

# **Decision to make the Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2019**

Statement on Ofcom's decision to make technical  
changes for in-vehicle mobile phone repeaters

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**STATEMENT**

Publication date: 5 November 2019

# Contents

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## Section

1. Overview	3
2. Introduction	4
3. Consultation responses and Ofcom's assessment	9
4. Ofcom's decision	11

## Annex

A1. Legal framework	12
A2. Interface requirements (IR 2102)	14
A3. Regulatory impact assessment	15
A4. (Unofficial) Copy of The Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2019	16

# 1. Overview

Accessing mobile networks from a vehicle can be troublesome for some consumers, particularly where they are travelling at the edge of mobile network coverage. If the mobile signal is already weak outdoors and must then penetrate through the glass and bodywork of the vehicle, once inside, it may fall below a usable level. In-vehicle mobile phone repeaters, also known as signal boosters and signal enhancers, can help to mitigate the loss of the mobile signal through the car's bodywork.

This document sets out Ofcom's decision to make new regulations by statutory instrument and to update a UK Interface Requirement. These regulations allow the use of certain low powered in-vehicle mobile phone repeaters without the need to obtain a licence.

## **What we have decided – in brief**

**We have decided to change the technical parameters allowed for licence exempt in-vehicle low gain mobile phone repeaters and amend the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2018 to implement these changes.**

The Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2019 come into force on 27 January 2020.

In July 2019 we proposed some technical amendments to the existing licence exemption for in-vehicle repeaters set out in the Wireless Telegraphy (Mobile Repeater) Regulations 2018. Our proposals included provisions that would increase the permitted antenna gain of devices and allow them to operate in the 2.6 GHz band. These changes permit newer repeaters to be developed as well as existing devices available in other European countries to be used in the UK. We consulted on these proposals and the draft regulations that would implement them.

Our July 2019 consultation was prompted by requests from an equipment supplier of low gain mobile phone repeaters used in the manufacture of European cars. Having undertaken our own technical analysis, Ofcom considered making changes to extend the technical provisions of the current exemption and published the analysis as part of the consultation.

**After considering the responses to the consultation, we have decided to proceed with amending the existing interface requirements for these devices by adding the 2.6 GHz band to the list of exempted frequency bands and increasing the maximum permitted gain limits for all in-vehicle mobile phone repeaters.**

We believe that our decision will further help improve mobile reception, without giving rise to undue interference or other adverse impacts on technical quality of service of mobile operators' networks, other mobile users and other users of the radio spectrum. To implement these changes, we have amended the existing regulations by statutory instrument.

## 2. Introduction

- 2.1 In April 2018 Ofcom made the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2018 (the “**Principal Regulations**”). These exempted the use, amongst other things, of low gain mobile repeaters for in-vehicle use.
- 2.2 A low gain mobile phone repeater for in-vehicle use is a system which amplifies a mobile radio signal in a car. A system would fall within this definition, for instance, if it consisted of the following:
- An external antenna that receives downlink signals from the base station and transmits the repeated uplink signals from the mobile handset;
  - A two-way amplifier which compensates for the signal loss through the system in both the uplink and downlink direction, whilst limiting emissions having a potential negative impact to such a level that harmful interference is avoided (e.g. in adjacent channels); and
  - A near-field coupler, also known as a cradle, that couples with the mobile handset to receive the handset’s uplink signals and transmit the repeated downlink signals from the base station to the handset.

### Ofcom’s consultation on proposed changes to the existing authorisation

- 2.3 In response to a request to consider making changes to the current licence exemption criteria for in-vehicle low gain mobile antennas, on 12 July 2019, we published a consultation document entitled “Notice of proposal to make the Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2019” (the “**Consultation**”).<sup>1</sup> The Consultation set out Ofcom’s proposals to change certain technical parameters which would allow us to include new repeater devices. Some of these devices are already available in other European countries so our proposal would also allow them to be used in the UK.
- 2.4 The Consultation proposed to amend the technical provisions in UK Interface Requirements 2102.2 (“**IR 2102.2**”) and to update the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2018 (the “**Principal Regulations**”). The Principal Regulations currently exempt (amongst other things) in-vehicle mobile phone repeaters from the need for a spectrum licence. The Consultation contained the draft statutory instrument that we proposed to make (the “**Proposed Regulations**”), explained its general effect and invited comments by 5 September 2019.

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<sup>1</sup> See the consultation document - [Notice of proposal to make the Wireless Telegraphy \(Mobile Repeater\) \(Exemption\) \(Amendment\) Regulations 2019](#).

## Ofcom's proposed changes to the technical parameters for low gain in-vehicle repeaters

- 2.5 Ofcom is responsible for authorising use of the radio spectrum. We permit the use of the radio spectrum either by granting wireless telegraphy licences under the Wireless Telegraphy Act 2006 (the “**WT Act**”) or by making regulations exempting the use 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. In Annex A1, we set out in more detail the relevant legal framework, which we have taken into account in making the proposals set out in the Consultation and our final decisions. This annex should be treated as part of this document. Access to reliable mobile services has become essential to how people live and work across the UK. The Regulations enable newer in-vehicle mobile repeater products to operate on a licence-exempt basis in the UK and could assist in improving mobile services/coverage for those consumers who have an in-vehicle mobile repeater deployed in their vehicle.
- 2.6 Initially, changes to the technical parameters allowed for licence exempt in-vehicle low gain mobile phone repeaters were requested by a manufacturer of these repeaters for use in European cars. After receiving this request, we undertook and published our own technical analysis considering:
- whether the changes to the technical conditions could cause undue interference with wireless telegraphy, namely interference with base stations, other phones or radar operating in neighbouring frequency bands; and
  - the specific limits to protect against oscillation and to reduce the adverse effects on the technical quality of service of the mobile operators' networks.<sup>2</sup>
- 2.7 We believe that the changes to the Regulations can be made for a number of reasons, including:
- to support the introduction of innovative radio technologies and applications; and
  - to reflect the evolution of existing technologies.
- 2.8 In summary, in light of our technical analysis, we proposed to update to the interface requirements set out in IR 2102.2 for low gain mobile phone repeaters for in-vehicle use to:
- Increase the maximum permitted gain of low gain mobile phone repeaters for in-vehicle use:
    - i) from 21 dB to 36 dB in relevant frequency bands above 1 GHz, and

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<sup>2</sup> See Annex 3 of the [Notice of proposal to make the Wireless Telegraphy \(Mobile Repeater\) \(Exemption\) \(Amendment\) Regulations 2019](#).

- ii) from 15 dB to 30 dB in relevant frequency bands below 1 GHz; and
  - Include the 2.6 GHz frequency band (being 2500-2570 MHz (Uplink) and 2600-2690 MHz (Downlink) in the list of licence-exempt frequency bands.
- 2.9 We also clarified that the maximum permitted gain would be measured by including the gains of any antennas or near-field couplers that are part of the installation, which was reflected in the changes that we proposed to make to IR 2102.2.
- 2.10 Below, we summarise in more detail our consultation proposals and the reasons for them.

### **Increasing the maximum gain limits**

- 2.11 As set out in the Consultation (paragraphs 3.17-3.19), we considered that, accounting for the new way we proposed to measure the maximum permitted gain, the maximum permitted gain limits would increase and would be included in the updated version of IR 2102.2.
- 2.12 Our technical analysis examined the potential risk of causing undue interference or other adverse impacts on mobile operators' networks, other mobile users or other users of radio spectrum, and set the maximum permitted gain limits accordingly. On the basis of our analysis, we considered that the proposed increases of the maximum permitted gain would be unlikely to cause undue interference or other adverse impacts on mobile networks and users of radio spectrum for the following reasons:
- a) The maximum permitted gain limits are sufficient to overcome the coupling loss of an efficient near-field coupler. The maximum uplink power requirement means the maximum uplink power from a low gain mobile phone repeater for in-vehicle use cannot exceed the maximum uplink power from a mobile phone. Accordingly, the impact of uplink transmissions will not exceed that of a mobile phone, the use of which is already accepted;
  - b) The maximum permitted gain limits ensure that once the repeated downlink signal propagates beyond the vehicle, it will be at a power that is at least 6 dB lower than the downlink signal received directly from the base station at the same location. Accordingly, the repeated signal is unlikely to cause undue interference with the mobile operators' networks, other mobile users or other users of the radio spectrum;
  - c) The maximum permitted gain limits ensure that the loss between the internal transmitter/receiver and the roof-top antenna exceeds the maximum gain. This means that the repeater cannot experience a positive gain loop and therefore is protected against oscillations, thus ensuring that the system is unlikely to cause adverse effects on the technical quality of service of the mobile operators' networks.

## Including the 2.6 GHz band

- 2.13 In the Consultation (paragraphs 3.20-3.22), we also proposed to include the 2.6 GHz band in the updated version of IR 2102.2 so that in-vehicle repeater products incorporating this frequency band could operate legally within the UK on a licence-exempt basis.
- 2.14 Our technical analysis examined the potential risk of undue interference from the in-vehicle use of mobile repeaters to Aeronautical Radar in the adjacent frequency band as well as mobile users and other users of the radio spectrum. On the basis of our analysis, we considered that the inclusion of the 2.6 GHz band would be extremely unlikely to cause undue interference for the following reasons:
- a) An in-vehicle repeater will only transmit in the 2.6 GHz uplink band from locations where it is receiving a downlink signal from a 2.6 GHz base station (coordinated with radar operation above 2.7 GHz) in locations where the 2.6 GHz uplink from mobile phones is already accepted;
  - b) Due to automatic standby requirements, it would be extremely unlikely that an in-vehicle mobile phone repeater system would be activated in the uplink by a 2.7 to 3.1 GHz radar signal's out-of-band power being received at the near-field coupler;
  - c) The essential requirements set out in the Radio Equipment Directive (Directive 2014/53/EU) mean that when the system is activated, it will only amplify signals in:
    - i) the mobile uplink band, whilst avoiding harmful interference to the 2.7-3.1 GHz radar signal from the rooftop antenna; and
    - ii) the mobile downlink band, whilst avoiding harmful interference to the 2.7-3.1 GHz radar signal at the near-field coupler; and
  - d) The addition of the 2.6 GHz band is extremely unlikely to cause undue interference as:
    - i) in the uplink, the in-vehicle repeater transmissions will not exceed those of a mobile phone, which are already accepted in the 2.6 GHz band; and
    - ii) in the downlink, the coordination with 2.6 GHz will be unaffected by the repeated downlink signal from the in-vehicle repeater because the signal level received at any location beyond the vehicle will not increase.

## European notification

- 2.15 On 17 July 2019, we notified our proposed new technical requirements (i.e. the “interface requirements”) to the European Commission<sup>3</sup> in accordance with the Radio Equipment

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<sup>3</sup> The notification is available on the [EU TRIS database](#) with the following notification number: 2019/344/UK (United Kingdom).

Directive and the Technical Standards Directive.<sup>4</sup> The European Commission and other Member States had until 18 October 2019 to provide comments. No comments were received from Member States.

## Document structure

- 2.16 **Section 3** provides details of the three responses to the Consultation, that we received and our assessment of these.
- 2.17 **Section 4** sets out Ofcom’s decision having considered the responses received. We state that we have decided to proceed with our proposals. Therefore, we have adopted the revised interface requirements and made the Proposed Regulations.
- 2.18 **Annex 1** sets out the relevant legal framework.
- 2.19 **Annex 2** contains a copy of the revised interface requirements that were adopted and published on Ofcom’s website on 1 November 2019.<sup>5</sup>
- 2.20 **Annex 3** includes a copy of the Regulatory Impact Assessment that Ofcom carried out to consider the impact that these regulations may have on businesses or the general public
- 2.21 **Annex 4** contains a copy of the Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2019 (the “**Regulations**”) for indicative purposes, in the form submitted for registration and publication after they have been made by Ofcom. [www.legislation.gov.uk](http://www.legislation.gov.uk) is the only authorised source for published statutory instruments. Ofcom made the regulations on 4 November 2019. They will be available on the [www.legislation.gov.uk](http://www.legislation.gov.uk) website thereafter and will come into force on 27 January 2020.

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<sup>4</sup>Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC. See, in particular, Article 8. Directive (EU) 2015/1535 of the European Parliament and of the Council, laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services, 9 September 2015. See in particular, Articles 5 and 6.

<sup>5</sup> See [UK Interface Requirements 2102](#).



## 3. Consultation responses and Ofcom's assessment

- 3.1 This section provides information regarding the responses we received to the Consultation and Ofcom's assessment of them.
- 3.2 Three stakeholders responded to the Consultation: Molex CVS, Mr Christopher Ingram and a confidential respondent. The two non-confidential responses are available on our website.<sup>6</sup>

### Stakeholder comment on the components that form part of the in-vehicle repeater system

- 3.3 Molex CSV, while supporting our consultation proposals, asked for further clarity on the components that form part of the system being measured for the purposes of the maximum gain calculation.
- 3.4 As set out above (paragraph 2.7), Ofcom considers the in-vehicle repeater system to be equipment which amplifies a mobile radio signal and, for instance, consists of the following:
- An external antenna that receives downlink signals from the base station and transmits the repeated uplink signals from the mobile handset;
  - A two-way amplifier which compensates for the signal loss through the system in both the uplink and downlink direction, whilst limiting emissions with a potential negative impact to such a level that harmful interference is avoided (e.g. in adjacent channels); and
  - A near-field coupler, also known as a cradle, that couples with the mobile handset to receive the handset's uplink signals and transmit the repeated downlink signals from the base station to the handset.
- 3.5 The total gain provided by the combination of all components deployed as part of the in-vehicle repeater system is measured for the purposes of the maximum gain calculation. Therefore, this measurement should include the maximum gain of the two-way amplifier and the maximum antenna gain from the antennas at both ends of the system.
- 3.6 For the avoidance of doubt, the footnote to amended IR 2102.2 reads as follows: "This is measured including any antenna gain". This footnote clarifies that the antenna gain at both ends of the system should be included in such a calculation.<sup>7</sup>

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<sup>3</sup> <https://www.ofcom.org.uk/consultations-and-statements/category-1/proposal-wireless-telegraphy-regulations>

<sup>4</sup> See [UK Interface Requirements 2102](#)

- 3.7 In order to be installed or used in the UK, in-vehicle mobile repeater systems must meet the minimum requirements specified in IR 2102.2 for the stated frequency bands. The onus is on the manufacturer and supplier of the in-vehicle repeater system to ensure that their device meets the Interface Requirements and complies with the conditions of the licence exemption.

## **Stakeholder comments on the health impact of the proposed changes and justifying Ofcom's changes**

- 3.8 Mr Christopher Ingram expressed concern for whether any health and safety assessments had been conducted in relation to the proposals including any possible health impact to people in a vehicle with an in-vehicle repeater. He suggested that, because of this, the proposed changes could not be justified.
- 3.9 Public Health England (PHE) is responsible for advising the UK Government on EMF safety limits and central to PHE's advice is that exposure to radio waves should comply with the levels set out in the guidelines laid down by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).
- 3.10 Ofcom regulates the operation of mobile networks in relation to their use of radio frequencies, but we do not make recommendations on human exposure to EMF emissions or SAR limits. That said, when we set out technical specifications, we are mindful that these should not be inconsistent with the ICNIRP guidelines.
- 3.11 The changes to IR 2102.2 that we have decided to make do not impact on the mandatory minimum requirements, which define the maximum transmit power/power density of the system in both the uplink and downlink. This mandatory requirement ensures that the repeater system is designed so that it never operates with a transmit power or power density level that is higher than a mobile phone. As such, we are satisfied that the equipment would be operating within the relevant ICNIRP levels irrespective of the limits proposed.

## **Stakeholder comments on implementation**

- 3.12 We specifically asked stakeholders whether the Proposed Regulations and Proposed IR 2102.2 would correctly implement our policy proposals and received agreement from all respondents on Ofcom's implementation approach.

## 4. Ofcom's decision

- 4.1 Having considered stakeholders' responses, we have decided to proceed with changing the technical parameters allowed for licence exempt in-vehicle low gain mobile phone repeaters and amending the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2018 as proposed in the Consultation.
- 4.2 Our view, which is supported by the technical analysis that we have carried out, is that the updated technical parameters we have set are appropriate for the operation of in-vehicle mobile phone repeaters on a licence exempt basis whilst ensuring that undue interference to, or adverse effects on the technical quality of service of, mobile networks is not likely.
- 4.3 As set out in the Consultation (paragraph 3.24), we consider that the changes that we have decided to make are:
- a) **objectively justified** in that they address the risks of undue interference that might otherwise arise from the use of in-vehicle mobile repeaters;
  - b) **not unduly discriminatory** against particular persons or against a particular description of persons in that they will apply to all users of relevant repeaters (and, indirectly, to all manufacturers and sellers);
  - c) **proportionate** to what they are intended to achieve, in that they are necessary to ensure that use of the relevant in-vehicle repeaters will not be likely to cause undue interference or to have an adverse effect on technical quality of the mobile networks, mobile users or other users of the radio spectrum; and
  - d) **transparent** in relation to what they are intended to achieve, in that they are clear on the face of the revised interface requirements and the amended Principal Regulations, in addition to being described and explained in the Consultation and this statement.
- 4.4 In light of the above, we have decided to make (and have made) the Proposed Regulations. The general effects of these regulations were set out in the Consultation (see paragraphs 4.1-4.7). In summary, Ofcom has changed the interface requirements which are referred to in the Principal Regulations (in the definitions sets out in regulations 2(e) and 2(f)) and published revised interface requirements. The Regulations amend the Principal Regulations to update the reference to the supporting interface requirements. As a result, additional devices will benefit from the exemption from the requirement to be licensed under section 8(1) of the WT Act. Ofcom has also removed the definition of "uplink frequencies" from the Principal Regulations (regulation 2(l)), on the basis that it was redundant.

The overview in this document is a simplified summary only. The decisions we have taken and our reasoning are set out in the full document.

# A1. Legal framework

- A1.1 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 Wireless Telegraphy Act 2006 (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.
- A1.2 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.
- A1.3 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.
- A1.4 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.
- A1.5 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.
- A1.6 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.
- A1.7 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.
- A1.8 Under sections 8(4) and 8(5) of the WT Act, we must make regulations to exempt stations and apparatus from the requirement to be licensed if their establishment, installation or use is not likely to:

- a) involve undue interference with wireless telegraphy;
- b) have an adverse effect on technical quality of service;
- c) lead to inefficient use of the part of the electromagnetic spectrum available for wireless telegraphy;
- d) endanger safety of life;
- e) prejudice the promotion of social, regional or territorial cohesion; or
- f) prejudice the promotion of cultural and linguistic diversity and media pluralism.

A1.9 In accordance with the requirements of section 8(3B) of the WT Act, the terms, provisions and limitations specified in the regulations must be:

- a) objectively justifiable in relation to the wireless telegraphy stations or wireless telegraphy apparatus to which they relate;
- b) not such as to discriminate unduly against particular persons or against a particular description of persons;
- c) proportionate to what they are intended to achieve; and
- d) transparent in relation to what they are intended to achieve.

A1.10 Before making any exemption 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 effect, 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.

## A2. Interface requirements (IR 2102)

The revised [interface requirements \(IR 2102\)](#) are available as a separate document.

## A3. Regulatory impact assessment

Our [regulatory impact assessment](#) is available as a separate document.

# A4. (Unofficial) Copy of The Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2019

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STATUTORY INSTRUMENTS

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2019 No. 1450

## ELECTRONIC COMMUNICATIONS

### The Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2019

*Made* - - - - - *4th November 2019*

*Coming into force* - - - - - *27th January 2020*

The Office of Communications (“OFCOM”) make the following Regulations in exercise of the powers conferred by sections 8(3) and 122(7) of the Wireless Telegraphy Act 2006<sup>(8)</sup> (the “Act”) and in exercise of those sections of the Act<sup>(9)</sup> as extended to the Bailiwick of Guernsey, the Bailiwick of Jersey and the Isle of Man.

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 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 (Mobile Repeater) (Exemption) (Amendment) Regulations 2019 and shall come into force on 27th January 2020.

#### **Amendments of the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2018**

2. The Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2018<sup>(10)</sup> are amended in accordance with regulation 3.

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<sup>(8)</sup> 2006 c. 36.

<sup>(9)</sup> Sections 8(3) and 122(7) of the Act 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).

<sup>(10)</sup> S.I. 2018/399.



3. In regulation 2 (interpretation)—

(a) for paragraph (e), substitute the following paragraph—

“(e) “IR2102.1” means section “IR2102.1: Minimum requirements for the use of: static mobile phone repeaters for indoor use” contained within the document entitled “UK Interface Requirement 2102 – Licence exempt static indoor and low gain mobile phone repeaters” published by OFCOM on 1st November 2019;”;

(b) for paragraph (f), substitute the following paragraph —

“(f) “IR2102.2” means section “IR2102.2: Minimum requirements for the use of: low gain mobile phone repeaters for in-vehicle use” contained within the document entitled “UK Interface Requirement 2102 – Licence exempt static indoor and low gain mobile phone repeaters” published by OFCOM on 1st November 2019;”;

(c) at the end of paragraph (k), insert “and”; and

(d) omit paragraph (l).

4th November 2019

*Philip Marnick*  
Group Director of Spectrum Group  
For and by the authority of the Office of Communications

#### EXPLANATORY NOTE

*(This note is not part of the Regulations)*

These Regulations amend regulation 2 of the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2018 (S.I. 2018/399) (the “principal Regulations”).

Regulations 3 and 4 of the principal Regulations exempt from the requirement to be licensed under section 8(1) of the Wireless Telegraphy Act 2006 (c. 36) (the “Act”) the establishment, installation and use of a wireless telegraphy station or apparatus known as a “mobile repeater device” which complies with certain technical specifications and conditions set out in interface requirements published by the Office of Communications (“OFCOM”).

The interface requirements which are referred to in the principal Regulations have been changed and new documents have been published by OFCOM. These Regulations amend the principal Regulations to refer to the interface requirements published by OFCOM on 1st November 2019. As a result, additional devices now benefit from the exemption from the requirement to be licensed under section 8(1) of the Act.

Copies of the interface requirements documents referred to in these Regulations are available to the public from OFCOM’s library at Riverside House, 2a Southwark Bridge Road, London SE1 9HA (Tel. 020 7981 3000) and on OFCOM’s website at <http://www.ofcom.org.uk>.

A full regulatory impact assessment of the effect that these Regulations will have on the costs to business is available to the public from OFCOM’s library at Riverside House, 2a Southwark Bridge Road, London SE1 9HA (Tel. 020 7981 3000) and on OFCOM’s website at <http://www.ofcom.org.uk>. Copies of this assessment have also been placed in the libraries of both Houses of Parliament.