

Notice of Ofcom's proposal to amend the Wireless Telegraphy (Exemption) Regulations 2003

Consultation

16 July 2008

Publication date:

Closing Date for Responses:

17 August 2008

Contents

Section		Page
1	Executive Summary	3
2	Decision	4
3	General effect of Wireless Telegraphy (Exemption) (Amendment) (No.2) Regulations 2008	8
Annex		Page
1	Responding to this consultation	9
2	Ofcom's consultation principles	11
3	Consultation response cover sheet	12
4	Impact Assessment	14
5	Draft Amendment Regulations	2

Section 1

Executive Summary

- 1.1 This notice outlines our intention to amend the Wireless Telegraphy (Exemption) Regulations 2003. Specifically to make the following equipment licence exempt:
 - A number of Short Range Devices (SRDs) as set out in the draft European Commission (EC) Decision 2006/771/EC; and
 - High Density Fixed Satellite Applications (HDFSS) in the 27.5 27.8185 GHz, 28.4545 28.8265 GHz and 29.4625 30 GHz bands.
- 1.2 We are also amending the current licence exemption for the following equipment
 - Land Mobile Satellite Services (LMSS); and
 - Social Alarms, Hearing Aids, Meter Reading, Asset Tracking devices in the 169.4 – 169.8125 MHz band.
- 1.3 The changes that we are introducing were outlined in our statement "Amending the Wireless Telegraphy (Exemption) Regulations 2003" which was published on 25 March 2008.
- 1.4 A Regulatory Impact Assessment (RIA) for the Regulations is available at Annex 4 to this document. The RIA sets out the risks, costs and benefits of our decision and the effects that these will have on the costs to business.
- 1.5 Draft Regulations the Wireless Telegraphy (Exemption)(Amendment) (No.2) Regulations 2008 – are included in this document at Annex 5. Comments on the draft are invited **by 5pm 17 August 2008**. Subject to consideration of responses Ofcom intends to bring the new Regulations into force by October 2008.

Section 2

Decision

- 2.1 In accordance with the requirements of section 122(4) and (5) of the Wireless Telegraphy Act 2006 ("the 2006 Act") this document gives notice of our intention to amend the Wireless Telegraphy (Exemption) Regulations 2003 ("the Principal Regulations") through the creation of new Regulations, the proposed Wireless Telegraphy (Exemption)(Amendment) (No.2) Regulations 2008 ("the Amendment Regulations").
- 2.2 Ofcom is responsible for authorising of civil use of the radio spectrum and achieves this by granting wireless telegraphy ("WT") licences under the 2006 Act and by making Regulations exempting users of particular equipment from the requirement to hold such a licence. Under section 8(1) of the 2006 Act, it is an offence to install or use equipment to transmit without holding a licence granted by us, unless the use of such equipment is exempted. However under Section 8(4) of the 2006 Act we must make Regulations to exempt equipment if its installation or use is unlikely to cause undue interference.
- 2.3 We consulted on the proposals outlined below in our document "Wireless Telegraphy Licence Exemption amending the Wireless Telegraphy (Exemption) Regulations 2003"¹ published on 18 September 2007.
- 2.4 Our statement "Amending the Wireless Telegraphy (Exemption) Regulations 2003^{"2} published on 25 March 2008 confirmed we would be making arrangements to change the regulations in line with the proposals outlined in the consultation.
- 2.5 We are making High Density Fixed Satellite Applications (HDFSS) exempt from licensing. HDFSS operating in the 27.5 27.8185 GHz, 28.4545 28.8265 GHz and 29.4625 30 GHz frequency bands will not require a licence providing that they comply with the technical specifications as set out in IR 2066³. However, in order to ensure compatibility with avionic systems the CAA requires that prior to installation within the perimeter fence of airfields, permission is obtained from either the CAA or the appropriate Airport authority. Further information can be found in Annex A of IR 2066.
- 2.6 IR 2016 for Land Mobile Satellite Services (LMSS) will no longer list equipment by manufacturer and product name. These will be replaced by the relevant ETSI Standard or Common Technical Regulation. This updated IR will be referred to in the Amendment Regulations and therefore also the Principal Regulations, when amended.
- 2.7 In line with the guidance from the European Commission (EC) we intend to increase the maximum power limitation for Social Alarms, Hearing Aids, Meter Reading, Asset Tracking devices in the 169.4 169.8125 MHz band from 10 mW to 500 mW. The duty cycle limitations of $\leq 0.1\%$ for Social Alarms will also be removed. This is to

¹ Available at <u>http://www.ofcom.org.uk/consult/condocs/wtle/wtle.pdf</u>

² Available at <u>http://www.ofcom.org.uk/consult/condocs/wtle/statement/statement.pdf</u>

³ Available at http://www.ofcom.org.uk/radiocomms/ifi/tech/interface_reg/draft_ir/draftir2066.pdf

further align with "Commission Decision of 20 December 2005 on the harmonisation of the 169.4 - 169.8125 MHz frequency band in the Community (2005/928/EC)"⁴

- 2.8 As a result of the changes that the EC have adopted as part of their annual revision to the EC Decision 2006/771/EC we intend to introduce the following changes for SRDs listed in "Commission Decision of 23 May 2008 amending 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices (2008/432/EC)"⁵. Those changes are for:
 - All SRDs removal of the restriction on airborne use;
 - Non-Specific SRDs removal of FM only restriction and allow digitised Audio in 26.957 – 27.285 MHz and 40.66 – 40.70 MHz bands;
 - Non-Specific SRDs add 25 mW allocations in the 863 870 MHz band with techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. This can include for example Listen Before Talk. Alternatively the specified duty cycle shown for the category may also be used;
 - Non-Specific SRDs allow generic use of the band 24.15 24.25 GHz which was previously reserved for Movement Detection;
 - Non-Specific SRDs add new allocation at 61 61.5 GHz at 100mW e.i.r.p.;
 - Non-Specific SRDs allow generic use of the bands 6.765 6.795, 13.553 13.567 and 26.957 27.283 MHz which were previously reserved for ISM;
 - Alarm systems reduce duty cycle restrictions from 0.1% to 1.0% in the 868.8 868.7 MHz band;
 - Inductive Applications add new allocation at 1600 kHz 2000 kHz at a power level of -15 dBµA/M measured at 10 m in a 10 kHz bandwidth;
 - Inductive Applications remove loop antenna restrictions;
 - Active Medical Implants allow a power of 30 dBµA/M measured at 10 m in the 185 – 315 kHz band; and
 - Inductive Applications increase the permitted power level in the 30 135 kHz band by up to 3 dB.
- 2.9 In addition to these mandatory requirements we intend to introduce the following changes to align the UK with the ERC Recommendation 70-03 relating to the use of short range devices⁶:
 - Medical and Biological Applications add a new allocation at 25 μW with a 25 kHz bandwidth at 401 402 MHz and 405 406 MHz bands with a low duty cycle of 0.1% or techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in

⁴ Available at <u>http://www.erodocdb.dk/docs/doc98/Official/Pdf/2005928EC.pdf</u>

⁵ Available at <u>http://www.erodocdb.dk/Docs/doc98/official/pdf/2008432EC.PDF</u>

⁶ Available at http://www.erodocdb.dk/docs/doc98/official/pdf/REC7003E.PDF.

harmonised standards adopted under Directive 1999/5/EC must be used. This can include for example Listen Before Talk;

- Medical and Biological Applications amend the reference from EN 300 220 to the recently introduced EN 302 510 in the 30 – 37.5 MHz band;
- Railway Applications remove set channel arrangements in the 2446 2454 MHz band. Maximum channel bandwidth will remain at 1.5 MHz for each channel;
- Hearing Aids remove references to the generic standard EN 300 220; and
- Radio Microphones remove channel restriction of 200 kHz.
- 2.10 Finally have made minor amendments to IR2030;
 - In tables 3.1 and 3.4, a measure to allow alternative mitigation techniques, other than the simple Duty Cycle or Listen Before Talk, so long as they meet the essential requirements of the R&TTE Directive;
 - The removal of the column titled Music or Speech;
 - We have amended the channel bandwidth in table 3.22 to make it more explicit that the limitation of 50 kHz is a maximum and that lower channel bandwidths are permitted;
 - In table 3.12 for Inductive Applications the relaxation of power limitations below 135 kHz by up to 3 dB;
 - In table 3.1 for Non-Specific SRDs category (xi), the amendment of text relating to the use of 418 MHz that became time expired on 1 January 2008. Also, the inclusion of the correct limitations for Audio relating to the wideband 863 to 870 MHz band, category (xxiv);
 - In table 3.7 for Railway Applications correct the frequency allocation from 4515 kHz to 4516 kHz;
 - In table 3.20 for Model Control amend the error in note (d) of Table 3.20 to correctly relate to category vi instead of category v;
 - In table 3.21 for Radio Microphones, correcting of the typographical error of the Reference Standard number to now read EN 300 422;
 - In table 3.22 for Radio Hearing Aids, amending the title to align with the present harmonised European term, Assistive Listening Devices; and
 - In table 3.28 Radar Level Gauge insert omitted mW radiated level in the 10.7 10.850 GHz band. Instead of reading "≤25 Peak" it will now read "≤25 mW Peak".
- 2.11 In our consultation we proposed to make Building Materials Analysis (BMA) using Ultra wide band (UWB) devices exempt from licensing. Presently, the European Commission is looking at the common regulatory framework for deployment of UWB devices. It is envisaged that they will amend the current Decision on UWB to incorporate new applications. Therefore we have decided not to delay making the exemption until the amended Decision has been adopted.

2.12 For the full rationale for each of the new exemption propositions please refer to the consultation and statement documents.

Section 3

General effect of Wireless Telegraphy (Exemption) (Amendment) (No.2) Regulations 2008

The Legislative Framework

3.1 Ofcom can exempt the establishment, installation and use of wireless telegraphy equipment by making Regulations under section 8(1) of the Wireless Telegraphy Act 2006. Ofcom proposes to implement the changes proposed in the recent consultation and summarised in this document by making the Wireless Telegraphy (Exemption) (Amendment) (No.2) Regulations 2008 ("the Amendment Regulations") to amend the Wireless Telegraphy (Exemption) Regulations 2003 ("the Principal Regulations"). The proposed Amendment Regulations are included in Annex 5 of this document.

Extent of application

3.2 The Exemption Regulations will apply in the United Kingdom, the Channel Islands and Isle of Man, and we anticipate that the Proposed Regulations will also apply subject to formal agreement of the Island Authorities.

The Regulations

- 3.3 The Amendment Regulations which are proposed will make 4 amendments to the Exemption Regulations to include reference to the updated interface requirements and the addition of High Density Fixed Satellite Applications (HDFSS):
 - a) The first proposed amendment changes Regulation 3 to extend the number of equipment schedules to include HDFSS.
 - b) The second amendment updates the reference in Part III (interface requirement) for Schedule 7 (Land Mobile Satellite Services) to incorporate reference to the latest IR2016 published by Ofcom on [October] 2008.
 - c) The third amendment updates the reference in Part III (interface requirement) for Schedule 6 (short range devices) to incorporate reference to the latest IR2030 published by Ofcom on [October] 2008.
 - d) The fourth amendment inserts a new Schedule (11) in order to make High Density Fixed Satellite Applications exempt from WT Act licensing. The new Schedule includes reference to IR2066 published by Ofcom on [October] 2008.

Responding to this consultation

How to respond

- A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 17 August 2008**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at http://www.ofcom.org.uk/consult/condocs/wtf_exp03, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A1.3 For larger consultation responses particularly those with supporting charts, tables or other data - please email paul.chapman@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.
- A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Paul Chapman 3rd Floor Spectrum Policy Group Riverside House 2A Southwark Bridge Road London SE1 9HA

Fax: 020 7981 3921

- A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.
- A1.6 It would help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

Further information

A1.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Paul Chapman on 020 7981 3069.

Confidentiality

A1.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, <u>www.ofcom.org.uk</u>, ideally on receipt. If you think your response should be kept confidential, can you please specify what part or whether all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

- A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at <u>http://www.ofcom.org.uk/about/accoun/disclaimer/</u>

Next steps

- A1.11 Following the end of the consultation period, Ofcom intends to publish a statement in September 2008.
- A1.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/static/subscribe/select_list.htm

Ofcom's consultation processes

- A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.
- A1.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at <u>consult@ofcom.org.uk</u>. We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.
- A1.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Vicki Nash, Director Scotland, who is Ofcom's consultation champion:

Vicki Nash Ofcom Sutherland House 149 St. Vincent Street Glasgow G2 5NW

Tel: 0141 229 7401 Fax: 0141 229 7433

Email vicki.nash@ofcom.org.uk

Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A2.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the consultation

- A2.3 We will be clear about who we are consulting, why, on what questions and for how long.
- A2.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened version for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.
- A2.5 We will normally allow ten weeks for responses to consultations on issues of general interest. However, as the proposed changes have already been subject to consultation we are going ahead with a one month consultation period.
- A2.6 There will be a person within Ofcom who will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organizations interested in the outcome of our decisions. This individual (who we call the consultation champion) will also be the main person to contact with views on the way we run our consultations.
- A2.7 If we are not able to follow one of these principles, we will explain why. This may be because a particular issue is urgent. If we need to reduce the amount of time we have set aside for a consultation, we will let those concerned know beforehand that this is a 'red flag consultation' which needs their urgent attention.

After the consultation

A2.8 We will look at each response carefully and with an open mind. We will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Consultation response cover sheet

- A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, <u>www.ofcom.org.uk</u>.
- A3.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.
- A3.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.
- A3.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' section of our website at <u>www.ofcom.org.uk/consult/</u>.
- A3.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS				
Consultation title:				
To (Ofcom contact):				
Name of respondent:				
Representing (self or organisation/s):				
Address (if not received by email):				
CONFIDENTIALITY				
Please tick below what part of your response you consider is confidential, giving your reasons why				
Nothing Name/contact details/job title				
Whole response Organisation				
Part of the response If there is no separate annex, which parts?				
If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?				
DECLARATION				
I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.				
Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.				
Name Signed (if hard copy)				

Impact Assessment

Introduction

- A4.1 In accordance with Government practice, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") must be undertaken.
- A4.2 The analysis presented here, represents an RIA as defined by section 7 of the Communications Act 2003 ("the Communications Act") for the Wireless Telegraphy (Exemption) (Amendment) Regulations 2008 (the "Amending Regulations").
- A4.3 RIAs provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making and are commonly used by other regulators. This is reflected in section 7 of the Communications Act, which means that we will generally carry out impact assessments where proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in our activities. However, as a matter of policy we are committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. In accordance with section 7 of the Communications Act, in producing this RIA, we have had regard to such general guidance as we consider appropriate including related Cabinet Office guidance. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website:

http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf.

Background

A4.4 In the UK, we are responsible for the authorising of civil use of the radio spectrum and achieve this by granting wireless telegraphy licences under the Wireless Telegraphy Act 2006 (the "WT Act") and by making Regulations exempting users of particular equipment from the requirement to hold such a licence. Under section 8(1) of the WT Act, it is an offence to install or use equipment to transmit without holding a licence granted by us, unless the use of such equipment is exempted. Section 8(3) enables Ofcom to make regulations exempting equipment from the requirement to hold a licence subject to specified terms, provisions and limitations and under Section 8(4) of the WT Act we must make regulations to exempt equipment if it is unlikely to cause undue interference. .

Proposal

- A4.5 This RIA relates to the proposal to update the current statutory instrument governing the use of wireless telegraphy on a licence-exempt basis, "the Wireless Telegraphy (Exemption) Regulations 2003 (SI 2003 no.74) ("the existing Regulations"). This update will be achieved through an amendment to the existing Regulations. The changes fall into the following four categories:
 - measures to permit the use of new technologies and novel applications of radio without the need for users to obtain a licence from us -
 - High Density Fixed Satellite Applications (HDFSS);

- measures to amend the use of licence-exempt Social Alarms, Hearing Aids, and Meter Reading and Asset Tracking devices in the 169.4 169.8125 MHz band;
- measures to harmonise with Europe where such measures are viewed as beneficial; and
- measures to simplify the regulatory process.

The citizen and/or consumer interest

- A4.6 We take account of the impact of our decisions have upon both citizen and consumer interests in the markets we regulate. In proposing changes to the existing Regulations we considered the wider impact beyond immediate stakeholders in the radiocommunications community. We believe that widening the exemption will be of benefit to consumers for the following reasons:
 - The measures concern the use of radio equipment on a licence-exempt basis which reduces the regulatory and administrative burden on our stakeholders;
 - Licence-exemption is proposed only in areas where use of equipment is unlikely to cause harmful interference to other spectrum use; and
 - They support the introduction of new and innovative technologies that will be of benefit to consumers in general and specifically measures that address social groups such as the elderly and the hearing impaired.

Our policy objective

A4.7 In accordance with the WT Act, we must exempt from licensing the use of specified equipment where it is not likely that such use will cause interference to other legitimate users of the radio spectrum or is contrary to an international obligation.

Options considered

- A4.8 The types of licence-exemption measure considered in this set of Regulations fall into two categories:
 - i) implementation of European Commission ("Commission") Decisions (typically changes to existing exemption requirements in all but one case) that require allocation of specified spectrum bands to short range devices (SRDs); and
 - ii) removing regulatory burdens on stakeholders.
- A4.9 We are required to implement Commission Decisions by law. Therefore for the first category of measures, we have merely identified the potential benefits of implementing the measures and assessed their potential impact on the costs for business and for us.
- A4.10 The options open to us in relation to the management of radio spectrum equipment use generally fall into the following categories:
 - Not to authorise use;
 - To authorise use through the issue of a WT licence; or

- To authorise use through exemption from the need to hold an individual WT licence.
- A4.11 The approach we have taken to analysing these options is as follows. First we consider, where relevant, the first option of not authorising use of the spectrum versus authorising use. This relates to balancing judgements about the potential future uses of the band and the value of the uses that would be authorised (potentially via licence-exemption). Such judgements typically require assumptions to be made about potential future uses of each band and the potential markets (and producer and consumer benefits) that may arise from licence-exempt use. Quantitative estimates for the bands in question would involve significant uncertainty and are unlikely to give a robust basis for analysing this option. Instead our approach has been to gather available information on the potential demand from other uses for the spectrum and make qualitative assessments of the relative benefits and costs of not authorising use of the spectrum.
- A4.12 Secondly we consider the question of whether to authorise use through issuing a licence or through exemption. Generally, taking a licence-exempt approach over a licensed approach involves a reduction of the regulatory burden in the use of these bands. Our analysis takes this proposition as starting point and then focuses on whether there might be concerns over whether existing users in the band (if there are any) or potential new users might suffer harmful interference as a result of the decision to licence exempt. In theory this could negate the benefits of reductions in the regulatory burden.

Analysis of options

Implementing Commission Decisions

A4.13 The table below presents our analysis of the first category of measures where we are merely implementing Commission Decisions relating to licence-exemption for SRDs. For each measure we identify the potential benefit associated with the measure. For example liberalisation may encourage service innovation and benefit both businesses and consumers. We also assess the risk of other users being affected by the proposal, in terms of the potential to create congestion or undue interference with other users. In comparison to the alternative of authorisation through licensing, the measures listed below also bring the benefit of reducing the administrative burden on both companies and on us.

Assessment of costs and benefits of implementing EC Decisions on SRDs

Device	Description of exemption	General benefit of change	Potential costs
All SRDs	To remove the restriction on airborne use for all SRD	Implement the SRD Decision as amended	The costs of this measure are expected to be low.
	allocation listed in Decision (the "SRD Decision") as amended.	This is a liberalisation measure on the permitted use of existing licence-exempt equipment. Many potential uses of SRDs would be enabled as a result of this measure. Moreover, the control and use of UK authorised SRD in airborne environments will now rest with the owners and operators of aircraft who may utilise these technologies as they see fit. One example of the potential benefits is a proximity warning device for gliders and soarplanes. Such devices are widely used in Europe and have the potential to reduce accidents, collisions and consequent loss of life. According to the British Gliding Association they could virtually eliminate mid- air collisions of non-commercial aircraft and helicopters if they were to have a similar effect to that since their introduction and widespread adoption in the Alpine region of Europe in 2004.	All SRDs have a limitation on range due to their relatively low power, which curtails the potential to cause interference to other users. Some SRDs have a very limited range indeed, such as medical implants. Other SRDs are either operating in bands where the only type of other authorised apparatus is other SRDs, or they operate in the internationally recognised, Industrial, Scientific & Medical (ISM) bands, where ISM machinery is currently permitted to operate without height restriction. It is therefore considered that the present restriction on airborne use is unnecessary and adds little to protecting from interference. Moreover, the European Conference of Postal and Telecommunications Administrations (CEPT) has studied the potential for interference and concluded (in the 30 May 2007 issue, of the ERC Recommendation on SRDs, ERC Rec 70-03 that such use should be allowed and that aviation safety aspects should remain the responsibility of aircraft manufacturers/owners consulting with the relevant national or regional aviation hodies
Non-Specific SRD	Remove FM only restriction	Implement the SRD Decision as amended	26.957 – 27.285 MHz – No risk is foreseen
	and allow digitised Audio in		from this liberalisation measure because the
	26.957 – 27.285 MHz and	26.957 – 27.285 MHz – Non-specific SRD equipment	proposed E-field limitation corresponds to the
	40.66 – 40.70 MHz bands	is already licence exempt, albeit in the regulations	currently permitted H-field (magnetic field)
		governing inductive applications. This liberalisation	
		flexibility, making explicit that an equivalent Electric	40.66 – 40.70 MHz – We do not expect
		field (E-Field) power limitation may also be applied.	significant use due to the limited allocation of 40

Device	Device Description of exemption General benefit of change		Potential costs	
		40.66 – 40.70 MHz – The liberalisation measure brings the benefit of allowing other forms of	kHz. Therefore the likelihood of interference or congestion appears low.	
		modulation in this band, which may allow innovative audio communications to be developed. However, we		
		expect that use of the band may be limited due to the small amount of spectrum available - 40 kHz.		
ISM bands to the Non-Specific allocations	Add existing inductive allocations in the 6.765 – 6.795, 13.553 – 13.567 and 26.957 – 27.283 MHz ISM bands to the Non-Specific allocations	Implement SRD Decision as amended This measure broadens the range of permitted SRD uses in these bands. We expect benefits from this liberalisation measure to be incremental in nature since licence-exempt equipment is already allowed in the band.	Costs are likely to be low since licence-exempt equipment is already allowed in the band. The measure purely includes generic Inductive devices within the generic SRDs permitted to be used in these bands.	
Non-Specific SRD	Add 863 - 870 MHz 25 mW allocation with low duty cycle (0.1%) or LBT.	Implement SRD Decision as amended This allocation will permit the deployment of innovative communications devices, previously barred from most, low bandwidth, SRD allocations, and could benefit manufacturers, business and consumer users.	Since the equipment covered by this measure is capable of using wide-band modulation techniques within the band limits and subject to the polite protocol, the likelihood of undue interference to other radiocommunications services or of increased congestion affecting the performance of existing SRDs is low.	
Non-Specific SRD	Add existing Movement Detection allocation at 24.15 - 24.25 GHz	Implement SRD Decision as amended The benefit of this liberalisation measure is to allow a much broader range of devices (Non-Specific SRDs as opposed to movement detection SRDs) to operate in the band than before. Frequency bands such as the 24 GHz band are well suited to movement detection type applications.	We are proposing that the power limit for movement detection SRDs be much lower (-13 dB) than for existing applications in this band. Therefore, although the scope of equipment that can be used in this band is being widened, We expect that the risk of additional interference arising is low.	
Non-Specific SRD	Add new allocation at 61- 61.5 GHz 100mW.	Implement SRD Decision as amended There is as yet no ETSI Standard for this apparatus, though ETSI is in the early stages of developing a Standard EN 305 550, a generic standard for the frequency band 40 - 125 GHz. Firms are considering developing products in areas such as radio Local- Area Networks (LANS), communications links, and	The combination of the frequency band and power limits will result in a very low power and short range, thus there is little likelihood of interference with other existing or potential licensed services operating at higher powers. Moreover, our <u>Licence-Exemption Framework</u> <u>Review</u> identified that, demand for access to	

Device	Description of exemption	General benefit of change	Potential costs
		road safety, although such initiatives are in their early	spectrum decreased in higher frequency bands
		stages.	congestion from licence-exempt apparatus
Alarm Systems	Reduce duty cycle restriction from 0.1% to 1.0% in the 868.6 - 868.7 MHz band	Implement SRD Decision as amended This liberalisation measure will bring the UK in line with the recently amended CEPT Recommendation on SRDs. Potential innovators may benefit from the opportunity to take advantage of the measure and develop equipment that can transmit over a greater time in any period, up to 36 seconds per hour rather than 3.6 seconds.	The change in duty cycle from 0.1 % to 1 % of the time will still enable a large number of SRDs to communicate in a given area. Moreover, in 2006, We undertook measurements ⁷ of frequency bands utilised by SRDs. These comprehensive measurements indicate that the actual average utilisation of the band required by SRDs is low. Therefore the risk of congestion and the impact on other potential services appear low.
Inductive Applications	Add new allocation 1600 kHz - 2000 kHz at the very low power level, -15 dBµA/m measured at 10 m in a 10 kHz bandwidth.	Implement SRD Decision as amended This measure would introduce a new allocation of spectrum for the use of inductive apparatus using the 9 kHz – 30 MHz band. The power limit is very low. However it would permit the use of Near Field Connectivity (NFC) devices suitable for technologies such as entry control, where proximity to an identity reader is essential or desirable; i.e. the benefit would be providing another band that such devices could use.	This NFC allocation is very low power. Other Inductive allocations within the existing Regulation permit far higher power (10 to 1,000 times) limits. Hence, although, this band is currently allocated to a number of civil and military applications, notably radio navigation aids, the nature of these NFC devices makes the likelihood of any interference to these services very low.
Inductive Applications	Remove loop antenna restriction for all Inductive SRD allocation listed in SRD Decision as amended.	Implement SRD Decision as amended This liberalisation measure may benefit users of radio location equipment by allowing the authorisation of equipment that uses a Field-Effect radio signal. The applications would use technology similar to touch screen technology but using variations in an electro- magnetic field to determine location.	 This change is largely administrative and is not expected to carry any risk of impacting on other spectrum users. The services would be very low power and very short range. Moreover, for the frequency bands in question, it would be difficult to create effective E-field (as opposed to H-field) inductive applications. This is because conventional E-field radio antennae are necessarily large, e.g. antennae tend to be

⁷ Autonomous Interference Monitoring System- Phase II & Measurement of LE Usage project http://www.ofcom.org.uk/research/technology/overview/state_use/aims2/le_summary.pdf

Device	Description of exemption	General benefit of change	Potential costs	
			sized as a function of wavelength and the wavelength at 1 MHz is 300 metres.	
Inductive Applications	Increase the permitted power level in the 30 – 135 kHz	Implement SRD Decision as amended	The liberalisation of the power limits, over part of the band 30 – 135 kHz) is consistent with the	
	band by up to 3dB	This liberalisation measure is for a slight increase in	CEPT Recommendation on SRD, hence the	
		applications could see significant benefits.	spectrum users is low.	
Active Medical Implants (AMI)	Allow a less stringent (by 6dB) power restriction in the 185 – 315 kHz band of 30	Implement SRD Decision as amended This liberalisation measure is for a slight increase in	The liberalisation of the power limits, over part of the band proposed for AMI (9 – 315 kHz) is consistent with the CEPT Recommendation on	
	dBµA/m measured at 10 m	power over a proportion of the band used by AMI. It therefore creates scope for innovation in the development of use of AMI, benefiting manufacturers and citizens.	SRD, hence the likelihood of interference or impact to other spectrum users is low.	
		UK users should also benefit from the European harmonisation involved in this measure, which will enable active medical implants to work effectively across the EU.		
Social Alarms, Hearing Aids, Meter Reading &	Increase power from 10 mW to 500 mW in the 169.4 – 169.475 MHz band	Implement Commission Decision 2005/928/EC.	Commission Decision 2005/928/EC has already allocated the band exclusively to specified SRD technologies. Therefore it is unlikely that the	
Asset Tracking		limit for this category of uses to a level that will permit the effective operation of Social Alarms, Hearing Aids, Meter Reading & Asset Tracking apparatus. Hence, businesses using these types of applications could see significant benefits.	spectrum will be used for other purposes so the opportunity cost to society in authorising this use is low.	

A4.14 In summary, we consider that implementing the measures listed above is likely to generate a net benefit for UK businesses and consumers. In the unlikely event that the new opportunities were not taken up, our view is that the outcome would at worst be neutral, since the risks of creating interference to other users are likely to be low.

Removing regulatory burdens

- A4.15 The two tables below present our analysis of the second category of measures which deal with proposals that remove regulatory burdens on spectrum users. In contrast to the first category, we are not required to implement them following EU legislation. The first table considers the arguments for authorising versus not authorising the use proposed. The second table considers the arguments for authorisation through licence-exemption compared to the alternative of licensing.
- A4.16 In considering whether use should be authorised or not, we assess the potential demand for the spectrum from alternative uses and whether licence-exemption could mean that potentially more valuable uses could be excluded from the spectrum.
- A4.17 In comparing the merits of authorisation through licence-exemption versus licensing, we assess the potential benefits associated with the licence-exemption and the risk of other users being affected by the proposal. Similarly to the first category of measures, all the proposals listed below also bring the benefit of reducing the administrative burden on both companies and on us.

Device **Description of exemption** General benefit of authorising Potential costs Extend licence exemption in Benefits business by promoting the availability of There is little evidence of current or future Low-power satellite earth band 29.4625 - 30 GHz for broadband and multimedia services in rural areas. demand for the band from alternative uses. In stations (e.g. low power stations. Brings the UK into line with other countries that have principle, the band could be used for Broadband HDFSS, VSAT) adopted ECC/DEC(05)01. Wireless Access (BWA) services. We have recently awarded spectrum in the 10, 28, 32 and 40 GHz bands and initial indications are that this is likely to be sufficient to meet demand for BWA use in these frequency ranges. Land Mobile Proposal to simplify the This measure removes the need to amend the This is an administrative measure and is Satellite Services equipment listings in the existing Regulations each time a company launches a unlikely to affect actual spectrum usage. existing Regulations new product in the relevant spectrum bands. Therefore it is unlikely to generate any costs (Schedule 5 part IV) and the Manufacturers will benefit from being able to bring save for our implementing the measure. UK IR2016 Annex A, without their product to the market more quickly. changing the status of the terminals. Allocation of Ultra Low Power Medical Devices benefit most from allowing the Medical and These medical devices present an extremely mobility of users and consequent harmonisation of the Biological in the 401 – 402 MHz and low risk of interference to the Meteorological, applications 405 – 406 MHz bands at radio spectrum needed for successful operation Satellite. Fixed and Mobile services in these 25µW, 25 kHz bandwidth and bands due to the very low power and polite low duty cycle 0.1% or LBT. spectrum access techniques employed. The potential costs are considered to be low The equipment is already licence exempt. This Railway Remove set channel Removal of unnecessary constraints on the channel Applications arrangements in the 2446 plan within the allocated band. This proposal brings change simply allows greater flexibility. The cost if co-ordination is expected to be low as this 2454 MHz band. The the UK allocation in line with the European maximum permitted channel Recommendation for SRD. In addition it does not stop allocation is limited to railway applications, operators from continuing to use their equipment as operated under the control of rail network bandwidth remains unchanged at 1.5 MHz for they were before. operator who can self co-ordinate. each channel Radio Remove channel restriction of Align radio microphones to the current Wireless Audio Radio microphones, could already take advantage of the generic allocation to Wireless Microphones 200 kHz allocation audio allocation and this is a relaxation of the rules, therefore it is unlikely to generate any costs save for our implementing the measure Railway Correct the allocation for To align with the correction made to this in the The exemption was already in place for a centre Applications railway applications operating European Recommendation 70-03. frequency of 4515 kHz. Changing the centre at 4516 kHz from the frequency by 1 kHz is not expected to cause

Assessment of costs and benefits of authorising vs. not authorising use

Device	Description of exemption	General benefit of authorising	Potential costs	
	incorrect 4515 kHz		any additional harmful interference	
Medical and Biological applications	Amend the reference from EN 300 220 to EN 302 510 in the 30 – 37.5 MHz band	To update to the recently introduced standard	These medical devices present an extremely low risk of interference to the Meteorological, Satellite, Fixed and Mobile services in these bands due to the very low power and polite spectrum access techniques employed. The potential costs are considered to be low	
Hearing Aids	Remove references to the generic standard EN 300 220	To reference only the specific standard for these devices.	The exemption was already in place with both the generic and specific standards.	

Device	Description of exemption	General benefit of licence exemption	Potential costs		
Low-power satellite earth stations (e.g. HDFSS, VSAT)	Extend licence exemption in band 29.4625 - 30 GHz for low power stations.	Reduces the regulatory burden on businesses. Brings the UK into line with other countries that have adopted ECC/DEC(05)01.	Licence-exemption is unlikely to generate a significant risk of harmful interference between low power satellite earth stations because of the low power nature of these services.		
Land Mobile Satellite Services	Proposal to simplify the equipment listings in the existing Regulations (Schedule 5 part IV) and the UK IR2016 Annex A, without changing the status of the terminals.	This measure removes the need to amend the existing Regulations each time a company launches a new product in the relevant spectrum bands. Manufacturers will benefit from being able to bring their product to the market more quickly.	This is an administrative measure and is unlikely to affect actual spectrum usage. Therefore it is unlikely to impose costs on other users.		
Medical and Biological applications	A new allocation of Ultra Low Power in the 401 - 402 MHz and 405 - 406 MHz bands at 25µW, 25 kHz bandwidth and low duty cycle 0.1% or techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. This can include for example Listen Before Talk.	People and hence medical devices will able to move location without the need for any coordination or permit for use.	These medical devices present an extremely low risk of interference to the Meteorological, Satellite, Fixed and Mobile services in these bands due to the very low power and polite spectrum access techniques employed.		
Railway Applications	Remove set channel arrangements in the 2446 - 2454 MHz band. The maximum permitted channel bandwidth remains unchanged at 1.5 MHz for each channel.	There is already licence-exempt equipment being used in the bands specified. Therefore the benefit of the measure arises from the greater flexibility that it enables.	The proposal is merely to remove the fixed centre frequency requirements. No impact is envisaged as this allocation is limited to railway applications, operated under the control of rail network operators		
Radio Microphones	Remove channel restriction of 200 kHz to align radio microphones to the current	There is already licence-exempt equipment being used in the bands specified. Therefore the benefit of the measure arises from the greater flexibility that it	This change is for clarification only and to align to the Wireless Audio Regulations presently existing so additional costs are limited.		

Assessment of costs and benefits of licence exemption vs. licensing

Device	Description of exemption	General benefit of licence exemption	Potential costs
	wireless audio allocation	enables.	
Railway Applications	Correct the allocation for operating at 4516 kHz from the incorrect 4515 kHz	There is already licence-exempt equipment being used in the bands specified. This Brings the UK into line with other countries that have adopted the revised European Recommendation 70-03 The majority of the equipment that is designed to take advantage of this exemption is designed with a centre frequency of 4516 kHz	Licence-exemption is unlikely to generate a significant risk of harmful interference from this railway application because of the low power nature of these services.
Medical and Biological applications	Amend the reference from EN 300 220 to EN 302 510 in the 30 – 37.5 MHz band	There is already licence-exempt equipment being used in the bands specified. This Brings the UK into line with other countries that have adopted the new standard.	This is an administrative measure and is unlikely to affect actual spectrum usage. Therefore it is unlikely to impose costs on other users.
Hearing Aids	Remove references to the generic standard EN 300 220	There is already licence-exempt. Manufacturers will benefit from being able to test their equipment to the specific standard.	This is an administrative measure and is unlikely to affect actual spectrum usage. Therefore it is unlikely to impose costs on other users.

Costs to business

- A4.18 Our assessment of the potential costs to business from each of the proposed licence-exemption measures is detailed in the sections above under analysis of the options. Costs to business could arise insofar as the proposals impact on business use of the spectrum. However, for each of the proposed measures our view is that the potential impact on other users of the spectrum, in terms of the risk of interference or increased congestion, is low. Hence, we consider that each of the measures should impose very little cost on business.
- A4.19 Moreover, costs to business are likely to be lower under a licence-exemption approach than the alternative of a licensed approach, since licence-exemption represents the least cost regulatory approach to the authorisation of spectrum use. For example if use of spectrum is authorised through a WT licence, businesses will face administrative costs associated with applying for the licence. Businesses could face additional costs depending on the method of award of the licence. If licences are awarded by means of an auction, businesses will face the costs (including management time) of participating in the auction. If licences are awarded on a first come first served basis, businesses will typically incur the administrative costs of the initial application and annual renewal of licences.

Costs to Ofcom

A4.20 There are one-off administrative costs associated with making a statutory instrument. We consider the implementation costs to be low and more than offset by the benefits of licence-exemption. There may be a slight reduction in spectrum management costs in certain areas. Licence-exemption would reduce the cost incurred by us in operating a licensing regime. Operating a licence regime would include issuing licences, collecting licence fees and enforcing terms and conditions of licences.

Costs to consumers

A4.21 The costs to consumers of licensing versus exemption would mainly arise from the potential disincentive effects on the take up of services and hence a loss of the consumer surplus that licensing costs may impose.

Evaluation

A4.22 We do not intend to actively monitor these devices however we may review the regulations if there is cause for concern to other spectrum users.

Conclusion

- A4.23 Licensing may still be appropriate if there was a risk of undue interference. However we have looked at the technical characteristics of the equipment and the risk of harmful interference to other licensees is low.
- A4.24 Licence-exemption is therefore the preferred option to authorise the use of these devices in the UK. The analysis of the equipment shows that there is minimal risk of interference to other users of the radio spectrum; this approach is in line with our regulatory duties and also meets the demands of EC requirements providing the following benefits:
 - Reduction of the regulatory burden;

- Implementing EU legislation; and
- Introduction of innovative applications and new technologies.

Draft Amendment Regulations

STATUTORY INSTRUMENTS

2008 No.

ELECTRONIC COMMUNICATIONS

Wireless Telegraphy (Exemption) (Amendment) (No. 2) Regulations 2008

Made	-	-	-	-	2008
Coming in	to fo	rce	-	-	2008

The Office of Communications ("OFCOM") make the following Regulations in exercise of the power conferred by section 8(3) of the Wireless Telegraphy Act $2006(^8)$ (the "Act").

Before making these Regulations, OFCOM have given notice of their proposal to do so in accordance with section 122(4)(a) of the Act, published notice of their proposal in accordance with section 122(4)(b) of the Act and have considered the representations made to them before the time specified in the notice in accordance with section 122(4)(c).

Citation and commencement

1. These Regulations may be cited as the Wireless Telegraphy (Exemption) (Amendment) Regulations 2008 and shall come into force on 2008.

Amendment of the Wireless Telegraphy (Exemption) Regulations 2003

2. The Wireless Telegraphy (Exemption) Regulations 2003(⁹) shall be amended in accordance with the following provisions of these Regulations.

Amendment of regulation 3

3. In regulation 3 (interpretation), in paragraph (1)—

(a) in the definition of "relevant apparatus", for "Schedules 3 to 10" substitute "Schedules 3 to 11".

Amendment of Schedule 5

4. In Schedule 5 (land mobile-satellite service stations), in Part III (interface requirement) for the entry relating to IR 2016 substitute the following entry—

(⁸) 2006 c.36 (⁹) S.I. 2003/7

⁹) S.I. 2003/74, amended by S.I. 2003/2155, S.I. 2005/3481, S.I. 2006/2994 and S.I. 2008/236

" UK Interface Requirement 2016 for Land Mobile Satellite Systems, published by OFCOM in [October 2008].".

Amendment of Schedule 6

5. In Schedule 6 (short range devices), in Part III (interface requirement) for "published by OFCOM in November 2006" substitute "published by OFCOM in [October 2008]".

Addition of Schedule 11

6. After Schedule 10 (Citizens' Band Radio Equipment) add the following Schedule-

"SCHEDULE 11 Regulation 3(1) HIGH DENSITY FIXED SATELLITE APPLICATIONS

PART I

Interpretation

In this Schedule "prescribed apparatus" means apparatus described in the Interface Requirement referred to in Part III of this Schedule.

PART II

Additional Terms, Provisions and Limitations

The prescribed apparatus shall be subject to and comply with the Interface Requirement referred to in Part III of this Schedule.

PART III

Interface Requirement

UK Interface Requirement 2066 for High Density Fixed Satellite Applications published by OFCOM in [October 2008].

Chief Executive of the Office of Communications For and by authority of the Office of Communications

EXPLANATORY NOTE

(This note is not part of the Regulations)