



# UK Microwave Group Report to RSGB Spectrum Forum

## Introduction to UKuG

The UK Microwave Group represents the interests of amateur GHz bands radio enthusiasts in the UK. Its Committee is an elected body representing the interests of UK amateur microwave enthusiasts. The UKuG is open to membership for both UK and overseas microwavers. UKuG is now 17 years old, having been formed at the Martlesham Microwave Roundtable in November 1999 and it is affiliated to the RSGB. Current membership is: 480, up by 5 this year.

## Events organised and supported during 2016

- Martlesham Microwave Roundtable with UKuG AGM - April
- Microwave Roundtable and buildathon organised by the Finningley Club – July.
- Microwave Roundtable organised by the Crawley Club - September
- Scottish Microwave Roundtable, Burntisland near Dunfermline - November
- RSGB Convention 2016

## Club and outreach

The group has members on the RSGB Board, the Spectrum Forum, Propagation Studies Committee, Contest Committee, EMC Committee, RTC Committee, Examination Standards and Audit Committees, IARU Committee, and one of our members Chairs the Technical forum.

A UKuG member wrote the presentation for the recently-issued “VHF and up propagation” video from the RSGB Propagation Studies Committee that is now available to clubs.

We provided further technical support to Camb-Hams members who are starting out on the GHz bands. Members presented talks at all the GHz Bands Round Tables this year, on various GHz related topics. Members have visited several clubs to present talks on Microwaves or Millimetre-waves.

The Group membership provided twelve speakers, 4 more than last year, at the RSGB convention.

## Technical Support and loan equipment

Two new beacons came on air this year, GB3USK on 1.3GHz and GB3PKT on 24GHz. A number of UKuG members provided technical support as part of our scheme including beacon repair and construction GB3PKT, GB3USK plus equipment testing. Members have continued to support Joe Taylor K1JT to further develop the WSJT-X suite of Digimode programs.

We have four "members' loan" transverter systems, covering 5.7, 10, 24 and 76GHz. Providing support for beginners and established microwavers.

## Chipbank

The chipbank offers a completely free service to members, and includes a fairly comprehensive selection of chip resistors, capacitors and inductors as well as a good

selection of useful semiconductors and other components. In the nine months to the end of September, 22 requests were received and serviced. This is about the same as in previous years. The roundtables at Martlesham and Finningley were attended with the full stock. The online catalogue was updated twice to reflect donations from the estate of the late G3PYB, and to include inductors from several Coilcraft kits donated by G4HJW.

## **Publications**

UKuG members still write five of the regular columns in RadCom, write for Practical Wireless and regularly contribute technical articles and the European activity report for Dubus magazine. As usual, there have been a large number of RadCom articles, equipment reviews and features contributed by members this year.

## **Scatterpoint**

The e-newsletter of the Group, under the Editorship of Martin, G8BHC, is published at least 10 times a year and continues to attract top-line technical articles as well as being a comprehensive repository of reports of activity. There are 475 members of the Yahoo Scatterpoint group. Copies of the monthly magazine are also available to members via Dropbox links. Older issues are available from the UKuG web site (issues for 2015 will become available at the end of December 2016). An annual index is produced for members.

Scatterpoint carries a regular activity report column, compiled by Neil G4LDR, which has detailed reports from members of their activities on the microwave and millimetre bands, illustrating the breadth of propagation modes and modes of operation in regular use. These reports cover Wideband, Narrowband and Machine Generated Modes (MGM) activity used for both local and DX operations.

## **Group website and beaconspot.eu**

This year UKuG has now posted a number of GHz related videos on its YouTube video channel the Twitter feed @UKGHZ attracts a number of likes and retweets, highlighting innovation such as long-distance QSOs on the 47, 76 and 122 and 134 GHz mmWave bands. Our main website, microwavers.org, also provides listings for Operating Firsts/DX records, Chipbank stock updates, a regularly updated beacon maps and a rolling events calendar.

Our sister site, Beaconspot.eu reached 2500 registered users last May and now is now up to 2771. The beaconspot.eu Webmaster recently added an interface to allow PI4 spots to be processed directly from the PI-RX program

## **Beacons**

The Group was pleased to see the site move for the 1.3GHz beacon, GB3USK approved this year and most impressed by the 4-day turnaround of the application for 24GHz beacon GB3PKT!

There are still three 1.3GHz Beacons that are waiting for site moves, changes, and approvals with delays between 5 and 19 months, plus two 10GHz, one 5.7 GHz and one 3.4GHz beacon awaiting approval.

**We ask the Society to continue to pursue this issue at the highest level within Ofcom.**

See [http://www.ukrepeater.net/vetting\\_beacons.php](http://www.ukrepeater.net/vetting_beacons.php)

## Operation

Development continues on all bands with an emphasis on mmWaves. 2016 saw the first recorded UK QSO on the 122GHz band and the 134GHz UK distance record was extended to 35.6km.

5.7GHz operation using re purposed, low cost commercial equipment is growing under the guidance of the Bolton group. Activity on 1296MHz is also growing driven by talks and articles about the band and the availability of a low cost transverter from SG lab in Bulgaria.

There has been an increase in the uptake of 2300MHz NoVs this year and the number currently stands at 247. The group hopes that new equipment for the 2300 MHz band by Kuhne and SG-lab will encourage even more uptake.

As per last year, activity is still clustered around UKAC and other contests, but small groups are encouraging activity on 1296 digital modes by promoting a centre of activity at 1296.165MHz.

## EME

Small dish EME is continuing to generate interest, with UKuG members leading the way on 10GHz with QSOs with sub-1m dishes and new digital modes. There continues to be 1296MHz activity pretty much any time the moon is up. Stations with dishes smaller than 2m, are showing what can be done with JT modes and CW on this band. This demonstrates the increasing practicality of every day intercontinental DX on the microwave bands with a low-profile antenna.

## UKuG Awards

The UKuG presents awards annually to recognize the achievements made by microwave operators in a number of different areas.

1. The G3BNL award is presented for innovation or technical development of microwave equipment or techniques, in honour of Les Sharrock G3BNL.  
The 2016 recipient is GW4DGU for his commercial development of the Gemini23 Power amplifier for 1296MHz.
2. The G3EEZ award is presented for contributions to microwave communications, in honour of Alan Wakeman G3EEZ.  
The 2016 recipient is G3WDG for his continued development of GaAn Power Amplifiers and his contribution to small dish EME.
3. The G3VVB memorial trophy. This presented for the best microwave home project exhibited at a microwave roundtable, in honour of Cyril James G3VVB.  
The 2016 recipient is G4HIZ for his 24GHz signal generator.
4. The G3KEU trophy. This is presented for the leading entry in the 5.7GHz cumulative contests, in honour of Tim Leighfield G3KEU.  
The 2016 recipient is G8KQW
5. The G3RPE trophy. This is presented to the Winner of the 10GHz cumulative contests (Open Section), in honour of Dain S. Evans G3RPE  
The 2016 recipient is G8KQW

6. The G3JMB memorial trophy. This is presented to the Winner of the 10GHz cumulative contests (Restricted Section, 1 Watt max), in honour of Jack Brooker G3JMB.

The 2016 recipient is G0LGS.

A new award is to be introduced in 2017 is in honour of G4EAT and in future will be awarded to the overall winner of the 23cm section of the Low Band events.

## **UKuG Contests and Certificates**

Two squares awards have been issued to John Worsnop G4BAO for 20 squares on 2.3GHz and 60 squares on 1.3GHz, and Tony Collett G4NBS for 15 squares on 2.3GHz and 70 squares on 1.3GHz. . No other certificate awards have been made. The database of UK microwave "Firsts" has continued to be updated, including first contacts within the UK at 122GHz and 241GHz recorder by G8CUB/P and G0FDZ/P.

The UKuG contest programme for 2016 did not change significantly from 2015. There is continued interest in the mm-Wave band events, with a first on 122GHz recorded during this years events.

Entry levels on the other bands have remained fairly static.

The UKuG Contest Manager also adjudicates the SHF UK Activity Contests which continue to grow in popularity, particularly with the use of modified video sender equipment for 3.4 and 5.7GHz, and more stations getting on 10GHz with systems capable of working more than 200km.

Submitted by G4BAO on behalf of the UK Microwave Group, October 2016