An Amateur Radio publication for the Microwave Enthusiast

scatterpoint

April 2013

Published by the UK Microwave Group

A new record!

In this Issue

STOP PRESS!

Just a reminder that the chipbank exists!

Since February quite a few more items have been added including some more resistors and inductors as well as some rather nice ceramic trimmers (~ 3 - 13pF), so take a look at the catalogue on the website.

I plan to bring the reeled components to Martlesham to be available on a DIY basis, but if anyone wants any specific values of capacitors which are in bulk, not reeled, please let me know. We have most common values in both 1206 and 0805 and a few 0603 so please state which size you want.

73

Mike, G3LYP

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Dave Powis	Trophies	G4HUP	g4hup@btinternet.com

Editor's corner

Apologies for the delayed issue this month – been away – and, clearly, the improvement in the UK weather has sent you all out to the shack, so it's a bit of a thin month – but not without some record QSOs.

Hope to meet some of you at the Martlesham Round Table & UKµG AGM this weekend. Mrs G8BHC is chief catering officer so I'll probably be gofering.

Next month's edition will have the AGM notes and pictures.

73 de Martin G8BHC

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, rtfd, 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 you co-operation.

Martin G8BHC

UK MICROWAVE GROUP

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.

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!)

Colour codes

Editorial & Events

Activity & Contests

Technical

Nanowaves (optical)

Commentary

Reproducing articles from Scatterpoint

If you plan to reproduce an article exactly as per Scatterpoint then please contact the Editor – otherwise you need to seek permission from the original source/author.

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

Silent Key

E. BROOKS SHERA, W5OJM

E. Brooks Shera was born on August 28, 1935 in Oxford, Ohio in an ambulance en route to the hospital. He always loved to say that it was really a hearse doing double duty as an ambulance. He died on March 16, 2013 at the Kingston Residence in Santa Fe, New Mexico. Brooks received his B.A. from Case Western Reserve in 1956, his M.S. in physics from the University of Chicago in 1958 and his PhD in nuclear physics from Case Western University in 1963. After a postdoctoral appointment at Argonne National Laboratory ,Brooks joined the Physics Division of the Los Alamos National Laboratory in 1964. He carried out the first experiments that used slow neutrons to study the Mossbauer effect and pioneered the coincidence method to deduce nuclear energy levels from the gamma radiation that follows neutron capture. When intense beams of muons became available from the Laboratory's LAMPF accelerator, he led an international collaboration that made uniquely precise measurements of nuclear sizes and shapes by studying the spectra of x rays from muonic atoms. He was elected Fellow of the American Physical Society in 1982. Later in his career Brooks became interested in the contributions that physics could make to molecular biology. This interest led to work on techniques for identifying proteins and eventually to development of methods for highspeed DNA sequencing. He held several patents and received awards for his work in DNA sequencing.

After Brooks retired from the Laboratory , he continued his broad technical interest. As an example, Brooks designed a GPS-controlled frequency standard . The goal was to produce an inexpensive, but highly accurate, frequency standard by synchronizing a local crystal (or Rb) oscillator to the GPS atomic clocks. The project began in the Spring of 1997 and a prototype was designed and operating by late Fall. Several months of experimentation and testing resulted in a design that produces a frequency accuracy better than one part in 10 to the 11. Brooks eventually published the design of his frequency standard in the July '98 issue of the amateur radio journal, QST. Since the initial publication hundreds of these frequency standards have been built on several continents - Brooks personally supplied over 300 programmed microprocessors to individual builders. Many more have been assembled using data Brooks made available on the world wide web. Brooks was also generous with his time providing support to builders via e-mail and phone.

Brooks's interests in retirement were not limited to science and technology. He loved to travel, go hiking and camping, and do photography. He spent many hours researching and writing about the Shera family history and genealogy. One of his loves was creating micaceous pots and he leaves a legacy of beautiful pots for his family and friends to use and enjoy.

Brooks had a keen intellect and an interest in life, a wry wit and a quirky and irreverent sense of humor. He loved a good argument. He was a self-described cat person. Brooks was a member of the American Physical Society, the Sierra Club and was a radio amateur (W5OJM).

He is survived by his wife, Karen Stoll. They were married on Oct 1, 1988 in Los Alamos. After retirement in 1993, Brooks and Karen moved to Crazy Rabbit Road, south of Santa Fe. He is also survived by his son Christopher Shera and granddaughter Sarita Shera of Belmont, MA; his daughter Katherine Shera and her children Jena Tegeler and Benjamin Bonnet of Cambridge, MA; his stepson Scott Hiromoto, wife Diana Oviedo and their children Saphire Heck and Gael Hiromoto of Los Angeles, CA.; his sister Mary Helen Baum of Cleveland Heights, OH; and the mother of his children, Nancy Shera . He was preceded in death by his parents, Jesse Hauk Shera and Helen Bickham Shera; his daughter-in-law, Mordena Babich and his brother-in-law, William Baum.

Source: Link

UKµG Chip Bank

A new free service for members

The catalogue is now on the UKµG web site See www.microwavers.org/?chipbank.htm

Non members can join the UKuG by following the non-members link on the same page. and members will be able to email Mike with requests for components. All will be subject to availability, and a listing of a component on the site will not be a guarantee of availability of that component.

The service will be run as a free benefit to all members and the UK Microwave Group will pick up the cost of packaging and postage, that is, Jiffy bags, small plastic bags for individual component values, and Large letter 2nd class postage, currently 69p.

The service may be withdrawn at the discretion of the committee if abuse such as reselling of components is suspected. We have asked Mike to check with the Chairman (or designated officer) if any individual is making excessive requests, and we will ensure that the service is only available to members.

John Worsnop G4BAO Chairman UKuG

First order received today [5 Feb]! There is an order form on the website with an address label which will slightly reduce what I have to do in dealing with orders so please could you use it.

Also, as many of the components are from unknown sources, if you have the facility to check the value, particularly unmarked items such as capacitors, do so, and let me know if any items have been miss labelled. G4HUP's Inductance/capacitance meter with SM probes is ideal for this (Unsolicited testimonial!!)

73, Mike, G3LYP

13cm beacon GB3ZME

A bit of late news, just arrived today (13 April).

OfCOM have finally licensed our 13cm beacon GB3ZME here in Telford. Here is a photo of the antenna too.

"GB3ZME has finally received authorisation for its 13cm propagation beacon on 2320.870 MHz, after a delay lasting several years. The unit is now operational and has an ERP of 25 watts from an omni directional Alford slot, mounted alongside the other three beacons on 3.4, 5.7 and 24 GHz. A picture of the Alford slot under test in G3UKV's shack is attached. Reports on all 4 microwave propagation beacons are always very welcome, preferably via beaconspot.eu. The unit is frequency locked by a RDDS unit, kindly donated by the UK microwave group. Thanks to all those who helped this beacon to become a reality."

73 Martyn Vincent G3UKV

Wideband Parabola Antenna

By Martyn Vincent G3UKV

In June 2012, the Telford & DARS had a mini DXpedition to Guernsey - GP3ZME/P.

A report was duly published in the June/July edition of Scatterpoint. However, a major breakthrough in microwave communications was overlooked, and this is a long overdue postscript to correct this serious omission. The subject of this breakthrough is a wideband parabola antenna.

The group have been inspired by John's (G4BAO) occasional series of "bodging" topics over several years. However, we wanted to go one step further, on this occasion using the 10 GHz band for the experiments. Space is always at a premium on various expeditions that the Telford club have undertaken since the 1970s, and if you'll excuse the pun, 'Space' is where the future of our hobby lies.

So, how could a modest sized dish be compressed into a back-pack, and yet be almost instantly accessed, and 'ready to go' ?

Well, the answer was found tucked away in the deep recesses of our local supermarket, and was a snip at £4.99. Even better, It operates brilliantly in a strong westerly breeze, and can be used equally well for terrestrial or EME operation. The delighted operator on the occasion of our visit to Guernsey was Jim G8UGL. For comparison, you can see that the second photo of Jim shows a more traditional, bulky, heavy, awkward dish. For 'dish' read 'ditched'.

Further development of this unique and adaptable dish will take place this month, but of course, patents are pending, so take care not to infringe TDARS copyright.

Modifying Andrews 13cms Amplifiers

By Mike WIllis G0MJW

I was interested to read the article in the latest scatterpoint on modifying the Andrews 2GHz amplifiers. A lot of good team work.

However, it does involve disabling the protection and the Harwell team has also been looking at this. In January, preparing for UKAC, Mike G8CUL found what might be a better way for those that want to retain the gain and protection and don't want to make a new bias board. Mike is in the process of writing this up, maybe he will be able to say something at the RAL RT. Normally I would leave it to Mike to tell everyone when he has finished testing but with the scatterpoint article people may like to know there may be an alternative to removing the control board.

There is a power cut out based on the on-board detectors which trips at 30-40W. All that has to be done is reduce this signal to fool the unit into producing 100W. I will leave it to Mike to explain how but a single resistor is all that is needed to define the trip limit anywhere up to about 125W. Any more and the isolator will be over driven. The reverse power detector should be left alone.

The excess gain can be dealt with using a 20dB attenuator but as Stuart noted, after removing the signal processing unit there is plenty of space to build a transverter with appropriate 1mW output inside the case. That is what I intend, if I can get around to it.

I was also looking at changing the forward power detector attenuator value – this is just below the circulator. The reason I forgot is rather embarrassing, I was doing it back in late 2011. Must get a move on. It uses one of those nice AD8314 log detectors and switches between forward and reverse based on control from the micro. I assume the controller also monitors currents as the driver and output drain current monitors are also available on the connector - along with the TTL control lines for the power monitor RF switch. It quite possibly does some very clever things with the bias to make it more linear.

If you want to only use the later stages and eliminate the control board, there are spaces on the PCB for SMA bias pots just below the connector. There are three, one each for the driver and output stages. These can be connected by moving the zero ohm jumpers. I assume that was for testing. That will allow the cover to be replaced. There is also a 7805 on board which could be used to supply them.

While we are at at - according to Rainer DF6NA who has supplied a lot of the information, the pin out for the multiway is known - my info might be out of date.

Mike Willis G0MJW

March 2013 Lowband Contest Results

The number of entrants was broadly similar to last year, although activity on 3.4GHz was very low this time. Conditions were noticeably better than last year with more continental DX in the logs and higher scores and QSO totals on 1.3 and 2.3GHz. The alignment with the European contests seemed to help with activity.

All entries were in the unlimited talk-back category on this occasion.

1.3GHz was won by the hardy souls from the Combe Gibberlets, using G3TCT/P this time. They worked 8 continental stations and five UK countries during the event, their best DX was DK2ZF/P in JO43WJ.

2.3GHz was won by Tony G4NBS with a large margin both in numbers of contacts and points. He worked 5 continental stations with DL0R in JN48IW the best.

A disappointing entry level on 3.4GHz saw G3TCT/P and G4LDR both working the same stations, but geography was in favour of G3TCT/P giving them a respectable lead.

The overall winner was the Combe Gibberlets G3TCT/P, who won 1.3GHz and 3.4GHz and were runners-up on 2.3GHz. The station was operated by Graham G3TCT, Trevor G3WBQ, Barry G4SJH, Phil G3TCU, and Dave G1EHF.

Overall runner-up and leading fixed station is Tony Collett G4NBS, who won 2.3GHz and was runner-up on 1.3GHz.

Certificates go to the Combe Gibberlets as overall winners, to G4NBS as runner-up and leading fixed station, and to the following band leaders, runners-up and leading low power (<10W) stations.

1.3GHz	G3TCT/P, G4NBS, G6GVI
2.3GHz	G4NBS, G3TCT/P, GW8ASD
3.4GHz	G3TCT/P, G4LDR

John G3XDY
UKuG Contest Manager

Overall					
Pos	**Callsign**	**1.3GHz**	**2.3GHz**	**3.4GHz**	**Total**
1	G3TCT/P	1000	541	1000	2541
2	G4NBS	855	1000	0	1855
3	G4LDR	444	421	673	1538
4	GW8ASD	585	242	0	827
5	G3UKV	192	303	0	495
6	G8DTF	0	66	0	66
7	G6GVI	53	0	0	53
1.3GHz					
Pos	**Callsign**	**Locator**	**QSOs**	**Best DX**	**Points**
1	G3TCT/P	IO91RF	28	DK2ZF/P 748km	7899
2	G4NBS	JO02AF	29	DL0R 713km	6755
3	GW8ASD	IO83LB	15	PI4GN 650km	4618
4	G4LDR	IO91EC	13	PI4GN 620km	3507
5	G3UKV	IO82RR	11	G3XDY 265km	1518
6	G6GVI	IO83SN	2	G4NBS 224km	416
2.3GHz					
Pos	**Callsign**	**Locator**	**QSOs**	**Best DX**	**Points**
1	G4NBS	JO02AF	18	DL0R 713km	4343
2	G3TCT/P	IO91RF	10	GM4CXM 582km	2351
3	G4LDR	IO91EC	9	DF0MU 626km	1830
4	G3UKV	IO82RR	8	G3XDY 265km	1317
5	GW8ASD	IO83LB	6	G3TCT/P 266km	1052
6	G8DTF	IO83SM	2	G4NBS 221km	286
3.4GHz					
Pos	**Callsign**	**Locator**	**QSOs**	**Best DX**	**Points**
1	G3TCT/P	IO91RF	2	M0GHZ 119km	196
2	G4LDR	IO91EC	2	G3TCT/P 77km	132

EME2014

at Pleumeur-Bodou, France

The Board of the French National Society (REF) met in January, their minutes are online and Google's translation gives:-

Conference EME2014:

EME2012 conference held in Cambridge (UK). A group of French OM present proposed for the next conference site Pleumeur-Bodou, a symbolic place in the history of space telecommunications. This proposal has received a majority of votes of the speakers facing the Italian proposal for Venice.

The Board approved the principle of logistical support and participation at this conference became prestigious and brings together experts from around the world. Other decisions will be taken based on the project's progress and specific requests made by the organizers.

Meeting adjourned at 15 h 30.

Lucien Serrano, F1TE
Secretary of REF-Union.

Jean-Paul Louis, F6BYJ
President of REF-Union

The latest EME calendar is available from DL7APV's website

RAL

We have opened the bookings for this year's round table.

See www.g3pia.org.uk/ for details.

I am still looking for talks. G7DOE has offered a talk on his comparisons of 6 free RF simulator tools, which should be very interesting. There is space for up to 3 more. Sorry, but I can't afford to pay expenses, we charge nothing to get in and we do not charge for tables.

Mike Willis G0MJW

24GHz EME QSO World Record

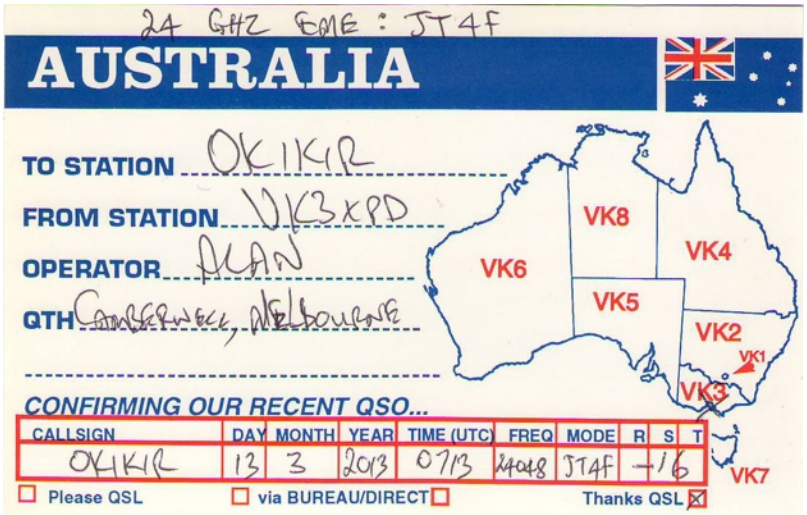
and first VK–OK

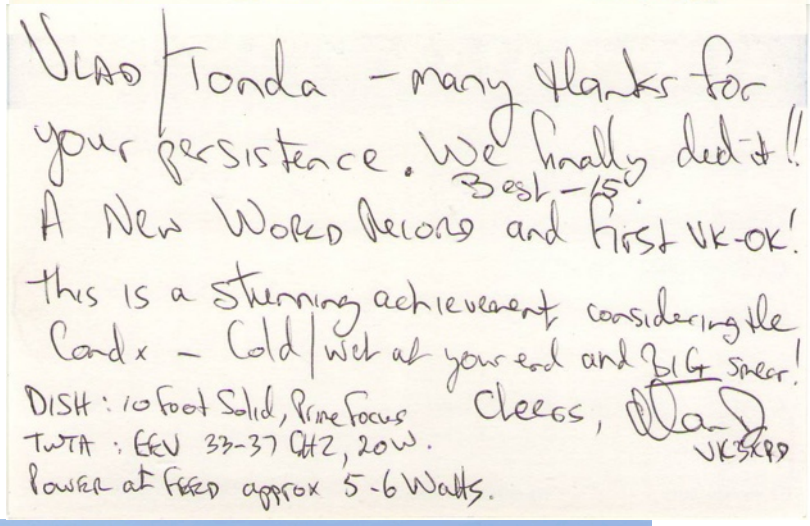
Dear friends,

my club station OK1KIR worked on 13 March 2013 VK3XPD on 24 GHz via EME. We used JT4F mode for contact. OK1KIR JN79DW (JN79DW74OQ) - VK3XPD QF22ND (QF22ND16FI) - 15931 km.

I enclosed our and Alans QSL.

73, Tonda op OK1KIR EME team
www.ok1kir.cz





UKµG Technical support

Another free service for members!

While many of you will have taken advantage of the "test equipment rooms" that we run at the Round Tables, sometimes that project just cannot wait for the few occasions per year when we hold them. 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, more importantly, 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

Region	Tech support volunteer	Facilities
NW England, N Wales Wales	David Wrigley G6GXK 07811776432 Chris Bartram GW4DGU	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 microwaves@blueyonder.co.uk	Available from Spring 2013 Spec Analyser to 24GHz Power measurement to 24GHz (up to 5W on 24GHz), RF sources to 24GHz, direct freq measurement to 3GHz. Setting up/tuning up transverters, etc + general advice.
S and SW England	Brian Coleman G4NNS Paul Marsh M0EYT pjmarsh@uhf-satcom.com	Spectrum analyser to 24GHz Power measurement to 26 GHz Scalar Network analyser and sweeper 2 to 15GHz Antenna test range 2.3, 3.4, 5.7, 10 and 24GHz Wavegide directional couplers for 10GHz and 24GHz Coax couplers 1.3 – 26GHz. Power measurement to 12GHz High power dummy load @ 10GHz (500W) Frequency measurement to 22GHz Spectrum analysers to 6 and 18GHz Frequency generation to 18GHz.
SE England and London	Allan Wyatt G8LSD allan@virtual-museums.org	not known
East Anglia, Essex & Suffolk Herts.	Sam Jewell G4DDK sam@g4ddk.com Bryan Harber G8DKK Letchworth, Herts	Spectrum analysis to 24GHz Power measurement to 24GHz Direct frequency measurement up to 3GHz VNA to 3GHz RF sources to 24GHz
West Anglia East Midlands	John Worsnop G4BAO john@g4bao.com	Spectrum analysis to 24GHz Power measurement to 24GHz Direct frequency measurement up to 18GHz VNA to 1.3GHz RF sources to 24GHz High current PSUs at 12, 28 and 48V
W Midlands	Vacancy	
N Scotland	Vacancy	
S Scotland	Vacancy	
N Ireland	Gordon Curry GI6ATZ	

The current list of technical support volunteers is available at www.microwavers.org/tech-support.htm

The Programme

Saturday 27th April 2013

10:00	Truck Stop Breakfast
12:00	Doors Open
13:00	Welcome & opening G4FSG
13:15	WA5VJB: Propagation in the USA
14:00	Trophy Presentations
14:15	G3XDY: Air Scout, a new aircraft reflection programme
15:00	Refreshments
15:30	G4NNS: A bit more Hydrogen Line Astronomy.
16:15	G4BAO: Optimising a REALLY small Microwave EME system
16:55	Close
19:30	Meet for Dinner at 20:00 at the Cameo Hotel Ipswich

Sunday 28th April 2013

09:00	Doors Open
09:50	Welcome & Opening – G4FSG
10:00	UKuG AGM
10:30	Refreshments
11:00	GW4DGU: 10GHz Transverter System Components for Commercial Production
11:45	G4JNT: Modern Synthesisers
12:30	Lunch break
13:30	Raffle Prize Draw: G4FSG
13:35	G3VZV: An AMSAT Update
14:20	UKuG Contest Forum – G3XDY
16:00	Close

Testing

Test equipment will be available throughout the day subject to qualified personnel to operate the test and measurement equipment (yes, staff would like to attend the talks too!).

Noise figure testing on many bands.

Travel & Accommodation

The talks and testing will be held at BT Adastral Park, Martlesham Heath, Suffolk, IP5 3RE. This is located a few yards off the A12, just east of Ipswich. CLICK for map.

The evening meal and accommodation will be at:

Cameo Hotel Copdock, London Road,

Ipswich, Suffolk, IP8 3JD, England.

Booking is closed.

MMRT Dinner Menu Saturday 27 April

Price £24.00 per person

Starters

Duck & port parfait served with toasted brioche & red onion marmalade

Strips of beef marinated in Thai spices served with a salad

Poached pear, blue cheese & walnut salad

Main Courses

Choice of Beef, Pork, or Turkey Carvery with a selection of vegetables

Please select which meat you would prefer

Vegetarian option:

Mushroom and chestnut Wellington with a tomato & red pepper sauce, served with new potatoes and vegetables

Desserts

Double chocolate & praline torte and chocolate sauce

Bramley apple slice with cream

Lemon & ginger cheesecake

Coffee and Mints

Activity News

By Bob Price G8DTF

Please send your activity news to:

scatterpoint@microwavers.org

Introduction

We have a variety of reports this month including an interesting report on Microwave activity in Australia. This is in three parts the first covering 23cm, with 2.3 and 3.4GHz bands in the second part, and 5.7, 10 and 24GHz in the third part.

We also have a 24GHz EME report from Kjeld OZ1FF, as well as reports on the Microwave Low Bands, the 23cm UKAC and SHF UKAC contests.

There is also an update from Ross G6GVI on his Octagon PLL LNB based RX for 3cm.

Brisbane Microwave Activity Day Video

From Adam VK4GHZ

Microwave enthusiasts from Brisbane and South East Queensland held a microwave activity day in February 2013.

A video, presented in three parts, can be found on the VK4GHZ YouTube Channel. Part 1: www.youtube.com/watch?v=ESKH16X2Q3s

This also has the links to parts 2 and 3, although entering "VK4GHZ" into the YouTube search box will find them as well.

We believe this is most likely the first microwave activity video, edited together, featuring simultaneous coverage from several sites.

I hope you enjoy watching what VK4 microwave enthusiasts get up to.

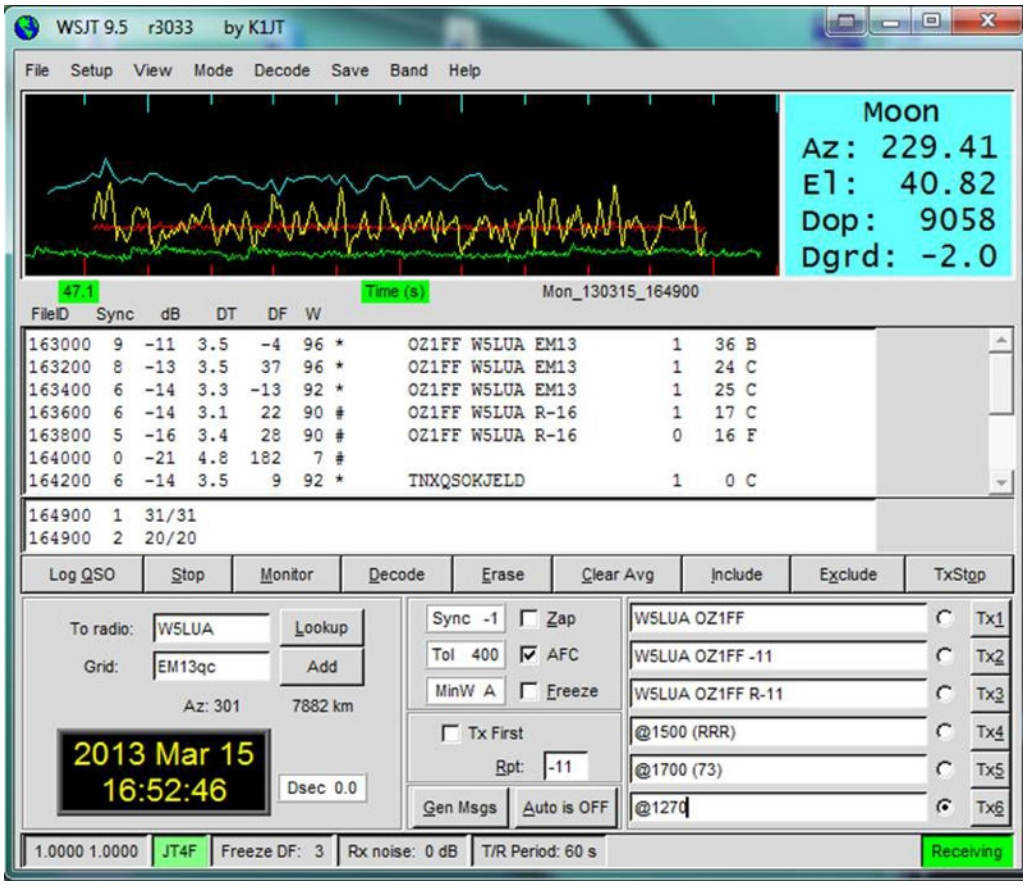
EME

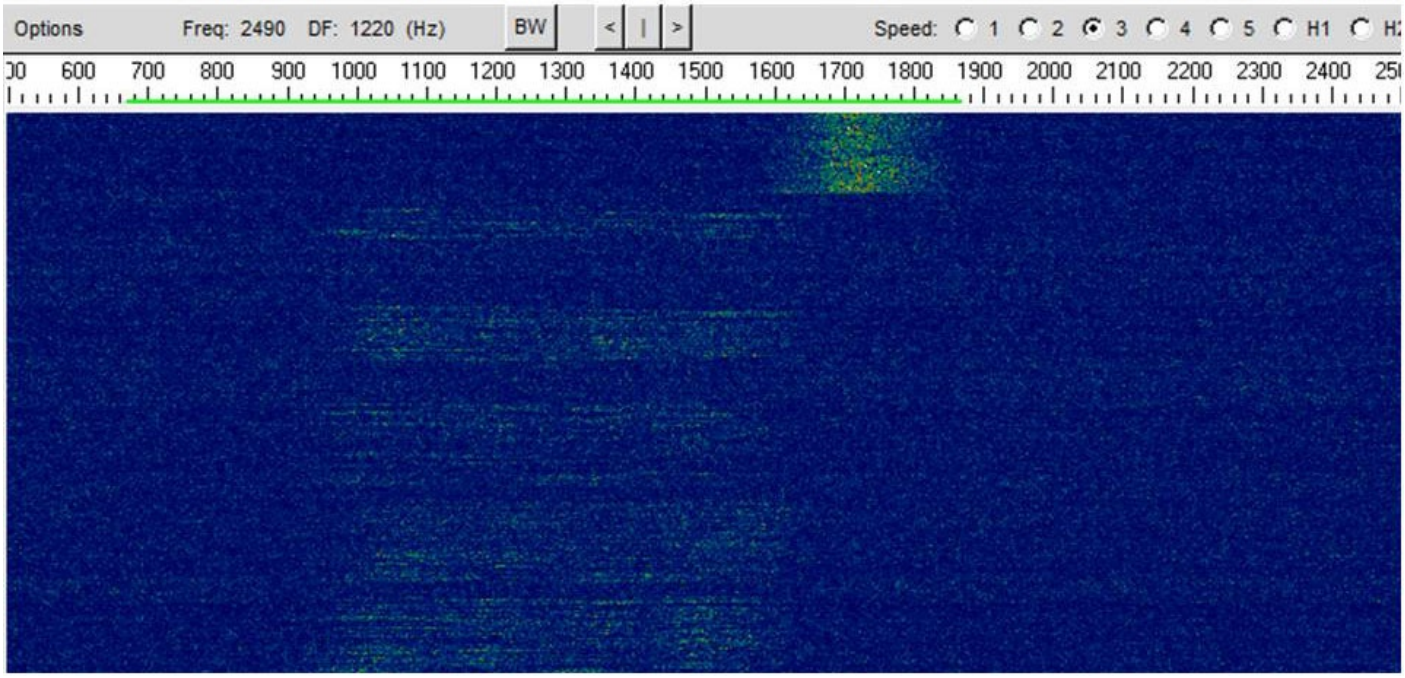
From Kjeld OZ1FF

On March 11, 2013 I worked W5LUA on 24 GHz CW after several unsuccessful attempts as #5 with my tiny setup: 1,8 m Prodelin offset dish, W1GHZ 10/24 GHz dual band feed, 10 W at feed, NF <2 dB. Weather conditions: -2 degr. C, 40% RH and light clouds. Moon noise 1,1 dB with degradation of 1,1 dB. Elevation 17 degr. Exchanged reports O/M.

On March 15 we had a try on WSJT JT4F. W5LUA worked with automatic doppler shift correction so the only thing I had to do was to track the Moon. Nearly as easy as making QSOs on the local 2 meter repeater.

The second picture (p23) shows the significant spreading, especially on the 1700 Hz single tone 73.





My transverter is built of DB6NT modules around a Spinner WG-switch with very low insertion loss. Feed, SSPA and LNA are bolted direct on the switch to minimize losses.

Gear is a 4ft mesh dish Kuhne txvtr and lna locked with an G3RUH GPSDO and Ionica amp giving 11W

Low Bands Contest

From Tony G4CBW

I got my 9cm fixed and worked Alan GM0USI very easily today from his normal portable site at IO76xa. Alan was using 11 watts and a 4 foot wire mesh dish.

My system 30watts to a 90cm offset at around 35ft.

From Alan GM0USI

Yesterday was the first time I had been out since the start of January when testing with G3UKV on 9cm which was successful both ways almost all AS with traces of tropo. Yesterday was mainly to test the 9cm kit for the /p season.

Tony had managed to get his 9cm kit qrv again - his signals were extremely good peaking 58 with some qsb .

Also tried with Neil G4LDR who did hear a 10sec snatch of AS from me - nil from him but he had no cw available. Test with David M0GHZ was almost complete with various bursts of AS. I find 3400 very good for aircraft scatter and would encourage others to try it.


Alan GM0USI's 4 foot wire mesh dish

I now have a 40w Toshiba amp which I hope to have going at some point in the future.

I will be staying at the Mull of Galloway lighthouse for a week from 6th April bringing 3 and 9cm.

From Bob G8DTF

I was only able to get on for the first hour of the Low Bands Contest. On checking the only beacon I can hear on 13cm (G3ZME), which is normally only 519 with me, I found it at 549 and significantly moving my S meter. After the really bad conditions in the last UKAC I was able to work Tony G4NBS at really good strength both ways. I also worked Tony GW8ASD who is a big signal with me even with his half a watt.

From Tony G4CBW

Just a note about 3cms tests today with Alan GM0USI/P at his normal IO76XA portable site. Results were a total failure both ways! This was the 1st time that Alan and I have failed on this path and we are not really sure why. At the time GB3CSB on 9cm was also very weak. A little later I tried with Nick G4KUX, which also failed, nil heard either way. This represented another 1st time failure as I was expecting Nick to be anywhere between S3 to S9. Appears condition were really flat. Beacons from the south and south east were as expected; GB3CCX, GB3KBQ & GB3LEX all audible. Alan and I are to try again possible next week as it's only a few weeks before Alan's trip to SW GM.

March 23cm UKAC

From Eddie G0EHV

I was /P as usual, with the repaired masthead relay box. The drop of superglue held the relay so no disaster this month. 25 QSO's , best DX was G3TCT at 418Km.

I found KST2me very useful but hectic to manage along with MInos, turning the rotator and operating the radio. The rotator suffered from the bad weather and after 10 p.m. developed a mind of it's own, the pointer swinging wildly all over the scale. Sorry to those I missed in the last half hour due to pointing errors. Drying out the controller solved the problem.

From Ray GM4CXM

In the 23cm UKAC I worked:

GM7GDE (IO75), GM0USI (IO75), G8CYW(IO94), G8PNN (IO95), G0EHV/P (IO94), G4EAT (JO01), G1SWH (IO83), GM7OIN (IO75), G0MJW (IO91), G4JLG (IO83), G4NTY (IO83), G8EOP (IO93), GM4JR (IO85), G4ODA (IO92), G3PYE/P (JO02), OZ1FF (JO45), GI6ATZ (IO74), G4BRK (IO91), PA0EHG (JO22), G3VKV (IO81), G3UVR (IO83), GW8ASD (IO83), G3UKV (IO82), G8OHM (IO92), G8CUL (IO91) and G4KCT (IO93)

Power was 150W and the antenna 4X44ele.

March SHF UKAC

From Eddie G0EHV

Again /P in IO94. I managed 10 QSO's in very poor conditions, both propagation and weather conspired to make the evening hard work.

The new Minicircuits preamp was at the masthead and seems to work fine so no equipment problems this time out.

Best DX was G3XDY at 359Km, followed closely by G8CUL (358), G8NVI (358) and G4BRK (353). No great reports but just made it.

Average points per QSO was 241 reflecting the low activity in adjacent squares – IO84, IO85, IO93 nil and IO83 only 1.

KST worked a treat, operating this band without it would be almost impossible.

From Ray GM4CXM

G4BRK (IO91), G8CUL (IO91), G8PNN (IO95), G8CYW (IO94), G0MJW (IO91), G8OHM (IO92), OZ1FF (JO45), G3UKV (IO82), G0EHV/P (IO94)

Power was 60W and antenna 67ele.

From Bob G8DTF

I had a pretty poor evening on 13cm. I had managed to blow up the FET in the preamp, because of a bad connection on the PTT line. I patched out the preamp and was then able to work the following stations: G1SWH, G3UVR, G4MVU, G6GVI (all in IO83) and G8OHM (IO92).

On 9cm I still have receive sensitivity issues, but did work G4MVU and G4CBW both in IO83.

3cm was much better with all the gear working properly. I worked G4MVU (IO83), G3VKV and M0GHZ (both in IO81) and G4LDR (IO91). This was the first ever QSO with David M0GHZ, but it was a struggle to hear CW from David. I also failed with Tony G4CBW who could hear me, but nothing heard from Tony, who is usually a huge signal with me.

Other Activity

From Ross G6GVI

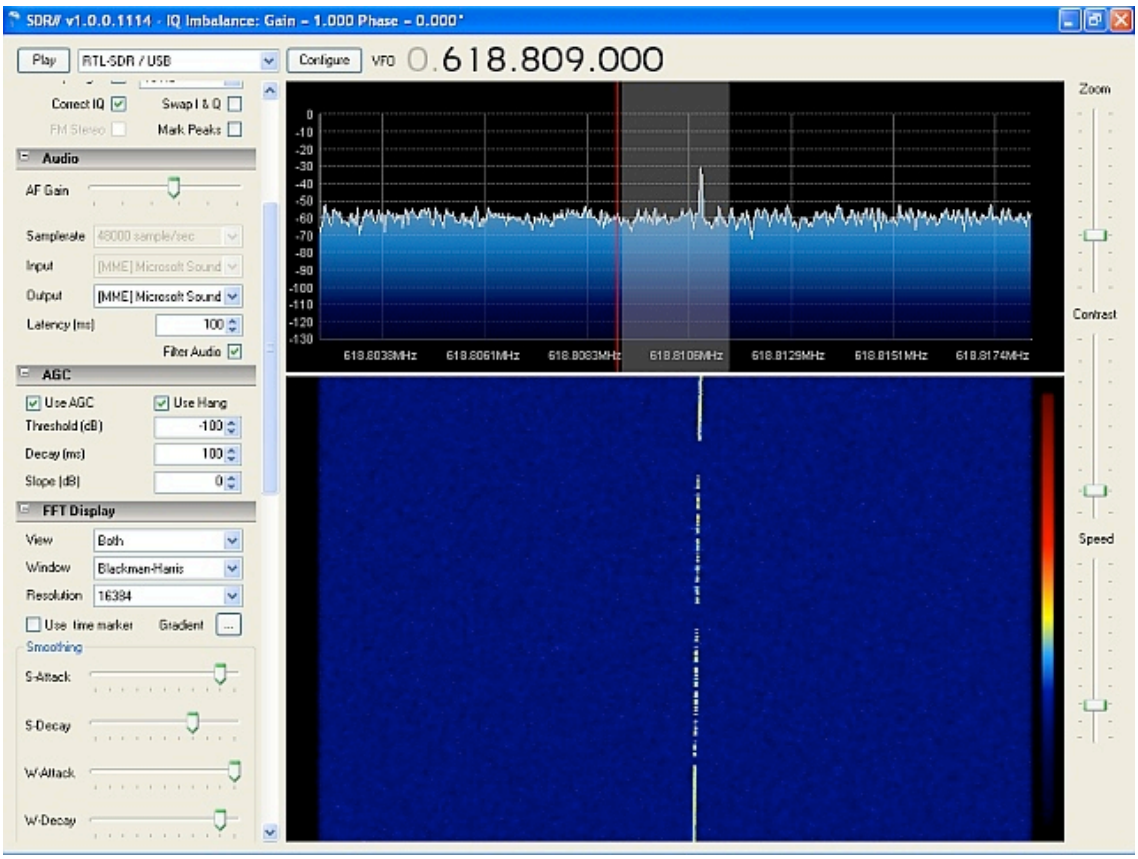
No need to pray for rain any more, as I can pick up the GB3XGH Rochdale beacon at will - even in the present drought!

I've fitted the new Octagon PLL-LNB to a little "caravan" dish (borrowed from my 3cm WBFM portable receiver), and lashed it to my mast:

This extra gain makes the signal easy to detect (I can see it via a number of different reflections, and very strongly on the direct heading):

I've just been doing some tests with Bob G8DTF - when he beams at his favourite "scattering point" (around 110 degrees) I can hear a clear reflection of his CW beacon - and even just make out his SSB signal!

I never thought that I'd be able to hear Bob on 3cm from here - but this new technology (RTL-SDR dongle and PLL-LNB) makes it a lot easier!



The IF spectrum: 10,368.810MHz is displayed as 618.810

...and finally

I want to encourage you all to report your activity to clearly document use of the amateur microwave bands. This means not just DX, but also local activity with low power or WB equipment.

Please send your reports to Scatterpoint@ukmicrowaves.org , remember the deadline is the 1st of the month.

73 Bob

...and finally, finally [Ed]

From Roger G8CUB

I had a contact today (3 April) on 76GHz as G8CUB/P at Wrotham, with John G4EAT at Danbury. Signals were 59 / 59 SSB over this 48.1km path. We benefited from a low dew point of -2 deg.C. We had worked this path on CW before but not SSB. I was trying out a new transverter, with 5dB NF (pre-amp) and 100mWo/p. John had 5mW SSB and around 7.5dB NF (mixer). Both were using '60GHz' horns with around 37dBi gain.

JA DATES IN 2013

From Robin Lucas G8APZ

There will be nine fixed JA in 2013:

First JA - 24 GHz and above in March,

Seven JA - 1296 MHz and above in April, May, June, July, August, September and October,

a JA mid-July for reflection via Mt Blanc 1296 MHz and above.

JA March:	W/E 30 and March 31
JA April:	W/E 27 and 28
JA May:	W/E 25 and 26 (UKMG contest)
JA June:	W/E 22 and 23 (Activity "Big Blue")
JA July:	W/E 27 and 28 (UKMG contest)
JA of August:	W/E 24 and 25 (UKMG contest)
JA September:	W/E 28 and 29 (UKMG contest)
October JA:	W/E 26 and 27.

F6BSJ memorial JA: QSOs by reflection via Mt Blanc will take place on Sunday morning July 14.

Duration of JAs:	Saturday 5:00 p.m.
	Sunday 5:00 p.m.

Don't forget that

Every Monday evening is Microwave Activity Evening

Shameless plug - mmWave Blog

I've started a humble blog detailing my puttering on the mmWave bands. Its just started so it is still pix of my existing projects. There is quite a bit of interest in our area especially with the St Louis microwave group and hams up here in northern Illinois focusing on 10 and 24G. Hope to have something worthy of a piece in Scatterpoint.
[I look forward to receiving it! Ed.]

Right now my focus has been on building a spare 47GHz xvrtr and experiment with simple diode mixers mounted on hardline for 78GHz.

The blog url is: aa9il.blogspot.com/

My goal is to do a 47G contact across Lake Michigan.

73 de AA9IL Mike

RSGB Contests 2013

Month	Contest name	Certificates	Date 2013	Time GMT	Notes
Mar	Low band 1.3/2.3/3.4GHz	F, P,U,R,L	3-Mar	1000 - 1600	First 4 hours coincide with IARU event
Mar	1.3GHz Activity Contest	*Arranged by RSGB*	19-Mar	2000 - 2230	RSGB Contest
Mar	2.3GHz+ Activity Contest	*Arranged by RSGB*	26-Mar	2000 - 2230	RSGB Contest
Apr	10GHz & Up EME	*Arranged by DUBUS*	*13–14-Apr*	0000-2359	DUBUS EME Contest
Apr	1.3GHz Activity Contest	*Arranged by RSGB*	16-Apr	1900 - 2130	RSGB Contest
Apr	Low band 1.3/2.3/3.4GHz 2	F, P,U,R,L	21-Apr	1000 - 1600	
Apr	2.3GHz+ Activity Contest	*Arranged by RSGB*	23-Apr	1900 - 2100	RSGB Contest
May	*10GHz Trophy*	*Arranged by RSGB*	*4-May*	*1400 - 2200*	Saturday, to coincide with IARU
May	*432MHz & up*	*Arranged by RSGB*	*4–5-May*	*1400 -1400*	RSGB Contest
May	1.3GHz EME	*Arranged by DUBUS*	*11–12-May*	0000-2359	DUBUS EME Contest
May	5.7GHz EME	*Arranged by DUBUS*	*18–19-May*	0000-2359	DUBUS EME Contest
May	1.3GHz Activity Contest	*Arranged by RSGB*	21-May	1900 - 2130	RSGB Contest
May	5.7GHz/10GHz/24GHz	F, P,U,R,L	26-May	0600-1800	
May	2.3GHz+ Activity Contest	*Arranged by RSGB*	28-May	1900 - 2130	RSGB Contest
Jun	Low band 1.3/2.3/3.4GHz 3	F, P,U,R,L	2-Jun	1000 - 1600	Aligned with some Eu events
Jun	2.3GHz EME	*Arranged by DUBUS*	*15–16-Jun*	0000-2359	DUBUS EME Contest
Jun	1.3GHz Activity Contest	*Arranged by RSGB*	18-Jun	1900 - 2130	RSGB Contest
Jun	2.3GHz+ Activity Contest	*Arranged by RSGB*	25-Jun	1900 - 2130	RSGB Contest
Jun	3.4GHz EME	*Arranged by DUBUS*	*29–30-Jun*	0000-2359	DUBUS EME Contest
Jun	5.7GHz/10GHz/24GHz	F, P,U,R,L	30-Jun	0600-1800	
Jul	VHF NFD (1.3GHz)	*Arranged by RSGB*	6– 7-Jul	1400 - 1400	RSGB Contest
Jul	1.3GHz Activity Contest	*Arranged by RSGB*	16-Jul	1900 - 2130	RSGB Contest
Jul	24GHz - 1THz Contest	O	21-Jul	0900 - 1700	New Format
Jul	2.3GHz+ Activity Contest	*Arranged by RSGB*	23-Jul	1900 - 2130	RSGB Contest
Jul	5.7GHz/10GHz/24GHz	F, P,U,R,L	28-Jul	0600-1800	
Aug	Microwave Field Day	O,L	4-Aug	0900 - 1700	
Aug	1.3GHz Activity Contest	*Arranged by RSGB*	20-Aug	1900 - 2130	RSGB Contest
Aug	5.7GHz/10GHz/24GHz	F, P,U,R,L	25-Aug	0600-1800	
Aug	2.3GHz+ Activity Contest	*Arranged by RSGB*	27-Aug	1900 - 2130	RSGB Contest
Sep	1.3GHz Activity Contest	*Arranged by RSGB*	17-Sep	1900 - 2130	RSGB Contest
Sep	2.3GHz+ Activity Contest	*Arranged by RSGB*	24-Sep	1900 - 2130	RSGB Contest
Sep	ARRL Microwave EME	*Arranged by ARRL*	28–29-Sep	0000 - 2359	
Sep	5.7GHz/10GHz/24GHz	F, P,U,R,L	29-Sep	0600-1800	
Oct	*1.3 & 2.3GHz Trophies*	*Arranged by RSGB*	*5-Oct*	*1400 - 2200*	RSGB Contest
Oct	*432MHz & up*	*Arranged by RSGB*	*5–6-Oct*	*1400 - 1400*	IARU/RSGB Contest
Oct	1.3GHz Activity Contest	*Arranged by RSGB*	15-Oct	1900 - 2130	RSGB Contest
Oct	2.3GHz+ Activity Contest	*Arranged by RSGB*	22-Oct	1900 - 2130	RSGB Contest
Oct	ARRL EME 50-1296MHz	*Arranged by ARRL*	26–27-Oct	0000 - 2359	
Nov	ARRL EME 50-1296MHz	*Arranged by ARRL*	16–17-Nov	0000 - 2359	
Nov	1.3GHz Activity Contest	*Arranged by RSGB*	19-Nov	2000 - 2230	RSGB Contest
Nov	Low band 1.3/2.3/3.4GHz 4	F, P,U,R,L	24-Nov	1000 - 1400	
Nov	2.3GHz+ Activity Contest	*Arranged by RSGB*	26-Nov	2000 - 2230	RSGB Contest
Dec	1.3GHz Activity Contest	*Arranged by RSGB*	17-Dec	2000 - 2230	RSGB Contest

Sections	**F**	Fixed / home station
	P	Portable
	L	Low-power <10W 1.3/2.3/3.4GHz, <1W 5.7/10GHz)
	R	Radio talkback
	U	Unlimited Talkback

Main changes from 2012 calendar	
1	ARRL/DUBUS EME updated
2	Lightwave event deleted
3	5.7/10/24GHz Cumulatives replaced with individual events

UKµG Microwave Contest Calendar 2013

Dates, 2013		Time UTC	Contest name		Certificates
21	Apr	1000 - 1600	Low band 1.3/2.3/3.4GHz	2	F, P,U,R,L
26	May	0600 - 1800	1st 5.7GHz Contest		F, P,U,R,L
26	May	0600 - 1800	1st 10GHz Contest		F, P,U,R,L
26	May	0600 - 1800	1st 24GHz Contest		F, P,U,R
2	Jun	1000 - 1600	Low band 1.3/2.3/3.4GHz	3	F, P,U,R,L
30	Jun	0600 - 1800	2nd 5.7GHz Contest		F, P,U,R,L
30	Jun	0600 - 1800	2nd 10GHz Contest		F, P,U,R,L
30	Jun	0600 - 1800	2nd 24GHz Contest		F, P,U,R
21	Jul	0900 - 1700	24GHz Trophy / 47 / 76-1000 GHz		
28	Jul	0600 - 1800	3rd 5.7GHz Cumulative		F, P,U,R,L
28	Jul	0600 - 1800	3rd 10GHz Cumulative		F, P,U,R,L
28	Jul	0600 - 1800	3rd 24GHz Cumulative		F, P,U,R
4	Aug	0900 - 1700	Microwave Field Day		F, P,L
25	Aug	0600 - 1800	4th 5.7GHz Cumulative		F, P,U,R,L
25	Aug	0600 - 1800	4th 10GHz Cumulative		F, P,U,R,L
25	Aug	0600 - 1800	4th 24GHz Cumulative		F, P,U,R
29	Sep	0600 - 1800	5th 5.7GHz Cumulative		F, P,U,R,L
29	Sep	0600 - 1800	5th 10GHz Cumulative		F, P,U,R,L
29	Sep	0600 - 1800	5th 24GHz Cumulative		F, P,U,R
6	Oct	0800 - 1400	Low band 1.3/2.3/3.4GHz	4	F, P,U,R,L
24	Nov	1000 - 1400	Low band 1.3/2.3/3.4GHz	5	F, P,U,R,L

Key:

F Fixed / home station

P Portable

L Low-power (<10W on 1.3-3.4GHz, <1W on 5.7/10GHz)

R Radio talkback

U Unlimited talkback

73 John G3XDY, UKUG Contest Adjudicator

UKµG Contest Portal

Events calendar 2013/14

2013

April 27-28	**Martlesham Microwave Roundtable and UK*µ*G AGM**	mmrt.homedns.org/
May 17-19	Hamvention, Dayton	www.hamvention.org/
June 9	**RAL Roundtable**	http://www.g3pia.org.uk/ I
June 28-30	Ham Radio, Friedrichshafen	www.hamradio-friedrichshafen.de/
July 13–14	**Finningley Roundtable**	detail tbc
July 19–21	Amsat-UK Colloquium, Holiday Inn, Guildford, Surrey	www.uk.amsat.org/Colloquium/
Sept 9	**Crawley Roundtable**	detail tbc
Sep 13-15	58.UKW Tagung Weinheim	www.ukw-tagung.de/
Sept 27-28	National Hamfest	www.nationalhamfest.org.uk/
Oct 6-11	European Microwave Week, Nuremberg	www.eumweek.com/
Oct 11-13	**RSGB Convention**	www.rsgb.org/rsgbconvention/
Oct 18–19	Microwave Update, Morehead, Kentucky	www.microwaveupdate.org/
Nov 2	**Scottish Roundtable**	www.rayjames.biz/microwavert/

2014

July 1	Scatterpoint 10th Anniversary
August	EME2014, Pleumeur-Bodou near Lannion
October 6-9	European Microwave Week, Rome