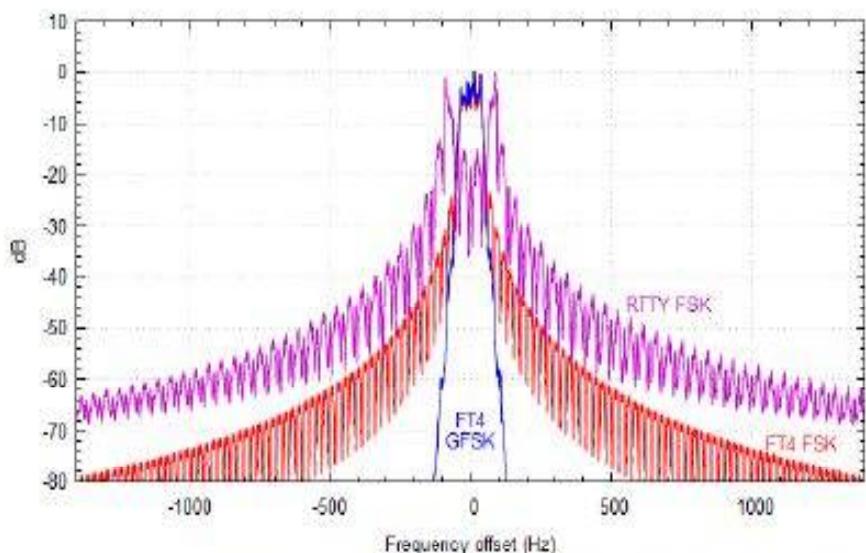


Fig 3. — Spectra of an FT4 signal transmitted with GFSK (blue), FT4 with FSK (red), and RTTY with continuous-phase FSK (purple).

Figure 3 also shows the spectrum of a standard RTTY signal (purple), which is more than 2000 Hz wide at -60 dB. Some ham software generating RTTY signals by audio frequency shift keying (AFSK) offers optional filtering of the waveform to reduce the unwanted keying sidebands. However, such post-modulation filtering necessarily destroys the constant-envelope nature of the continuous-phase FSK signal and leaves behind a waveform that must be amplified with good linearity to avoid generating new unwanted sidebands. In contrast, the GFSK signal of FT4 has a constant envelope and is immune to inter-modulation distortion.

Decoding and Frequency Usage: The FT4 decoder in *WSJT-X 2.1* identifies and decodes signals anywhere in a passband up to 5 kHz wide. As in other *WSJT-X* modes, received messages are “all or nothing” — there are no partial decodes, and false decodes are rare. Subtraction of decoded signals from the received data stream enables decoding of transmissions that overlap in frequency with other, possibly much stronger signals. The last three decodes shown in the Band Activity window in Figure 1 are examples of such second-pass decodes. With the normal odd/even sequencing of transmissions and signals spaced at intervals 120 – 150 Hz, as many as 50 stations can operate in a 3 or 4 kHz passband with little interference, even when signal strengths differ by as much as 60 dB.

Experience will tell what may be the best strategy for selecting dial frequencies during contests, and for how many ~3 kHz segments should be used for FT4 on each band. As initial guidelines we suggest the following default dial frequencies for FT4: 3.595, 7.090, 10.140, 14.140, 18.104, 21.140, 24.919, 28.180, 50.318, 144.170 MHz. We will welcome any feedback that could lead to better frequency choices.

Sensitivity: Figure 4 presents measurements of FT4 decoder sensitivity over a wide range of simulated propagation conditions. Paired numbers at the right give the Doppler spread (Hz) and two-path differential delay (ms) for various sets of ITU-standard conditions, using the Waterson model for ionospheric propagation. The left-most solid curves correspond to common mid-latitude propagation paths in undisturbed conditions. Dashed curves show the measured sensitivities for decoding with maximum *a priori* information, in two extremes of propagation conditions. For a rough comparison with RTTY, we note that in simulated mid-latitude moderate conditions RTTY has been shown to yield character error rates less than 10% only when SNR exceeds -1 to +4 dB, depending on the software modem in use. FT4 offers a sensitivity advantage of about 10 dB over RTTY.

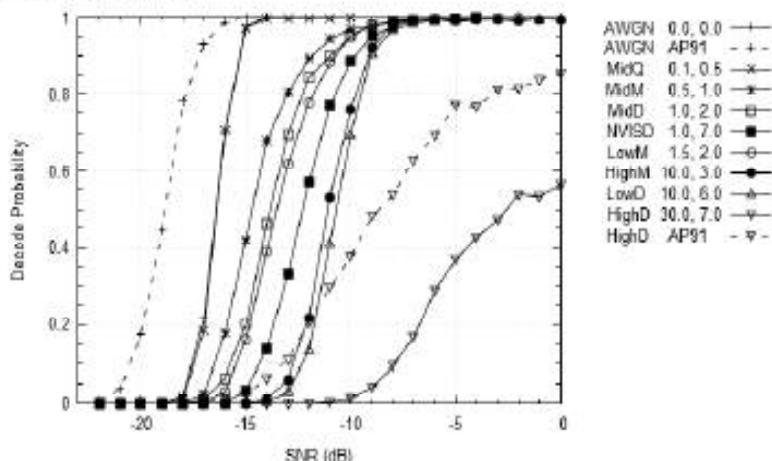


Fig 4. — Measured decoding probability for FT4 as a function of SNR. AWGN means Additive White Gaussian Noise; Low, Mid, and High refer to geomagnetic latitude; Q, M, and D imply Quiet, Moderate, or Disturbed ionospheric conditions; NVIS means Near Vertical Incidence Skywave; AP91 refers to a *a priori* decoding of the RR73 message in a typical contest QSO.

Previous testing: Early release candidates of *WSJT-X 2.1.0* enabled us to explore the advisability of making FT4 an asynchronous mode with no fixed start times for T/R intervals. These tests served to highlight the significant advantages of using time-synchronized sequences. Fixed sequence lengths with prescribed start times ensure that a much larger fraction of received signals are decodable, especially in contest-like operating conditions where a given station may transmit roughly half the time. In terms normally used for communications engineering, synchronization increases channel capacity.

Schedule: A few parameters and operating behaviors of FT4 are still being tested and optimized. It will be very useful to hold several more mock contest practice sessions, with a larger group of active participants. Even if these reveal no serious bugs or inadequacies, we think FT4 is too new to be used in two upcoming events: the ARRL VHF Contest (June 8-10) and ARRL Field Day (June 22-23). Consequently we plan to build a release candidate *WSJT-X 2.1.0-rc5* that will "time out" on June 7, 2019. As far as possible, we plan to adhere to the following schedule:

- April 22: Public announcement about FT4, with a link to this document
- April 29: Second announcement, with links to downloadable installation packages for *WSJT-X 2.1.0-rc5*
- May 9, 0000 – 0100 UTC: FT4 practice session, 7.090 MHz
- May 14, 0000 – 0100 UTC: FT4 practice session, 7.090 MHz
- June 5, 0000 – 0100 UTC: FT4 practice session, 7.090 MHz (if needed)
- July 15: General Availability (GA) release of *WSJT-X 2.1.0*

Random concluding thoughts: FT4 is a special-purpose mode designed for rapid-fire contest QSOs. It serves this purpose very effectively, but like FT8 the mode is not useful for more extensive conversations. FT4 uses much less bandwidth than RTTY and provides reliable decoding at much lower signal levels. It has no need for "Super Check Partial" or similar contesting aids, and skilled operators using FT4 will find less motivation to use a DX Cluster or other non-radio aids. All information necessary to score well in a contest can be obtained over the air, during the contest, through one's own antennas and radios. With FT4 there is little distinction between CQ and S+P operation, so it's easy to switch frequently between the two ways of finding QSO partners. Stations using low power and compromise antennas can participate effectively in a contest using FT4.

The W3BO Flyaway Pack

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packed for ease of transport.

In support of this we have received a 6m/10m GM3VLB mini delta from Sandpiper Aerials. It telescopes down to 75cm and weighs less than 1kg!

Please contact *sponsorship@uksmg.org* for details or see *www.uksmg.org/w3bo memorial.php*

Minutes of the Annual General meeting of the UKSMG held on Sunday 21 October 2018 by Conference Call

Present

Chris Deacon	G4IFX	Chairman	
Trevor Day	G3ZYY/EA5ISX	Vice Chairman / Sponsorship Manager	
Mike Wills	G3OIL	Treasurer	
David Bondy	G4NRT	Secretary	
John Rivers	GØGCQ	Editor	
Dave Toombs	G8FXM	Awards Manager / Webmaster	
Robin Burrows-Ellis	(M1DUD)	Committee Member	
Chris Patterson	W3CMP	Committee Member	
Clive Davies	G4FVP	Committee Member	
Peter Bacon	G3ZSS	Committee Member	
Mike Eccles	GM3PPE	Justin Crocket	G8Y TZ
Bo Hansen	OZ2M	Ray Benitez	M0DHP
David Welch	G7IXU	Tony Moore	E17BMB
David Gillies	MMØAMW	Mark Buckley	G4HGL
Steve Black	G4PSS	Fernando Martin	EA4WF
Bill Tracey	GM4UBJ		

1. Chairman's Introduction and Agenda

Chris G4IFX opened the meeting and welcomed those present. He particularly thanked those members who had taken the trouble to call in.

2. Apologies for Absence

Apologies had been received from: Matt Madsen OZ6OM, Fred Handscombe G4BWP and John Short G1DJJ

3. Minutes of last meeting

The minutes of the 2017 AGM held during the 6m BBQ at the QTH of Chris Gare G3WOS had been published in Six News No. 133. Clive G4FVP proposed and Mike GM3PPE seconded that they be approved. Passed *nem con*.

4. Chairman's Report

Chris G4IFX started by commending his committee colleagues for their hard work during the last year.

Chris pointed out that Six Metres is booming – in spite of the sunspot cycles. He went on to mention that we had a new editor in John GØGCQ.

A decision had been made not to attend the European Ham Radio in Friedrichshafen in 2018, but we do continue to attend National Hamfest and the RSGB Convention. Additionally, we have our website, the discussion group on groups.io and our Facebook page.

The group is financially sound, and we are careful how we commit our resources. The Treasurer's report will show a substantial surplus and we need to decide how we should use some of this whilst still safeguarding our future.

Membership has shown a substantial reduction this year and we need to do more to attract new members – especially amongst the more newly licensed community. Our aim should be dual – that is promoting the band as well as getting new members.

5. Treasurer's Report

Mike G3OIL gave the Treasurer's report which showed a substantial surplus of £15,282.32 (2017: 14,792.62)

The accounts were checked by Helen Moody, to whom great thanks are due.

Income

The 2017 income was some £350 less than the previous year. This was mainly due to a transfer from postal to digital membership. Advertising income is from our two main advertisers Nevada and Martin Lynch to whom thanks are due for their continuing support.

Expenditure

The main item of expenditure is the production and distribution of the UKSMG News which was slightly up on the previous year. Apart from that, expenditure was broadly in line with previous years.

6. Secretary's Report

David G4NRT presented the membership numbers as at October 2018 (numbers in brackets are 2017 figures):

Total: 566 (665) Standard: 377 (433) Digital: 189 (232)

The reduction was very regrettable, but no single reason could be ascertained for it. One. PayPal changes had resulted in more members subscriptions remaining unpaid and eventually their membership would lapse.

The subject of life membership was again raised and a short discussion ensued. It was agreed that the committee would agree a proposal for consideration at the next AGM.

It was noted that members paying by PayPal subscription should ensure they have a secondary funding source established otherwise their subscription payment might fail.

7. Sponsorship Report

Activity on the sponsorship front has been rather lower than in previous years. We have been asked to sponsor the EI06 Beacon and to 'top-up' GB3NGI.

8. Committee Membership and Roles

It was proposed by Mike GM3PPE and seconded by Robin M1DUD that the following should be elected to serve on the Group committee:

Chris Deacon	G4IFX	Chairman
Trev Day	G3ZYY	Vice-Chairman
Mike Wills	G3OIL	Treasurer
David Bondy	G4NRT	Secretary
John Rivers	GØGCQ	Committee Member
David Toombs	G8FXM	Committee Member
Chris Patterson	W3CMP	Committee Member
Clive Davies	G4FVP	Committee Member
Peter Bacon	G3ZSS	Committee Member

Passed *nem con*.

9. Trophy Presentation

The Jersey Trophy for 2018 is awarded to Ken Osborne ZL3OZ and Javi Pons Estel LU5FF for their work in finding the Southern Hemisphere SSSP path. They were the prime stations involved in the exploration and confirmation of the phenomenon.

46 Six News

(The Jersey trophy is awarded to the amateur who, in the opinion of the committee, has made a recent and significant contribution to the Six Metre community.)

G5KW Shield for 2018 is awarded to Jim Kennedy, KH6/K6MIO for his article 'A Tale of Sun, Wind, Waves, Fields, Fountains, Tides, Seasons, Weather, Clouds, and Stardust', published in Six News #134.

(The G5KW Shield is awarded to the author of the best article, in the opinion of the committee, published in Six News in the previous year.)

10. UKSMG Summer Contest 2018

The winners were:

Single Operator (Fixed)	IZ5EME	Winner of the Richardson Cup
Single Operator (Portable)	IS0BSR/P	Winner of the HB9QQ Plate
Multi Operator	EA8AA/P	Winner of the Ellis Cup
QRP	4X4IF	Winner of the Secretary's Tray
Six Hour (Fixed)	5B4AAB	Six Hour Winner's Certificate
Six Hour (Portable)	IS0/DK7Z/P	Six Hour Winner's Certificate

11. Any Other Business

Clive G4FVP mentioned that the EI6 beacon was QRV on the 8m band. There being no other business, the AGM was closed by Chairman Chris at 5.00pm.

David Bondy G4NRT, Hon. Secretary UKSMG

UKSMG Accounts 2018

Mike Wills G3OIL

The Accounts

I prepared the financial report from the Group's bookkeeping and Helen Moody has checked and corrected as necessary, to produce these accounts. Many thanks to Helen.

Expenditure

UKSMG News – The cost of printing the News has increased significantly over the previous year. This is attributable to three factors:

1. The printer applies a price increase each year based on RPI.
2. The cost of printing varies according to the number of pages in each edition. There is also an extra printing cost involved in the introduction of colour pages.
3. A January 2018 printer's final invoice for £283.94 related to Edition 133, which was published in December 2017.

The cost of distribution has increased significantly. This is attributable to three factors:

1. The use of a professional distributor. (Previously, the task of distributing the News fell on the editor).
2. The number of pages and thus weight of the News.
3. An increase in postal charges.

DX Support – The sponsorship manager identified two causes worthy of support. These were GB3NGI (£200) and EI0SIX (£300).

Website – The increase in cost relates to a change of webhosting

Income

Subscriptions – These were slightly higher than the previous year. There is no clear reason for this, but the total will alter from year to year as some members lapse and new ones join, and the proportion of "digital" members and "printed copy" members varies.

Advertising income – The increase in revenue is attributable to the new advertiser – DX Engineering. A vote of thanks is due to advertisers.

UKSMG Audited Accounts Report 2018

	2018	2017	2016	2015	2014	2013	2012	2011
Income								
Subscriptions received	7328.7	7083.89	7420.96	7823.96	7692.3	8039.16	7707.74	8213.92
Beacon Support, Sales & Donations	0	5	0	0	170	50	0	0
Awards	0	0	19.5	26	0	0	0	0
Advertising	783.33	640	640	640	685	825	1285	720
Bank interest	28.02	3.85	7.97	6.9	6.57	5.91	5.52	4.77
Total	8140.05	7742.74	8088.43	8496.86	8553.87	8820.07	8988.26	8938.68
Expenditure								
Postage & Packing	1952.95	1267.18	1435.26	1383.79	1512.65	1686.88	1988.26	2555.84
UKSMG News Printing	4780.39	4119.82	4062.08	4011.51	4167.54	5183.62	5056.7	4804.76
Bank charges	136.12	120.91	143.97	106.8	126.71	126.02	131.44	108.72
RSGB sub. & AGM	51	51	51	156.74	117.77	141.05	104	119.99
Sundry, Equipment & Merchandise	94.99	111.67	464.72	851.16	373.91	45	55	45
Expeditions & DX support	500	1105	425.77	1353.46	643.76	325	676.39	945
Awards	0	0	0	51	0	0	0	0
Web site	603.56	476.95	502.25	411.63	366.23	23.97	205.64	15.9
Total	8119.01	7252.53	7085.05	8326.09	7308.57	7531.55	8217.43	8595.21
Surplus of income over expenditure	21.04	490.21	1003.38	170.77	1245.3	1388.52	780.83	343.48
Current Assets								
Cash at Bank -Current AC	2005.19	2010.64	3483.3	1491.95	3194.21	3450.49	2793.59	2720.55
Cash at Bank -Business Premium A/C	13298.68	13272.19	10269.86	10264.99	8261.57	6258.57	6256.05	6253.54
Cash in Payroll account		0	9.46	2032.3	1937.69	1424.23	766.98	149.77
Cash held by Country Managers and sec.		0	0	0	0	419.88	528.03	1079.96
Advertising Debtors		0	280	0	225	820	640	0
Advance Deposit Payment for 2017		0	750	0	0	0	0	0
Represented By :-	15303.87	15282.83	14792.62	13789.24	13618.47	12373.17	10984.65	10203.82
Accumulated Surplus Brought Forward	15282.83	14792.62	13789.24	13618.47	12373.17	10984.65	10203.82	9860.34
Profit For The Year Ended 31st December 2017	21.04	490.21	1003.38	170.77	1245.3	1388.52	780.83	343.48
Accumulated Surplus Carried Forward	15303.87	15282.83	14792.62	13789.24	13618.47	12373.17	10984.65	10203.82

UK Six Metre Group

The UK Six Metre Group (UKSMG) was formed in 1982 with the primary aim of encouraging an interest in the 50MHz band by all amateurs. It maintains a beacon fund to finance and provide beacons in various parts of the world. Over the last few years the group has also supplied many pieces of equipment to encourage and help six metre enthusiasts activate new counties.

The ambition of the UK Six Metre Group, through the medium of its quarterly newsletter, 'SIX NEWS', is to provide the best information available on all aspects of the band, including such things as DX news and reports, beacon news, propagation, six metre equipment reviews, QSL addresses, DXpedition news, and technical articles.

Why not join the UKSMG and give us a try? We have already attracted over 700 members in over 50 countries around the world. The subscription rates are as follows: UK - £15.00, Europe - £16.00, rest of world £16.00 (air mail).

Digital subscription ('Six News' by download, no printed copy): £10.00 for all countries.

Send to: **The UKSMG Secretary: David Bondy, G4NRT, 19 Harriet Drive, Rochester, ME1 1DY.**

Cheques in local currency should be made out to 'UK Six Metre Group'. Or send to one of our Country Managers below. (Cheques made out in equivalent local currency in the name of the Country Manager). Alternatively you can pay by credit card.

France Georges Vialet - F8OP, 541 route de Tournus, "Le Cottage", 71290 Cuisery.

Germany Jens Ludwig - DG1AAE, PO Box 1390, 38358 Schoeningen, Germany.

Italy Michele Coppola - I7CSB, c/o AR Elettronica, Via PNenni, 114 San Severo (71016) FG

Poland Bart Bzymek- SQ1K, PO Box 18, 78-540 Kalisz Pomorski. Tel: +48 663 808 343

Spain J R Hierro Peris - EA7KW, Oceano Indico, 11 Mairena del Aljarafe, Sevilla 41927

Sweden Johan Hansson - SMØTSC, Rullstensgränd 8, S-135 50 TYRESÖ, Sweden

USA Mario L Karcich, 209 Jim Stephenson Road, Jeffersonville, NY 12748. Email: usa@uksmg.org

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Voluntary Operating Code of Practice for Six Metre Operators



The UKSMG fully supports the DX Code of Conduct, details of which may be found here: <http://dx-code.org/>

Please read these recommendations carefully and try to adopt their use in your everyday operating.

SIX METRES AS A DX BAND: Six metres is a DX band and it, along with other six metre operators, should be treated with respect and tolerance.

LOCAL BAND PLAN: Always respect your local band plan. Details vary around the world, and do not forget that IARU Region 1 will have a new bandplan in 2012. **LOCAL QSOs:** Do not cause nuisance and disturbance to other operators with local QSOs within the 50.100MHz to 50.130MHz DX Window.

LEARN TO LISTEN: Most six-metre DXers spend about 5% of their time transmitting while 95% of time is spent listening and observing changing band conditions and propagation modes. This will be far more effective than just calling CQ DX at random.

50.100 - 50.130 DX WINDOW: The DX Window is widely accepted and should in principle be used for INTER-CONTINENTAL DX QSOs only. The definition of what constitutes a 'DX' station lies with an individual operator especially when a station within your own region constitutes a new country.

INTER-CONTINENTAL CALLING FREQUENCY: The international DX calling channel is 50.110MHz. This should be used for long range DX contacts and such contacts should normally be inter-continental in nature. If a local station returns to your CQ, move quickly to an unused frequency above 50.130MHz.

50.110 CQING: LISTENING is the first rule of working rare DX on six metres. So think twice before calling CQ on 110. But the occasional CQ is good as it can discover an unrecognised opening.

QSO TECHNIQUES: Follow the style and take the lead of the DX operator in providing information. Otherwise keep it simple as there are other stations waiting in line.

DX PILE-UP OPERATING: You should listen to the DX stations carefully and not continue to call if they request a particular country or prefix if that is not you. You should NOT call if you cannot hear the DX station!

SPLIT FREQUENCY OPERATION: When a DX station creates a large pile-up, split-frequency operating is recommended. To minimise interference with other DX stations operating simplex, it is recommended that a maximum split of 10kHz is used.

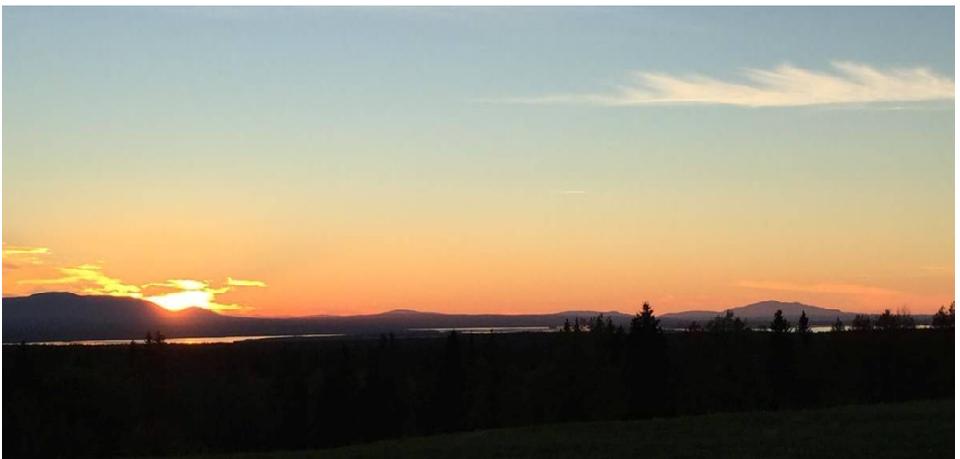
DUPLICATE QSOs: It is always tempting to call a rare DX station every time you hear it. This should be avoided as it means that you taking away the opportunity for the DX station to work a new station and give them their first QSO with the DX country.

CW OPERATION: CW is probably the major mode of operation on six metres due to the usually weak nature of many real DX openings

FM QSOs: All FM transmissions should be made above 50.500 MHz for the obvious reason that FM is wide-band and could wipe out weak DX signals.

MICROPHONE GAIN: Proper gain adjustments will reduce distortion and will also reduce interference with operators on nearby frequencies.

This is a summary of the recommended Operating Code of Practice as issued by the UKSMG in conjunction with JAROC, HARDXA, SixItaly, DRAA, LABRE-SP and SSA. The full version of the Code can be found on the UKSMG website at <http://www.uksmg.org/code.htm>.



Above 2: Take-offs from the GB3HX repeater QTH (see page 37).
Bottom: Take-off from the SK3SIX beacon to the west (worst direction) at sunset.

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