



Decision to make the Wireless  
Telegraphy (Mobile Communications  
Services on Aircraft) (Exemption)  
Regulations 2014

Statement

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## Section 1

# Executive Summary

- 1.1 This statement presents our decision to make the Wireless Telegraphy (Mobile Communication Services on Aircraft) (Exemption) Regulations 2014 (the “Regulations”). This decision follows our recent Statutory Notice entitled “Notice of proposals to make Wireless Telegraphy (Mobile Communication Services on Aircraft) (Exemption) Regulations 2014<sup>1</sup> (the “Notice”) which we published on 11 February 2014.
- 1.2 The Notice detailed our intention to revoke and replace the Wireless Telegraphy (Mobile Communication Services on Aircraft) (Exemption) Regulations 2008<sup>2</sup> (the “MCA Exemption Regulations”). The MCA Exemption Regulations set out the current licence exemption arrangements for the use of mobile terminals when connecting to mobile communication services on aircraft (MCA) via GSM (2G) technology in 1710 to 1785 MHz and 1805 to 1880 MHz (the “1800 MHz” frequency band).
- 1.3 We are required to implement the Commission Implementing Decision (2013/654/EU)<sup>3</sup> (the “Amending Decision”) which sets out the technical and operational conditions<sup>4</sup> necessary to allow and extend access of MCA services to UMTS (3G) and LTE (4G) technologies in 1920 to 1980 MHz and 2110 to 2170 MHz (the “2100 MHz” frequency band); and in 1710 to 1785 MHz and 1805 to 1880 MHz (the “1800 MHz” frequency band), respectively.
- 1.4 Through the Regulations we have implemented the Amending Decision. The Regulations made the following changes:
- revoked and replaced the existing MCA Exemption Regulations;
  - continued to permit, on a licence exempt basis, the use of 2G GSM technologies connecting to MCA services in the 1710 to 1785 MHz and 1805 to 1880 MHz (the “1800 MHz band”) (subject to complying with various terms, provisions and limitations);
  - extended the licence exemption regime to cover the use of 3G and 4G technologies (in the 2100 MHz and 1800 MHz bands respectively) to connect to MCA services (subject to complying with various terms, provisions and limitations); and
  - described the technical parameters that the MCA systems in the 1800 MHz and 2100 MHz bands must meet in order to be exempt from the need to hold a wireless telegraphy licence.

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<sup>1</sup> [http://stakeholders.ofcom.org.uk/binaries/consultations/mca-exemption/summary/FINAL\\_MCA\\_Notice.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/mca-exemption/summary/FINAL_MCA_Notice.pdf)

<sup>2</sup> <http://www.legislation.gov.uk/uksi/2008/2427/made/data.pdf>

<sup>3</sup> “Commission Implementing Decision of 12 November 2013 amending Commission Decision of 2008/294/EC to include additional access technologies and frequency bands for mobile communications services on aircraft (MCA services)”; <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:303:0048:0051:EN:PDF>

<sup>4</sup> subject to harmonised European Telecommunications Standards Institute (ETSI) standards or equivalent specifications

- 1.5 We have amended the Notice of Variation (NoV) to the aircraft licence as well as the Interface Requirement (IR) 2070 (containing the necessary technical parameters that equipment must meet) as proposed in the Notice by incorporating the changes set out in the Amending Decision. The aircraft licensee remains responsible for the installation and operation of the onboard MCA radio equipment and the avoidance of interference to terrestrial systems.
- 1.6 Ofcom has an obligation to transpose European Union (EU) decisions into United Kingdom (UK) law. The UK is required to comply with the Amending Decision, the implementation of which is mandatory on all EU Member States.
- 1.7 Before deciding to make the Regulations, we published the Notice on 11 February 2014 in accordance with the requirements of section 122(4) of the WT act, setting out our proposals to make the Regulations. The Notice also contained a draft of the Regulations. We invited comments from stakeholders on whether the Regulations properly give effect to the Amending Decision.
- 1.8 We received one non-confidential response to the Notice from Hutchison 3G UK Ltd (Three). They agreed with our proposals but did raise an additional comment regarding remedial actions in the unlikely event of interference. 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 (as proposed, 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 April 2014.

## Section 2

# Background

## Introduction

- 2.1 Mobile communication services on aircraft (MCA) refers to the provision of electronic communication services<sup>5</sup> which enables airline passengers to use public communication networks (e.g. mobile handsets) during their flight without connecting directly with terrestrial mobile networks. The MCA system effectively replicates on an aircraft, the operation of a terrestrial base station. It should be noted that there is no mandatory requirement on airlines to install MCA systems. Aircraft owners or operators decide what services they wish to offer their passengers.
- 2.2 On 7 April 2008, the European Commission (EC) published a Decision (2008/294/EC)<sup>6</sup> (the “2008 MCA Decision”) which required Member States to make the GSM (2G) technology in the 1710 to 1785 MHz and 1805 to 1880 MHz (the “1800 MHz band”) available for MCA systems on a non-protected, non-interference basis according to specified technical conditions and the harmonised European Telecommunications Standards Institute (ETSI) standard or equivalent specifications.
- 2.3 We implemented the 2008 MCA Decision by making the Wireless Telegraphy (Mobile Communication Services) on Aircraft) (Exemption) Regulations 2008 (the “MCA Exemption Regulations”) <sup>7</sup>. The MCA Exemption Regulations permitted air passengers using MCA systems on 2G mobile devices in 1800 MHz band to be exempt from the requirement to be licensed in accordance with section 8 of the Wireless Telegraphy Act 2006 (the “WT Act”).
- 2.4 In light of advancements in technology and increasing consumer demand for mobile data services, the European Union (EU) amended its 2008 MCA Decision by making the “Commission Implementing Decision of 12 November 2013 amending Decision 2008/294/EC to include additional access technologies and frequency bands for mobile communications services on aircraft (MCA services)” (2013/654/EU)<sup>8</sup> (the “Amending Decision”). The Amending Decision permits the use of UMTS (3G) and LTE (4G) technologies (in the 2100 MHz<sup>9</sup> and 1800 MHz<sup>10</sup> bands respectively) to be used by passengers on board MCA equipped aircraft flying over the EU. Member States have until 12 May 2014 to implement the Amending Decision.
- 2.5 The Amending Decision postponed the use of 4G technology in the 2.6 GHz (2570 to 2 690 MHz) band for MCA systems until 1 January 2017, pending agreement of the technical parameters for Network Control Unit (NCU), by competent aeronautical

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<sup>5</sup> For definition of “electronic communications service” see Article 2(c) of, “Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services” (Framework Directive): <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:108:0033:0033:EN:PDF>

<sup>6</sup> “Commission Decision 2008/294/EC of 7 April 2008 on harmonised conditions of spectrum use for the operation of mobile communication services on aircraft (MCA services) in the Community” <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:098:0019:0023:EN:PDF>

<sup>7</sup> [www.legislation.gov.uk/ukxi/2008/2427/pdfs/ukxi\\_20082427\\_en.pdf](http://www.legislation.gov.uk/ukxi/2008/2427/pdfs/ukxi_20082427_en.pdf)

<sup>8</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:303:0048:0051:EN:PDF>

<sup>9</sup> 2100 MHz frequency band is between 1920 to 1980 MHz and 2110 to 2170 MHz

<sup>10</sup> 1800 MHz frequency band is between 1710 to 1785 MHz and 1805 to 1880 MHz

certification authorities<sup>11</sup>. The NCU is used to prevent the mobile terminals within the cabin from connecting to, or interfering with terrestrial base stations and ensure they connect only to an aircraft base station.

- 2.6 From a spectrum management perspective the key objective is that MCA systems should not generate any harmful interference to terrestrial networks. To ensure minimal risk to terrestrial networks, the use of MCA services is restricted to aircraft at an altitude of 3000 metres or above.
- 2.7 As terrestrial use of mobile terminals is licence exempt; it would be disproportionate to require a licence when using the same equipment onboard an aircraft. However, both the aircraft base station and onboard NCU are subject to the licensing requirement of section 8(1) of the WT Act. Authorisation of the base station and NCU on an aircraft is covered by a Notice of Variation (NoV) to the existing aircraft WT Act licence.
- 2.8 We have implemented the Amending Decision by making the Wireless Telegraphy (Mobile Communication Services on Aircraft) (Exemption) Regulations 2014 (the "Regulations") in accordance with section 8 of the WT Act.

## Statutory Notice

- 2.9 Under S 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.
- 2.10 We published the "Notice of proposals to make the Wireless Telegraphy (Mobile Communication Services on Aircraft) (Exemption) Regulations 2014 (the "Notice")<sup>12</sup>, meeting the statutory requirements, on 11 February 2014. The Notice included a copy of the draft regulations. The Notice gave any person or party who wished to do so until 12 March 2014 to make representations.
- 2.11 The Notice proposed to:
- revoke and replace the existing MCA Exemption Regulations;
  - continue to permit, on a licence exempt basis, the use of 2G GSM technologies connecting to MCA services in the 1710 to 1785 MHz and 1805 to 1880 MHz (the "1800 MHz band") (subject to complying with various terms, provisions and limitations);
  - extend the licence exemption regime to cover the use of 3G and 4G technologies (in the 2100 MHz and 1800 MHz bands respectively) to connect to MCA services (subject to complying with various terms, provisions and limitations); and

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<sup>11</sup> In line with Article 2 of the Amending Decision, we intend to implement the requirements in relation to the NCU parameters for the 2.6 GHz band from 1 January 2017, by giving notice of our intention to do so, nearer the implementation date

<sup>12</sup> [http://stakeholders.ofcom.org.uk/binaries/consultations/mca-exemption/summary/FINAL\\_MCA\\_Notice.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/mca-exemption/summary/FINAL_MCA_Notice.pdf)

- outline the technical parameters that the MCA systems in the 1800 MHz and 2100 MHz bands must meet in order to be exempt from the need to hold a wireless telegraphy licence.
- 2.12 We received one non-confidential response to the Notice which agreed with our proposals but did raise additional comments. These are addressed in the next section of this document.

## Section 3

# Responses to the Notice

## Introduction

- 3.1 We received one non-confidential response which is published in full on our website<sup>13</sup>. This section outlines the comment that we received and our reply. Having considered the response as outlined below, we decided to proceed with our proposal to make the Regulations.

## Stakeholders' responses to the Notice

- 3.2 Hutchison 3G UK Ltd (Three) responded to the Notice and agreed that our proposals correctly give effect to the Amending Decision, given that they largely mirror the technical parameters and standards it contains.
- 3.3 Three's main comment was in relation our proposal to exempt use of UMTS 2100 and LTE 1800 on board aircraft in accordance with section 8(1) and (3) of the WT Act<sup>14</sup>. Three notes that Ofcom has taken the view that such uses are not likely to involve undue interference with terrestrial networks. Three commented that in the unlikely event that they experience undue interference from an aircraft (for example, if an airline installs faulty equipment), they would expect Ofcom to take immediate remedial action.

## Ofcom's response

- 3.4 In response to Three, we can confirm that where there is a complaint of interference resulting from the use of licence exempt apparatus, Ofcom will investigate any such complaints and may carry out enforcement action in accordance with section 39 of the WT Act.

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<sup>13</sup> <http://stakeholders.ofcom.org.uk/consultations/mca-exemption/?showResponses=true>

<sup>14</sup> Section 8(1) of the WT Act it is an offence to install or use equipment to transmit without a licence, unless Ofcom has exempted installation or use under section 8(3).

## Section 4

# Scope of the Regulations

4.1 This section confirms the extent of the Regulations and outlines some further minor amendments that have been made.

## The Legislative Framework

4.2 We are responsible for authorising civil use of the radio spectrum and achieve this by granting wireless telegraphy licences under the WT Act and by making regulations exempting users of particular equipment from the requirement to hold such a licence.

4.3 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.

4.4 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.

4.5 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

4.6 On 09 April 2014 Ofcom made the Regulations as proposed (subject to changes described in paragraph 4.14 below). The Regulations come into force on 30 April 2014. They are summarised below.

## Extent of application

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

## The Regulations

- 4.8 The Regulations will implement the Amending Decision as closely as possible.
- 4.9 Regulation 1 sets the date when the Regulations would come into force;
- 4.10 Regulation 2 revokes the 2008 MCA Exemption Regulations.
- 4.11 Regulation 3 provides interpretation of the terms used in the Regulations.
- 4.12 Regulation 4 sets the permission to use any apparatus on board an aircraft without the need to hold a licence subject to the terms, provisions and limitations set out in Regulations 5.
- 4.13 Regulation 5 mirrors the technical parameters and standards set in the Amending Decision. It sets the terms, provisions and limitations to be complied with for the on-board MCA system.
- 4.13.1 Regulation 5(1) provides that the exemption shall apply if the apparatus comply with the ETSI standards listed therein or equivalent specification.
- 4.13.2 Regulation 5(2) sets out the frequency bands the apparatus must operate in.
- 4.13.3 Regulation 5(3) outlines what the apparatus must be used for, when it can be used, and the applicable operational and technical requirements (as set out in the Schedule of the Regulations).
- 4.13.4 Regulation 5(4) provides that the apparatus must not cause or contribute to undue interference to other wireless telegraphy.
- 4.13.5 Regulation 5(5) sets out the requirements in relation to the network that the apparatus must connect directly to (as set out in the Schedule of the Regulations).

## Amendments to the regulations

- 4.14 In addition to the above, we removed unnecessary reference to regulations 1(2) of the draft regulations which set out that the regulations will apply to the Isle of Man and Channel Islands; instead we have inserted footnote (a) in the regulations, setting out that section 8(3) has been extended to them.<sup>15</sup>
- 4.15 We have also clarified references to the relevant ETSI standards in regulations 5(1) and (5)(c).

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<sup>15</sup> See article 2 of the Wireless Telegraphy (Guernsey) Order 2006 (S.I. 2006/3325); article 2 of the Wireless Telegraphy (Jersey) Order 2006 (S.I. 2006/3324); and article 2 of the Wireless Telegraphy (Isle of Man) Order 2007 (S.I. 2007/278).

**Annex 1**

# List of respondents

**Hutchison 3G UK Ltd (Three)**