



An Amateur Radio publication for the Microwave Enthusiast

scatterpoint

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Published by the UK Microwave Group

The 3cm system of G4UVZ receiving the F1ZAP beacon on Charmouth beach



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Scatterpoint content is NOT just written by the Committee but by the members!

Your magazine needs your input

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Loan Equipment

Don't forget, UKμG has loan kit in the form of portable transceivers available to members for use on the following bands:

5.7GHz 10GHz 24GHz 76GHz

Would someone like to build a second 76GHz system?

Contact John G4BAO for more information.

Subscription Information

The following subscription rates apply.

UK £6.00 US \$12.00 Europe €10.00

This basic sum is for **UKuG membership**. For this you receive Scatterpoint for **FREE** by electronic means (now internet only) via the [Yahoo group](#) and/or Dropbox. Also, free access to the Chip Bank.

Please make sure that you pay the stated amounts when you renew your subs next time. If the amount is not correct your subs will be allocated on a pro-rata basis and you could miss out on a newsletter or two!

You will have to make a quick check with the membership secretary if you have forgotten the renewal date. Please try to renew in good time so that continuity of newsletter issues is maintained.

Put a **renewal date reminder** somewhere prominent in your shack.

Please also note the payment methods and be meticulous with PayPal and cheque details.

PLEASE QUOTE YOUR CALLSIGN!

Payment can be made by: PayPal to

ukug@microwavers.org

or a cheque (drawn on a UK bank) payable to 'UK Microwave Group' and sent to the membership secretary (or, as a last resort, by cash sent to the Treasurer!)

Articles for Scatterpoint

News, views and articles for this newsletter are always welcome.

Please send them to

editor@microwavers.org

**The CLOSING date is
the FIRST day of the month**

if you want your material to be published in the next issue.

Please submit your articles in any of the following formats:

Text: txt, rtf, rtf, doc, docx, odt,
Pages

Spreadsheets: Excel, OpenOffice,
Numbers

Images: tiff, png, jpg

Schematics: sch (Eagle preferred)

I can extract text and pictures from pdf files but tables can be a bit of a problem so please send these as separate files in one of the above formats.

Thank you for your co-operation.

Martin G8BHC

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You may not reproduce articles for profit or other commercial purpose.

You may not publish Scatterpoint on a website or other document server.

UKμG Project support

The UK Microwave Group is pleased to encourage and support microwave projects such as Beacons, Synthesiser development, etc. Collectively UKuG has a considerable pool of knowledge and experience available, and now we can financially support worthy projects to a modest degree.

Note that this is essentially a small scale grant scheme, based on 'cash-on-results'. We are unable to provide ongoing financial support for running costs – it is important that such issues are understood at the early stages along with site clearances/licensing, etc.

The application form has a number of guidance tips on it – or just ask us if in doubt! In summary:-

- **Please apply in advance of your project**
- **We effectively reimburse costs - cash on results (eg Beacon on air)**
- **We regret we are unable to support running costs**

Application forms below should be submitted to the UKuG Secretary, after which they are reviewed/agreed by the committee

www.microwavers.org/proj-support.htm

UKμG Technical support

One of the great things about our hobby is the idea that we give our time freely to help and encourage others, and within the UKuG there are a number of people who are prepared to (within sensible limits!) share their knowledge and, what is more important, test equipment. Our friends in America refer to such amateurs as “Elmers” but that term tends to remind me too much of that rather bumbling nemesis of Bugs Bunny, Elmer Fudd, so let's call them Tech Support volunteers.

While this is described as a “service to members” it is not a “right of membership!”

Please understand that you, as a user of this service, must expect to fit in with the timetable and lives of

the volunteers. Without a doubt, the best way to make people withdraw the service is to hassle them and complain if they cannot fit in with YOUR timetable!

Please remember that a service like our support people can provide would cost lots of money per hour professionally and it's costing you nothing and will probably include tea and biscuits!

If anyone would like to step forward and volunteer, especially in the regions where we have no representative, please email john@g4bao.com

The current list is available at

www.microwavers.org/tech-support.htm

UKμG Chip Bank – A free service for members

Interim Chipbank Update

By Mike Scott, G3LYP

Since the Martlesham Roundtable, I have received a number of donations to the Chipbank which will be included in the next catalogue update sometime after the Finningley Roundtable. Included are a considerable number of MMICs from G4HUP's estate including MARs and the Agilent MSA equivalents. We also have a further supply of Kent's “Funny” MAR-6s (Thanks Kent!).

Paul Nickalls G8AQA donated 48 pcb mounting SMA sockets (through hole) and Paul Entwistle G8AFC, two large bags of BZX85C5v1 and BZX85C11v 1watt Zener diodes.

John, G8ACE, presented me with a large box of reeled components which has added to our range of

SM Rs and Cs. If you need a value not listed in the current catalogue, ask as it may now be available.

Finally, as a result of a posting I made on the Reflector just before Martlesham, Bill, N6GHZ, kindly sent me a large collection of microwave components from California. These are mainly diodes, including Gunn and varactor as well as some transistors. These are listed on the next page. In many cases Google produced full or abbreviated data sheets, some appear to be specials as I could find no data. The quantity available is listed after the item. If you want any items(s) please use the usual Chipbank order form on the website.

The catalogue is on the UKμG web site at www.microwavers.org/chipbank.htm

UKµG Elmers

Region	Contact	Facilities
NW England	David Wrigley G6GXX 07811-776432	Spectrum Analysis to 24GHz Power measurement to 76GHz Freq Measurement to 26GHz Freq sources to 47GHz NF Measurement to 10GHz Antenna Test range to 24GHz
NE England, Yorks and Humberside	Peter Day G3PHO	Spectrum Analysis to 24GHz Power measurement to 24GHz (up to 5W on 24GHz) RF sources to 24GHz Direct freq measurement to 3GHz Transverter setting/tuning up General advice
S and SW England - 1	Brian Coleman G4NNS	Spectrum Analysis to 24GHz Power measurement to 26 GHz Scalar Network analyser and sweeper 2-15GHz Antenna test range 2.3, 3.4, 5.7, 10 and 24GHz Waveguide directional couplers for 10GHz and 24GHz Coax couplers 1.3 - 26GHz
S and SW England - 2	Paul Marsh M0EYT	Spectrum analysers to 6 and 18GHz Power measurement to 12GHz High power dummy load @ 10GHz (500w) Frequency measurement to 22GHz Frequency generation to 18GHz.
SE England and London	Allan Wyatt G8LSD	-
SE England - Herts	Bryan Harber G8DKK	RF Sources to 24GHz
East Anglia, Suffolk, Essex	Sam Jewell G4DDK	Spectrum analysis to 24GHz Power measurement to 24GHz Direct frequency measurement up to 3GHz VNA to 3GHz RF sources to 24GHz
East / Essex	Dr David Kirby G8WRB	Spectrum analysis to 22GHz Power measurement to 18GHz Frequency measurement to 18GHz Frequency sources to 20GHz VNA to 20GHz, inc SMA/3.5mm, N, APC7, WR90 calkits LCR meter and other instruments
West Anglia, East Midlands	John Worsnop G4BAO	Spectrum analysis to 24GHz Power measurement to 24GHz Frequency measurement up to 3GHz VNA to 1.3GHz Directional couplers 1-24GHz RF sources to 24GHz High current PSUs at 12, 28 and 48V

West Midlands	Richard Bown G8JVM	Power measurement to 18 GHz Sig gen to 1.3 GHz but can mix up to 10GHz Spectrum to 1.3 GHz but can down-convert 10GHz NF to 3 cms with IFs of 144 and others Freq measurement to 18 GHz, Rb standard Check for other bands
Wales	Chris Bartram GW4DGU	Spectrum Analysis to 24GHz Power measurement: Coax to 18GHz, WG 18-40GHz Frequency/time measurements to 3GHz VNAs 0-6GHz, 2-12.4GHz Noise figure to 18GHz Calibrated rotary vane attenuator for WG20 Tunable source, detectors, couplers and loads (WG and coax) for 24GHz
Scotland	John Cooke GM8OTI David Anderson GM6BIG	Power measurement to 18/24GHz Freq counter to 20GHz Spectrum Analyser to 20GHz Freq generators to 2GHz Various couplers
Northern Ireland	Gordon Curry GI6ATZ	-

or, indeed, anyone active on the microwave bands.

Spectrum Matters

From GB2RS 4 Aug

The 2302 MHz news is important as the early 3yr NoVs will expire in November if you don't renew (Existing holders were emailed more info directly)

(Note unlike GJ/GU, that GD remains off-limits in 2300-2302). The number of extra locations you can specify is a bit bigger too.

The Beacon 'clearances' by the Primary User are good news but the language is careful to refer to 'frequency clearance' and not NoV – as the issue of two NoVs is yet to be confirmed, but that's just a matter of a few days.

2300-2302 microwave NoV

Ofcom has updated the conditions of the 2300-2302MHz microwave NoV. Operation from Jersey and Guernsey is now also permitted under the latest terms. As many of the existing three year NoVs are due to expire, all holders are encouraged to renew online, free, to benefit from the latest terms.

Beacons

Separately, Ofcom has issued frequency clearances for four microwave beacons. These are GB3FNM at Farnham on 2.3GHz, GB3LPC at Bampton in 3.4GHz, a move of GB3KEU to Finningley on 5.7GHz and a change to GB3KBQ in Taunton on 10GHz. These are all Secondary allocations where RSGB supports and encourages activity.

Murray Niman G6JYB

Chairman's thoughts on – clearing an SK estate

By now all of you will know that our friend Dave, G4HUP, passed away back in February. Dave was one of a group of us in Suffolk who had all worked for BT at one time or other. The group still meets weekly for coffee and a chat.

We had discussed and agreed that when any of us passed away, the others would help to dispose of the personal ham radio estate of our friend. It was the last thing we expected when Dave passed away at the early age of 67. It was sudden and he didn't have a chance to put his estate in order before it happened.

As well as Dave's extensive collection of amateur radio parts, gleaned over more than 45 years, part of which was spent in ham radio-rich Germany, he was in the process of building up his HUPRF kit business.

We quickly established where the borderline between the hobby and the business lay. So we thought. That is another story.

Many of you in the UK (and beyond) have benefitted from the distribution of Dave's microwave and VHF radio equipment and parts. A great deal of that has now been disposed of, although there is still much to go over the next few months. It has been a slow and at times very sad task.

His family decided against selling the HUPRF business. It would have been a very difficult job as much of what Dave did, although documented extremely well on his HUPRF web page, was less well accessible on his computers. The family decided to liquidate the existing stock and that's what I have been involved in recently. A transfer of the business would have been a lengthy and major headache for everyone.

But back to the hobby disposal.

It is obvious that Dave had items that had been unused for many, many, years. Haven't we all?

My own rule is that if something has not been used for 2 years then it is a candidate for disposal as it probably won't get used now. If it hasn't been used for 5 years, it's outta here! Of course this doesn't work for everything, but it is a really good way to reappraise your interests. If you come back to something again after a number of years there is a good chance that technology has moved on and that old piece of WG16 or that tinfoil boxed transverter from VHF comms c 1976 is probably not the way forward. Of course many of you will disagree and hold on to the 'precious' item.....until one of us comes along to take it to the tip!

Remember before buying something that gleams at the local radio rally 'does it solve an immediate problem? If not, then you really don't need it'.

You owe it to your family to clear a lot of that junk out now and not leave it to them or your friends to have to dispose of if you suddenly pass away as Dave did.

Call it your HUP resolution. Clear at least some of that junk out now.....you know it makes sense.

73 de Sam, chairman UKuG

RSGB Convention

There are a number of microwave related talks on ATV, amateur satellites, deep space reception, etc.

Draft programme is at: <http://rs.gb.org/main/about-us/rs.gb-convention/rs.gb-convention-programme/>

Contest Results

John G3XDY, UKuG Contest Manager

June 5.7GHz Contest 2017

It is good to see continued entries from several stations using inexpensive modified video sender equipment in these events. Conditions were assessed as average.

Congratulations go to the Combe Gibberlets group M0HNA/P who won by a small margin from runners up Telford & District G3ZME/P. Congratulations to both.

5.7GHz Contest June 2017						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	M0HNA/P	IO91GI	9	1029	F9ZG/P	270
2	G3ZME/P	IO82QL	6	1001	G4ALY	248
3	G4LDR	IO91EC	8	724	G4ALY	195
4	GW3TKH/P	IO81LS	4	470	G4JNT	156
5	GW4HQX/P	IO81LS	3	314	G4LDR	124
6	G4JNT	IO90IV	5	291	GW3TKH/P	156
7=	2E0MDJ/P	IO81XW	2	22	G4NZV	11
7=	G0LGS/P	IO81XW	2	22	G4NZV	11
7=	M0BUX	IO82WA	2	22	2E0MDJ/P	11
10	G4NZV	IO82WA	1	11	2E0MDJ/P	11

June 10GHz Contest 2017

A little rain scatter was noted by some, but most found activity rather limited and conditions normal.

Congratulations go to Neil G4LDR with a narrow win over the Telford group G3ZME/P in the Open section, and to the Combe Gibberlets team M0HNA/P in the Restricted section who had a large margin ahead of runner up Stewart G0LGS/P.

10GHz Contest June 2017						
Open Section						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	G4LDR	IO91EC	17	2278	F6DKW	378
2	G3ZME/P	IO82QL	14	2244	G4ALY	248
3	G8HAJ	JO01JR	8	1455	F6DKW	345
4	G4KCT/P	IO93OX	6	1021	G4LDR	325
5	GW3TKH/P	IO81LS	7	702	M0KSW/P	155
6	G3UVR	IO83KH	4	616	G8EOP/P	173
7	G4EML/P	IO90SV	3	237	M0HNA/P	87
8	G8EEM/P	IO93PV	3	185	G3UVR	173
Restricted Section						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	M0HNA/P	IO91GI	16	1886	G4KCT/P	296
2	G0LGS/P	IO81XW	10	1053	G6TRM/P	253
3	2E0MDJ/P	IO81XW	9	800	G8HAJ	197
4	GW4HQX/P	IO81LS	6	613	M0KSW/P	155
5	G8EOP/P	IO93PV	3	185	G3UVR	173
6	G1DFL/P	IO91NM	2	115	G4LDR	70
7	M0KSW/P	IO91OS	0	0		0

July 5.7GHz Contest 2017

Some moderately helpful rain scatter conditions were reported in this event, although scores and activity were comparable with the June event.

The top two places swapped over this time, with Telford & District G3ZME/P taking top spot from the Combe Gibberlets group M0HNA/P. Congratulations to both.

5.7GHz Contest July 2017						
Section All						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	G3ZME/P	IO82QL	7	1199	G3XDY	265
2	M0HNA/P	IO91GI	8	991	G4ALY	216
3	M0GHZ	IO81VK	6	857	G3XDY	246
4	G4LDR	IO91EC	6	801	G3XDY	223
5	G4EML/P	IO90SV	2	172	M0HNA/P	87
6	M0RKX/P	IO92DB	4	112	G4NZV	29
7=	G4NZV	IO82WA	3	51	M0RKX/P	29
7=	M0BUX	IO82WA	3	51	M0RKX/P	29
9=	2E0MDJ/P	IO81XW	3	49	M0RKX/P	27
9=	G0LGS/P	IO81XW	3	49	M0RKX/P	27

July 10GHz Contest 2017

Rain scatter propagation aided signals for several stations, with respectable totals for the leading stations.

The Telford group G3ZME/P win the Open section this time, with G4KUX as runner up, and Keith GW3TKH/P with Rover operation from two locations pushed the Combe Gibberlets team M0HNA/P into second place in the Restricted section. Congratulations to all.

10GHz Contest July 2017						
Open Section						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	G3ZME/P	IO82QL	24	3856	F6DKW	535
2	G4KUX	IO94BP	10	3367	F6DKW	712
3	G4LDR	IO91EC	19	3350	G4KUX	395
4	G8HAJ	JO01JR	15	2661	G4KUX	370
5	G4BAO	JO02CG	9	1338	G3UVR	253
6	G3UVR	IO83KH	7	1274	G3XDY	324
7	G4EML/P	IO90SV	3	382	G4ODA	210
Restricted Section						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	GW3TKH/P	IO81LS	15	2491	G6TRM/P	314
2	M0HNA/P	IO91GI	15	1844	G4DDK	204
3	G3YKI	IO92BD	14	1622	G4KUX	279
4	G0LGS/P	IO81XW	12	1225	G4KUX	302
5	2E0MDJ/P	IO81XW	11	1198	G4KUX	302
6	M0GHZ	IO81VK	8	935	G8HAJ	210
7	M0RKX/P	IO92DB	5	303	G4UVZ	156

5.7/10GHz Championship Tables

Positions after three events, the best three count to the total.

5.7GHz					
Pos	Callsign	28/05/17	25/6/17	30/7/17	
1	G3ZME/P	1000	973	1000	2973
2	G4LDR	500	704	668	1872
3	M0HNA/P	0	1000	827	1827
4	GW3TKH/P	461	457	0	918
5	GW4HQX/P	368	305	0	673
6	G4JNT	216	283	0	499
7	M0RKX/P	62	0	93	155
8	M0BUX	28	21	43	92
9=	2E0MDJ/P	27	21	41	89
9=	G0LGS/P	27	21	41	89
11	G4NZV	28	11	43	82
10GHz Open					
Pos	Callsign	28/5/17	25/6/17	30/7/17	TOTAL
1	G3ZME/P	1000	985	1000	2985
2	G4LDR	870	1000	869	2739
3	G8HAJ	559	639	690	1888
4	GW3TKH/P	436	308	0	744
5	G3UVR	0	270	330	600
6	G6TRM/P	567	0	0	567
7	G4KCT/P	0	448	0	448
8	G4CLA	238	0	0	238
9	G4EML/P	0	104	99	203
10	G8EEM/P	0	81	0	81
10GHz Restricted					
Pos	Callsign	28/5/17	25/6/17	30/7/17	TOTAL
1	G0LGS/P	1000	558	492	2050
2	M0HNA/P	0	1000	740	1740
3	2E0MDJ/P	621	424	481	1526
4	GW3TKH/P	0	0	1000	1000
5	GW4HQX/P	619	325	0	944
6	M0KSW/P	0	0	740	740
7	G3YKI	0	0	651	651
8	G1DFL/P	570	61	0	631
9	M0RKX/P	430	0	122	552
10	M0GHZ	0	0	375	375
11	G8EOP/P	0	98	0	98

UKuG Microwave Contest Calendar 2017

Dates	Time UTC	Contest name	Certificates
27-Aug	0600 - 1800	4th 5.7GHz Contest	F, P,L
27-Aug	0600 - 1800	4th 10GHz Contest	F, P,L
17- Sep	0900 - 1700	3rd 24GHz Contest	
17- Sep	0900 - 1700	3rd 47GHz Contest	
17- Sep	0900 - 1700	3rd 76GHz Contest	
24 -Sep	0600 - 1800	5th 5.7GHz Contest	F, P,L
24 -Sep	0600 - 1800	5th 10GHz Contest	F, P,L
22 -Oct	0900 - 1700	4th 24GHz Contest	
22 -Oct	0900 - 1700	4th 47GHz Contest	
22 -Oct	0900 - 1700	4th 76GHz Contest	
19 -Nov	1000 - 1400	5th Low band 1.3/2.3/3.4GHz	F, P,L
Key:	F	Fixed / home station	
	P	Portable	
	L	Low-power (<10W on 1.3-3.4GHz, <1W on 5.7/10GHz)	



Scottish Microwave Round Table

The GMRT reverts to the first Saturday of the month this year, so it will be held on Saturday 4 November.

The venue for the Round Table will be the Museum of Communication as in previous years, and the evening meal has again been booked in the Kingswood Hotel.

Currently three speakers are confirmed:

- Mark GM4ISM - "A 10 GHz Home Station"
- David GM6BIG - "A High Quality 10GHz Beacon"
- Andy MM0FMF - "13cm SOTA"

As before, it will include the GM round of the UK Microwave Group Projects Trophy, so get that project completed before November – built, modified, hardware or software.

Places will be limited to about 50 as usual, and booking will be available through this website soon.

Announcements will also appear on the ukmicrowaves Yahoo reflector.

Crawley Microwave Round Table Program

Sunday 10th September 2017

Again this year following we will be holding a heat for the UK Microwave Group annual Project contest for the G3VVB trophy. Please do bring along your constructed equipment or project and enter. Entries do not necessarily need to have been finished during the last year.

Please note that the contest will also accept software entries as well as hardware. The winner of this round will go on to be considered, together with entries from all the other round tables over a year both before and after this event.

The morning will feature the usual 'bring and buy' sale, so if you have something to sell then please bring it along.

Mike G3LYP will be happy to bring any chip components from the UKuW Group chipbank to you at the meeting. If you have a forthcoming project then why not contact Mike beforehand to place your orders, which are free for UKuW group members.

The program this year as ever offers the microwaver something different – come along and have a good chat, support the construction contest heat and hear the talks.

Below is the finalised timetable:

10:00	Venue opens
12:00	UKuW Group Project contest round judging commences
12:30	Lunch (hot dogs and burger rolls etc and tea/coffee available)
13:30	Opening remarks by Chris G0FDZ and the results of the Project contest heat
13:45	Thoughts on low noise microwave sources – Roger G8CUB
14:15	The Bodger's Guide to small station EME part 3 – John G4BAO
15:00	Break – Tea and coffee available
15:30	EME and ISS operations from Goonhilly Earth Station – Brian G4NNS
16:15	End of meeting

The venue is the Crawley Amateur Radio Club's hut and directions can be found at:

<http://carc.org.uk/find-us/>

Please contact Chris G0FDZ for more info on chris@g0fdz.com



Activity News : July 2017

By Neil Underwood G4LDR

Please send your activity news to:

scatterpoint@microwavers.org

Introduction

July has seen a deterioration of the warm summer weather into what on some days has seemed like early autumn with a stream of unsettled weather systems crossing the UK. This has done nothing to enhance the propagation conditions on the microwave bands especially in the south of the UK. There have been exceptions including a new tropo distance record on 1296MHz and an opening across the North Sea and parts of the north east UK.

At the beginning of August a number of German amateurs came to the English Channel coastal regions and the Channel Isles to carry out tests on the mm wave bands up to 122GHz. A little more detail later.

Thanks go to those who have sent in contributions this month and a plea to others to send me something if only a few lines of what they have been up to, on any mode on any microwave band.

New IARU Region 1 Tropo Record

On the 14th July 2017 a new tropo record was set by M0VRL IO70PO (Cornwall) and EA8AVI IL28FC (Gran Canarie). The distance worked was 2661km.

I have received the following e-mail from Kjeld OZ1FF.

Region 1 DX Records

VUSHF Region 1 DX Records can be found at <http://vushf.dk/iaru-reg-1-dx/>.

The new 1296 MHz TR record by EA8AVI and M0VRL is now in the database. Please inform the Scatterpoint readers, that record claims should be send to the below shown address.

IARU Region 1 VUSHF DX Records Coordinator

Phone/SMS +45 4021 1119

<mailto:dxrecords@vush.dk>

<http://dxrecords.vushf.dk>

cm-Wave Bands

From Jim, GM3UAG

On the 18th July although Hepburn looked promising with a large splotch of yellow over the North Sea, I wasn't sure as the pressure was never very high - about 1021mb. All the same, after my weekly sked on 23cm with John, 2M0FYG, in Aberdeen, I decided to listen for beacons on 23cm. At 1845Z I picked up PI6ASD just above the noise but in the next 10 minutes it had improved greatly to about S6 and PI7ALK, my usual most reliable beacon, was readable. GB3BT, the Berwick repeater, another reliable source for me, was about S7.

This was UKAC night on 23cm and between 1920 and 2020Z, I worked M0CES/P, G4KIY, G8EEM/P, G3XDY and G0EHV/P all on SSB as random contacts at S3 to S9.

During this time GB3MHZ, 23cm and GB3MHS, 13cm were coming in nicely.

I logged GB3EDN, the first time this year, at its usual S1. Things faded out about 2100Z and all is white noise once again.

From Keith GW3TKH/P IO81LS/KR

With the weather forecast predicting sunshine and showers for the 10/5.7GHz July cumulatives, I decided to try roving.

Using 10GHz only, 60cm dish, light tripod and power turned down to 1Watt, the gear was easy to rig/de-rig quickly when the rain squalls came.

I started early at IO81KR, worked 4 stations, the rain was moving up the Bristol channel in front of me, GB3SCX was strong but very scattered. F1ZAP/B in IN88, usually heard here, was absent and a test with F9OE in IN78 was unsuccessful, despite hearing each others line-up signals briefly via AS.

Still in the dry, I moved to IO81LS, working the Telford group quickly with big signals both ways.

Rain cells were moving quickly across towards the SE, helping with my best DX, G6TRM/P at 314km.

The rain/wind struck at about 14:00 whilst in contact with G4BAO, I had to finish the contact from under a bin bag! 5 minutes later I had just completed with G4ALY, another squall; they were coming to get me now, time to go!

From Ed, G3VPF IO80

For the July 10GHz cumulative the site I used, Hardy's Monument, is an exposed coastal site and on Sunday morning it was gusting to force 7. I had hoped to try my new 10GHz system with a 0.8 metre dish on a tripod.

I assembled the 10 GHz system and did the rounds of the beacons but just after I activated KST to look for contacts the wind picked up even more and tripod and dish went flying. I picked up the bits and retired home. Straightened the dish feed and repaired the broken power connector and went back up to the site.

This time the tripod was heavily weighted to stop it tipping. Unfortunately the wind had picked up even more and was now gusting to force 8. Just got the system assembled and about to put the clamps on to secure the dish to the tripod when there was another big gust of wind and while the tripod stayed put, the dish went rolling down the hill. Major damage this time to the dish feed and dish mount so I gave up!

Hope to try again in the next contest at the end of August.

From Adrian G4UVZ IO80

An interesting outing took place where Cliff, G8SHF and I first pitched up 160m amsl a couple of miles east of Charmouth in Devon, where we heard the 3cm French beacon F1ZAP in IN88HL, Brittany, not an enormous signal but it was there 100% of the time. We transferred to the SDR and saw the classic sine wave frequency shift of this beacon; (it has been like that for at least 10 years Ed.).

Encouraged by the success we then went to sea level at Charmouth. We heard the same signal maybe even a bit stronger.

The 3cm system of G4UVZ receiving the F1ZAP beacon on Charmouth beach.

We then headed inland to the Stockland Hill TV mast which was slightly obstructed to the sea. Sadly no signal from the French beacon but a good signal from GB3SCX direct and an even better signal bounced off the tower!



From Neil G4LDR IO91

On the 6th and 7th August MJ/DK5NJ and MJ/DB6NT operated on 3cm from the north coast of Jersey (IN89VG). A number of stations along the south of England managed to work them including G8GTZ/P, G4NNS and G4LDR in IO91; G4UVZ/P and G3VPF/P in IO80 and G4ALY in IO70. Signal levels were better on the 7th than the 6th with 59 reports being exchanged for most contacts. G4BAO in JO02 heard a very brief burst from MJ/DK5NJ via aircraft scatter.

It is also hoped that 3cm contacts with Guernsey can be made before MU/DK4RC leaves the island on the 10th August.

mm-Wave Bands

From Pete, G1DFL IO91

Pete G1DFL reports that he has completed his first QSO on 24GHz with Dave G1EHF/P across the car park at The New Inn, Heckfield in IO91MI!

Dave's system is a self-constructed transverter using ex-DMC link kit modules producing 100mW into a 30cm dish. Pete was using a converted Nortel ODU with 250mW into a 30cm dish kindly loaned by Mike G0MJW. After setting up they quickly found each other's signals and exchanged 5-9 end-stop reports with their dishes 4.4 meters apart. They then tested with Dave's Arduino-powered reference beacon to check offset's again. The QSO was celebrated with a pint in the pub.

Dave M0HNA and Barry G4SJH (using UKuG loan kit) have now both worked Neil G4LDR on 24GHz from Walbury Hill to Salisbury at a distance of 30km for their first QSO's on the band. Noel G8GTZ is also building a system, so its great to report that interest and activity on 24GHz in IO91 square is on the up!

(Noel G8GTZ/P had his first 24GHz QSO with G4NNS and G4LDR using equipment loaned to him by G4NNS on the 6th August whilst waiting to work MJ/DK5NJ on 10GHz – Ed.).

mm-Wave Activity Across the Channel.

At the beginning of August several German amateurs made mm-wave contacts across the English Channel and between the Channel Isles and France. I expect a full report will be published in Dubus in due course. Those involved included DK5NJ, DB6NT, DK4RC and DF9IC.

Information posted on the ON4KST reflector by Henning DF9IC on the 7th July shows that the following paths were worked on the mm-wave bands;

G (Dover) to F (Calais), up to 122GHz

G (Ramsgate) to ON, up to 76GHz

G (Dorset) to GU, up to 47GHz

GU to GJ, up to 122GHz, (also Red Light)

GU to F, up to 76GHz

GJ to F, up to 76GHz (possibly 122GHz as well), (also Red Light).

Congratulations to the German team in achieving some 'firsts' on the mm-wave bands.

First connections at 24, 47, 76 and 122 GHz as well as 660 nm at the English Channel

Pictures and article from <https://www.darc.de/home/> reproduced by kind permission of Roland Becker DK4RC

After the mm-wave DXpedition at the Baltic Sea in 2016, the participants were delighted to have a similar action planned: on the English Channel the DXCC areas on all bands from 10 GHz to 122 GHz as well as to 660 nm (Red light LED). Of the DL radio operators who are active on these bands, the following OMs participated in this DXpedition: Michael, DB6NT; Henning, DF9IC; Hartmut, DG2DWL; Gert, DG8EB; Roland, DK4RC; Matthias, DK5NJ, and Norbert, DL4DTU.

The DV Thüringen (X) Roland Becker, DK4RC, writes in his DXpeditionsbericht:

"In addition, we were called by some stations from England and France, as mm-wave connections with these DXCC countries (GU + GJ) and the Activated large fields are just not everyday. The following areas were activated:

West-Belgium, South-England, North-West France, the islands of Guernsey and Jersey. From these sites, more than 100 QSOs were distributed, distributed on all frequencies from 10 GHz to 122 GHz. Several wireless

connections, especially those at 47 GHz, 76 GHz, 122 GHz and 660 nm, are certainly first connections between these countries.

We used mostly the tried and tested station technology as last year (see CQ-DL 11/16, p. 49). At 122 GHz, however, we have used newly built transverters with subharmonic mixers (Made by DB6NT). These are about 10 dB more sensitive on the receiving side than the well-tried technique with harmonic mixers. The mirror of the 122-GHz station, which I used on Guernsey, Was a very small precision mirror with only 20 cm diameter. Michael used a mirror with 30 cm diameter on jersey, in France a mirror with a diameter of about 60 cm. Thus, we were able to exchange signal transponders of S2 for several QSOs at 122 GHz. This year we had also taken the existing equipment technology for 660 nm and successfully used it. We have been able to make radio connections between the following DXCC areas: Belgium, England, France and England, England and Guernsey, France and Guernsey, France and Jersey, and the islands of Guernsey and Jersey.

Our first radio connection, between Belgium and England took place on 3.8.2017, 1105 UTC, the last QSOs of this DXpedition between Guernsey and England on 9.8.2017, 1045 UTC. Even though this year the weather was not optimal, there was a lot of wind, now and then rain, a restless sea and no inversions, we could realize almost all planned connections. Again this time the signal strengths were often at S9 +. On 9.8.2017 I could, for example, from

Guernsey from stations from England (IO91, IO80) with S9 + problem-free in SSB and FM work. From Guernsey to France, from Jersey to France And from Jersey to Guernsey we were able to confirm signal strengths of S9 for all connections from 10 GHz to 76 GHz as well as to 660 nm signal strengths. However, the fact that on the islands of Jersey and Guernsey, especially in the remote locations we had to visit for our experiments, almost no mobile Internet was usable. Surely, with a stable access to the KST-chat, further nice radio connections would have been possible. "

QTH locators of the used sites:

F	Cap Blanc Nez	JO00UW41ID
	Jobourg Radar Station	IN99BQ14DK
	Baie d'Écalgrain Paraglider	IN99AQ76VW
	Baie d'Écalgrain Sitzbank	IN99AQ77IN
	Camping Belsito	IN99CK32IT
	Phare de Carteret	IN99CI39GO
	Baubigny	IN99CK41IO
	IN99BP	IN99BP68MN
G	Ramsgate	JO01RI22MV
	South Foreland Lighthouse	JO01QD43UW
	Portland Bill Lighthouse	IO80SM53DG
	King Barrow Quarries Reserve	IO80SN73FD
GJ	Grosnez Castle	IN89VG22TL
	IN89XD	IN89XD69BO
GU	IN89QL	IN89QL96NW
	IN89RL	IN89RL18EH
	IN89RM	IN89RM91GI
	IN89RK	IN89RK61GS
ON	De Panne	JO11GC83GF

<http://no.nonsense.ee/qth/map.html>



F/DG8EB in direction of Guernsey

Date	UTC	Band	Call 1	Locator 1	RST 1	Call 2	Locator 2	RST 2	Distance km	Comment
8/3/17	12:10	47G	M/DB6NT	JO01RI22MV	55	ON/DG8EB	JO11GC83GF	54	83.6	First ON-G 47G
8/3/17	12:18	76G	M/DB6NT	JO01RI22MV	55	ON/DG8EB	JO11GC83GF	54	83.6	First ON-G 76G
8/3/17	15:58	76G	M/DB6NT	JO01QD43UW	59	F/DF9IC	JO00UW41ID	59	33.6	First F-G 76G
8/3/17	16:55	122G	M/DB6NT	JO01QD43UW	519	F/DG8EB	JO00UW41ID	519	33.6	First F-G 122G
8/4/17	16:51	47G	M/DK5NJ	IO80SM53DG	559	MU/DK4RC	IN88	559	114.6	First G-GU 47G
8/4/17	17:10	24G	M/DB6NT	IO80SM53DG	559	MU/DK4RC	IN88	559	114.6	First G-GU 24G
8/6/17	11:46	47G	MU/DK4RC	IN88	59	F/DG8EB	IN99AQ76VW	59	46.4	First F-GU 47G
8/6/17	11:50	76G	MU/DK4RC	IN88	59	F/DG8EB	IN99AQ76VW	59	46.4	First F-GU 76G
8/6/17	16:24	24G	MU/DK4RC	IN88	59	MJ/DB6NT	IN89VG22TL	59	28.6	First GJ-GU 24G
8/6/17	16:41	76G	MU/DK4RC	IN88	59	MJ/DB6NT	IN89VG22TL	59	28.6	First GJ-GU 76G
8/6/17	17:01	122G	MU/DK4RC	IN88	529	MJ/DB6NT	IN89VG22TL	529	28.6	First GJ-GU 122G
8/6/17	17:45	10G	MJ/DK5NJ	IN89VG22TL	59	F/DF9IC	IN99CK32IT	59	35.8	First F-GJ 10G
8/6/17	17:47	24G	MJ/DK5NJ	IN89VG22TL	59	F/DF9IC	IN99CK32IT	59	35.8	First F-GJ 24G
8/6/17	17:51	47G	MJ/DK5NJ	IN89VG22TL	59	F/DF9IC	IN99CK32IT	59	35.8	First F-GJ 47G
8/6/17	17:58	76G	MJ/DB6NT	IN89VG22TL	59	F/DG8EB	IN99CK32IT	59	35.8	First F-GJ 76G
8/6/17	18:09	122G	MJ/DB6NT	IN89VG22TL	529	F/DG8EB	IN99CK32IT	529	35.8	First F-GJ 122G
8/6/17	19:59	660nm	MJ/DB6NT	IN89VG22TL	59	F/DG8EB	IN99CK32IT	59	35.8	First F-GJ 660nm
8/7/17	19:10	660nm	MJ/DB6NT	IN89VG22TL	59	MU/DK4RC	IN88	59	28.6	First GJ-GU 660nm

QSO Log



MJ/DK5NJ in the direction of Guernsey



MU/DK4RC to England



F/DL4DTU in QSO to Guernsey



M/DB6NT in QSO to Guernsey



MU/DK4RC on 660 nm to Jersey

From John Worsnop G4BAO

ICYMI: Would someone like to build a second 76GHz system?

.....and finally

The deadline for activity reports to be included in the next issue is Friday 1st September 2017.

Events calendar

2017

August 18 – 20	SP VHF Convention and Technical Meeting - Poland	www.mikrofaie.iq24.pl
Sept 8 – 10	62.UKW Tagung Weinheim	www.ukw-tagung.de/
Sept 9–10	BATC Convention (CAT 17) at Finningley	http://batc.org.uk/convention.html
Sept 10	Crawley Roundtable	carc.org.uk
Sept 17–21	IARU-R1 Conference, Landshut, Germany	www.iaru2017.org/
Sept 29–30	National Hamfest	www.nationalhamfest.org.uk/
Oct 8 – 13	European Microwave Week, Nürnberg	www.eumweek.com/
Oct 13 – 15	RSGB Convention, Kents Hill Park Conference Centre, Milton Keynes	rsgb.org/convention/
Oct 14 – 15	Amsat-UK International Space Colloquium, Kents Hill Park Conference Centre, Milton Keynes	https://amsat-uk.org
Oct 26 – 29	Microwave Update, Santa Clara, California	www.microwaveupdate.org
Nov 4	Scottish Round Table	www.gmroundtable.org.uk/

2018

* February 9–11	Hamcation, Orlando, Florida	www.hamcation.com
February 17	Tagung Dorsten	www.ghz-tagung.de/
April 7	CJ-2018, Seigy	http://cj.r-e-f.org
April 21	RSGB AGM	http://rsgb.org/agm
May 18–20	Hamvention, Dayton	http://www.hamvention.org/
** June 1–3	Ham Radio, Friedrichshafen	www.hamradio-friedrichshafen.de/
August 17–19	EME2018, Egmond aan Zee,NL	https://www.eme2018.nl
Sept 23–28	European Microwave Week, Madrid	www.eumweek.com/

2019

June 28–30	Ham Radio, Friedrichshafen	www.hamradio-friedrichshafen.de/
Sept 15–20	European Microwave Week, Utrecht	www.eumweek.com/

NB Some of the 2018/19 event links may not be working/updated yet.

* The web site is currently giving *Access from your area has been temporarily limited for security reasons.*
Worked OK a week ago.

** HAM RADIO 2018 will take place from 1 to 3 June (note change of date)

EME 2018

The website <http://eme2018.nl/> is online. Booking now open! Email info@eme2018.nl to register interest and for updates.

There's also a Facebook page: <https://www.facebook.com/EME2018/>

73!

Jan PA3FXB (team PI9CAM) team EME 2018

80m UK Microwavers net

Tuesdays 08:30 local on 3626 kHz (+/- QRM)

73 Martyn Vincent G3UKV