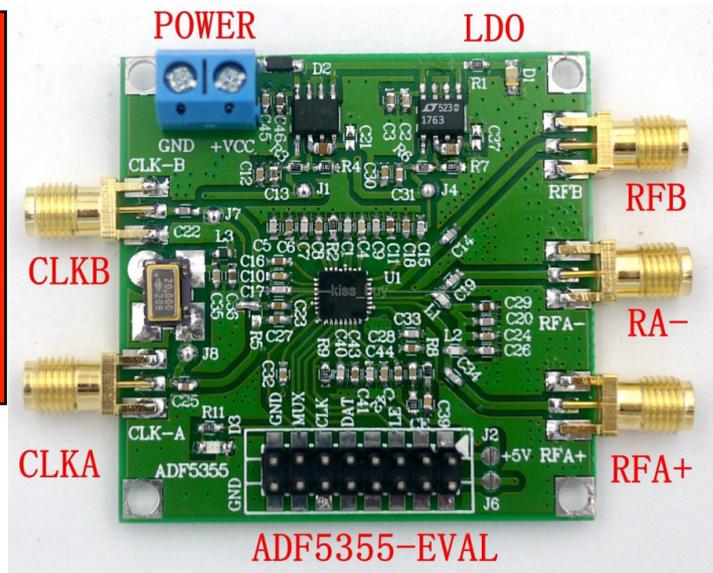




Reducing Phase Noise (PN) on Chinese ADF5355 Boards

By Brian Flynn GM8BJF



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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

<https://groups.io/g/Scatterpoint> 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

Reproducing articles from Scatterpoint

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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

Chipbank

By Mike Scott, G3LYP

Since the Martlesham Roundtable, I have received a number of donations to the Chipbank. 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 in the July issue on page 5. 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

Chairman's thoughts – Building new kit

During the last six months I have been developing a new kit. I'm not going to talk about that here, but it has caused me to think long and hard about what ham radio constructors now look for in a kit.

I have been constructing kits since before I was licensed in 1970. I didn't have much money to spend on buying a full Heathkit rig, so I was restricted to some more basic radio kits which I would then modify to suit my own requirements. My 'junk box' was not particularly well stocked but by dismantling older radios, scrounging parts and persuading my father that I needed some extra pocket money to finish off a project, I usually got there in the end.

Later, when I started to get interested in VHF and the lower UHF bands, I saw all these lovely designs in the old (Terry Britain) issues of VHF Communications, I found that I could buy 'short kits' from advertisers and article authors. These usually consisted of a PCB, the hard-to-get semiconductors and the occasional specialist parts. Most of the resistors and capacitors were leaded components and reasonably available from a number of component companies like Electrovalue in Egham and Echelford Communications (both reasonably local to where I lived).

I built many designs into full working rigs (still no Heathkits, though!) as well as starting to develop my own designs. I found that several ham friends were interested in having a go at these as well and "could I let them have a PCB?". As I got a real kick out of seeing others use my designs (I still do), I was pleased to supply the board and they could then supply their own Cs, Rs and, usually, transistors and ICs. These were, in the main, designs that still used leaded components. Everyone had a good collection of these in their 'junk boxes'. Mostly the Rs and Cs were not critical.

All that has changed in recent years. Apart from many of the PCBs being commercially manufactured because of the difficulties of producing effective through hole via for grounding, multilayer to enable complex interconnects and between layer screening, the widespread use of SMD (surface mount devices) means that many amateurs no longer have a junk box with all the various sizes and types of SMD parts likely to be needed. You can, of course, go out and buy these SMD parts, but because they are usually so cheap (<1p for a resistor), but because of the unwillingness of suppliers to sell just one, it is usually necessary to buy a strip of 100. I don't regard this as a major problem, in itself, but what is a problem is that these have to be stored, maybe for future use. Maybe not. And they have to be stored in such a way as to be easily and accurately identified.

So many amateurs just do not want to do this, so the expectation is that kit producers are now expected to supply complete kits, containing all parts. This shifts the onus onto the kit supplier to buy the parts, mark them, store them and then be able to retrieve them to put into kits in such a way as to be readily identified by the constructor. When the number of SMD parts in one kit alone can amount to over one hundred and there may be several kits, the need to deal with thousands of tiny parts it can become a very time consuming activity.

The solution is to have the board assembled by the board manufacturer and then electrically tested to ensure that the builder has a good, working board to work with. Setting all this up takes a lot of time that could otherwise be used to play on the radio!

With the widespread 'invasion' of SDRs all this is changing. An SDR seems to have far more in common with a great many other advanced electronic devices, so assembly doesn't cause so many problems for board and assembly houses.

Where does this leave us as radio amateurs? I think it will gradually lead to the demise of traditional ham radio construction and a move to the sort of thing we see in computing, radio control and other area, where the radio is a piece of bought-in equipment that is personalised by the addition of facilities from software libraries to make the radio that we want.

For those who want to continue traditional construction, we are very fortunate in the UKuG to have a very comprehensive SMD (chip) bank that is administered by Mike, G3LYP. A great many SMD parts are now stocked and available absolutely free to our members. Maybe the day of offering short kits is not really dead if you can take advantage of our chip bank!

73 de Sam, G4DDK

Reducing Phase Noise (PN) on Chinese ADF5355 Boards

Brian Flynn GM8BJF

Introduction

Recently two varieties of PCBs have become available from different Chinese internet outlets which have AD ADF5355 PLL ICs on them. They are described as “54MHZ-13.6GHZ RF ADF5355 PLL Phase-locked Loop VCO Synthesizer Board”. One on 1.6 mm FR4 board with green solder resist and the other on a thinner board material which again appears to be FR4 but with black solder resist. Both have broadly the same circuitry on them which closely follows the design of the AD evaluation board for the chip but there are some differences.

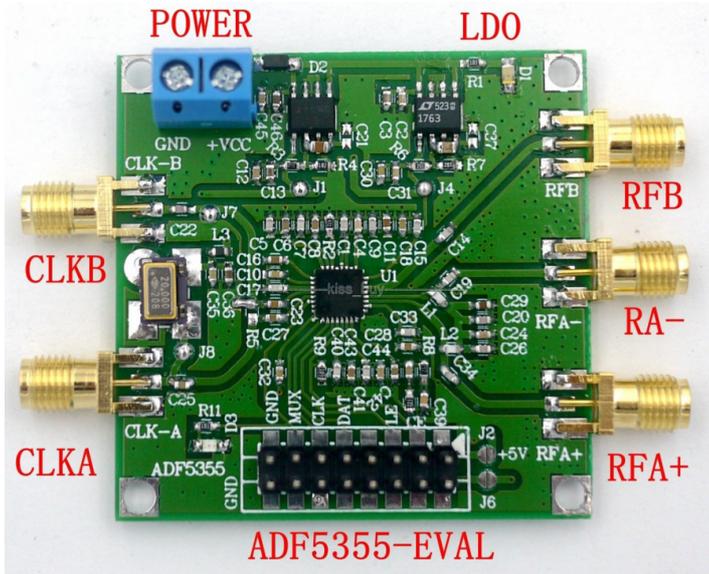


Figure 1. Green PCB

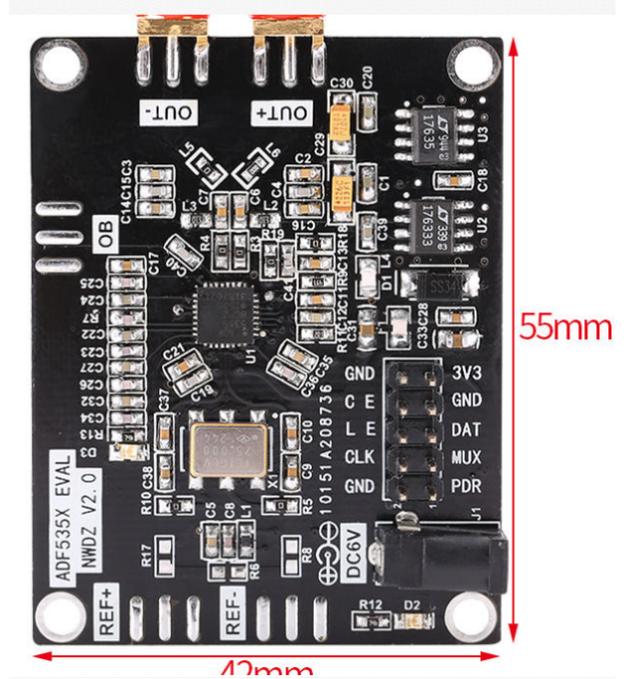


Figure 2. Black PCB

Both boards are boards are available for prices starting at about £55 which is about the one off price for the ADF5355 chip in the UK. They can be made to work under the control of a PC via their SPI bus, [1,2], with the AD evaluation software. I have now had one each type of board to try out and they both functioned correctly but the phase noise was a bit disappointing and the output powers were lower than quoted in the data sheet. The lack of output power is easily overcome with a MMIC amplifier and hardly surprising considering the FR4 substrate, but the PN performance was considerably worse than suggested by the data sheet and merited further investigation. The schematic diagram of the black PCB can be downloaded from here,[3].

Phase noise reduction

My initial hunch was that the power lines were the source of the noise. There are two voltage regulators on the boards one a LT176333 which powers both the 3.3 Volt analogue and digital Vdd lines and the other a LT17635 which powers the VCO and charge pump circuitry with 5V. This is powered directly from the output of the regulator and there is no further on-chip regulation, whereas the 3.3 V rails are further regulated down to 1.8 V on-chip. Both the LT parts are billed as “low-noise” in the data sheet, but I noted that the AD evaluation PCB design used AD parts which are considerably more expensive than the LT parts. Their respective data sheets reveal that the AD parts were about ten times less noisy. The simple expedient of adding a 3300 uF low ESR capacitor across C30 (on a black PCB) bypasses the noise from the regulator output quite effectively. I used a Rubycon MBZ series 6.3 V part with an ESR of 12 mOhm. The screenshots in figures 3 show the reduction in phase noise at 10 GHz. This also is effective on the green board.

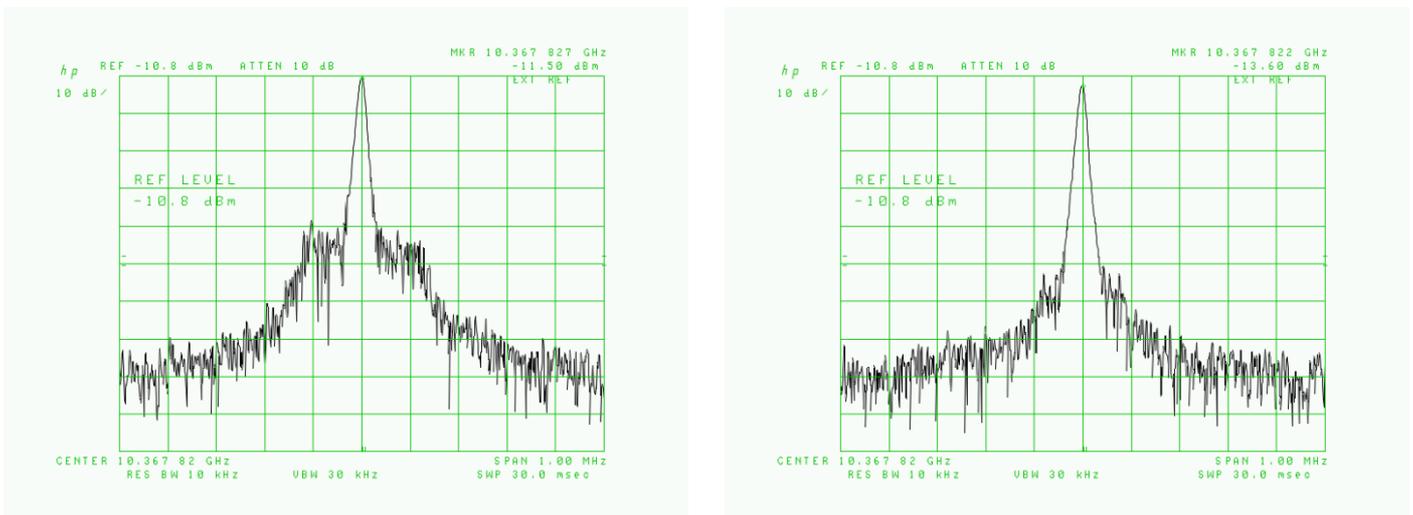


Figure 3. PN before and after addition of Cap across C30 on black PCB.

In order to check whether the chips were now performing as well as they should I measured the PN and compared the result with a simulated PN plot produced by the free ADISimPLL tool which is provided by AD. The results are shown below.

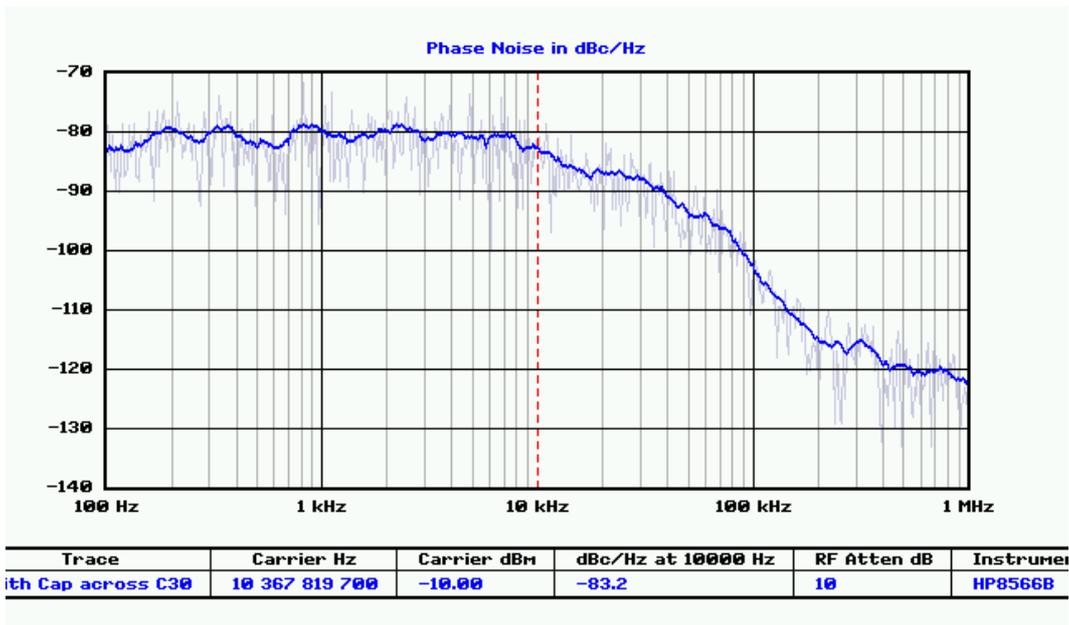


Figure 4. Measured PN at 10 GHz with the addition of extra decoupling

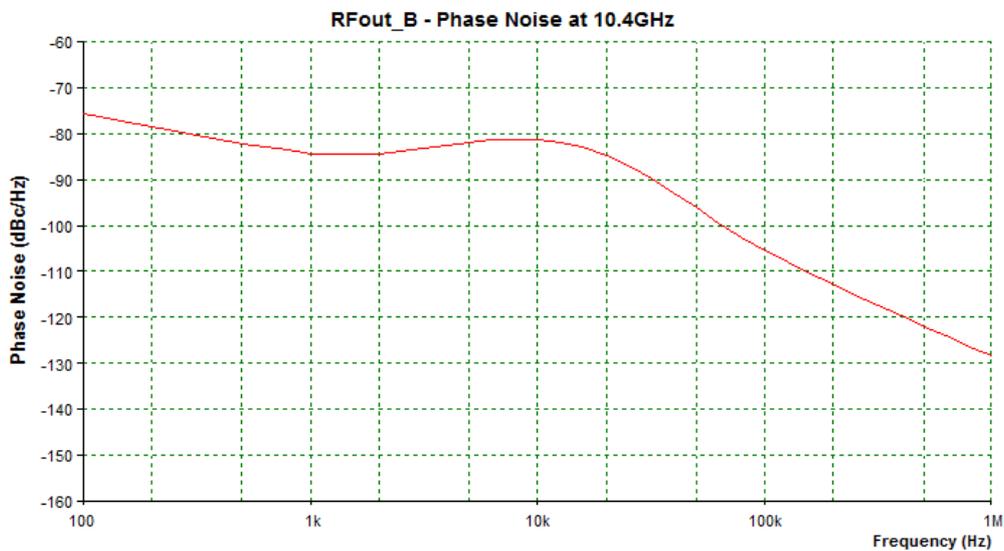


Figure 5 Simulated PN at 10.4 GHz with a 15 kHz loop bandwidth.

Conclusion

The data sheet does not give PN curves at 10 GHz but does show the behaviour at 5GHz . This suggests that the levels at 100 Hz, 1kHz and 10 kHz are in the -75 to -80 dBc region which is borne out by the measurements. The conclusion from this is that these boards can be made to realise the full performance of the chips and can be useful RF sources for simple low power beacons, signal generators and local oscillators. They may also be useful for multiplying to the higher bands.

References.

1. "PC Control of Analog Devices ADF4XXX Synthesiser chips over USB", <https://gm8bjf.joomla.com/articles/9-pc-control-of-analog-devices-adf4xxx-synthesiser-chips>
2. ADF5355 evaluation software. <http://www.analog.com/en/design-center/evaluation-hardware-and-software/evaluation-boards-kits/eval-adf5355.html#eb-overview>
3. ADF5355 schematic for black PCB. <https://www.sendspace.com/file/kdqcm1>

We welcome our new Wales Rep. – Peter Harston GW4JQP

Originally from Pembrokeshire, I was badgered into taking my RAE by Adrian G8EQL (now G4UVZ) and was licensed in 1971 as G8FKC, then as G4JQP in 1980.

With a career as a Broadcast Engineer in ITV, then as Chief Engineer of a large independent programme producer, my hands-on terrestrial microwave experience has been mainly at 2, 2.5, 7 and 13GHz together with satellite operations at 14 and 29GHz.

Now retired in my native Wales, I look after the technical side of the local VHF and UHF repeaters and am integrating the equipment for the GB3RPE 10GHz beacon, with the hope that an NoV will some day be forthcoming.

I am currently assembling a GW4DGU 10GHz transverter as well as building 5.6GHz and 10GHz FM transceivers.

I am keen to encourage the use of the microwave bands in Wales and hope to be out for the contest season in 2018.

Peter GW4JQP

UKuG report to the RSGB Spectrum Forum

The 2017 UKuG report to the RSGB Spectrum Forum report along with many others can now be found online at <http://rsgb.org/main/about-us/committees/spectrum-forum/meeting-minutes/>

Beacon

'New' beacon GB3RCM has been approved for Drum Hill near Derby IO92GX and will be on 5760.870MHz.

It is effectively the relocation of the former GB3MAN Manchester 5.7GHz system, and was approved by Ofcom in unusually quick time for a secondary band.

Contest Results

John G3XDY, UKuG Contest Manager

Low Band Championship 2017

Numbers of contacts made in these events have been on an upward trend this year, with 50 QSOs made on 1.3GHz in the best event. Coordination with European events helps boost DX and QSO totals.

Conditions have been generally uninspiring but this does give a level playing field for all entrants.

1.3GHz

John G4ZTR takes the top spot on this band, displacing last year's winners the Combe Gibberlets (M0HNA/P) to the runner up position. Both winner and runner up won two sessions each, achieving the runner-up slot in November was decisive for G4ZTR.

2.30GHz

M0HNA/P had the field to themselves for this band so achieved an easy maximum score. More entrants are needed!

2.32GHz

M0HNA/P also won the 2.3GHz section with three session wins scoring maximum points. In second place is Neil G4BRK with two session wins and two runner up slots.

3.4GHz

M0HNA/P exceeded last year's result by winning four of the five sessions this year, achieving the maximum 3000 points. The runner up was Neil G4BRK who won one session and was runner-up in another.

Overall

Top of the overall table is the "Combe Gibberlets" group (M0HNA/P) with another resounding victory. Neil G4BRK was overall runner up and leading fixed station overall. M0HNA/P and G1DFL were the only entrants active in all five sessions this year.

Congratulations to the winners and runners up mentioned above.

November 2017 Lowband Contest Results

Good activity for the time of year was a fairly universal view on 23cm, but entry levels on 13cm seemed down a little. Conditions were nothing special on any of the bands.

On 1.3GHz the winner was Conrad PA5Y, with John G4ZTR as runner up. Conrad worked most of the entrants plus several DL stations that didn't appear in other logs, with a correspondingly high points/QSO tally. Pete G1DFL was the leading low power entrant. Richard GD8EXI made the best DX contact, working F6DKW in Paris.

On 2.30GHz M0HNA/P was once again the only entrant but doubled the number of stations worked to two this time out.

Neil G4BRK won 2.32GHz by the smallest of margins from another Neil, G4LDR, with the latter making the best DX with Barry G4KCT.

G4BRK also won 3.4GHz, with Martyn G3UKV in the runner up slot. Martyn made the best DX with his QSO with Ralph G4ALY in Cornwall.

The overall winner was the Combe Gibberlets group consisting of G3TCU, G4SJH, and G1EHF, who won on 2.30GHz and were third on 1.3GHz. Overall runner up and leading fixed station was Neil G4BRK, who was the winner on 2.32GHz and 3.4GHz.

Certificates go to the overall Winner M0HNA/P and Runner-up G4BRK and to the following winners and runners-up:

1.3GHz	PA5Y, G4ZTR, G1DFL (Low Power)
2.30GHz	M0HNA/P
2.32GHz	G4BRK, G4LDR
3.4GHz	G4BRK, G3UKV

November 2017 Low Band Results

Overall						
Pos	Callsign	1296MHz	2300MHz	2320MHz	3400MHz	Overall
1	M0HNA/P	606	1000	793	613	3012
2	G4BRK	440	0	1000	1000	2440
3	G3UKV	228	0	893	717	1838
4	G4LDR	245	0	995	431	1671
5	PA5Y	1000	0	0	0	1000
6	G4ZTR	832	0	0	0	832
7	GD8EXI	497	0	0	0	497
8	G3TCT	375	0	0	0	375
9	G4KIY	310	0	0	0	310
10	GM8IEM	97	0	0	0	97
11	M0XIG/P	53	0	0	0	53
12	G1DFL	23	0	0	0	23
13	G0DDX	14	0	0	0	14
1296MHz						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX Kms
1	PA5Y	JO21VO	25	10987	GU6EFB	637
2	G4ZTR	JO01KW	34	9145	DL3IAE	602
3	M0HNA/P	IO91RF	31	6656	GI6ATZ	507
4	GD8EXI	IO74PC	17	5463	F6DKW	762
5	G4BRK	IO91HP	24	4835	PA5Y	495
6	G3TCT	IO81QC	19	4124	PA5Y	587
7	G4KIY	IO92WN	18	3402	PA5Y	418
8	G4LDR	IO91EC	15	2696	GD8EXI	394
9	G3UKV	IO82RR	14	2505	GI6ATZ	292
10	GM8IEM	IO78HF	4	1064	GI6ATZ	428
11	M0XIG/P	IO91GI	7	585	G4ZTR	174
12	G1DFL	IO91NL	4	251	G4ZTR	131
13	G0DDX	JO02AF	2	158	M0HNA/P	119
2300MHz						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	M0HNA/P	IO91RF	2	327	G4ODA	174
2320MHz						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	G4BRK	IO91HP	9	1287	G4KCT	256
2	G4LDR	IO91EC	7	1280	G4KCT	318
3	G3UKV	IO82RR	6	1149	G3XDY	265
4	M0HNA/P	IO91RF	8	1021	G3UKV	216
3400MHz						
Pos	Callsign	Locator	QSOs	Score	ODX Call	ODX km
1	G4BRK	IO91HP	7	889	G4ALY	237
2	G3UKV	IO82RR	3	637	G4ALY	276
3	M0HNA/P	IO91RF	5	545	G4ODA	174
4	G4LDR	IO91EC	4	383	G4ODA	212

Lowband Championship 2017

Final results, the best three events count towards the total

Overall

Pos	Callsign	5-Mar	23-Apr	7-May	4-Jun	19-Nov	TOTAL
1	M0HNA/P	3646	4000	3920	3000	3012	11566
2	G4BRK	1251	0	2435	1613	2440	5299
3	G4LDR	446	1848	1884	0	1671	4178
4	G3UKV	1219	1773	0	0	1838	2992
5	G4ZTR	1000	688	0	1000	832	2688
6	G3YJR	0	716	707	601	0	2024
7	G8EOP	57	951	0	455	0	1463
8	G8OHM	0	0	1435	0	0	1435
9	G4KIY	0	0	1229	0	310	1229
10	PA5Y	0	0	0	0	1000	1000
11	GM4BYF	385	251	0	221	0	857
12	G0LGS/P	0	838	0	0	0	838
13	GI6ATZ	0	695	0	0	0	695
14	G3WJG	0	159	475	0	0	634
15	G4BAO	492	0	0	0	0	492
16	G1DFL	147	102	17	48	23	297
17	GU6EFB	0	152	0	132	0	284
18	GM8IEM	0	66	112	0	97	178
19	G6KWA	0	154	0	0	0	154
20	M0XIG/P	0	12	91	37	53	140
21	G7SOZ/P	0	0	48	0	0	48
22	G0DDX	0	0	0	0	14	14
23	GM7GDE	0	9	0	0	0	9
24	GM4DIJ/A	8	0	0	0	0	8
25	M0GDX/P	0	1	0	0	0	1

3400MHz

Pos	Callsign	5-Mar	23-Apr	7-May	4-Jun	19-Nov	TOTAL
1	M0HNA/P	1000	1000	1000	1000	613	3000
2	G4BRK	322	0	901	692	1000	2593
3	G4LDR	0	665	973	0	431	2069
4	G3UKV	398	627	0	0	717	1742
5	G4BAO	110	0	0	0	0	110

2300MHz

Pos	Callsign	5-Mar	23-Apr	7-May	4-Jun	19-Nov	TOTAL
1	M0HNA/P	1000	1000	1000	1000	1000	3000

2320MHz

Pos	Callsign	5-Mar	23-Apr	7-May	4-Jun	19-Nov	TOTAL
1	M0HNA/P	1000	1000	920	1000	793	3000
2	G4BRK	615	0	1000	655	1000	2655
3	G4LDR	333	695	615	0	995	2305
4	G3UKV	615	770	0	0	893	1385
5	G8EOP	57	692	0	421	0	1170
6	G3YJR	0	379	227	388	0	994
7	G8OHM	0	0	805	0	0	805
8	G4KIY	0	0	780	0	0	780
9	G0LGS/P	0	544	0	0	0	544
10	G3WJG	0	159	381	0	0	540
11	G1DFL	34	41	0	0	0	75
12	G4BAO	74	0	0	0	0	74
13	GM4BYF	0	46	0	18	0	64

1296MHz

Pos	Callsign	5-Mar	23-Apr	7-May	4-Jun	19-Nov	TOTAL
1	G4ZTR	1000	688	0	1000	832	2832
2	M0HNA/P	646	1000	1000	0	606	2646
3	G4BRK	314	0	534	266	440	1288
4	G3YJR	0	337	480	213	0	1030
5	G4LDR	113	488	296	0	245	1029
6	PA5Y	0	0	0	0	1000	1000
7	G3UKV	206	376	0	0	228	810
8	GM4BYF	385	205	0	203	0	793
9	G4KIY	0	0	449	0	310	759
10	GI6ATZ	0	695	0	0	0	695
11	G8OHM	0	0	630	0	0	630
12	G4BAO	308	0	0	0	0	308
13	G0LGS/P	0	294	0	0	0	294
14	G8EOP	0	259	0	34	0	293
15	GU6EFB	0	152	0	132	0	284
16	GM8IEM	0	66	112	0	97	275
17	G1DFL	113	61	17	48	23	222
18	M0XIG/P	0	12	91	37	53	181
19	G6KWA	0	154	0	0	0	154
20	G3WJG	0	0	94	0	0	94
21	G7SOZ/P	0	0	48	0	0	48
22	G0DDX	0	0	0	0	14	14
23	GM7GDE	0	9	0	0	0	9
24	GM4DIJ/A	8	0	0	0	0	8
25	M0GDX/P	0	1	0	0	0	1

UKuG Microwave Contest Calendar 2018

Now that the 2017 season has concluded, the calendar and rules for 2018 will be prepared late this month. I would be delighted to receive any feedback on the rules or calendar by the 28th December. I know that the mm-wave events were not ideal with weather related issues affecting participation, so suggestions for better dates will be welcome. Please send suggestions to the UKuG Contest Manager at g3xdy@btinternet.com

80m UK Microwavers net

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

73 Martyn Vincent G3UKV

EME 2018: CALL FOR PAPERS

With less than one year to go until EME 2018 I want to invite you to submit papers and presentations for the conference.

This time we will have three ways of sharing your information with the participants.

1. The classical presentation of about 30 minutes in the main conference room. Slides, small movies and sound examples can be presented during such a presentation.
2. Poster presentations. This is a way of presenting your story/information on a big piece of paper (the poster). Those posters will be on the wall of the conference room during the whole conference so everybody can have a look and read your information anytime they like.
3. Table top presentations. You are behind a table, presenting your information, showing your stuff on the table before a relatively small but highly interactive audience.

You choose when, for how long or how many times you want to do such a presentation. It's all up to you.

We would like to try these three ways of communication because not all subjects are suited for a full size classical presentation. Yet they might be very interesting for a poster or a table top presentation. And not everybody is happy to tell his story for a big audience. Using these three ways of communication gives you the opportunity to choose the way that suits you and your subject the best.

For now it's good enough to send me an abstract.

The deadline for abstracts is April 2018

The deadline for the full presentations is June 2018

Please send your contributions to [jvm\(at\)netvisit.nl](mailto:jvm(at)netvisit.nl) or [janvmu\(at\)gmail.com](mailto:janvmu(at)gmail.com)

See you in the Netherlands at EME 2018!

73!

Jan PA3FXB (team PI9CAM)

www.eme2018.nl



Activity News : November 2017

By Neil Underwood G4LDR

Please send your activity news to:

scatterpoint@microwavers.org

Introduction

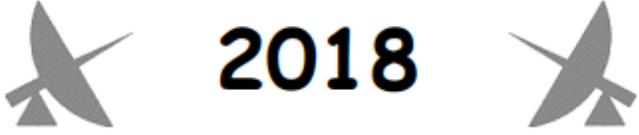
It's been a quiet month.

From John Worsnop G4BAO

Despite my being away for most of November, the weekly Wednesday night digifest has continued with a number of new stations trying their hand at JT modes above a GHz. This is a regular non competitive together around 1296.165 and 2300/2320.165 from around 1900 local. We have settled on JT9F fast mode with 15 second periods as the main mode but we have been experimenting with others including using 5 second transmission periods. We have been joined by aircraft scatter signals from DL, GM,ON and PA. Activity from G4DBN led the way with QSOs with stations as far apart as Germany and northern Scotland from his near sea level QTH on the Humber. This shows that you don't have to live on hilltop to get amongst the GHz bands DX if you engineer a system with power a good preamp and a decent antenna. Noel G8GTZ took s break from his ATV activities to get amongst the digimodes action on 23cms.

I'd like to extend this to the higher bands as well. During some recent rain I was copying myself via the Southampton SDR on 3cm so anyone who'd like to try on that band or 9cm turn up on ON4KST on a Wednesday and give a shout out. A number of station including G4DDK and myself are ready to go on 3cm digital.

HEELWEG MICROWAVE MEETING 2018



SATURDAY JANUARY 13th 2018

LOCATION:

KULTURHUS "DE VOS"
HALSEWEG 2
7054 BH WESTENDORP



INFO@PAMICROWAVES.NL

PE1FOT/PA7JB/PA3CEG/PA0BAT

Have Happy digiFestive season and hope to catch up with some of you at Heelweg in January.

From Noel Mathews

During the Low band contest on 19th November G4SJH and G8GTZ took the opportunity to work an obstructed 66Km path on 24GHz from Guildford to Walbury Hill. G4SJH/P was using the UK Microwave Group 24GHz loan equipment.

<https://twitter.com/G8GTZ/status/932326992153907201>

BTW - it pays to watch a few selected stations on Twitter who regularly report activity as it happens (or shortly afterwards).



G8GTZ



G4SJH



Walbury Nov 17

Events calendar

2018

January 13	Heelweg	info@pamicrowaves.nl
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 9–13	EuCAP 2018	
	European Conference on Antennas and Propagation, London	www.eucap2018.org
April 14–15	Martlesham Round Table / AGM	http://mmrt.homedns.org/
April 21	RSGB AGM, Birmingham	http://rsgb.org/agm
May 18–20	Hamvention, Dayton	www.hamvention.org/
June 1–3	Ham Radio, Friedrichshafen	www.hamradio-friedrichshafen.de/
July 7–8	Finningley RT	www.g0ghk.com/
August 17–19	EME2018, Egmond aan Zee,NL	https://www.eme2018.nl
Sept 7–9	63.UKW Tagung Weinheim	http://www.ukw-tagung.de/
Sept 23–28	European Microwave Week, Madrid	www.eumweek.com/
Sept 28–29	National Hamfest	www.nationalhamfest.org.uk/
Oct 12–13	Microwave Update, Fairborn, Ohio USA	http://www.microwaveupdate.org/
Oct 12–14	RSGB Convention & AMSAT Colloquium	http://rsgb.org/convention/

2019

May 17–19	Hamvention, Dayton	www.hamvention.org/
June TBA	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.

EME 2018: Booking

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

Editor's note

A big Thank You to Roger Ray G8CUB who kindly volunteered to act as chief assembler of your articles for the November issue.

The index to the 2017 volume of Scatterpoint will be available after Christmas, plus the revised full index.

Please add the AGM and MMRT date (14-15 April) to your new 2018 diary.

Christmas 73s and good condx for 2018

Martin RH G8BHC