An Amateur Radio publication for the Microwave Enthusiast

scatterpoint

Published by the UK Microwave Group

October 2024

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Sam G4DDK receiving the Don Hilliard award

Josh M0JMO on 24GHz

UK Microwave Group

Subscription Information

The following subscription rates apply

UK £6.00 US $9.00 Europe €9.00

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 DropboxAlso, **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

payukug@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@microwaversorg

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)

Please send pictures and tables separately, as they can be a bit of a problem.

Thank you for you co-operation

Roger G8CUB

Reproducing articles from Scatterpoint

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

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 (e.g. 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 contact the committee.

The current list is available at

www.microwavers.org/tech-support.htm

UKµG Chip Bank – A free service for members

By Mike Scott, G3LYP

Non-members can join the UKµG 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 components on the site will not be a guarantee of availability of that component.

The service is run as a free benefit to all members of the UK Microwave Group. The service may be withdrawn at the discretion of the committee if abused. Such as reselling of components.

There is an order form on the website with an address label which will make processing the orders slightly easier.

Minimum quantity of small components is 10.

These will be sent out in a small jiffy back using a second class large letter stamp. The group is currently covering this cost.

As many components are from unknown sources. It is suggested values are checked before they are used in construction. The UKµG can have no responsibility in this respect.

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

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Loan Equipment

Don't forget, UKuG has loan kit in the form of portable transceivers available to members for use on the following bands: **Contact Neil G4DBN for more information**

3.4GHz 5.7GHz 10GHz 24GHz 76GHz (122GHz)

WEATHERPROOFING A SPID ROTATOR

Clive GW4MBS

The SPID rotator system offers a one degree digital readout and with a 12v motor that can slowed down to a speed as slow as one revolution in four minutes. I have installed one in my Land Rover but placed the motor inside the vehicle with a flexible drive output, protecting it from water ingress.

I wanted to use another SPID for my 24GHz home rig but felt that it needed some protection from the weather. Unlike a traditional rotator where the motor sits underneath the gearbox, the SPID motor sits rather awkwardly at the side.

The motor is sleeved in wide diameter heat shrink rubber, but the upper edge provides an inadequate seal against water ingress.

This shortcoming is acknowledged by the provision of a drain hole at the base.

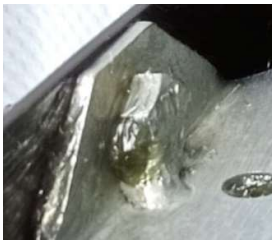
The eventual failure of SPID rotators seems to be attributable to rusting up of the motor. I am only too familiar with this occurring in satellite dish elevating rams, but with these it is easy to provide weather protection by enclosing the motor in a plastic box.

But this was not an option for the SPID without largely dismantling it. I also wanted greater protection for the entry of the control cable and the seal of the cover over the terminals.

With no great plan in mind, I set about constructing a protective frame over the motor assembly. The challenge was finding existing anchorage points that did not require drilling into the rotator. I made use of scrap aluminium that I already had in stock. Periodically I buy 10kg of scrap aluminium sheet and profile, which gives me a good range of options. There always seem to be pieces that are unlikely to ever be of use, but it is surprising how often in some future project even these obscure bits can get incorporated.

I could only find two suitable anchorage points. The most obvious was to make use of the M6 bolt that protrudes from main case.

The problem with this as a fixing point was that vertical edges of the case prevented anything flat being bolted onto the thread as it was too short. As the bolt is welded to the case I didn't want to attempt to break the union.



The only way was to fit an extension to the thread, I did this by using an M6 threaded tube tightened onto the thread. This would then present an open thread for a securing bolt to hold my first supporting strut via a stand-off tube.

This allowed a suitably trimmed angle piece to protrude through the threaded collar for the fixing bolt.

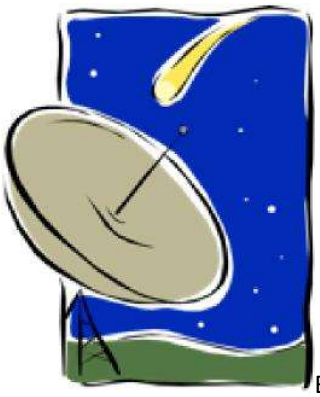
The second fixing point was the hole for the self-tapping screw that secure the gearbox cover. Note that the M6 bolt to the left was not suitable as it would become inaccessible.

Gradually various pieces were cut down and assembled into a frame secured by rivets and stainless steel M3 screws into Rivnuts.

No base was provided as the shroud was just to keep the rain out. Once all the side panels were secured the edges were treated with silicone sealant.

In the event of needing to inspect the motor or its connections, it is a simple matter to remove an individual panel. I hope this might give some ideas for providing protection for SPID motors that might otherwise become rusty. I am sure there may be more elegant ways of constructing such a cover, but I just used what bits of aluminium that were to hand.

Activity News October 2024



By John G4BAO

Please send your activity news to: **scatterpoint@microwavers.org**

From Josh M0JMO

After a spending social weekend at Rob G7MHF's QTH, I followed him an hour South to Clee Hill IO82QJ85 to take part in the October 24GHz Cumulative contest on Sunday morning.

The journey down to Clee Hill had sporadic showers, but as we ascended the hill, we quickly entered thick fog. At the summit, visibility was no more than 20m and pretty grim, but we set up our 24GHz stations and the 2m talkback station using a Big Wheel antenna.

My equipment for this band comprises an Icom IC-705 with 3M Peltor WS ProTac XPI Bluetooth Headset, a Leo-Bodnar GPSDO, a Wavelab Transverter housed in a Stratex ODU and an Andrews 30cm Dish, mounted on a Bosch surveyors tripod using a beautifully made As/El mount made by G7MHF. In fact the whole setup was built by Rob, so a big thanks go out to him!

This was only the second time I'd used this band, following a successful short distance test with Pete G1DFL at the Reading Rally in 2023 experimenting with "shipping container bounce".

Mobile signal from any provider is sporadic and poor up there, so connecting to KST was initially problematic, but we finally got it working.

We tried a few stations without luck, but I finally made a solid SSB contact with David M0GHZ in IO81 over a 107km path. I was elated when he gave me 59! He was a strong 57 with me, and after Rob made contact with David on his equipment, I continued with David and felt we could have rag chewed all afternoon had it not been for the foul weather!

I had a smile on my face for the whole journey back to my home in South Oxfordshire, and a renewed passion for our wonderful hobby. I can't wait to get back on a hill, hopefully under better weather conditions!

From Pete G4HQX

On the October 24GHz cumulative contest. Just one successful contact with M0GHZ/P from a very murky Blorenge. Failed with John G8IKP/P.

From Roger G8CUB

Dire weather on the last 24/47/76GHz cumulative of the year. View North from Stockbridge.
After the photo the weather got worse. Paths that usually worked didn't. I was pleased though to work Dave G1EHF/P on 76GHz from Coombe Gibbet for the first time.

From Staszek SP6GWB

Great to welcome Staszek to the list of Scatterpoint contributors. He pitches in this month with some amazing GHz DX during the big opening at the beginning of November. His remote station in JO80JG is at 1150 m asl. On 23cm he runs 200 W/1.25 m dish, 13 cm 70 W/1.25 m dish, 9 cm 16 W/1.25 m dish, 6 cm 2.5 W/55 cm offset Gregorian feed, 3 cm 8 W/55 cm offset Gregorian feed, 1.2 cm 3.5W/55 cm Gregorian feed.
Highlights were three Terrestrial "firsts." His QSO with Keith G4ODA IO92WS on 5.7 GHz was the first G-SP on 6 cm terrestrial. I say "Terrestrial" first, as G3WDG and SP3GWN worked on 6cm via EME in 2012. G4ODA heard Stasz on 3 cm but was not copied in Poland due s8 noise from local beacon SR6XHC. He then worked F6CKV/P in JN16NL for a 5.7 GHz first F-SP on 6cm. On 3cm he worked Nick G4KUX IO94BP on 1.3 and 10 GHz at 1351 km and a first terrestrial G-SP on 3 cm. Note that G4NNS worked SP7JSG on 3cm in 2006 on EME.

Other highlights were F6DKW JN18CS on 23 and 3 cm, G3XDY JO02OB 23 cm, F6DBI IN88IJ 1.3 GHz 1466 km F8DLS JN19SE 1.3 GHz. DL6NAQ JO40XI 1.3-2.3-3.4-5.7-10 GHz. DL5FCW JO40XI 10 GHz. DC7QH JO62QN 10 GHz, DG0VV JO62RM 10 GHz, DL3IAE JN49DB 10 GHz, F6DBI IN88IJ 5.7 and 10 GHz 1466 km (ODX on 3 and 6 cm)
Stasz commented to me that activity was poor probably due to the Marconi 144 CW Contest, and unbelievably, some people didn't believe that sked would be possible with him so didn't try!
What ever happened to experimentation? We should just NEVER, NEVER refuse to do a test because "we think it won't go"
I had a similar experience this when I asked to try 24GHz with a station who was easily workable on 10GHz.

From John G4BAO

As we see from Stasz's report above, the period from the 31st of October to the 3rd of November was FUN!
While I missed out on a contact with Poland, I did manage to repeat my 10GHz QSO of 2012 with OE5VRL, but this time on SSB, as well as CW.
On 23cm I worked a number on all modes including FT8 and Q65B. Highlights (over 500km) were,
on the 31st OE5VRL JN78DK 559/559 CW 1084km.
On the 3rd, DF1EO JO31ND -13/ -07 FT8 492km,
OE5VRL JN78DK 569 559 CW 1084km
DK1MAX JN58SP-16 /+01 FT8 896km,
DK1VC JO31RG -07/+08 FT8 511km
4th DF4IAE JN49IK -15/ -10 FT8 674km
On the 3rd on 10GHz I worked OE5VRL JN78DK 57/57 SSB 1084km
4th F6DKW JN18CS 549/559 CW 414km

From the sublime to the ridiculous, I reinvented my QO-100 station using my Lime SDR last month but with the Lime RFE Amp board and no QRO amplifier, and just a 60cm sky dish to "mess about" with FT8 on the satellite. With just a few hundred mW it's easy to have FT8 contacts. I even had two QSOs running just 7mW!
At a geostationary orbit distance of 35786 km, I make that just over 5 million km (3 million miles in old money) per Watt!

From Nick G4KUX

On Nov 3rd on 23cm I worked 7 DL stations, plus 2 OE, 1 OK and 1 SP. On 3cm along with the (reported above,) SP6GWB tropo "first," I worked OE5VRL, DB6NTand DL3NAQ all at good strength.

From Neil G4LDR

I was only able to operate for a short time on Sunday evening the 3rd of November so only managed to work two stations but on quite a few bands.
I worked OE5VRL JN78DK at 1182km on all bands from 432MHz up to 10GHz followed by DB6NT from 144MHz to 10GHz. Whilst working DB6NT on 3cm and 6cm, SP6GWB reported hearing me on both bands in JO80JG a distance of 1301km. Unfortunately, by the time I finished working DB6NT conditions had changed, and I didn't manage to work the SP on 3cm or 6cm. Had we had QSOs this would been my best ever DX on 3cm and 6cm. So, for now my best ever DX on 6, 9 and 13cm are the contacts with OE5VRL as detailed above. (My best DX on 3cm is for a contact with an SM station at 1275km about twenty years ago when I held the UK record for about five minutes!).

From Clive GW4MBS

For portable operation I have given up the need for a shelter at the rear of my Land Rover, which I now only use when camping and operating at military vehicle shows. It is too cumbersome for operating from a verge and besides is no longer necessary as I can operate the gear from inside the Land Rover whatever the weather.
Although it is an evolution of operating set-ups the final improvement for the season was incorporating a mount for the SPID rotator controller. This has a display that is difficult to see and buttons that require it to be held or steadied with another hand. I knocked up an aluminium frame from bits in the scrap box, this gives a rigid support for the controller midway between arm's reach and eye level, where the display is not
in competition with the Sun.

Sunday 29 Sept was the last of the 10GHz contests for this season. With a forecast of heavy rain and wind up to 50mph, few people were able to operate portable. It seems as if portable microwave operating is still in the dark ages of 60+ years ago, largely based on a tripod mounted dish with the rig mounted on a plywood base with the operator stood behind or even in a comfy chair. Although this is very agreeable for a day out in the Summer as result the contesting calendar is built around these activities. There seems to be no appetite for more robust all-weather portable operating at other times of the year.
The result was that with so few portable stations there seemed to be a contagious pessimism that deterred many fixed station regulars from coming on. The net result was that I only had 7 QSOs and packed up early in the afternoon with nobody else to work. There was some distant rain scatter around making signals very broad and distorted, often on quite unexpected headings and elevations, then with all this comes the Doppler shift and tracking required to sustain a QSO. So, a bit more skill required than beaming on the true heading and just listening!

From Ross G6GVI

I have one exceptional (for me) contact to report from the big Tropo opening at the start of November. After recently saying that I'd not heard any DX on 23cm this week, I was delighted to catch Rudi OE5VRL on SSB at 20:19 on 3rd Nov. I was using just 25W into my venerable old 27-ele LQY, down here in the centre of Bolton and got a 57 report. The distance was just over 1300km - beating my previous record of <900km from about 15 years ago.

From Hugh VA3TO

Peter VA3ELE and I did some more testing on 78 GHz. After work he went to his chosen 78 GHz VUCC site at FN03dp and I drove to a roadside location in grid EN93xo a little north of my home, in attempt to give him grid #2 on 78G. We lined up on 24 GHz with good signals then switched to 78 GHz. Nothing was heard on 78G, so we went back to 24G to re-peak on the rain. After a bit of back and forth we found each other with decent signals on 78G and completed a QSO.
Since that worked out for us, Peter drove up to grid EN93xo and I drove down to my VUCC site at grid FN03cn to see if I could get the grid. In the meantime, the rain that we used in the earlier contact dissipated but the weather radar was showing that more scattered rain was moving in. Once Peter arrived at the same location from where I worked him, the traffic had picked up so he decided to look for a quieter location. After a bit of driving around he found a site with a clearing in my general direction. The second wave of rain had not yet arrived but it was getting dark so we thought that we'd try a tropo shot. We set up and peaked up on 24 GHz with signals well into the red, It seemed promising for 78 GHz so we switched over and found each other within seconds of dashing. After peaking up on each other the signals were also very strong so Peter suggested that we go directly to FM and we completed the QSO in short order. 3 down, 2 to go... with 78 GHz VUCC in our crosshairs!

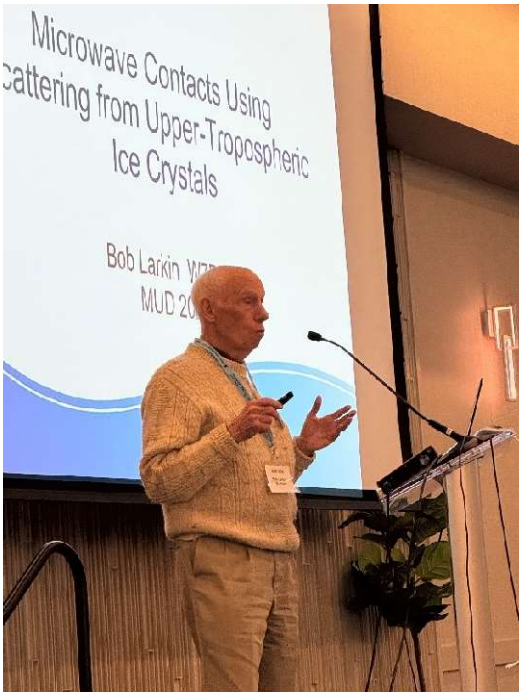
Microwave Update 2024 Vancouver Report

by Sam G4DDK

I was able to attend MUD (Microwave Update) in Vancouver in early October. This was my first return to this event for some years. Although primarily a USA event, it was held in Canada for the first time. MUD is an offshoot to the Central States VHF Society conferences. First staged in 1985 in Estes Park, Colorado, the Conference was envisaged and organised by Don Hilliard, W0PW. Its purpose was to recognise the advances being made on the higher bands as distinct from the VHF bands.

This year's conference was jointly hosted by the Western Canada Weak Signal Association (WCWSA) and the Pacific Northwest VHF Society (PNWVHFS) and organised by VE7HR, VE4MA and VE7AFZ.

The range of topics was quite extensive, ranging from microwave operating (very different in NA) through practical subjects to Cyber Security for the Radio Amateur.



Bob Larkin W7PUA

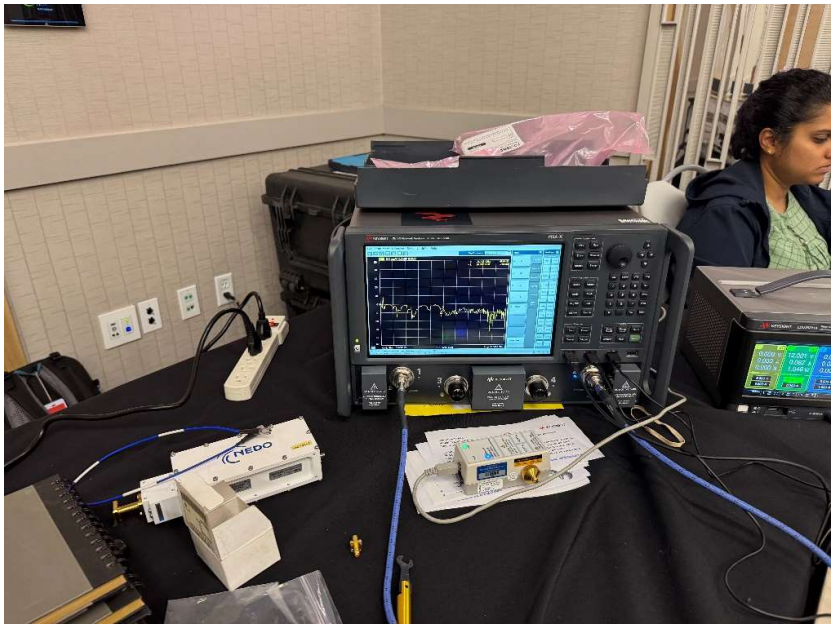
Tom WA1MBA in disguise

My own 'favourites were 'Microwave Contacts Using Scattering from Upper-Tropospheric Ice Crystals' from Bob Larkin, W7PUA, and 'Getting on the Zero Metre band' from Tom Williams,
WA1MBA, aka Mr Spock. Tom's talk gave some figures for what the highest possible band might be for an amateur radio QSO, assuming it could be a) allowed, b) afforded, c) time to complete the QSO. The large colliders required would be well beyond the cost of the average transceiver.

Tom concluded that the highest we might practically achieve would be around 10^{20} Hz, but if we went to 10^{30}Hz, it would involve the total destruction of the universe. Beware what you wish and strive for!

The keynote speech was given by well-known satellite man, Scott Tilley, VE7TIL, and detailed his exploits 'Assorted Tales of Monitoring Space from My Backyard'. A most interesting guy, as were so many of the other speakers at the event.

Neil G4DBN gave his talk remotely from UK



Nice VNA doing Noise measurement

My thanks to the organisers for a great conference.

Next year MUD is being held in warmer Tucson, Arizona. An event for your diary?

The full colour proceedings are still available by contacting VE7HR via the Microwave Update 2024 web page.

The Don Hilliard Technical Achievement Award

In tribute to Don Hilliard and his tremendous contributions to VHF and microwave technology and for appreciation of his forward looking into the fascinating world of 'microwaves', the North Texas Microwave Society on behalf of Microwave Update, created 'The Don Hilliard Technical Achievement Award presented each year to an amateur radio operator who has made significant contributions to amateur microwave operation and technology. The NTMS proposed that this award be presented to a deserving amateur each year by each sponsoring organisation.

The award this year was presented at MUD 2024 to Sam Jewell G4DDK for his VLNA project and a lifetime dedication to supporting us on the VHF & GHz bands

Beacon News……..

Yesterday (27/10/2024) afternoon about 13-30 hours both the 10 and 24 GHz GB3SEE beacons were switched on from the Reigate hill site IO91VG41.

Reports would be welcome on both beacons please.

Please spot on Beaconspot.uk as well

Many thanks

Best 73

Denis G0OLX

Editors Comments

Very well done to Sam G4DDK for being awarded the Don Hilliard award this year at MUD Vancouver.
Great to see some proper tropo being worked on the microwave bands. More like Octobers of old. Certainly in the Southeast.
I look forward to seeing many of you at the Midlands round table.

Loan Equipment

Current status is as below, with people listed, currently having the gear.

3.4GHz enroute to Allan G6HPR

5.7GHz Bernie G4HWA https://www.microwavers.org/6cm-loan-system.htm

10GHz Available https://www.microwavers.org/10ghz-loan-system.htm

24GHz Steve G1PPA https://www.microwavers.org/24ghz-loan-system.htm

76GHz Noel G8GTZ https://www.microwavers.org/76ghz-loan-system.htm

The original 10GHz system is being checked over, before being made available again.

Another one or two 24GHz systems will also be produced soon.

The following equipment from Chris G0FDZ, is currently with me, being checked over. It is my intention that some of it will become loan equipment in the future.

I will take some of it to the Midlands RT, so that Chris's high build quality can be appreciated. All transverters have a dedicated FT817 transceiver.

24GHz transverter (1.5W DB6NT LNA)

47 / 76GHz transverter (low level tx)

47 / 76GHz CW transmitter (100mW@76G)

122GHz transverter (not VK)

134 / 241GHz transverter (low level)

122 / 241GHz CW transmitter

122 / 134GHz CW transmitter

For loan requests or queries please use the email below to keep it separate from Scatterpoint.

Email: roger@valendine.co.uk

Microwave Meetings 2024

Next on the calendar – Midlands Round Table MRT

Now 23 / 24th November 2024

https://www.eatonmanor.co.uk/round-table-event-2024/

The event is being held at:

Eaton Manor

Eaton-under-Heywood

Church Stretton

Shropshire

SY6 7DH.

The event venue is wheelchair accessible and will be open from 9:00 am, proceedings will start at 10:00 am.

There is an admission charge of £22 per head to cover the venue hire, lighting and heating.

Admission also includes a two course sit down lunch (vegetarian option available on request at time of booking), all day teas and coffees etc.

This must be booked and paid for in advance

Provisional programme:

09:00	**Doors open**		
10:00	**Introduction and Presentation of Brown Clee Trophy**		
10:15	**Alwyn Seeds**	**G8DOH**	**1.3GHZ**
11:15	**Roger Ray***	**G8CUB**	**>275GHz**
12:30	**Lunch**		
14:00	**David Fielding**	**G8KHU**	**122GHZ**
15:00	**David Butler**	**G4ASR**	**Scatter**
16:00	**End of Talks**		

18:00 Dinner for those staying or local people to prebook

***Roger is presenting a talk written by Chris G0FDZ**

Contest Results 2024

UKuG MICROWAVE CONTEST CALENDAR 2024

Dates, 2024	Time UTC	Contest name
10 -Nov	1000 - 1400	5th Low band 1.3/2.3/3.4GHz

MICROWAVE CONTEST CALENDAR 2024

Month	Contest name	Organiser	Date 2024	Time GMT	Notes
Jan	1.3GHz Activity Contest	*Arranged by RSGB*	16-Jan	2000 - 2230	RSGB Contest
Jan	2.3GHz+ Activity Contest	*Arranged by RSGB*	23-Jan	1930 - 2230	RSGB Contest
Feb	122GHz Contest	UKuG	4-Feb	0900 - 1700	New event
Feb	1.3GHz Activity Contest	*Arranged by RSGB*	20-Feb	2000 - 2230	RSGB Contest
Feb	2.3GHz+ Activity Contest	*Arranged by RSGB*	27-Feb	1930 - 2230	RSGB Contest
Mar	Low Band 1296/2300/2320/3400MHz	UKuG	3-Mar	1000 - 1600	First 4 hours coincide with IARU event
Mar	REF/DUBUS EME 3.4GHz	*Arranged by REF/DUBUS*	17-Mar	0000 - 2400	REF/DUBUS EME 3.4GHz
Mar	1.3GHz Activity Contest	*Arranged by RSGB*	19-Mar	2000 - 2230	RSGB Contest
Mar	2.3GHz+ Activity Contest	*Arranged by RSGB*	26-Mar	1930 - 2230	RSGB Contest
Apr	Low Band 1296/2300/2320/3400MHz	UKuG	7-Apr	0900 - 1500	
Apr	REF/DUBUS EME 2.3GHz	*Arranged by REF/DUBUS*	14-Apr	0000 - 2400	REF/DUBUS EME 2.3GHz
Apr	1.3GHz Activity Contest	*Arranged by RSGB*	16-Apr	1900 - 2130	RSGB Contest
Apr	2.3GHz+ Activity Contest	*Arranged by RSGB*	23-Apr	1830 - 2130	RSGB Contest
May	*432MHz & up*	*Arranged by RSGB*	4-May to 5-May	1400 -1400	RSGB Contest
May	*10GHz Trophy*	*Arranged by RSGB*	5-May	0800 - 1400	Sunday, to coincide with IARU
May	Low Band 1296/2300/2320/3400MHz	UKuG	5-May	0800 - 1400	Aligned with IARU event
May	24GHz/47/76GHz	UKuG	5-May	0900-1700	Aligned with IARU event
May	REF/DUBUS EME 1.2GHz	*Arranged by REF/DUBUS*	11-May to 12-May	0000 - 2400	REF/DUBUS EME 1.2GHz
May	1.3GHz Activity Contest	*Arranged by RSGB*	21-May	1900 - 2130	RSGB Contest
May	5.7GHz/10GHz	UKuG	26-May	0600-1800	
May	2.3GHz+ Activity Contest	*Arranged by RSGB*	28-May	1830 - 2130	RSGB Contest
Jun	Low Band 1296/2300/2320/3400MHz	UKuG	2-Jun	0900 - 1500	Aligned with some Eu events
Jun	REF/DUBUS EME 24GHz	*Arranged by REF/DUBUS*	8-Jun	0000 - 2400	REF/DUBUS EME 24GHz
Jun	REF/DUBUS EME 10GHz	*Arranged by REF/DUBUS*	9-Jun	0000 - 2400	REF/DUBUS EME 10GHz
Jun	1.3GHz Activity Contest	*Arranged by RSGB*	18-Jun	1900 - 2130	RSGB Contest
Jun	2.3GHz+ Activity Contest	*Arranged by RSGB*	25-Jun	1830 - 2130	RSGB Contest
Jun	5.7GHz/10GHz	UKuG	30-Jun	0600-1800	
Jul	VHF NFD (1.3GHz)	*Arranged by RSGB*	6-Jul to 7-Jul	1400 - 1400	RSGB Contest
Jul	24GHz/47/76GHz	UKuG	15-Jul	0900-1700	
Jul	1.3GHz Activity Contest	*Arranged by RSGB*	16-Jul	1900 - 2130	RSGB Contest
Jul	2.3GHz+ Activity Contest	*Arranged by RSGB*	23-Jul	1830 - 2130	RSGB Contest
Jul	5.7GHz/10GHz	UKuG	28-Jul	0600-1800	
Jul	REF/DUBUS EME 5.7GHz	*Arranged by REF/DUBUS*	28-Jul	0000 - 2400	REF/DUBUS EME 5.7GHz
Aug	24GHz Trophy Contest	UKuG	18-Aug	0900 - 1700	New event
Aug	1.3GHz Activity Contest	*Arranged by RSGB*	20-Aug	1900 - 2130	RSGB Contest
Aug	2.3GHz+ Activity Contest	*Arranged by RSGB*	27-Aug	1830 - 2130	RSGB Contest
Aug	ARRL Microwave EME	*Arranged by ARRL*	24-Aug to 25 -Aug	0000 - 2359	ARRL EME 2.3GHz & Up
Aug	5.7GHz/10GHz	UKuG	25-Aug	0600-1800	
Sep	24GHz/47/76GHz	UKuG	15-Sep	0900-1700	
Sep	1.3GHz Activity Contest	*Arranged by RSGB*	17-Sep	1900 - 2130	RSGB Contest
Sep	ARRL Microwave EME	*Arranged by ARRL*	21-Sep to 22-Sep	0000 - 2359	ARRL EME 2.3GHz & Up
Sep	2.3GHz+ Activity Contest	*Arranged by RSGB*	24-Sep	1830 - 2130	RSGB Contest
Sep	5.7GHz/10GHz	UKuG	29-Sep	0600-1800	
Oct	*432MHz & up*	*Arranged by RSGB*	5-Oct to 6-Oct	1400 - 1400	IARU/RSGB Contest
Oct	*1.3 & 2.3GHz Trophies*	*Arranged by RSGB*	5-Oct	1400 - 2200	RSGB Contest
Oct	24GHz/47/76GHz	UKuG	6-Oct	0900-1700	
Oct	1.3GHz Activity Contest	*Arranged by RSGB*	15-Oct	1900 - 2130	RSGB Contest
Oct	ARRL EME 50-1296MHz	*Arranged by ARRL*	19-Oct to 20-Oct	0000 - 2359	ARRL EME Contest
Oct	2.3GHz+ Activity Contest	*Arranged by RSGB*	22-Oct	1830 - 2130	RSGB Contest
Nov	Low Band 1296/2300/2320/3400MHz	UKuG	10-Nov	1000 - 1400	
Nov	ARRL EME 50-1296MHz	*Arranged by ARRL*	16-Nov to 17-Nov	0000 - 2359	ARRL EME Contest
Nov	1.3GHz Activity Contest	*Arranged by RSGB*	19-Nov	2000 - 2230	RSGB Contest
Nov	2.3GHz+ Activity Contest	*Arranged by RSGB*	26-Nov	1930 - 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)

Added 24GHz and 122GHz events, rescheduled 24/47/76GHz events for 2024

EVENTS 2024

November 9	Scottish Roundtable	www.gmroundtable.org.uk
November 23/24	Midlands Roundtable SY6 7DH	**https://www.eatonmanor.co.uk/round-table-event-2024/**

EVENTS 2025

January 13	Heelweg, Westendorp, Netherlands	www.pamicrowaves.nl
February 1	Ridgeway Roundtable, Chilton village	
February 15	Tagung, Dorsen, Germany	www.ghz-tagung.de
March 7-9	MicroMeet Madrid. Spain	www.micromeet.es
April 24-26	IARU-R1 Interim meeting / Centenary, Paris	
September 12-14	70.UKW Tagung, Weinheim	www.ukw-tagung.de
September 21-26	European Microwave Week, Utrecht, Netherlands	www.euweek.com