
Notice of Ofcom's proposals for changes to the licence exemption for Wireless Telegraphy Devices

Proposals to implement a European Commission Decision on short range devices and to revoke the licence exemption for Railway Level Crossing Radar Sensor Systems

CONSULTATION:

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1. Overview

Ofcom is responsible for authorising use of the radio spectrum. We achieve this by granting wireless telegraphy licences under the Wireless Telegraphy Act 2006 (the WT Act) or by making statutory regulations exempting users of particular equipment from the requirement to hold such a licence.

What we are proposing – in brief

We are consulting on proposals to make new regulations to implement:

- a European Commission Decision¹ that harmonises the frequencies and technical parameters for certain categories of short-range device (SRD) applications within the 874 to 876 and 915 to 921 MHz bands; and
- an Ofcom decision to revoke the licence exemption for the use of Railway Level Crossing Radar Sensor Systems and to introduce a national licence for this equipment.

To implement the decision on SRD applications within the 874 to 876 and 915 to 921 MHz bands, we are proposing to make the Wireless Telegraphy (Exemption and Amendment) (Amendment) Regulations 2020 and to update the technical requirements for applications contained in UK Interface Requirement (IR 2030). Our proposal will allow several new SRD applications such as networked SRDs and advanced radio-frequency identification devices (RFIDs) to operate on a licence-exempt basis.

We also want to remove the current licence exemption authorisation for the use of Railway Level Crossing Radar Sensor Systems. The licence exemption specifies that these radars cannot be used within 20 km of six UK Radio Astronomy sites. However, we have agreed with the relevant parties that the devices will be subject to coordination by Ofcom and the exclusion zones will be removed. This will allow deployment of these safety devices in locations where previously they could not be used. This is best achieved by a licensing approach rather than through amendments to the current exemption.

The use of these devices will be licensed on a national basis and will also include a recent change in the equipment standards that changes the way that the power of Railway Level Crossing Radar Sensor Systems devices is measured. To reflect this, the licence will show a power increase from 500 mw to 5W.

Ofcom invites comments on the proposals by 5pm on 17 January 2020.

¹2018/1538/EU of 11 October 2018.

2. Ofcom's proposals

Introduction

- 2.1 This Notice sets out Ofcom's proposals to make the Wireless Telegraphy (Exemption and Amendment) (Amendment) Regulations 2020 (the Proposed Regulations). A copy of the Proposed Regulations can be found in Annex A1.

Proposals for SRD uses within the 874 to 876 and 915 to 921 MHz frequency bands

- 2.2 Every day, most of us use one or more SRDs such as keyless entry fobs/cards, smart meters, garage door openers and Wi-Fi systems. The importance of SRDs for the economy and the growth in applications for these devices means that regular updates of their spectrum harmonisation conditions must occur.
- 2.3 SRDs are typically mass-market, portable products which can be transported easily and used across borders. Therefore, our aim is to establish a predictable sharing environment, to encourage the development of new SRD uses which will benefit both businesses and consumers, and to facilitate access to spectrum to enable innovation to take place.
- 2.4 The Proposed Regulations, when made, would implement the European Commission Implementing Decision 2018/1538/EU of 11 October 2018 (the SRD Decision).² As an EU Member State, the UK is required to implement the SRD changes which harmonises uses within the 874 to 876 and 915 to 921 MHz bands.
- 2.5 Ofcom proposes to implement the SRD Decision because of the many positive benefits of the decision including enhancing the maximum freedom of movement of SRDs, the continuation of the common approach to spectrum access conditions for SRDs and potentially lowering the costs of SRDs for UK consumers and business.
- 2.6 Furthermore, the SRD Decision is supported by the recommendations from the European Conference of Postal and Telecommunications Administrations (CEPT) in CEPT's Addendum to Report 59³ and the work of European Telecommunications Standards Institute (ETSI) on harmonised standards for SRDs. Ofcom has been integral to the work of CEPT and ETSI and the technical parameters necessary for SRDs developed by these organisations help to ensure the efficient use of spectrum and the avoidance of interference.
- 2.7 The Proposed Regulations will implement these changes by referencing an updated version of UK Interface Requirement 2030 (IR 2030).⁴ The updated IR 2030 will reflect the new technical requirements for the use of SRD applications within the 874 to 876 and 915 to

² The [SRD Decision](#) is available.

³ [CEPT Report 59](#) is available.

⁴ The [current version of IR 2030](#) is available on the Ofcom website.

921 MHz bands. A copy of the proposed amendments to IR 2030 can be found in Annex A2.⁵

2.8 The SRD Decision supports certain uses of SRD devices within the 874 to 876 and 915 to 921 MHz frequency bands, including new networked SRDs, technically advanced RFIDs and new types of machine-to-machine/IoT applications. These are described in Table 1.

Table 1 – Harmonised SRD uses covered by the SRD Decision⁶

Band no	Frequency band	Category of short-range device	Remarks
1	874 to 874.4 MHz	Non-specific short-range devices	The band is for the use of non-specific short-range devices at 500mW effective radiated power (ERP). The usage conditions are only available for data networks. ⁷ Typical uses in the band will include telemetry, telecommand, alarms, data transmissions and other applications.
2	917.4 to 919.4 MHz	Wideband data transmission devices	The band is for the use of wideband data transmission systems at 25 mW ERP. Typical uses in the band will include wireless access systems such as radio local area networks (WAS/RLANs) or wideband short-range devices in data networks.
3	916.1 to 918.9 MHz	Radio Frequency Identification devices (RFIDs)	The band is for the use of interrogator transmissions at 4 W ERP. RFIDs covers tag/interrogator-based radio communications systems, consisting of radio devices (tags) attached to animate or inanimate items and of transmitter/receiver units (interrogators) which activate the tags and receive data back. Transmissions are only permitted at the centre frequencies of 916.3 MHz; 917.5 MHz; and 918.7 MHz. Typical uses in the band will include the tracking and electronic article surveillance (EAS).
4	917.3 to 918.9 MHz	Non-specific short-range devices	The band is for use of non-specific short-range devices at 500mW ERP.

⁵ Interface Requirements typically specify transmit power and field strength or power density limits, as well as additional parameters and usage restrictions by frequency band and category of SRD, based on underlying compatibility studies.

⁶ As noted in the annex of the [SRD Decision](#).

⁷ A ‘data network’ means several networked SRDs including the network access point as network components and the wireless connections between them. All devices within the data network shall be under the control of network access points.

			<p>Transmissions are only permitted within the frequency ranges 917.3 to 917.7 MHz; 918.5 to 918.9 MHz.</p> <p>The usage conditions are only available for data networks.</p> <p>Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications.</p>
5	917.4 to 919.4 MHz	Non-specific short-range devices	<p>The band is for the use of non-specific short-range devices at 25mW ERP.</p> <p>The usage conditions are only available for data networks.</p> <p>Typical uses in the band will include telemetry, telecommand, alarms, data transmissions in general and other applications.</p>

- 2.9 The UK has an existing authorisation for RFIDs operating in the 916.1 to 916.5, 917.3 to 917.7 and 918.5 to 918.9 MHz frequency bands (Band 3 in Table 1).⁸ However, the SRD Decision would have the practical effect of removing the requirement for a detect and avoid mechanism (DAA) in the 918.5 to 918.9 MHz frequency band. Therefore, we are to remove this requirement from the technical parameters in IR 2030.
- 2.10 The SRD Decision includes provision for Member States to take appropriate measures to protect existing use (such as defence and railways) in the 874 to 876 MHz and 915 to 921 MHz spectrum. Where protections are proposed they should only be made to the extent necessary and where no alternative protective solution could be achieved through coordination with other uses in those bands. This may include the imposition of additional technical, geographic or operational requirements for the use of the band while complying with the harmonised technical conditions for spectrum access.
- 2.11 In addition, the SRD Decision notes that national rules, such as local coordination, may also be needed in order to avoid interference to radio services operating in the adjacent bands, for example, due to intermodulation or blocking. This provision is not relevant to the UK, as there are no existing uses in the 874 to 876 MHz and 915 to 921 MHz spectrum bands that would require national rules beyond what is provided in the Decision.⁹
- 2.12 The SRD Decision also allows Member States to permit the use of frequency bands for SRDs under less restrictive conditions. However, such use cannot prevent or reduce the possibility for harmonised SRDs relying on the appropriate set of harmonised technical conditions allowing for the shared use of a specific part of the spectrum.

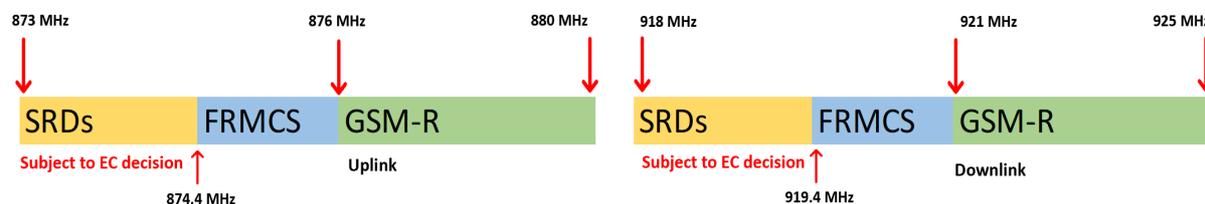
⁸ See 2014/88/UK (June 2014).

⁹ As noted in Article 3 of the [Commission Decision](#).

Proposals for the future spectrum access for railways in the 870 to 876 MHz and 918 to 921 MHz bands

- 2.13 GSM-R is an international wireless communications standard, currently used for applications related to the operation of railways in the UK and in some European countries. Railways currently use the 876 to 880 MHz and 921 to 925 MHz band as the harmonised spectrum for GSM-R at CEPT and EU levels.¹⁰
- 2.14 GSM-R is expected to reach its end of life around 2030. In 2012, the European railway community started the Future Rail Mobile Communications System (FRMCS) project to prepare for the introduction of a successor to GSM-R.
- 2.15 Taking account of the view of the railway sector and the opinion of the European Commission Radio Spectrum Committee (on the possible future spectrum needs for FRMCS), the SRD Decision states that 2 x 1.6 MHz (874.4 to 876 and 919.4 to 921 MHz) should be reserved for FRMCS subject to further study.
- 2.16 As railway communications transition from GSM-R to FRMCS, it will be necessary for both technologies to operate during the transition period. As detailed in ECC Report 294, 2 x 1.6 MHz will provide sufficient spectrum to transition to FRMCS in the majority of cases, for example by providing 2 x 1.4 MHz LTE. As this spectrum is adjacent to the GSM-R bands, after transition, it could provide 2 x 5.6 MHz of spectrum for FRMCS. This could allow for a 2 x 5 MHz LTE channel for FRMCS.¹¹

Figure 1: UK Frequency bands for GSM-R and E-GSM-R



UK proposal

- 2.17 Ofcom proposes to fully implement the SRD Decision, as drafted, because it balances the requirements of the UK rail, SRD/RFID and IoT communities. Through the development of our proposals, we have worked with the Department for Transport and Network Rail to ensure their views have been considered, especially in relation to the impact of the SRD Decision on UK railway communications.
- 2.18 The implementation of the SRD proposals provides the opportunity to make 2 x 1.6 MHz (874.4 to 876 MHz and 919.4 to 921 MHz) available for FRMCS later, depending on the

¹⁰ see Decision 1999/569/EC.

¹¹ This spectrum could be used for a 2x1.4 MHz LTE channel or combined with the existing GSM-R band to provide a 2x5 MHz LTE channel.

outcome of further technical studies.¹² Therefore our proposal is to implement our SRD proposals with no additional restrictions. Our view is that this will likely provide enough flexibility for the future migration from GSM-R to FRMCS without reducing the benefits of implementing harmonised spectrum for SRDs.

Railway Level Crossing Radar Sensor Systems

- 2.19 Railway Level Crossing Radar Sensor Systems are sensor systems installed at level crossings which monitor intersections and detect obstacles such as people, vehicles and any object that may cause damage to a moving train. They improve safety and service efficiency for trains and people and have been licence-exempt by statutory instrument since 2010.¹³

Change from exclusion to coordination zones

- 2.20 In 2010, as part of the requirements for licence exemption, Ofcom introduced six 20 km exclusions zones where the deployment of Railway Level Crossing Radar Sensor Systems was not permitted. The exclusion zones were thought necessary to reduce the potential for harmful interference with UK Radio Astronomy equipment. The following six sites were protected:

Site	Location
Jodrell Bank	02° 18' 22.8" W 53° 14' 06.7" N
Cambridge	00° 02' 12.4" E 52° 10' 00.0" N
Defford	02° 08' 40.1" W 52° 06' 02.0" N
Darnhall	02° 32' 08.5" W 53° 09' 22.7" N
Knockin	02° 59' 49.6" W 52° 47' 25.1" N
Pickmere	02° 26' 43.5" W 53° 17' 19.1" N

- 2.21 After discussions between Network Rail (the only current UK user of Railway Level Crossing Radar Sensor Systems), the Radio Astronomy community and Ofcom, we have agreed that Railway Level Crossing Radar Sensor Systems can be deployed closer to those six Radio Astronomy sites.
- 2.22 Given this, we no longer believe that the exclusion zones are necessary and Ofcom will instead coordinate deployments. This will mean that this useful equipment can be installed in new areas of Network Rail’s network. Ofcom will manage the coordination process.

¹² For example, [ECC Report 294- Assessment of the spectrum needs for future railway communications](#) concludes that that 2 x 1.6 MHz is likely to be a sufficient amount of spectrum for all but the densest areas of rail operation.

¹³ http://www.legislation.gov.uk/ukxi/2010/2512/pdfs/ukxi_20102512_en.pdf

Maximum transmit power level and measurement

- 2.23 Under the present technical conditions for Railway Level Crossing Radar Sensor Systems published in IR 2080, the maximum transmit power level for licence exempt equipment is 500 mW EIRP.¹⁴
- 2.24 As a result of changes to the relevant ETSI harmonised standard¹⁵ in July 2018, the method for measuring the power output from the device has changed. Now, the output power is measured in the far-field rather than the near-field. This means that, while the equipment has not changed; the maximum measured transmit power level from the Railway Level Crossing Radar Sensor System should be specified as 5 W rather than 500 mW EIRP.

The licensing approach

- 2.25 Given the coordination and transmit power changes, we believe that these devices are best authorised via a licence rather than through the existing exemption. This is because a licence makes it easier to manage specific behavioural conditions such as the need to supply coordination and commercially sensitive deployment information.
- 2.26 We are to licence the use of Railway Level Crossing Radar Sensor Systems in the 24.100 GHz to 24.350 GHz band on the following basis:
- the licensee will be authorised to install and operate Railway Level Crossing Radar Sensor Systems across the UK;
 - potential deployments will be coordinated to ensure they would not cause interference; and
 - the maximum transmitter power limit for operating Railway Level Crossing Radar Sensor Systems will be increased from 500 mW (under the current licence exemption) to 5 W (under the proposed licence) because of a change in the ETSI measurement methodology.
- 2.27 The licensing arrangements mean that the licensee will need to apply to Ofcom for a licence and to pay fees in order to establish, install and use this equipment in the UK. We will authorise the use of this equipment under a Science and Technology licence for which the fee is £50.
- 2.28 The licensing arrangements mean that the exemption in the regulations and the specific reference to IR 2080 (which contains the technical conditions for Railway Level Crossing Radar) will be no longer required.

Document structure

- 2.29 This document is structured as follows:

¹⁴ https://www.ofcom.org.uk/data/assets/pdf_file/0029/84665/ir_2080.pdf

¹⁵ EN 300 440 available at

https://www.etsi.org/deliver/etsi_en/300400_300499/300440/02.02.01_30/en_300440v020201v.pdf

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- Section 3 contains the legislative framework and notice of the proposed changes to the regulations.
- Section 4 sets out the general effects of the Proposed Regulations.
- Annex A1 contains a draft of the Proposed Regulations.
- Annex A2 contains a draft of our proposed amendments to Interface Requirement, IR 2030.

3. Notice

Notice of proposals

- 3.1 To give effect to the proposed changes set out in Section 2 of this document, we are proposing to make the Proposed Regulations, in accordance with section 122(4) and (5) of the WT Act.
- 3.2 This section sets out the legal framework for making the Proposed Regulations, summarises the technical changes currently proposed, and provides a provisional assessment that implementing the proposals would be consistent with the requirements of the WT Act.

The legislative framework

- 3.3 Ofcom is responsible for authorising use of the radio spectrum. We permit the use of the radio spectrum by granting wireless telegraphy licences under the WT Act or by making statutory regulations exempting users of particular equipment from the requirement to hold such a licence. It is unlawful and an offence to install or use wireless telegraphy apparatus without holding a licence granted by Ofcom, unless the use of such equipment is exempted.
- 3.4 Ofcom's statutory powers and duties in relation to spectrum management are set out primarily in the Communications Act 2003 (the 2003 Act) and the WT Act. Amongst our functions are the making available of frequencies for use for particular purposes and the granting of rights of use of spectrum through wireless telegraphy licences and licence exemptions.
- 3.5 Our principal duties under the 2003 Act, when carrying out our functions and exercising our powers, are to further the interests of citizens and consumers, where appropriate by promoting competition. In doing so, we are also required (among other things) to secure the optimal use of spectrum and the availability throughout the United Kingdom of a wide range of electronic communications services.
- 3.6 We must also have regard to: (i) the desirability of promoting competition in relevant markets; (ii) the desirability of encouraging investment and innovation in relevant markets; (iii) the different needs and interests, so far as the use of the electro-magnetic spectrum for wireless telegraphy is concerned, of all persons who may wish to make use of it; and (iv) the different interests of persons in the different parts of the United Kingdom, of the different ethnic communities within the United Kingdom and of persons living in rural and in urban areas.
- 3.7 Additionally, in carrying out our spectrum functions we have a duty under section 3 of the WT Act to have regard in particular to: (i) the extent to which the spectrum is available for use, or further use, for wireless telegraphy; (ii) the demand for use of that spectrum for wireless telegraphy; and (iii) the demand that is likely to arise in future for such use.

- 3.8 We also have a duty to have regard to the desirability of promoting: (i) the efficient management and use of the spectrum for wireless telegraphy; (ii) the economic and other benefits that may arise from the use of wireless telegraphy; (iii) the development of innovative services; and (iv) competition in the provision of electronic communications services.
- 3.9 Under section 8(1) of the WT Act, it is unlawful to establish or use a wireless telegraphy station or install or use wireless telegraphy apparatus except under and in accordance with a wireless telegraphy licence granted under the WT Act.
- 3.10 Under sections 8(3) – 8(3B) of the WT Act, Ofcom may make regulations exempting from the licensing requirements under section 8(1), the establishment, installation or use of wireless telegraphy stations or wireless telegraphy apparatus of such classes or description as may be specified in the regulations, either absolutely or subject to such terms, provisions and limitations as may be specified.
- 3.11 Under section 8(4) of the WT Act, we must 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.
- 3.12 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.
- 3.13 We make exemption regulations by means of a statutory instrument. Before making any such regulations, we are required by section 122(4) of the WT Act to give statutory notice of our proposal to do so. Under section 122(5), such notice must state that we propose to make the regulations in question, set out their general effects, specify an address from which a copy of the proposed regulations or order may be obtained, and specify a time period of at least one month during which any representations with respect to the proposal must be made to us.
- 3.14 We have formulated our proposals by reference to our statutory duties. For the reasons set out in this Notice, our provisional assessment is that they are consistent with those duties and the terms, provisions and limitations would meet the requirements of section 8(4) of the WT Act.

3.15 In our view, the proposals set out in this document are:

- **objectively justified** in that they address the risks of undue interference that might otherwise arise from the use of SRDs and Railway Level Crossing Radar Sensor Systems;
- **not unduly discriminatory** against particular persons or against a particular description of persons in that they would apply to all users of relevant SRDs or Railway Level Crossing Radar Sensor Systems (and, indirectly, to all manufacturers and sellers);
- **proportionate** to what they are intended to achieve, in that they would be necessary to ensure that use of the relevant equipment would not be likely to have relevant adverse effects; and
- **transparent** in relation to what they are intended to achieve, in that they are described and explained in this Notice.

Our proposed changes

3.16 The Proposed Regulations would amend the 2010 Regulations.¹⁶ In doing so, the following changes will be made:

- In relation to the exemption for SRDs (regulation 5 of the 2010 Regulations) the publication date for IR 2030 will be updated to implement our proposals for SRDs in the 874 to 876 and 915 to 921 870/915 MHz frequency band and this will give effect to the SRD Decision.
- In relation to the operation of Railway Level Crossing Radar Sensor Systems, the exemption will be revoked (regulation 4 in the 2010 Regulations) along with the reference to IR 2080 which provides the technical conditions for Railway Level Crossing Radars.
- As set out in Section 2 of this document, the reason we are to remove the current licence exemption for Railway Level Crossing Radar Systems is because licensing allows Ofcom to impose behavioural conditions or technical requirements that help us to manage spectrum in a more efficient and flexible way.

Comments and representations

3.17 We are inviting comments on whether the Proposed Regulations correctly implement the SRD Decision and reflect Ofcom's decision to license Railway Level Crossing Radar Sensor Systems by the removal of the current exemption provision.

Question 1: Do you agree with Ofcom's proposals to implement changes, that are consistent with the SRD Decision, within the 874 to 876 and 915 to 921 MHz frequency bands for SRDs?

Question 2: Do the Proposed Regulations and proposed changes to IR 2030 correctly implement our proposals?

¹⁶ <http://www.legislation.gov.uk/uksi/2010/2512/contents/made>

Question 3: Do you agree that removal of the licence exemption effectively implements Ofcom's decision to license the use of Railway Level Crossing Radar Sensor Systems?

If you disagree with any of the questions, please provide the evidence that would support any disagreement with the proposals.

- 3.18 Subject to our consideration of responses, we intend to bring the Proposed Regulations into force in February or March 2020. A regulatory impact assessment for the Proposed Regulations and new licence arrangement will accompany the making of the regulations.
- 3.19 Comments are invited by 5pm on 17 January 2020.

4. General effect

4.1 In this section, we set out the general effects of the Proposed Regulations as required by section 122(5) of the WT Act. We are proposing to make the Proposed Regulations as set out in Annexure A1 to this document.

Extent of application

4.2 The Proposed Regulations would apply in the United Kingdom, the Channel Islands and the Isle of Man, subject to formal agreement of the Crown Dependencies.

Proposed Regulations

4.3 The overall general effect of the Proposed Regulations will be to add to the licence-exemptions for SRDs within the 874 to 876 and 915 to 921 MHz frequency bands.¹⁷

4.4 The Proposed Regulations will update the 2010 Regulations with respect to:

- the SRD proposals; and
- Railway Level Crossing Radar Sensor Systems, by revoking the previous licence exemption contained in Regulation 4 of the 2010 regulations.

4.5 Regulation 2 proposes the definitions which apply. They are the same definitions as set out in the 2010 Regulations.

4.6 Regulation 3 specifies that the Railway Level Crossing exemption in the previously made Regulations will be revoked and provides a licence exemption for SRDs, replicating the previous exemption in Regulation 5 of the 2010 Regulations and updating the publication date of IR 2030 to reference the latest version of this document.

Entry into force of the Proposed Regulations

4.7 The Proposed Regulations are intended to come into force as soon as practical after making the final regulations taking into consideration any comments received. This is currently estimated to be in February or March 2020.

This overview in this document is a simplified summary only. The proposals we are consulting on and our reasoning are set out in the full document.

¹⁷ Devices and equipment will be exempt where they comply with the technical conditions set out in the UK Interface Requirements (IRs) IR 2080, IR 2030, IR 2078, IR 2066, IR 2084, IR 2093 and IR 2072.2. All [interface requirements](#) are available on the Ofcom website.

A1. Proposed Regulations

STATUTORY INSTRUMENTS

2020 No. 000

ELECTRONIC COMMUNICATIONS

Wireless Telegraphy (Exemption and Amendment) (Amendment) Regulations 2020

Made - - - - - ***

Coming into force - - - - - ***

The Office of Communications (“OFCOM”), makes the following Regulations in exercise of the powers conferred by sections 8(3) and 122(7) of the Wireless Telegraphy Act 2006⁽¹⁸⁾ (“the Act”) and in exercise of those sections of the Act as extended to the Bailiwick of Guernsey, the Bailiwick of Jersey and to the Isle of Man⁽¹⁹⁾.

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) of the Act.

Citation and commencement

1. These Regulations may be cited as the Wireless Telegraphy (Exemption and Amendment) (Amendment) Regulations 2020 and shall come into force on XXX 2020.

Interpretation

2. In these Regulations—

“the Act” means the Wireless Telegraphy Act 2006;

“the Principal Regulations” means the Wireless Telegraphy (Exemption and Amendment) Regulations 2010; and

Revocations and amendments

3.

⁽¹⁸⁾ 2006 c.36.

⁽¹⁹⁾ Section 8(3) and section 122(7) were extended to the Bailiwick of Guernsey by article 2 of the Wireless Telegraphy (Guernsey) Order 2006 (S.I. 2006/3325); to the Bailiwick of Jersey by article 2 of the Wireless Telegraphy (Jersey) Order 2006 (S.I. 2006/3324); and to the Isle of Man by article 2 of the Wireless Telegraphy (Isle of Man) Order 2007 (S.I. 2007/278).

- (1) The Principal Regulations shall be amended in accordance with paragraphs (2) and (3).
- (2) Regulation 4 (railway level crossing radar) of the Principal Regulations is revoked.
- (3) In Regulation 5 (short range devices), for ““IR 2030—UK Interface Requirements 2030 Licence Exempt Short Range Devices”, published by OFCOM in November 2018”, substitute ““IR 2030—UK Interface Requirements 2030 Licence Exempt Short Range Devices”, published by OFCOM on [XXXX]”.

XXX

Philip Marnick
Group Director, Spectrum Group
Office of Communications

A2. IR 2030 – Draft changes

UK Interface Requirements 2030-Licence Exempt Short Range Devices

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Definitions

Section 4

The following definitions apply in relation to the specified Radio Interface Requirements:

Number	Defined term	Definition
IR2030/1	Non-Specific Short-Range Device	The non-specific short-range device category covers all kinds of radio devices, regardless of the application or the purpose, which fulfil the technical conditions as specified for a given frequency band. Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications.
IR2030/1/47	Network Access Point	A 'network access point' is a fixed terrestrial networked short-range device in a data network that acts as a connection point for the other short-range devices in the data network to service platforms located outside of the data network.
IR2030/1/48		
IR2030/1/49		
IR2030/7/4		
IR2030/7	Wideband Data transmission Devices	The wideband data transmission device category covers radio devices that use wideband modulation techniques to access the spectrum. Typical uses include wireless access systems such as radio local area networks (WAS/RLANs) or wideband SRDs in data networks.
IR2030/13	Radio Frequency Identification	<p>The radio frequency identification (RFID) device category covers tag/interrogator based radio communications systems, consisting of radio devices (tags) attached to animate or inanimate items and of transmitter/receiver units (interrogators) which activate the tags and receive data back.</p> <p>Typical uses include the tracking and identification of items, such as for electronic article surveillance (EAS), and collecting and transmitting data relating to the items to which tags are attached, which may be either battery-less, battery assisted or battery powered. The responses from a tag are validated by its interrogator and passed to its host system</p>

Minimum requirements for the use of Short Range Devices

Normative Part									Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR 2030/1/47	Non-specific short- range devices	This set of usage conditions is only available for data networks All devices within the data network shall be under the control of network access points	874-874.4 MHz		500 mW e.r.p.	Adaptive Power Control (APC) required, alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility	Bandwidth: ≤ 200 kHz	Duty cycle: ≤ 10 % for network access points Duty cycle: 2.5 % otherwise Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the Official Journal of the European Union under Directive	2018/1538/EU Band No.1

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								2014/53/EU, performance at least equivalent to these techniques shall be ensured	
IR2030/1/48	Non-specific short- range devices	This set of usage conditions is only available for data networks. All devices within the data network shall be under the control of network access points.	917.4-919.4 MHz		25 mW e.r.p.		Bandwidth: ≤ 600 kHz	Duty cycle: ≤ 1 % Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the <i>Official Journal of the European Union</i> under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured	2018/1538/EU Band No. 5

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IR2030/1/49	Non-specific short- range devices	This set of usage conditions is only available for short-range devices in data networks. All devices within the data network shall be under the control of network access points.	917.3 -918.9 MHz		500 mW e.r.p.	Transmissions only permitted within the frequency ranges 917.3-917.7 MHz, 918.5- 918.9 MHz Adaptive Power Control (APC) required, alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility	Bandwidth: ≤ 200 kHz Duty cycle: ≤ 10 % for network access points Duty cycle: ≤ 2.5 % otherwise	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured.	2018/1538/EU Band No. 4
IR 2030/7/5	Wideband Data Transmission Systems	This set of usage conditions is only available for wideband short-range devices in data networks. All devices within the data network shall be under the	917.4 -919.4 MHz		25 mW e.r.p.		Bandwidth: ≤ 1 MHz Duty cycle: ≤ 10 % for network access points Duty cycle: ≤ 2.8 % otherwise	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive	2018/1538/EU Band No. 2

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		control of network access points.						2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured	
IR2030/13/9	Radio Frequency Identification (RFID) devices		916.1-918.9 MHz	Interrogator transmissions at 4 W e.r.p. only permitted at the centre frequencies: 916.3 MHz; 917.5 MHz; and	4W e.r.p.		Bandwidth: ≤ 400 kHz	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the <i>Official Journal of</i>	2018/1538/EU Band No. 3

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				918.7 MHz.				<i>the European Union</i> under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured.	
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Note A **data network** means several networked SRDs including the network access point as network components and the wireless connections between them. All devices within the data network shall be under the control of network access points.

A3. Responding to this consultation

How to respond

- A3.1 Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on 17 January 2020.
- A3.2 You can download a response form from <https://www.ofcom.org.uk/consultations-and-statements/category-3/proposal-changes-licence-exemption-wireless-telegraphy-devices>. You can return this by email or post to the address provided in the response form.
- A3.3 If your response is a large file, or has supporting charts, tables or other data, please email it to elizabeth.press@ofcom.org.uk, as an attachment in Microsoft Word format, together with the [cover sheet](#).
- A3.4 Responses may alternatively be posted to the address below, marked with the title of the consultation:
- Elizabeth Press
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- A3.5 We welcome responses in formats other than print, for example an audio recording or a British Sign Language video. To respond in BSL:
- Send us a recording of you signing your response. This should be no longer than 5 minutes. Suitable file formats are DVDs, wmv or QuickTime files. Or
 - Upload a video of you signing your response directly to YouTube (or another hosting site) and send us the link.
- A3.6 We will publish a transcript of any audio or video responses we receive (unless your response is confidential)
- A3.7 We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt if your response is submitted via the online web form, but not otherwise.
- A3.8 You do not have to answer all the questions in the consultation if you do not have a view; a short response on just one point is fine. We also welcome joint responses.
- A3.9 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex A6. It would also help if you could explain why you hold your views, and what you think the effect of Ofcom's proposals would be.
- A3.10 If you want to discuss the issues and questions raised in this consultation, please contact Elizabeth Press on 020 76206814, or by email to elizabeth.press@ofcom.org.uk.

Confidentiality

- A3.11 Consultations are more effective if we publish the responses before the consultation period closes. In particular, this can help people and organisations with limited resources or familiarity with the issues to respond in a more informed way. So, in the interests of transparency and good regulatory practice, and because we believe it is important that everyone who is interested in an issue can see other respondents' views, we usually publish all responses on our website, www.ofcom.org.uk, as soon as we receive them.
- A3.12 If you think your response should be kept confidential, please specify which part(s) this applies to and explain why. Please send any confidential sections as a separate annex. If you want your name, address, other contact details or job title to remain confidential, please provide them only in the cover sheet, so that we don't have to edit your response.
- A3.13 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and try to respect it. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A3.14 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's intellectual property rights are explained further in our [Terms of Use](#).

Next steps

- A3.15 Following this consultation period, Ofcom plans to publish a statement in February or March 2020.
- A3.16 If you wish, you can [register to receive mail updates](#) alerting you to new Ofcom publications.

Ofcom's consultation processes

- A3.17 Ofcom aims to make responding to a consultation as easy as possible. For more information, please see our consultation principles in Annexure A5.
- A3.18 If you have any comments or suggestions on how we manage our consultations, please email us at consult@ofcom.org.uk. We particularly welcome ideas on how Ofcom could more effectively seek the views of groups or individuals, such as small businesses and residential consumers, who are less likely to give their opinions through a formal consultation.
- A3.19 If you would like to discuss these issues, or Ofcom's consultation processes more generally, please contact the corporation secretary:

Corporation Secretary
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA
Email: corporationsecretary@ofcom.org.uk

A4. Ofcom's consultation principles

Ofcom has seven principles that it follows for every public written consultation:

Before the consultation

- A4.1 Wherever possible, we will hold informal talks with people and organisations before announcing a big consultation, to find out whether we are thinking along the right lines. 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

- A4.2 We will be clear about whom we are consulting, why, on what questions and for how long.
- A4.3 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 for people to give us a written response. If the consultation is complicated, we may provide a short Plain English / Cymraeg Clir guide, to help smaller organisations or individuals who would not otherwise be able to spare the time to share their views.
- A4.4 We will consult for up to ten weeks, depending on the potential impact of our proposals.
- A4.5 A person within Ofcom will be in charge of making sure we follow our own guidelines and aim to reach the largest possible number of people and organisations who may be interested in the outcome of our decisions. Ofcom's Consultation Champion is the main person to contact if you have views on the way we run our consultations.
- A4.6 If we are not able to follow any of these seven principles, we will explain why.

After the consultation

- A4.7 We think it is important that everyone who is interested in an issue can see other people's views, so we usually publish all the responses on our website as soon as we receive them. After the consultation we will make our decisions and publish a statement explaining what we are going to do, and why, showing how respondents' views helped to shape these decisions.

A5. Consultation coversheet

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)

A6. Consultation questions

Question 1: Do you agree with Ofcom's proposals to implement changes, that are consistent with the SRD Decision, within the 874 to 876 and 915 to 921 MHz frequency bands for SRDs?

Question 2: Do the Proposed Regulations and proposed changes to IR 2030 correctly implement our proposals?

Question 3: Do you agree that removal of the licence exemption effectively implements Ofcom's decision to license the use of Railway Level Crossing Radar Sensor Systems?

If you disagree with any of the questions, please provide the evidence that would support any disagreement with the proposals.