

UK Microwave Group Report to RSGB Spectrum Forum



Introduction to UKuG

The UK Microwave Group represents the interests of amateur microwave 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 13 years old, having been formed at the Martlesham Microwave Roundtable in November 1999 and it is affiliated to the RSGB. Membership has remained largely static at around 400 since the last report.

Events organised and supported during 2012

- EME2012 Cambridge, August
- Martlesham Microwave Roundtable with UKuG AGM - April
- Microwave Roundtable and buildathon organised by the Finningley Club – July.
- Microwave Roundtable with Construction contest organised by the Crawley Club - September
- Exhibited at RSGB Convention – October
- Scottish Microwave Roundtable, Burntisland near Dunfermline - November
- Rutherford Appleton Laboratories Microwave Roundtable organised by the Harwell Club
- UKuG displays and demonstration stations at the Cambridge and East Suffolk rallies .

EME Conference 2012

Between 15th and 19th August the UK Microwave Group hosted the 15th International EME Conference at Churchill College Cambridge. These conferences are held every two years to provide a forum for those engaged in this very challenging branch of our hobby to exchange ideas and stay abreast of the latest developments. Having won the bid to host the conference at the 14th event in Dallas Texas in 2010 the UK Microwave Group set up an organising committee and with generous sponsorship from Waters and Stanton and others, a comprehensive program was developed. This included two days of lectures and multimedia presentations, a pre conference guided tour to Bletchley Park, the WWII code breaking centre, and a visit to the National Radio Centre, two formal dinners and a program for delegates' partners. Nearly two hundred delegates and 75 partners from 26 countries attended making this the most successful EME conference on record. As is traditional at EME conferences, a facility was provided for delegates to bring along pre-amplifiers to measure their key parameters: gain and noise figure. Throughout the conference a remote controlled 2m station, G4SWX in Suffolk some 90km East of Cambridge, was operating JT65 Digital modes. The Special Event call-sign GB2EME was used. What made GB2EME different from other special event or demonstration stations is that it only operated using Earth-Moon-Earth (EME) communications on 144MHz by complete remote operation of the station. One of the 'guest operators' on GB2EME was Joe Taylor

K1JT the designer of the JT65 protocol and software now used by many EME operators across the world. With former conference venues including Prague, Wurzburg, Florence and Dallas, EME 2012 in Cambridge was judged by the attendees to be highly successful with many very positive plaudits received both during and after the event. The organisers of EME2012 would particularly like to thank the team from Camb-Hams who manned the reception desk throughout the conference.

Club outreach

The Group supported the successful GS3PYE/P Camb- Hams DXpedition to Mull in May by supplying a complete 10GHz system. Camb- Hams reciprocated by providing the registration team at EME2012 and allowing us to use "Flossie" the mobile display station at rallies.

We attended the Cambridgeshire repeater Group's rally and the Felisxtowe Club's East Suffolk Wireless revival with UKuG displays and demonstration stations at the Cambridge and East Suffolk rallies a UKuG display and demonstration station in participation with Camb-hams

The Group continues to support the Finningley Club with their Microwave Round table.

Newsletter

Scatterpoint, the e-newsletter of the Group, under the Editorship of Martin, G8BHC is published 10 times a year. It continues to attract top-line technical articles; topics this year have covered many areas including the exploding interest in Nanowaves (optical) operation as well as providing comprehensive reports of activity.

Beacons

2012 has been a little better than last with microwave beacon licences issued for 5.7 and 10GHz for GB3CSB, and 47, 76 and 134GHz licences issued for the GB3CCX cluster at Cheltenham. Sadly none of these beacons are yet operational and I'm afraid that this does not help our case when we complain about licence delays. On that subject, still no 2.3GHz licences for Bristol or Telford have been forthcoming both of which have equipment and sites waiting for licences for up to three years. The situation on repeater licensing is very similar, with delays here running to four years in some cases. It is hoped that more progress will be made now the Olympics are over.

Reverse DDS (RDDS) control kits, are still made available to beacon builders free of charge through the Group, and allow current and future beacons to be locked to high stability 10MHz or other sources. Rather surprisingly none have been taken up this year. The Reverse DDS solution provides for MGM modulation facilities, if required. Odd frequency offsets, used by many beacons, can be accommodated.

Beaconspot.eu is still the most up to date source of real time VHF/Microwave beacon data currently available and is fully integrated with the DX Cluster. While originally designed for the microwave bands much use is being made by VHF operators this year.

Spectrum news

Terrestrial

1296 and 10368MHz continue to be the most popular terrestrial microwave bands, with increasing activity on 2320MHz, boosted by the SHF UKAC contests. Sadly activity seems to be clustered around this and other contests. Both the UK 10GHz and Nanowave records were broken this year, the former being pushed out to 1428km. There has been some interesting new mm Wave activity on 77 and 134GHz. in the South East.

EME

Activity on 13, 9, 6 and 3cm has risen steadily for the past 4-5 years driven in particular by the DUBUS and ARRL contests and the annual Activity weekends arranged for 9, 6 and 3cm. 13cm activity is only slowly increasing due to the uncertainty of the band allocations. Sweden has already lost 13cm, and other Scandinavian countries seem likely to follow. This is a worrying trend that needs to be addressed. On 23cm there is plenty of activity pretty much any time the moon is up. There are a growing number of stations operating on 24GHz, 2.4-3m dishes with efficient feed systems and power sources in the 20-50W region are generally used. The availability of easy to use analysis Software like VK3UM's excellent EMECalc enables people to optimise their systems with fairly simple measurements on Sun and moon noise.

Microwave activity on EME in Europe is much higher than in the USA where most eme is done on 144 JT65 with a little activity on 1296. An interesting observation is that the Netherlands, the most densely populated country in Europe, seem to have more microwave EMEers with 2.4-3m dishes than the UK, France and the USA.

UKuG Awards

No Squares Awards have been issued to date in 2012. The Firsts database has continued to be updated with new claims but no certificates have been issued. Proposals have been circulated for a revised set of Distance Awards, and a certificate design is being worked on. Further publicity for the UKuG awards schemes is planned.

UKuG Contests

Participation in this year's contests has dropped slightly from the levels seen in 2011. The Microwave Field Day had good publicity in RadCom but despite this did not see an increase in entries. Some of the decrease may be due to the poor summer weather this year. Some revisions to the contest rules for 2012 are planned, including allowing operators to choose a 6 hour timeslot within a wider contest period, running the 5.7/10/24GHz cumulatives as independent contests with an overall championship, and allowing fixed stations to take part in Microwave Field Day. The UKuG contest manager is now also a member of the RSGB Contest Committee to improve coordination with the RSGB Contest programme, and will be adjudicating the SHF UKAC contests in 2013.

Submitted by G4BAO on behalf of the UK Microwave Group, October 2012

