



Decision to make the Wireless
Telegraphy (Automotive Short
Range Radar) (Exemption)
Regulations 2013

Statement

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Section 1

Executive Summary

- 1.1 This statement presents our decision to make the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) Regulations 2013 (the “Regulations”). This decision follows our recent Statutory Notice entitled “Notice of proposals to make the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) Regulations 2013¹ (the “Notice”) which we published on 24 April 2013 and it explains that we have decided to make the Regulations.
- 1.2 The Notice proposed to revoke and replace the current licence exemption arrangements for the establishment, installation and use of automotive short range radar (SRR) equipment in the 24 GHz (21.65 to 26.65 GHz) radio spectrum band. This was in order to implement the European Commission (EC) amending decision (2011/485/EU)² (the “Amending Decision”).
- 1.3 In 2005, Ofcom implemented the EC decision on the harmonisation of the use of the automotive SRR equipment in the 24 GHz spectrum band (21.65 to 26.65 GHz) on a temporary basis in the Community (2005/50/EC)³ (the “2005 Decision”) by making the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) Regulations 2005 (SI 2005/1585)⁴ (the “SRR Exemption Regulations”).
- 1.4 The 2005 Decision required Member States to permit the use of SRR equipment in the 24 GHz band (21.65 to 26.65) until 30 June 2013. The SRR Exemption Regulations permitted any SRR equipment installed or used in a motor vehicle to be exempt from the requirement to be licensed in accordance with section 8(1) of the Wireless Telegraphy Act 2006 (the “WT Act”).
- 1.5 The SRR Exemption Regulations were amended in 2008 by the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) (Amendment) Regulations 2008 (S.I. 2008/237)⁵ and in 2010, by the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) (Amendment) Regulations 2010 (S.I. 2010/1484)⁶.
- 1.6 The EC on 29 July 2011 amended the 2005 Decision by making the Amending Decision. The Amending Decision extends the period in which SRR equipment operating in the 24.25 to 26.65 GHz part of the 24 GHz band can be used in motor vehicles.
- 1.7 The Regulations implement the Amending Decision by making the following changes:
 - revoke and replace the SRR Exemption Regulations (and the two subsequent Regulations that amended the SRR Exemption Regulations);

¹ <http://stakeholders.ofcom.org.uk/consultations/assr-exemption/>

² “The amending Decision 2005/50/EC on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community” <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011D0485:EN:PDF>

³ “Commission Decision of 17 January 2005 on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community” <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:021:0015:0020:EN:PDF>

⁴ <http://legislation.data.gov.uk/ukxi/2005/1585/made/data.pdf>

⁵ <http://legislation.data.gov.uk/ukxi/2008/237/made/data.pdf>

⁶ http://www.legislation.gov.uk/ukxi/2010/1484/pdfs/ukxi_20101484_en.pdf

- revoke the use of part of the 24 GHz band between 21.65 and 24.25 GHz for automotive SRR equipment from 30 June 2013 except for automotive SRR equipment that was installed, or that is replacing equipment so installed, in a vehicle that was registered, placed on the market or put into service between 1 July 2005 and 30 June 2013. Such equipment will be permitted to continue to use this part of the band on a licence-exempt basis (subject to complying with various terms, provisions and limitations);and
 - permit SRR equipment installed, or that is replacing equipment so installed, in a vehicle that was registered, placed on the market or put into service after 30 June 2013 to operate in part of the 24 GHz band between 24.25 and 26.65 GHz on a licence-exempt basis (subject to complying with various terms, provisions and limitations).
- 1.8 Ofcom has an obligation to transpose EC decisions into United Kingdom (UK) law. The UK is required to comply with the Amending Decision, the implementation of which is mandatory on all European Union (EU) Member States. Ofcom has consulted purely on the basis of how we implement the Amending Decision.
- 1.9 Before deciding to make the Regulations, we published the Notice on 24 April 2013 in accordance with the requirements of section 122(4) of the WT act, setting out our proposals to make the Regulations (the 'Proposed Regulations'). The Notice also contained a draft of the Proposed Regulations. We invited comments from stakeholders on whether the Proposed Regulations properly gave effect to the EC's Amending Decision.
- 1.10 We received one non-confidential response to the Notice. In accordance with section 122(4) (c) of the WT Act, we have considered this response. After doing so, and for the reasons set out in this document, we have decided to adopt the Regulations (subject to some minor amendments, the details of which can be found in section 3). This statement confirms that we have made the Regulations which will come into force on 30 June 2013.

Section 2

Background

Introduction

- 2.1 Under section 8(1) of the Wireless Telegraphy Act 2006 (the “WT Act”), it is an offence to install or use equipment to transmit without holding a licence granted by Ofcom, unless the installation or use of such equipment is exempted. Ofcom can exempt the establishment, installation and use of wireless telegraphy equipment by making regulations under section 8(3) of the WT Act
- 2.2 The European Commission (EC) identified the use of Short Range Radar (SRR) equipment as a means of providing motor vehicles with radar functions and technologies which help in road traffic safety and collisions mitigation. Consequently, in 2005 the EC adopted the “Decision (2005/50/EC) on the harmonisation of the use of the automotive SRR equipment in the 24 GHz range radio spectrum band (21.65 to 26.65 GHz) on a temporary basis in the Community” (the “2005 Decision”)⁷.
- 2.3 The 2005 Decision required Member States to permit the use of SRR equipment in the 24 GHz band (21.65 to 26.65) until 30 June 2013. The EC originally expected that, by 1 July 2013, the technology for the systems in the 79 GHz band (which it considered to be the most suitable band in terms of long term operating frequency for SRR equipment), would be ready for mass market distribution and the use of the 24 GHz band would be phased out.
- 2.4 However, the EC recognised (as a result of technical studies undertaken by the European Conference of Postal and Telecommunications Administrations (CEPT)) that there had been a significant delay in the development of technology of SRR equipment in the 79 GHz band and that many car manufacturers would not be able to produce motor vehicles on a cost-effective basis in the 79 GHz band in time for the originally stated June 2013 deadline, set out in the 2005 Decision. Therefore, in July 2011, the EC amended its 2005 Decision through “The amending Decision on the harmonisation of the 24 GHz range radio spectrum band (21.65 to 26.65 GHz) for the time-limited use by automotive short range radar equipment in the Community (2011/485/EU)”, (the “Amending Decision”)⁸.
- 2.5 The Amending Decision extends the availability of the 24 GHz band by permitting SRR equipment that has been installed in motor vehicles registered, placed on the market, or put into service before 1 January 2018 (and equipment replacing equipment so installed) to operate in the 24.25 to 26.65 GHz part of the 24 GHz band. Equipment installed in vehicles registered, placed on the market or put into service prior to 30 June 2013 (and equipment replacing equipment so installed) can continue to be used in the 24 GHz band between 21.65 and 26.65 GHz. The changes only affect installations in vehicles registered, placed on the market or put into service after 30 June 2013.

⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:021:0015:0020:EN:PDF>

⁸ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011D0485:EN:PDF>

2.6 In addition, the Amending Decision also allows SRR equipment, mounted on motor vehicles for which a type-approval⁹ application has been submitted and has been granted before 1 January 2018, to be extended by an additional 4 years in accordance with Article 6(6) of Directive 2007/46/EC¹⁰.

Statutory Notice

2.7 Under section 122(4) to (6) of the WT Act, we are required to publish a notice of any proposal to make regulations. The notice must state that Ofcom proposes to make the regulations in question, must set out their general effects, specify an address from which a copy of the proposed regulations may be obtained and specify a time of at least one month before which any representations with respect to the proposal must be made to Ofcom.

2.8 We published the “Notice of proposals to make the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) Regulations 2013 (the “Notice”)¹¹, meeting the statutory requirements, on 24 April 2013. The Notice included a copy of the Proposed Regulations. The Notice gave any person or party who wished to do so until 27 May 2013 to make representations.

2.9 The Notice stated that the Regulations would:

- revoke the use of part of the 24 GHz band between 21.65 and 24.25 GHz for automotive SRR equipment from 30 June 2013 except for automotive SRR equipment that was installed, or that is replacing equipment so installed, in a vehicle that was registered, placed on the market or put into service between 1 July 2005 and 30 June 2013. Such equipment would be permitted to continue to use this part of the band on a licence-exempt basis (subject to complying with various terms, provisions and limitations); and
- permit SRR equipment that was installed, or that is replacing equipment so installed, in a vehicle that was registered, placed on the market or put into service after 30 June 2013 to operate in part of the 24 GHz band between 24.25 and 26.65 GHz on a licence-exempt basis (subject to complying with various terms, provisions and limitations).

2.10 We received one response to the Notice and this is detailed in the next section of this document.

⁹ **Vehicle Type Approval** is the confirmation that production samples of a design will meet specified performance standards- see <http://www.dft.gov.uk/vca/vehicletype/index.asp>

¹⁰ “Establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive)”- see <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:263:0001:01:EN:PDF>

¹¹ <http://stakeholders.ofcom.org.uk/consultations/assr-exemption/>

Section 3

Scope of Regulations

Introduction

- 3.1 This section outlines the comment that we received to the Notice and our response to this. We also outline some further amendments that have been made and describe the final scope of the Regulations.
- 3.2 We received one non-confidential response. The response is published in full on our website¹². Following consideration of the response as outlined below, we have decided to proceed with our proposal to make the Regulations making the amendments as indicated. We therefore have decided to adopt the Regulations (subject to some minor changes).

Stakeholders' responses to the Notice

- 3.3 The Radio Society of Great Britain (RSGB) and its national affiliates who have microwave spectrum interests - Amsat-UK, UK Microwave Group (UKuG), and the British Amateur Television Club (BATC) - responded to the Notice and strongly support the changes proposed in the Notice.
- 3.4 The RSGB in addition stated that the amateur and amateur satellite service has a Primary allocation at 77.5 to 78 GHz, which they stated would be affected by increased use of 77 to 81 GHz Short Range Radar (SRR). Whilst they acknowledged the potential benefits of SRR, they noted that both this and alternative technologies should continue to be on a licence exempt (non-protected non-interference basis). The RSGB stated that they would oppose any change to the existing European 79 GHz SRR Decision, 2004/545/EC¹³. In particular they would be concerned with any upgrade of SRR status based on what they regarded as unnecessary and non-proportionate changes being considered under World Radiocommunications Conference in 2015 (WRC-15) Agenda Item 1.18. They stated that automotive radars are classic examples of short-range devices (SRDs) for which, in general, allocations are neither essential nor appropriate and they should remain on a non-protected, non-interference basis.
- 3.5 We would like to thank the RSGB for their response and support of the Regulations.
- 3.6 We are aware of work both in the European Telecommunications Standards Institute (ETSI) and the European Conference of Postal and Telecommunications Administrations (CEPT) to liberalise the 76 to 77 GHz allocation. We are also aware of the WRC15 agenda item 1.18 issues raised by RSGB and will continue to work within the International Telecommunication Union Radiocommunications (ITU-R) and CEPT forums with the aim of ensuring compatibility between all lawful users of

¹² <http://stakeholders.ofcom.org.uk/consultations/assr-exemption/?showResponses=true>

¹³ "Commission Decision of 8 July 2004 on the harmonisation of radio spectrum in the 79 GHz range for the use of automotive short-range radar equipment in the Community"; <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004D0545:EN:PDF>

the radio spectrum. Information on the UK Preparations into the Conference is available on our website¹⁴.

- 3.7 We know of no plans for the EC to amend the 79 GHz SRR Decision¹⁵, as implemented in the UK by the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) Regulations 2005¹⁶. Further, Ofcom can confirm that there are presently no plans to amend the conditions within the UK licence exemption regulations, relating to the non-interference and no-protection status of this or any other licence exempt SRD.

Amendments to Regulations

- 3.8 We have made a number of amendments to the Proposed Regulations that were published with the Notice, including a number of minor editorial amendments which do not affect the substance of the exemption. The main amendments are described below:

- We have amended the definition of “vehicle” since the definition in the Proposed Regulations published in the Notice referred to the definition in the Council Directive 70/156/EEC on the approximation of the laws of the Member States relating to the type-approval of motor vehicles¹⁷, as amended¹⁸. However, that Directive has been revoked and replaced by Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles¹⁹. The Regulations now refer to the revised definition in Directive 2007/46/EC.
- We have amended the layout of the Regulations by separating the original overall exemption into two exemptions. The first exemption covers the establishment or installation of equipment in vehicles which were registered, placed on the market or put into service during the period starting on 1 July 2005 and ending on 30 June 2013. The second exemption covers the establishment or installation of equipment in vehicles which were registered, placed on the market or put into service after 30 June 2013. The effect of this is to make the provisions of the Regulations clearer. However, it does not affect the substance of the exemption.
- We have amended the exclusion zones in relation to each of the radio astronomy stations specified in Column 1 of the Schedule of the Regulations in line with the Wireless Telegraphy (Exemption and Amendment) Regulations 2010 (S.I. 2010/2512)²⁰. This was done to more accurately reflect the centre point of the sites that need protecting.

¹⁴ <http://stakeholders.ofcom.org.uk/international/spectrum/briefing-groups/>

¹⁵ “Commission Decision of 8 July 2004 on the harmonisation of radio spectrum in the 79 GHz range for the use of automotive short-range radar equipment in the Community”; <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004D0545:EN:PDF>

¹⁶ http://www.legislation.gov.uk/ukxi/2005/1585/pdfs/ukxi_20051585_en.pdf

¹⁷ OJ No L 42, 23.02.70, p.1

¹⁸ Article 2 was amended by Council Directive No 92/53/EEC amending Directive 70/156 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers, OJ No. L225,10.8.92, p.1.

¹⁹ OJ No. L263, 09.10.2007, p.1.

²⁰ http://www.legislation.gov.uk/ukxi/2010/2512/pdfs/ukxi_20102512_en.pdf

The Legislative Framework

- 3.9 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. We can exempt the installation or use of wireless telegraphy equipment by making regulations under section 8(3) of the WT Act.
- 3.10 Under section 8(4) of the WT Act, we have to make regulations to exempt equipment if its installation or use is not likely to:
- involve undue interference with wireless telegraphy;
 - have an adverse effect on technical quality of service;
 - lead to inefficient use of the part of the electromagnetic spectrum available for wireless telegraphy;
 - endanger safety of life;
 - prejudice the promotion of social, regional or territorial cohesion; or
 - prejudice the promotion of cultural and linguistic diversity and media pluralism.
- 3.11 In accordance with the requirements of section 8(3B) of the WT Act, the terms, provisions and limitations specified in the regulations must be:
- objectively justifiable in relation to the wireless telegraphy stations or wireless telegraphy apparatus to which they relate;
 - not such as to discriminate unduly against particular persons or against a particular description of persons;
 - proportionate to what they are intended to achieve; and
 - transparent in relation to what they are intended to achieve.

Ofcom's decision

- 3.12 On 10 June 2013 Ofcom made the Regulations as proposed, subject to the changes described in paragraph 3.8. The Regulations come into force on 30 June 2013. They are summarised below.

Extent of application

- 3.13 The Regulations will apply in the United Kingdom, the Channel Islands and the Isle of Man.

The Regulations

- 3.14 The Regulations will implement the Amending Decision as closely as possible.
- 3.15 Regulation 1 sets the date when the Regulations will come into force.
- 3.16 Regulation 2 provides interpretation of the terms used in the Regulations.

- 3.17 Regulation 3 revokes the previous SRR Exemption Regulations and the two Regulations that amended the SRR Exemption Regulations.
- 3.18 Regulation 4(1) sets out the first exemption which states that automotive SRR equipment may be used without the need to hold a licence under section 8(1) subject to the terms, provisions and limitations set out in Regulation 4 being met.
- 3.18.1 Regulation 4(2) requires that the establishment or installation must be in a vehicle which was registered, placed on the market or put into service during the period starting on 1 July 2005 and ending on 30 June 2013, or must be in a vehicle in which equipment was so established or installed to replace that equipment.
- 3.18.2 Regulation 4(3) sets out that SRR equipment must only operate when the vehicle in which it is installed is active; only operate in the frequency band between 21.65 GHz and 26.65 GHz; and not cause undue interference to other users of that frequency band.
- 3.18.3 Regulation 4(4) and (5) set out technical requirements for automotive SRR equipment. Transmissions from any ultra wide band part of the equipment must have:
- a mean power density no greater than -41.3 dBm/MHz eirp and a peak power density no greater than 0 dBm in any 50 MHz at frequencies between 22.00 GHz and 26.65 GHz; and
 - a mean power density no greater than -61.3 dBm/MHz eirp and a peak power density no greater than 0 dBm in any 50 MHz at frequencies between 21.65 GHz and 22.00 GHz.
- 3.18.4 Any narrow band component of the equipment must only operate in the frequency band 24.05 GHz to 24.25 GHz and transmit with a peak power no greater than 20 dBm eirp; and where transmitting with a peak power greater than -10 dBm eirp have a duty cycle which does not exceed 10%.
- 3.18.5 Regulation 4(6) sets emission limits within the 23.6 to 24.0 GHz band for emissions that appear 30° or greater above the horizontal plane by at least 30 dB.
- 3.18.6 Regulation 4(7) sets out that there is no exemption permitted within the exclusion zones (locations set out in the schedule), for the use of automotive SRR equipment operating in the Radio Astronomy band 22.21 to 24.00 GHz under the Regulations.
- 3.18.7 Regulation 4(8) requires equipment in the frequency band between 22.21 GHz and 24.00 GHz either to automatically or manually deactivate so that all emissions cease when the vehicle is within an exclusion zone around the radio astronomy sites (as set out in the schedule of the Regulations) where the equipment has been established or installed in a vehicle put into service in the Community before 27 February 2008.
- 3.18.8 Regulation 4(9) specifies that equipment that is established or installed in a vehicle put into service in the Community on or after 27 February 2008 will only be permitted to operate in the frequency band between 22.21 GHz and

24.00 GHz if it automatically deactivates when the vehicle is within an exclusion zone around the radio astronomy sites.

3.19 Regulation 5(1) sets out the second exemption which states that automotive SRR equipment may be used without the need to hold a licence under section 8(1) subject to the terms, provisions and limitations set out in Regulation 5 being met.

3.19.1 Regulation 5(2) requires that the establishment or installation must be in a vehicle which was registered, placed on the market or put into service after 30 June 2013, or must be in a vehicle in which equipment was so established or installed in order to replace that equipment.

3.19.2 Under Regulation 5(3) the equipment must only operate when the vehicle in which it is established or installed is active; only operate in the frequency between 24.25 and 26.65 GHz and not cause undue interference to other users within that frequency band.

3.19.3 Under Regulation 5(4), transmissions from any ultra wide band part of the equipment at frequencies between 24.25 GHz and 26.65 GHz must have a mean power density no greater than -41.3 dBm/MHz eirp and a peak power density no greater than 0 dBm in any 50 MHz.

3.20 Column 1 of the Schedule sets out the exclusion zones in relation to each of the radio astronomy stations; the coordinates listed are as follows:

02° 18' 22.8" W 53° 14' 06.7" N - Jodrell Bank

00° 02' 12.4" E 52° 10' 00.0" N – Cambridge

02° 32' 08.5" W 53° 09' 22.7" N – Darnhall

02° 26' 43.5" W 53° 17' 19.1" N – Pickmere

02° 59' 49.6" W 52° 47' 25.1" N – Knockin

Annex 1

List of respondents

Radio Society of Great Britain (including Amsat-UK, UK Microwave Group, and British Amateur Television Club)