

VHF Manager Report Nov-2015

The VHF Manager, John Regnault G4SWX is responsible for RSGB spectrum matters for the VHF and UHF amateur bands 50-432MHz.

Highlights

- 70.5-71.5MHz temporarily released to UK amateurs for experimental work under NoV.
- The 146-147MHz temporary experimental allocation for UK amateurs under NoV has been renewed by Ofcom for a further year.

Lowlights

- Amateur satellites launched from IARU Regions 2 and 3 operating in the IARU Region 1 narrowband section of 144MHz.
- Despite several initiatives the decline in 432MHz activity has not been reversed and changes in 144MHz activity patterns are becoming apparent.
- The very slow progress in bringing newly licenced 432MHz beacons into operation.

Digital Amateur Television Experiments at VHF

The VHF Manager would like to thank BATC and in particular Noel Matthews G8GTZ for the work in supporting the RSGB in gaining new VHF spectrum at 146 and 70.5MHz.

Using material supplied by BATC the VHF Manager gave a presentation on Reduced Bandwidth Digital Amateur Television (RB-DATV) to Ofcom's Business Radio Interest Group in April 2015. This included clips of 128Kbps and 256Kbps RB-DATV experimental transmissions at 146MHz. The audience response, from a grouping which often has eyes on amateur VHF/UHF spectrum, was highly positive. Following many requests for further information, BATC made available a special issue of CQTV which is now available on the Ofcom site.

The perceived value from such amateur experimentation should not be underestimated as it certainly played a significant part in gaining more experimental spectrum at 70.5-71.5MHz and the renewal of the 146-147MHz allocation.

Temporary Amateur Allocation: 70.5-71.5MHz

In April 2015 Ofcom informed the RSGB that the spectrum 70.5 MHz to 71.5MHz could be used by radio amateurs for digital experimentation. Access to this additional spectrum is being permitted via a Special Research Permit enabled by a Notice of Variation. The terms are very similar to those in the 146-147MHz NoVs.

Renewal of Temporary Amateur Allocation: 146 – 147 MHz

Ofcom have informed the RSGB that access to the temporary amateur allocation at 146 -147MHz will be renewed for a further year. The geographical constraints have been slightly relaxed but are still subject to International coordination agreements concerning power levels which must be compliant with the level published in the Harmonised Calculation Method (HCM) Agreement of +6dBuV/m.

The RSGB case was, and still is that amateur radio needed some additional spectra for amateurs to test and experiment with new digital communications schemes and systems. The 146 – 147MHz band has given amateur radio a unique opportunity to introduce new digital technologies whilst minimising the disruption to current users of analogue modes in the existing 144-146MHz amateur band. Whilst the initial success has

been with RB-DATV it is hoped that experimental work involving digital voice and data communications will allow longer term amateur access to additional spectrum. Unfortunately many UK amateurs still regard this extra spectrum as a 'band extension' and therefore an opportunity to spread out the same 'business as usual' analogue modulation activities currently between 144 and 146MHz. This is not the case particularly when the current occupancy of the 144-146MHz bands is not high compared with business use spectrum.

General Activity

- The VHF Manager again wishes to thank the ETCC, in particular the chairman, John McCullagh for the work done by the ETCC in effectively dealing with the large number of repeater and gateway issues. In particular the increasing difficulties and large amount of work required to deal with the Primary User of shared bands.

Review of the VHF-UHF Bands

50MHz:

- It is hoped that with the support of the UKSMG that the GB3MCB 50MHz beacon will be upgraded to include MGM signalling and time sequencing to become a UK based pilot in the IARU 50MHz co-ordinated beacon scheme.
- As recently published by Ofcom in "Final UK Positions on key issues for the World Radiocommunications Conference 2015 (WRC-15)", there is a possibility of harmonizing the 50 MHz amateur service courtesy of a proposed WRC19 future agenda item by CEPT. This would address the current situation that 47-68 MHz remains a broadcasting allocation at ITU Region-1 level, whereas Region-2 and Region-3 do have formal ITU amateur allocations

70MHz:

- Progress has been made in CEPT WGFM in upgrading the EU9 footnote from a purely informational one to reflect it now being a secondary European allocation: EU9 now reads - "EU9: CEPT countries may authorise all or parts of the band 69.9-70.5 MHz to the Amateur service on a secondary basis". This is a positive move forwards which might facilitate more countries within Europe to introduce an amateur allocation at 70MHz.

144MHz:

- There have been a number of 'own goals' by builders of amateur satellites causing interference in the narrowband modes section of the 144MHz band:-

The issue was first highlighted when the satellite NO-44(PCsat) went out of control transmitting FM APRS Packets on 144.390MHz. It was soon realised that the default condition of this satellite was to repeat APRS packets uplinked on 145.825MHz. The interference has impacted many meteor scatter enthusiasts in Europe who will have to suffer the interference for several years until the satellite finally dies. To compound the issue the constructors of this satellite, the US Naval Academy have planned further satellites capable of transmitting on 144.390MHz which is used for terrestrial APRS in the US.

This problem was compounded when it came to light that a series of Chinese satellites planned to use an APRS transponder on 144.390MHz and FM repeaters with an input on 144.350MHz and outputs corresponding with several commonly used frequencies in IARU Region 1. Following representation from IARU Region 1, driven by the RSGB, on 20th August 2015 the IARU secretariat made a statement: "IARU will not coordinate frequencies for satellites which are planned to operate outside the internationally aligned IARU band plans for amateur satellites."

- CW activity on 144MHz has dropped to an all-time low. Apart from major auroral events the 144.025-144.100 section of the band remains almost unused. However this is balanced by a growth in the use of MGM modes for both terrestrial DX and moonbounce operation.

432MHz:

- The RSGB has responded to Ofcom's public 'call-for-input' as part of a 'Strategic Review of UHF Spectrum 420-470 MHz' which is looking at current usage and future requirements in this part of the spectrum. This is one of the parts of the RF spectrum which is in great demand from both commercial and public service users. Although the amateur 432MHz allocation is secondary, changes impacting the Primary User may have consequences for the amateur service. The public consultation has closed, but the review is still ongoing and being closely watched.
- Despite the initiative from Radcom Columnist Richard Sharples G4HGI which introduced two weekly narrowband activity periods the, long-term decline in narrowband 432MHz activity has not been reversed.
- Of the Ofcom issued NoVs for 4 new 432MHz beacons; GB3FNY, GB3LEU, GB3NGI and GB3UHF only two GB3LEU and GB3NGI are now on the air. It is hoped that that GB3UHF and GB3FNY can be brought into operation over the next few months.

Outlook

- **IARU R1 Interim Meeting 2016**

At the IARU R1 interim meeting to be held in Vienna, Austria in 2016 the RSGB is running a consultation on the forums part of the website for potential issues for submission. Some of topics which are likely to be included in RSGB proposals include; better co-ordination of amateur satellite down-links, removal of SSB and CW MS calling frequencies and possible re-alignment of MGM modes within the 144MHz band plan.

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