An Amateur Radio publication for the Microwave Enthusiast

# scatterpoint

Published by the UK Microwave Group

August 2024

In This Issue



G8AGN making tests on 30GHz


Clive GW4MBS/P on 10 / 24 / 47GHz

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 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

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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, 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

# UK Microwave Group Contact Information

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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**

**5.7GHz 10GHz 24GHz 76GHz 122GHz**

# 30GHz Tests

Barry G8AGN

After no "in the field" 30THz activity  for about 8 months, Barry G8AGN and Bob G4APV arranged to visit the Finningley  Amateur Radio Society site on 17 August 2024 for some testing and increased their DX when using the directly modulated spiral heater Tx to 125m. (Previous testing in Nov 2023 had been over 40m.)

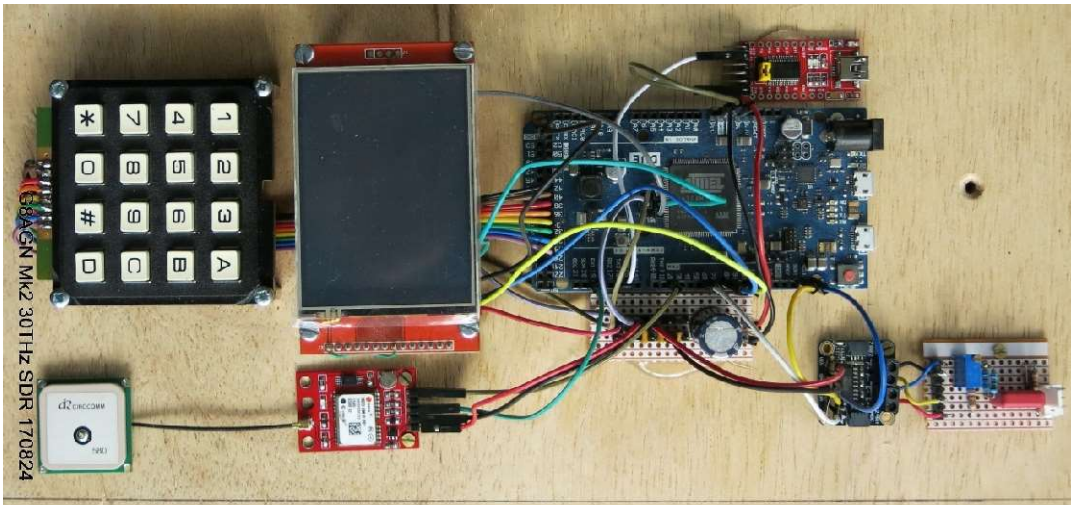

View from Rx end.

The Tx is difficult to see but is just to the right of the orange netting to the right of the car

The Tx used 2-PSK QRSS6-CW with a sub-carrier frequency of 2Hz. Strong signals were received and suggest that much longer DX should be possible.

Further details of the Tx will appear in the next issue of RadCom Plus.

Side view of Rx end




New SDR Rx


The 30GHz Transmitter

Two different SDR receivers were used in the tests. The original SDR is based on a 24 bit ADC and Arduino Nano. The second one is based on the same 24 bit ADC but uses an Arduino Due. This enables the second Rx's characteristics to be set up "on the fly" using an integral hex keypad and TFT display, as well as using the on-board GPS module to specify the time at which reception and data logging commence. Ultimately, it is hoped to have both the Tx and Rx time-synced so as to enable real time phase sensitive signal demodulation.

Many thanks are due to FARS members and especially to Kevin G3AAF for hosting our visit.

Our previous power-wasteful Tx easily did 450m so I would hope to get at least that far. As the DX increases, the main problem is Tx-Rx alignment but the retro-reflective tape technique should help with this. I also have the larger telescope to use in the Rx in reserve still..

73 Barry

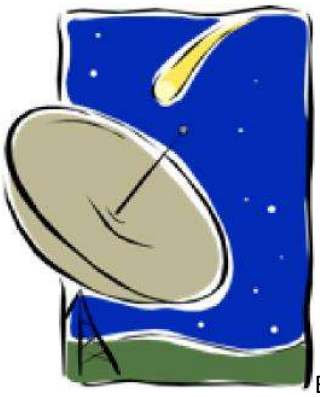
# Checking out 10GHz Portable Gear

Adrian G4UVZ

The last time I went out /P on 10GHz working Peter GW4JQP in Milford Haven over 120km 185dB path loss
Results were very disappointing so I wanted to check system against home station.
The path from home is 161km 220dB path loss.
We established on the home station 59 / 59+ both ways. I have 10 watts and Peter 5 watts.
My home antenna is a 1.2 M offset dish
The portable kit has a 0.5 M Procom set up with just 1.5 watts. The heading was slightly obscured by trees at about 400M But signals came through at around 15dB down on the home station as received in Milford Haven which we felt fitted in well with the reduced power and dish size.

C

# Activity News August 2024



By John G4BAO

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

## From Dave G1EHF

For the August 24GHz Contest. A good day on Walbury Hill (IO91GI44) with fine weather, good activity but poor conditions. I managed 13 individual callsigns in the log, which comprised three home stations and ten portables. Interestingly, my best DX and a new path was to Adrain G4UVZ at 123km. My setup comprised homebrew transverter with around 250mW and 60cm Andrew PF dish. With regard to 'Tripod Heroics', there is no way I could mount or rotate the dish on my home mast, as it's too heavy. The provided mount is for a 3" mast and the side-load would be considerable!

## From G4BAO

Work this month has mainly been on repurposing my 5.7GHz EME feed box from my old 1.9m mesh prime focus dish to use with the 1.2m offset. This involved replacing the Kumar choke on the RA3AQ Septum feed with a dual mode horn to the design of W1GHZ. I also needed to make a new mount on the dish to fit the longer horn. I replaced the injection lock on the Kuhne G2 transverter with a dedicated 117MHz PLL OCXO and refurbished the 2 x Ferranti 12W GasFET PAs, “giving them both a good tabbing!” to optimise power out at 23 Watts at the feed. This has enabled me to see around 0.15 dB Moon noise and JUST detect echoes using WSJT-X echo mode. Unfortunately, I didn’t complete it all in time for the 6cm contest, so no QSOs with the new system yet. As I found on 10GHz, the decent 1.2m offset outperforms the 1.9m mesh prime focus dish on the higher bands.

Also found time to have some terrestrial 10GHz QSOs in the recent contests, get the Kent Web 24GHz SDR working and am pleased to report that the GB3CAM beacons are operational now from Haddenham, Cambs. JO02BI74. Thanks to Aidan G8NPH for allowing us to install the beacons on the family home. As I write this, the 24GHz beacon needs looking at as it’s a bit spurious!

## From G4LDR

During the 24GHz trophy contest I worked from home, making a total of 7 contacts (G1EHF/P IO91GI44 32km; G4NNS IO91FF19 19km; G8GTZ/P IO91JG26 37km; G8KMH/P IO80WP01 63km; G8GKQ/P IO80WP0163km; G4XAT/P IO90MX13 50km and G8GTZ/P IO91GI44 32km).

I am lucky that I have good paths (some near line of sight) to the stations I worked. I also briefly heard G8IKP/P IO80TP at 82km over a much obstructed path. It was unfortunate that conditions were flat as I had failures with G8CUB/P IO91CL, who was the wrong side of a thick hedge at his site; GW4HQX/P IO81LS, normally workable from home; G4UVZ IO80 and GW4MBS/P IO71 who at 190km from me is

40km more than my best DX on the band. I also got the impression that my tower mounted system may have had reduced receive performance as I was not hearing the Bell Hill beacon, which is normally received over the non-line of sight path despite tree blockage at Bell Hill (since the beacon tower was lowered a few years ago) and at my QTH. It is interesting to note that to my knowledge there are currently six stations with permanent capability to operate 24GHz from home in the UK (G4UVZ, G4LDR, G4NNS, G1JRU G3XDY and G4BAO) and several more who can put up 24GHz systems at their home QTH. I regularly carry out tests with two that are in range of me. Hopefully with more Wavelab units becoming operational there will be more activity on the band in future.

## From Clive GW4MBS


I went a vehicle show with VMARS at South Cerney Airfield IO91AQ95. The highlight for me was meeting VMARS member Roger Ray G8CUB who brought along his 24GHz and 47GHz rigs. He later set these up at IO91CL12 a distance of 25.5km and we worked on both bands 59+ allowing digital voice on our IC-705s.
This was my best DX so far on 47GHz, running 30mW to a dish from a nose cone radar. The Cassegrain feed was the base of an aerosol can, scaled down from a similar system I used over 50 years ago when we had the 21Gc/s band.
Other tests on 24GHz were extremely attenuated by a massive horsebox that parked in front of me! I persuaded them to move it, although it is the grey thing in the photo. But it still blocked one path I was trying to work, but there was no problem on 10GHz as that was high enough to clear the horsebox.
Operating three microwave bands gets a bit complicated especially as it is done from the back of a Land Rover where I have been living and eating for 4 days.

The unexpected horsebox incident brought home the need to get both lower dishes much higher. I have now engineered clamping arrangements to get both dishes up to the penultimate section of the mast to cure such occurrences. I found that a 48mm clamp for the jockey wheel of a caravan gives a firm grip to the mast.
This modification was done just in time for the 24GHz Trophy event that allowed me to operate from a site that was blocked by a row of bushes on one heading when the dish was too low. This is not good tripod territory!

Unfortunately, as the mast extended the cables caught on a vehicle projection that ripped the connections to the tilt motor and caused an internal break in the coax to the 10MHz lock. So, I had to dismantle everything and go home, one of advantages of my site is that it is only a 3km drive away. Once home I reconnected the tilt motor and fitted a new coax cable. There was the reassuring glow from the LED in my control unit indicating the rig had locked to the TCXO.

Back up the hill again and got set up but to my horror the LED lock did not illuminate. So down it all came again. Tests showed that the LED had failed, and I could confirm there was a lock because disconnecting the TCXO caused my signal generator to move frequency.

So, all that messing around delayed my start by 2 hours.
I managed to work GW4JQP on CW over a difficult path to IO71KR94 and that was it! It was not for lack of trying but I tried with:
GW3TKH/P G8CUB/P G1EHF/P G8IKP/P G4FRE/P G4LDR G4UVZ. The horizons were misty all day and results differ from last year when in two events I had QSOs at 190km.
From a home perspective I have now worked G4UVZ Taunton twice on 24GHz rain scatter from my valley, but this has been by hurriedly setting up the portable from the garage. I now have installed a dedicated home rig robustly assembled from a Wavelab, to an Italian feed into a Sky dish. Just waiting for some S9 RS from G4UVZ then I might get a chance to switch on the 24GHz home rig.

## From Gareth G4XAT

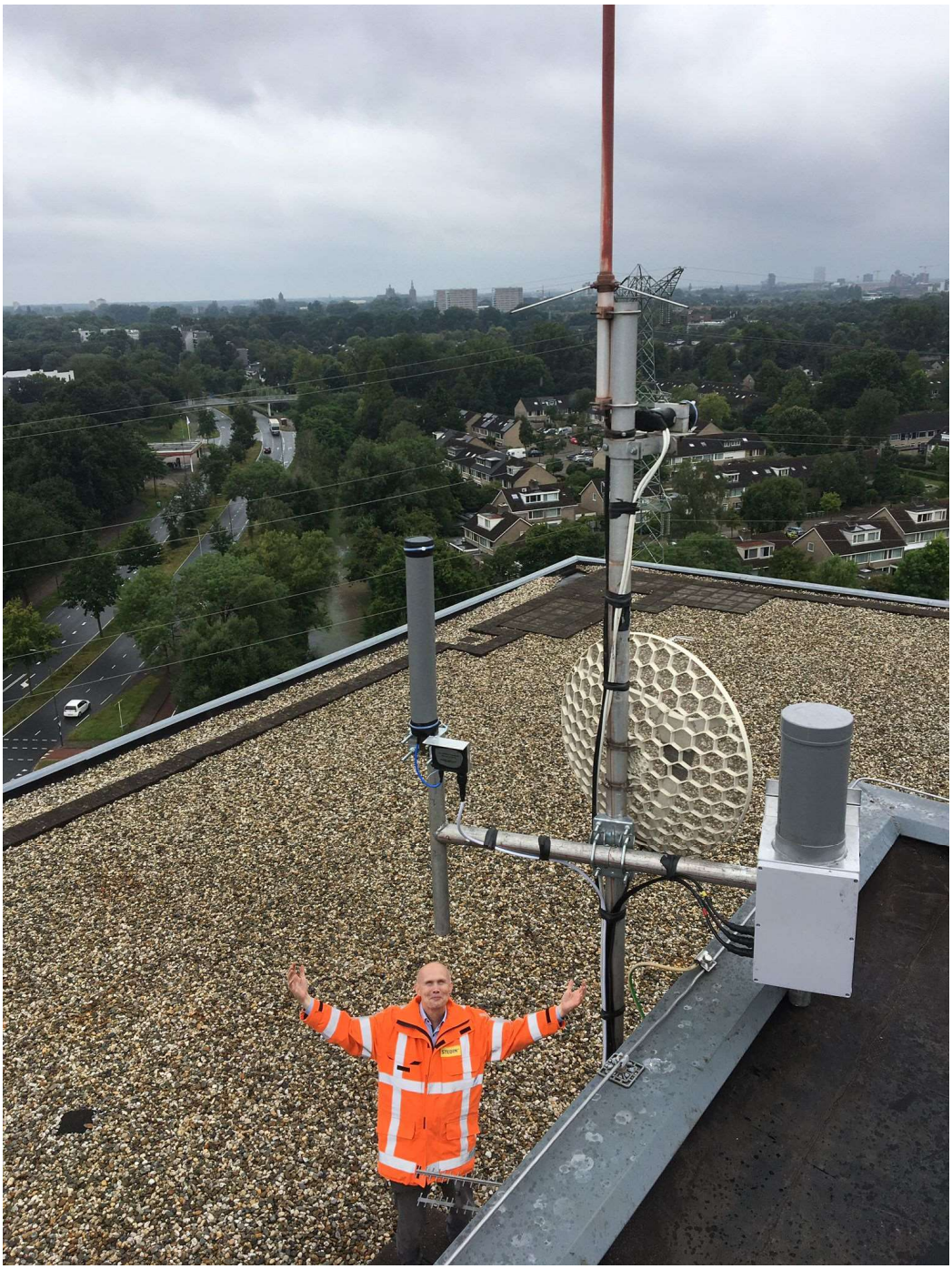
Having used my Portsdown4/Pluto/Wavelab/30cm Andrew gear successfully for DATV I thought I'd make a serious effort to join in with the inaugural 24GHz contest and use the same combination with my Langstone. In discussion with Noel, G8GTZ he suggested that I set up at Butser Hill as there would be several stations within likely range. After a slightly slower journey due to the roadworks at the M25/A3 junction I arrived on site at 10:50 (70 miles from home) and set up on the little triangle just before the main Butser car park entrance. Other than a bit of hedge growth in the way (not a problem as it turned out) it looked good. For a gear check I looked for the Bell Hill beacon, easily found and a good signal at S6. For talkback I used my full-wave dipole (which I designed to mount either vertically or horizontally) on the top of 6m of fishing pole, secured to my roof-rack. At this point the farmer arrived in the field over the hedge

to begin combining the wheat. A good crop I assume as I was repeatedly showered (gear, car and self!) with chaff blown my way each time it passed on ever decreasing laps.
First contact was with Dave G8GKQ/P down at Lulworth (91km, my best DX) and easily worked via FM. He was site sharing with Lehane G8KMH/P who I worked later using SSB. Four other stations were worked and although I tried with Dave G4FRE, it was a step too far as nothing was seen or heard. During a lull, I set up my 60cm Andrew dish, modified with a rectangular to circular transition. Using the Bell Hill beacon, it was very difficult to tell if there was any improvement (S6 or S6…). Manufacturer's figures suggest a 4dBi difference which I have loosely correlated in my garden using a source and turning the RX gain down until at the threshold of audible detection. I reckon there was perhaps a 3dB difference, not very accurate but at least I know it works. It's a big heavy beast though so I'd be better off optimising my Wavelab changeover (980mW at the transition) and getting more of its supposed 2W out to the dish.
For the future I think I'll develop a car-top platform and park on the slightly higher up wider verge back down the approach road. Other improvements I'd like to try are an azimuth readout. Standing behind the dish and waving a compass is not really good enough. If I use my modified CCTV head unit with its internal 10-turn feedback pots I should be able to point with greater accuracy. For talkback the horizontal full-wave proved directional (as expected) so I either need to rotate it (12V rotator built and tested) or build a halo/big wheel. I did suffer noise on 144.390 in some directions, sufficient to drown out any talkback from Dave G4FRE who could easily hear me.

## From David G8GKQ

I went up to Tyneham View, near Lulworth in Dorset, where Lehane G8KMH was already set up. Together, we had 6 successful contacts each over path lengths of 34 -91 km. Attempts with contacts beyond that distance (97 km and 142 km over obstructed paths) failed. Conditions seemed poor with heavy fading even on 144 MHz talkback. On one contact in particular (to Walbury Hill near Newbury) the optimum dish pointing angle was about 10 degrees off of the direct path (at both ends). It was interesting to compare Lehane's precision offset dish with my battered old prime focus with penny feed dish. The precision dish had more gain, but initial signal acquisition was a lot easier on the older dish as it was able to receive signals outside the main beam. A very enjoyable and relaxed contest. It was great to have time for a natter rather than trying to fill the log with lots of 59001s. For portable operation, digital modes do not appeal to me at all (unless they are carrying "live" video and voice). I accept that there might be a place in the calendar for predominantly fixed station digital modes, but I can't get motivated to take my computer up a hill so that it can talk to another computer!

## From Albert PA3GCO



New Web SDR hardware has been installed at the location of the 70 cm repeater PI2SHB in JO21PR80HF. At that location there has been a webSDR for 2m, 70cm, 23cm and 3 cm (LNB beaming west), Paul PE1LXX and I added 10 GHz with a 2 x 20 slot antenna, 45 m above ground level, and 24 GHz also with 2 x 20 slot antenna.

The thick pipe contains the slot antenna for 24 GHz, the thin one is for 10 GHz.

We monitor PI4 beacons automatically.
See http://sdr.shbrg.nl:8074/PI4-RX-v2.html/ Looking at the page, top left is LNB beaming west, top right is the new equipment for 10 GHz. Second row is similar but for ON0HVL, distance 200 km and off air unfortunately. When in operation we decode this Belgian PI4 beacon daily.
Third row is 24 GHz. Left PA3GCO/B 24048.930 from JO21EU (69 km). Yesterday the PI4 signal was received for more than 10 hours. Right PA3GCO/P, a temporary beacon on 24048.935 from JO21QQ17 which is a few kilometres from the webSDR. Power has been reduced to 1 mW, horn antenna inside at the location of 23 cm repeater PI6SHB. At first power was 2 W but this caused webSDR overload. 1 mW turns out to be more than enough. On 24 GHz we also see PI7ATV on 24048.901.5 from JO22MA but it does not use PI4. All our beacons and everything in the webSDR for 10 GHz and 24 GHz is locked to GPS. On 10 GHz we also monitor PI7ALK and GB3GCT, both beacons are received regularly on the LNB, let's see what happens with the slot antenna.

The webSDR can be found here: http://sdr.shbrg.nl:8074/

Our 24/7 PI4 monitoring is here: http://sdr.shbrg.nl:8074/PI4-RX-v2.html

## Beacon News……..

The Beacon ON0HVL had an PLL solder failure, now hopefully repaired.
As test I put it the coming week in the tower at home, ~ 15m ASL.
2W, slotted waveguide, 10368.985, ON/PA0MHE/B , JO11PF, PI4
As the beacon runs here on solar, it operates only from 9 till 17 CET.

Reports are appreciated.
Maarten PA0MHE

GB3CAM 10 and 24GHz beacons back on from new site JO02BI84. Reports to beaconspot please.
24048.945 and 10368.755 MHz #hamradio #GHz_bands.

John G4BAO

## Editors Comments

I look forward to seeing many of you at Crawley Round Table.
Autumn weather should hopefully create some good conditions on the microwave bands, hopefully……

As always, it would be great to have some articles for forthcoming issues of Scatterpoint. This is the first issue without a constructional article. Contest news, and a report on Crawley will be in the next issue.

# VK 122 / 134 GHz Project Update

Hi all,

Just a quick note to let you know we are still moving forward albeit slowly with this.

I've been doing the rounds with the manufacturers and settled the mechanical requirements.

The PCB assembly is another matter since we're striking significant supply chain delays for some items and the fact that some things are not made any more. This requires a round of selecting suitable substitutes and then we get supply chain issues or MOQ demands that are untenable, so we go around again. It’s become quite the iterative process.

All that being said, we are now quite close ( I hope I haven't jinxed anything by writing this! )

cheers

Tim
VK2XAX

# Microwave Meetings 2024

## Next on the calendar – Crawley RT

**Planned timetable**

**10:30: Venue opens**

**10:30: 'Bring and buy', general socialising**

**12:00 UKuW Group Project contest round / G3GRO trophy judging commences**

**12:15 Lunch (hot dogs and burger rolls etc and tea/coffee available)**

**13:15 Welcome and results of the Project contest heat**

**13:30 Talks: (Live streaming at https://www.youtube.com/@G0KAD - subject to confirmation)**

- **Adjudicating the 23cms UKAC – Quin, G3WRR**
- **Sub-Millimetre Waves: Operating above 275GHz, Chris, G0FDZ & Roger, G8CUB**
- **Ramsgate 24GHz SDR – Phil, G0JBA**
- **Raspberry Pi Pico Synthesiser Controller – Colin, G4EML**

**~16:30 End of meeting**

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

**http://carc.org.uk/find-us/**

## Next after that…

**Bookings are now open for the Twelfth Scottish Microwave Round Table (GMRT). It will be held on Saturday 9th November at the Museum of Communication, Burntisland in Fife. Admission includes lunch and there will be an optional dinner at a local hotel. To find out more and to book your place go to the GMRT Website https://gmroundtable.org.uk/. For further information email Colin GM4HWO at gm4hwo@gmail.com**

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**73 Pete GM4BYF**

**Note Date Change for Midlands Round Table**

**Now 23 / 24th November 2024**

# Contest Results 2024

## UKuG MICROWAVE CONTEST CALENDAR 2024

| Dates, 2024 | Time UTC | Contest name |
|---|---|---|
| 15-Sep | 0900 - 1700 | 3rd 24GHz Contest |
| 15-Sep | 0900 - 1700 | 3rd 47GHz Contest |
| 15-Sep | 0900 - 1700 | 3rd 76GHz Contest |
| 29 -Sep | 0600 - 1800 | 5th 5.7GHz Contest |
| 29 -Sep | 0600 - 1800 | 5th 10GHz Contest |
| 6 -Oct | 0900 - 1700 | 4th 24GHz Contest |
| 6 -Oct | 0900 - 1700 | 4th 47GHz Contest |
| 6 -Oct | 0900 - 1700 | 4th 76GHz Contest |
| 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

| | | |
|---|---|---|
| September 22 | Crawley Roundtable | https://carc.org.uk/ |
| September 22-27 | European Microwave week, Paris | www.eumweek.com |
| October 3-5 | Microwave Update, Vancouver, Canada | microwaveupdate.org |
| November 9 | Scottish Roundtable | www.gmroundtable.org.uk |
| November 23/24 | Midlands Roundtable SY6 7DH | |