

**Ofcom consultation on:-**

**Licence Exemption of Wireless Telegraphy Devices  
Candidates for 2010**



**Response by the Radio Society of Great Britain**

**May 2010**

**Introduction**

This response to the above Ofcom consultation document is from the Radio Society of Great Britain (RSGB, [www.rsgb.org.uk](http://www.rsgb.org.uk)) on behalf of its members and the wider amateur radio community. The latter includes both individual operators as well as a variety of special interest groups whose spectrum this document involves.

RSGB is recognised as one of the leading organisations in the world in the field of amateur radio. It collaborates with its fellow national societies via the International Amateur Radio Union (IARU) through IARU Region-1 ([www.iaru-r1.org](http://www.iaru-r1.org)).

Amateur radio is a science-based technical hobby that contributes to education, innovation, skills and emergency communications. It is enjoyed by over three million people worldwide. From a statutory point of view it is fully recognised by the International Telecommunication Union (ITU) as a Service and is listed in the ITU Radio Regulations as the Amateur Service and the Amateur-Satellite Service.

Permission is granted for a copy of this response to be placed in the public domain.

## Responses

**Q1:** *Do you agree with our proposal to permit railway level crossing radar sensor systems to operate in the UK, on a licence exempt basis, providing that exclusion zones are put in place to protect Radio Astronomy sites?*

No Comment

**Q2:** *Do you agree with our proposal to exempt users of HDFSS equipment operating with e.i.r.p. no greater than 55 dBW in the 27.50 to 27.8185 GHz, 28.4585 to 28.8265 GHz and 29.4625 to 30 GHz bands from the need to possess a wireless telegraphy licence?*

No comment.

**Q3:** *Do you agree with our proposal to permit underwater SRD systems to operate in the UK, providing in-air emissions meet the present limitations for licence-exempt use?*

The principle is fine, but there are some circumstances (in confined channels and docks for example) that can lead to substantial increases in surface emissions, despite the source being at depth. Thus we would have some concerns if the frequencies used coincided with Amateur allocations.

Low attenuations can be attributed to boundary layer propagation at interface with surrounding lower loss materials (an area where the UK SEAS DTC (<http://www.seasdtc.com/>) has been funding underwater communications research). Such 'anomalous' propagation can occur due to low the presence of low loss concrete or metal bank liners, as well as coupling effects from reinforcing rods, underwater cables/pipes etc

**Q4:** *Do you agree with our proposal to remove restrictions where a more liberal duplication of the regulations exists elsewhere in the UK licence exemption regulations and incorporate all relevant information for licence exempt SRD into a single Interface requirement document?*

Not automatically.

Whilst understanding the desire for simplification where genuine cases of duplication exist, we would advocate that each individual case should undergo careful review to avoid a 'Trojan horse' type risk in which a 'liberal power case' which originally applied to very limited volumes of devices becomes the template for a more numerous application and resulting overall rise in exempt emissions

## Comment on Recent and upcoming EC Decisions

Whilst there is no consultation question referring to this section we are compelled to highlight a key concern regarding removing restrictions on SRDs in the 433/4MHz band which features UK Amateur calling channels and a national repeater network. In short, this is a special case where the move to 'Technology Neutrality' creates a significant increase in risk of harmful interference.

We see no pressing reasons or market demand for such a change when requirements for licence exempt voice etc can be met by PMR446 or other exempt 868MHz systems.

The effect of such a change will be to permit unlicensed FM speech/audio transmitters that would be effectively be using compatible emissions modes with UHF Amateur Service users and in particular our Repeater Inputs. The latter could then inadvertently re-transmit their unlicensed content over large service areas of tens of kilometres – despite the use of tone-based access controls.

In the UK alone, Ofcom has licensed 137 high value UHF Repeater systems (incorporating specially tuned cavity duplexers etc) that use the 433/434MHz band, of which two-thirds would be co-channel with this new source of interference. The repeater network represents a major investment by the Amateur Service for both ordinary users and emergency communications.

As a full and licensed ITU Service we have superior spectrum rights to SRDs – indeed the Amateur Service is a Primary one in ITU Region-1 and the European Common Allocations table – and even Secondary users (such as our UK allocation) have the right to be protected against harmful interference from licence exempt devices.

Ofcom therefore needs to be aware of its responsibility by its participation in the CEPT process in which it is often highly influential (and has been a major proponent of 'neutrality'). There has to be some acknowledgment of responsibility for permitting this unlicensed voice/audio traffic, especially if new amateur frequencies are needed and expensive modifications arise – eg if repeaters are forced to move to alternative UHF channels

– see our additional comments on the Impact Assessment

It is noteworthy that the 433/4MHz simplex and repeater channels used by the Amateur Service are coordinated with IARU and other countries have similar repeater networks and Amateur Service use

We note the CEPT changes are based on the latest edition of CEPT Report 35. Despite the pressures to be 'Technology Neutral', it acknowledges that there are potential problems in removing restrictions, which had been put in place for good reason:-

*It was however decided to keep the restrictions for audio and video in place due to the typical high usage pattern nature of the mainly analogue systems*

and

*in WGFM it was indicated that more time was needed to study the subject in WGSE and SE24.*

*This was also indicated in the report for the second revision of the annex of the EC decision on SRDs.*

We therefore urge that Ofcom fully accounts for the concerns of a Licensed service which has ~£1m of value of fixed infrastructure as well as many thousands of users in this band. Ofcom needs to delay any implementation of these changes and ensure that CEPT improves its thoroughness and maintain restrictions to protect ourselves and other ITU services.

We would be pleased to provide further details of current 433/434 MHz amateur usage if required. The repeater network in any case is fully detailed on <http://www.ukrepeater.net/>

### **Comment on Impact Assessment**

The Impact Assessment table entry for Non-Specific SRDs on p34 of the consultation document fails to mention the impact of the changes on licensed users of the 433/434 MHz band where there is a potentially serious and costly impact.

The impact is without doubt a negative one on the Amateur and other licensed Services in the band. The SRD applications can easily be accommodated by alternative means or frequencies and there needs to be a far stronger justification for the change other than one of simplifying European paperwork.

For repeaters in particular the high performance duplexers employed to achieve the tight 1.6MHz Tx/Rx splits and 85-90dB isolations cost typically £1000 to £2000. Such costs would arise for each one affected if a total replacement or professional factory re-tune is required.