



RSGB VHF Manager's Spectrum Forum Report

October 2016

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

Highlights

- The temporary spectrum at 70.5-71.5MHz and 146-147MHz will be renewed for another year.
- Ofcom have agreed to permit greater ERP for wide bandwidth modes in the 70.5-71.5MHz temporary allocation making long range RB-DATV on this band a more realistic proposition.

Lowlights

- The general level of 432MHz activity continues to cause concern with many repeaters remaining unused for much of the day. CW operation on 70MHz and above has declined although this has been balanced by the growth of MGM.

General Matters

Earlier in 2016 Ofcom changed the noise floor criteria used to calculate coverage areas for Band One and Low Band 'Technically Assigned' business radio users. This change from the previous figure of -104dBm, which was based upon old CCIR figures, to -92dBm recognises the increase in man-made noise in this part of the spectrum. The change resulted after surveys and pressure from business users of this part of the spectrum. This should not surprise those who operate on 6 & 4m who have long recognised that their noise floor is mainly from man-made sources. Unfortunately, this degradation of the RF spectrum is unlikely to feed through into EMC standards that are sadly very poor above 30MHz.

The VHF Manager would like to thank BATC and Noel Matthews G8GTZ for the work in supporting the RSGB in our bid to renew the temporary VHF spectrum allocations at 70.5 and 146MHz. The presentation made by Noel at the 2016 RSGB Convention has been shared with Ofcom who are now going to further publicise this work at meetings of their Business Radio Technical Advisory Group. The perceived value from such amateur experimentation should not be underestimated as it certainly played a very significant part in the renewal of access to experimental spectrum at 70.5-71.5 and 146-147MHz.

The VHF Manager again wishes to thank the ETCC, particularly 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, in addressing the difficulties and large amount of work required to deal with the Primary User of shared bands.



The VHF Manager was very pleased to see the presentation at the 2016 RSGB Convention by Chris G4IFX describing new propagation research at 50MHz. It is hoped that this work will feed into much needed further work by PSC/EMCC in the VHF part of the spectrum. In particular, amateur research building on that done by the business radio community (see above) on the increasing noise floor experienced by most amateurs across the VHF bands.

Review of the VHF-UHF Bands

50MHz

IARU Region 1 is developing a position for a harmonised allocation for the amateur service at 50 MHz for WRC19. Currently the spectrum 47-68 MHz is allocated to broadcasting at ITU Region-1 level, whereas Region-2 and Region-3 do have formal ITU amateur primary allocations. The proposal is to make 50-54MHz an amateur allocation - the case for 52-54MHz is based on the development of new amateur digital services.

70MHz

The ongoing increase in the number of European countries allowing amateurs to operate from 70.0-70.5MHz is welcome, but there remain problems in Germany and a few other countries.

70.5-71.5MHz Temporary Use

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 application – that would enable a Notice of Variation. Unfortunately, this process has been rather slow but it is hoped that after recent discussions between Ofcom and the RSGB that the process will be faster.

As the noise floor is some 12+dB greater at 70.5-71.5MHz (Ofcom figures see above) compared with 146MHz, antennas for the same physical size have 3dB less gain system budgets for wide bandwidth modes severely constrain operation. The RSGB has now secured an increase in power to 100W ERP for wide-bandwidth modes with a constraint that amateurs will still have to abide with the HCM agreement so as not to cause interference in countries outside the UK.

144MHz

CW activity in the CW exclusive section of 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 has been balanced by a significant growth in the use of MGM modes for both terrestrial DX and moonbounce operation. This raises the question of whether such a large CW-exclusive sub-band is required in the 144MHz band plan.

146-147MHz Temporary Use

Ofcom have informed the RSGB that access to the amateur experimental band at 146 -147MHz will be renewed for a further year. The support given by BATC has been essential in making the case for this renewal.



It would be good to see more coordinated experimental work beyond that of the DATV community. This temporary experimental spectrum allocation provides radio amateurs with a place to experiment with different and wider bandwidth modes than are currently used by both amateur and professional users at VHF.

432MHz

The RSGB has continued to closely monitor Ofcom's '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 UK amateur 432MHz allocation is secondary, changes impacting the Primary User may have consequences for the amateur service.

The general level of 432MHz activity continues to cause concern with many repeaters remaining unused for much of the day.

Apart from a small handful of stalwarts, CW operation in the CW-exclusive part of the 432MHz band plan is almost non-existent. When CW operation takes place, it is mostly higher in the band intermixed with SSB operation. This raises the question of whether CW-exclusive sub-bands are required in the band plans above 432MHz.

Outlook

IARU R1 General Conference 2017

The RSGB is again running a consultation exercise on the IARU-forums part of the RSGB website for potential issues for submission to the IARU R1 meeting in Landshut in September 2017. Some of the topics which are likely to be included in RSGB proposals include:-

- Further simplification of the VHF/UHF band plans,
- Greater flexibility to address the requirements for emerging digital modes
- Possible re-alignment of narrowband MGM within the 144MHz and 432MHz band plans.

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