



<b>SUBJECT</b>	<b>VHF Spectrum Requirements</b>		
<b>Society</b>	<b>RSGB</b>	<b>Country:</b>	<b>UK</b>
<b>Committee:</b>	<b>C5</b>	<b>Paper number:</b>	<b>CT08_C5_27</b>
<b>Author:</b>	<b>David Butler, G4ASR</b>		

## Background

At the IARU-R1 Interim conference at Vienna on 24/5-Feb-2007 member societies were actioned in the VHF/Microwave C5 Committee to make their inputs regarding the current IARU Spectrum Requirements document on the Internet at <http://www.iaru.org/ac-spec06.html>

Since the conference, RSGB has considered this request very seriously and propose the attached amendments which we summarise below.

## Key Points and Recommendations

- The present IARU web document is ~18 pages of A4 and, as such, would benefit from better structuring.
- It is requested that LF/MF/HF are separated. In this document we have introduced these distinct categories:-
  - VHF (40, 50, 60 70, 144, 220MHz)
  - UHF (430, 900MHz)
- Modified requirements for Beacon allocations in the vicinity of 40MHz
- A new goal to seek Beacon allocations in the vicinity of 60MHz
- Modified 50MHz requirement, including the addition of the Amateur Satellite Service
- Deletion of the Region-1 220MHz requirement (which is now Digital Broadcasting)
- Updates to information on the 70MHz band
- General updates to English and corrections of web text/formatting
- Recommendation that the IARU Spectrum Requirements web pages are reviewed on a variety of browser and screen resolutions to check for html/formatting issues.

### **30-300MHz – The VHF Bands** *(new separate category)*

#### **40MHz** *(New section and modified requirement)*

A shared allocation in the vicinity of 40 MHz is sought for the establishment of propagation research beacons. IARU Region-1 has sought access to this band and has received some encouragement – The UK (G) and Denmark (OZ) have established experimental beacons and Slovenia (S5) also has a beacon allocation at this frequency. With the decline in TV broadcasting in VHF Band-I member societies are encouraged to seek similar opportunities.

### **50-54MHz** *(Reword paragraphs as follows and add Amateur Satellite Service requirement)*

**The Amateur Service** requires retention of the exclusive 50 MHz allocation where it now exists, and provision of an allocation of at least 2 MHz in other geographic areas, with at least 1MHz on an exclusive basis.

This band is used for local amateur communication on a daily basis. Tropospheric scatter and sky-wave propagation (principally sporadic-E and occasional F-layer propagation at sunspot maxima) are used for longer distances, as well as auroral propagation at the higher latitudes. Meteor scatter has been used for Morse code, data and voice communications primarily during meteor showers for distances up to 2000 km. Earth-Moon-Earth (EME) communications is a practical possibility in this band.

**The Amateur Satellite Service** seeks a harmonised global allocation of at least 1 MHz at 50-51MHz. With no allocations between 30 and 144MHz, this would fill a major gap and offers unique advantages. The band offers lower Doppler for satellite communications compared to higher VHF/UHF bands, whilst retaining practical antenna sizes compared to HF. It also offers significant potential for propagation research.

In the CEPT area, IARU Region 1 has achieved an amateur secondary allocation in the band 50 - 52 MHz in the European Common Allocation Table (ECA). It has also achieved a CEPT-ERC statement in support of global harmonisation. Action by member-societies could be helpful in accelerating this process through achieving primary status nationally, as had already been accomplished in some countries.

### **60MHz** *(New Requirement)*

A shared allocation in the vicinity of 60MHz is sought for the establishment of propagation research beacons. In conjunction with other VHF allocations this would then enable propagation to be tracked at 40, 50, 60 and 70MHz. This opportunity exists as a result of the reduction in the use of VHF Band-I for TV transmissions.

### **70MHz** *(Update the Para-3, especially the country list to read:- )*

A Regional allocation is sought for Region 1. At March 1st 2008, DXCC countries with permanent allocations to use the 70MHz band include:

Crete (SV9), Croatia (9A), Cyprus (5B), Denmark (OZ), Dodecanese (SV5), Estonia (ES), Faroe Islands (OY), Gibraltar (ZB), Greece (SV), Greenland (OX), Ireland (EI), Luxembourg (LX), Monaco (3A), Slovenia (S5), South Africa (ZS), UK Sovereign Base areas on Cyprus (ZC4), England (G), Isle of Man (GD), Northern Ireland (GI), Jersey (GJ), Scotland (GM), Guernsey (GU) and Wales (GW).

In addition several other countries have offered temporary permits to facilitate experimentation. Azores (CU), Czech Republic (OK), Germany (DI2AL & DI2PM), Hungary (HA), Italy (I), Madeira Is (CT3), Norway (LC0VHF), Portugal (CT), Sardinia (IS), SMOM (1A).

### **144MHz**

Where EME is mentioned:- remove the reference to low noise – as QRM is increasing!

### **220MHz**

Delete the unrealistic reference to a Region-1 requirement.

*(Following the ITU RRC-06 conference, 220MHz is now assigned and increasingly used by Digital Broadcasting - such DAB and DVB-T)*

## **300-1000 MHz – The UHF Bands** *(new separate category)*

### **420-450MHz**

*Modest updates, formatting or broken HTML corrections etc, so it should read:-*

The Amateur Services require the establishment of the band 430-440MHz as a worldwide exclusive band, with continued sharing of 420-430 MHz and 440-450 MHz where now permitted. In addition, the deletion from the Radio Regulations of footnotes for fixed and mobile operation in some countries in the band 430-440MHz is sought.

This band is particularly important to the Amateur Services. It is the lowest frequency band in which amateurs can use fast-scan television and other emissions with similar bandwidths.

The band provides reliable local voice and data communication whilst at the same time affording opportunities for experimentation with various forms of tropospheric propagation and Earth-Moon-Earth (EME) communication.

The Amateur-Satellite Service relies heavily on the sub-band 435-438MHz, which presently is the only Space-to-Earth amateur allocation between 146MHz and 2.4GHz. Because of the crowding of the existing band 435-438 MHz with unmanned amateur satellites and manned space stations, it is desirable to expand the allocation to 435-440MHz when possible.

The introduction of additional low-power (unlicensed) short-range device transmitters around 433MHz is strongly opposed.

*(Delete WRC 2003 info on the former EEES threat)*

### **900-928MHz**

*No change, other than to remove the accidental paragraph breaks - an HTML fault*

The Amateur Service seeks retention of the band 902 - 928 MHz in Region 2 and upgrading the sub-band 902 - 905 MHz to primary status.

This band is available only in Region 2. It is used for industrial, scientific and medical (ISM) applications and is shared with other services (FIXED, Mobile except aeronautical and Radiolocation). While there are sharing problems in some locations, the band is a valuable resource, where available. New Zealand amateurs enjoy a temporary, domestic secondary allocation of 922 - 927 MHz limited to 25 watts e.i.r.p.