

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 15 years old, having been formed at the Martlesham Microwave Roundtable in November 1999 and it is affiliated to the RSGB. Current membership is: 443 up by 27 net increase of 27 members, made up of 80 new members and a loss of 53 members who did not renew.

Events organised and supported during 2014

- 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
- Exhibited at RSGB Convention – October.
- Scottish Microwave Roundtable, Burntisland near Dunfermline - November
- Rutherford Appleton Laboratories Microwave Roundtable organised by the Harwell Club
- UKuG displays at the East Suffolk rally.
- The Group took its "Chipbank" to the BATC Convention
- UKuG members attended and gave presentations at the successful EME2014 Conference in France in August.
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Club outreach

Members have visited several clubs to present talks on Microwaves or Millimetre-wave Microwaves (the latest was the Havering Club) and there are plans to visit more this Winter and in 2015.

Technical Support and loan equipment

A number of UKuG members provided technical support as part of our scheme including beacon repair and construction equipment testing. We have made available a "member's loan" 10GHz transverter system, to the Five Bells Contest group in addition to the 5.7GHz which is still being used to good effect by GM0USI.

Chipbank

The Chipbank, originally run by the RSGB Microwave Committee, was relaunched in February 2013. Since that date the stock has been greatly increased thanks to many donations received from both members and non-members of the UKuG. Since the relaunch, 65 requests have been serviced as of October 2014, all costs were covered by Group funds. All four English microwave roundtables were attended in 2013 and 2014 as well as the BATC Convention in 2014.

Publications

UKuG members write five of the regular columns in RadCom and regularly contribute technical articles and write the European activity report for Dubus magazine.

Scatterpoint

The e-newsletter of the Group, under the Editorship of Martin, G8BHC, is published 10 times a year and continues to attract top-line technical articles as well as being a comprehensive repository of reports of activity. An annual index is published in December and an archive of previous year's issues is maintained on the web site. There are 461 members of the Yahoo Scatterpoint group. Copies of the monthly magazine are also available to members via Dropbox links. Scatterpoint has helped in getting the 2.3GHz registration message across for the PSSR band changes to 2.3/3.4GHz. Scatterpoint carries a regular activity report column, 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

The main website has over 1000 files so moving to a new search engine is in the to-do list and its information maps are being increasingly used. The Beaconspot maps have been a key source for some of the Spectrum Forum Chairman's IARU papers, including 6m Beacon planning at the recent Region-1 Conference.

Beacons

The renewal of NoVs is now complete, thanks to our beacon co-ordinator GW8ASD's work chasing keepers when they were all expired. The NoV data is published on the ETCC website at <http://www.ukrepeater.net/beaconlist.htm>. Our beacon co-ordinator plans to send out a general request for information, survey form, as was done some years ago, and hopefully that will simplify things for the future. **We would welcome guidance from the SF as to how regularly.**

The online NoV form, when available should help, as long as beacon keepers contact information is kept up to date, as tracking some of them down proved quite challenging! The information relating to the possible move of GB3USK to the site of GB3JB repeater site is with The Spectrum Forum Chairman, and Graham, G3TCT, is working on the equipment and awaiting the ETCC web based application form to be agreed before pursuing it further. It is likely G3ZXX will be the nominated keeper. G4KUX, has identified a prospective beacon site at the location of GB3CD which could be suitable for 23cms and up. Nick has offered to construct a 10GHz beacon and The Spectrum Forum Chairman has been in contact with advice regarding delays on beacon licensing. 2.3GHz beacon GB3BSS has been repaired and is awaiting reinstallation. In Scotland, GB3CSB became operational on 16 August. GPS locked in time and frequency 10368.985.000 Running 1.2W to a single sided 15 slot slotted waveguide antenna via a short run of 3/8 heliax. Bearing 150 degrees. Running JT4g and CWID on the Even minute. Brian Flynn GM8BJF installed a new 3cm microwave personal beacon (10368.4000) at the QTH near Invergordon of GM3WOJ and using his callsign. Beaming at 165 degrees, the signal enables scatter propagation over the

top of the Cairngorm mountains to the south. This has been heard in Edinburgh at 215km and as far as G4KUX in Bishop Auckland at 376km.

Operation

On the millimetre wave terrestrial front, development continues on all bands with an emphasis on the 76 and 134GHz and up bands. A number of UK distance records were achieved on the 76 GHz band this last year. 1296 and 10368MHz continue to be the most popular terrestrial microwave bands, with increasing activity on 10GHz and 2320MHz, boosted by the SHF UKAC contests. As per last year, activity seems still to be clustered around this and other contests.

EME

A number of stations are showing an interest in small dish 10GHz EME which is beginning to become very popular, mainly though the work of G3WDG and VK7MO and publicity in G4BAO's "GHz Bands" RadCom Column. It is becoming clear that real small dish (>1.5m) EME can be done on this band with JT modes. There continues to be plenty of 23cm activity pretty much any time the moon is up. UKuG members attended and gave presentations at the successful EME2014 Conference in France In August

UKuG Awards

The UKuG / SOTA award scheme has now started. This has been well publicised on the SOTA Reflector <http://reflector.sota.org.uk/t/sota-microwave-award/8995/25> and SOTA activators are already making contacts with this award in mind, including summit-to-summit on 10GHz.

This year the G3BNL trophy went to G4EAT, G8ACE, G8CUB, G8KQW for their work on 76 and 134GHz development.

The G3EEZ Award went to GW3XYW for consistent long term EME operation.

The Fraser Shepherd Award for innovation went to G3WDG for his work on Gallium Nitride Power Amplifiers the Microwave Amateur bands.

G3VVB construction trophy went to G8CUB for his 134GHz transmitter

UKuG Contests and Certificates

The microwave distance awards have been relaunched in conjunction with the Summits on the Air awards programme for contacts from 1.3GHz upwards. An attractive new certificate will be available for recipients, and claims are being received and managed by SOTA. No squares or firsts awards have been made in the past 12 months. The 10GHz contests have been particularly successful in 2014, with over 20 entrants in some events and leading stations making up to 34 contacts. Portable activity has been very good. The activity in the 5.7GHz and 24GHz summer events has been lower than previous years however. The millimetre wave contest held in July repeated last years success with entries on four bands from 24GHz to 134GHz. Continued progress on equipment on these bands is being made, with more stations active each year on the upper bands. The contests on 1.3, 2.3 and 3.4GHz have

maintained entry levels but activity is poor compared to the RSGB UK activity contests on these bands, which regularly see over 90 entrants on 1.3GHz.

Of the operating awards, the G3KEU (5.7GHz) award went to Telford & DARS
G3ZME/P

The G3JMB (10GHz) Trophy to Nick Pearce G4WLC

The G3RPE (10GHz) Trophy Neil Underwood G4LDR

The G0RRJ (24GHz) Trophy Keith Winnard GW3TKH

The 24GHz and 47GHz contests were won by Ian Lamb G8KQW

Submitted by G4BAO on behalf of the UK Microwave Group, October 2014