STATUTORY INSTRUMENTS

2014 No. 953

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Mobile Communication Services on Aircraft) (Exemption) Regulations 2014

Made - - - -	*9th April 2014*
Coming into force - -	*30th April 2014*

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

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 that 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 Communication Services on Aircraft) (Exemption) Regulations 2014 and shall come into force on 30th April 2014.

Revocation

2. The Wireless Telegraphy (Mobile Communications Services on Aircraft) (Exemption) Regulations 2008(**b**) are hereby revoked.

Interpretation

3. In these Regulations—

"aircraft BTS" means a base transceiver station located in an aircraft;

"apparatus" means wireless telegraphy apparatus;

"dBm" means decibels of power referenced to one milliWatt;

"e.i.r.p" means equivalent isotropic radiated power;

"electronic communications network" and "electronic communications service" have the meaning given to them by section 32 of the Communications Act 2003(**c**);

"ETSI" means the European Telecommunications Standards Institute;

"kHz" means kilohertz;

(**a**) 2006 c.36. Section 8(3) was 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).
(**b**) S.I. 2008/2427.
(**c**) 2003 c.21.

"MHz" means megahertz;

"mobile communication services on aircraft" means electronic communications services provided by an undertaking to enable airline passengers to use public communications networks during flight without establishing direct connections with terrestrial mobile networks;

"network control unit" means equipment located in an aircraft that ensures that signals transmitted by ground based mobile electronic communication systems are not detectable within the cabin by raising the noise floor inside the cabin in mobile communication receive bands;

"relevant network" means an electronic communications network that includes an aircraft BTS and a network control unit;

"the 1800 MHz band" refers to frequency bands 1710-1785 MHz (uplink) and 1805-1880 MHz (downlink); and

"the 2100 MHz band" refers to the frequency bands 1920-1980 MHz (uplink) and 2110-2170 MHz (downlink).

Exemption

4. The use of any apparatus on board an aircraft which is—

(a) an aircraft registered in the British Islands; and

(b) flying over the British Islands and the territorial waters adjacent thereto, or, for the time being beyond the British Islands and the territorial waters adjacent thereto;

is hereby exempt from the provisions of section 8(1) of the Wireless Telegraphy Act 2006 where the terms, provisions and limitations in regulation 5 are met.

Terms, provisions and limitations

5.—(1) The apparatus must comply with the standards in paragraph 2(a), (b) or (c) published by ETSI (or equivalent specifications).

(2) The standards referred to in paragraph (1) are—

(a) for GSM apparatus, the GSM standard EN 301 511(**a**);

(b) for UMTS apparatus, the UMTS standards—

(aa) EN 301 908-1(**b**); and

(bb) EN 301 908-2(**c**);

(c) for LTE apparatus, the LTE standards—

(aa) EN 301 908-1; and

(bb) EN 301 908-13(**d**).

(3) The apparatus must only operate in the 1800 MHz band or the 2100 MHz band.

(4) The apparatus must only be used—

(a) for mobile communication services on aircraft;

(b) when the aircraft is three thousand meters or more above the ground;

(c) where the following operational requirements are met—

(**a**) EN 301 511 (version 9.0.2) published on 20 March 2003.
(**b**) EN 301 908-1 (version 6.2.1) published on 15 April 2013.
(**c**) EN 301 908-2 (version 6.2.1) published on 15 October 2013.
(**d**) EN 301 908-13 (version 6.2.1) published on 15 October 2013.

(i) the aircraft BTS, while in operation, limits the transmission power of all GSM apparatus to a nominal value of 0 dBm/200 kHz at all stages of communication, including initial access;

(ii) the aircraft BTS, while in operation, limits the transmission power of all LTE apparatus in the 1800 MHz band to a nominal value of 5 dBm/5MHz at all stages of communication; or

(iii) the aircraft BTS, while in operation, limits the transmission power of all UMTS apparatus in the 2100 MHz band to a nominal value of -6 dBm/3.84 MHz at all stages of communication and the maximum number of users does not exceed 20;

(d) where the e.i.r.p. outside the aircraft emanating from the apparatus transmitting in the frequency bands specified in the headings of Columns 2 to 4 of Table 1 of the Schedule, does not, at each of the heights above ground specified in Column 1 of that table, exceed the value specified in each of Columns 2, 3 or 4 of that Table.

(5) The apparatus must not cause or contribute to any undue interference to any wireless telegraphy.

(6) The apparatus must connect directly to a relevant network in which—

(a) the network control unit prevents the apparatus, when operating on one of the frequency bands listed in Column 1 of Table 2 of the Schedule, from registering on that band with the types of system on the ground which are listed adjacent to that band in Column 2 of that Table;

(b) the network control unit and the aircraft BTS operate such that their total e.i.r.p. outside the aircraft does not, at each height above ground specified in Column 1 of Table 3 of the Schedule, and at each of the frequency bands specified in the heading of Columns 2 to 6 of that table, exceed the value specified in Columns 2 to 6 of that table;

(c) the aircraft BTS complies with the following standards published by ETSI (or equivalent specifications)—

(i) the GSM standards—

(aa) EN 301 502(**a**); and

(bb) EN 302 480(**b**);

(ii) the UMTS standards—

(aa) EN 301 908-1; and

(bb) EN 301 908-3(**c**) or EN 301 908-11(**d**); or

(iii) the LTE standards—

(aa) EN 301 908-1; and

(bb) EN 301 908-14(**e**) or EN 301 908-15(**f**); and

(d) the network control unit complies with the standard EN 302 480 published by ETSI (or equivalent specification).

Philip Marnick
Group Director, Spectrum Policy Group
9th April 2014 For and by the authority of the Office of Communications

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(**a**) EN 3001 502 (version 11.0.1) published on 15 November 2013.
(**b**) EN 302 480 (version 1.1.2) published on 24 April 2008.
(**c**) EN 301 908-3 (version 6.2.1) published on 15 October 2013.
(**d**) EN 301 908-11 (version 5.2.1) published on 19 July 2011.
(**e**) EN 301 908-14 (version 6.2.1) published on 15 October 2013.
(**f**) EN 301 908-15 (version 5.2.1) published on 19 July 2011.

SCHEDULE

Regulation 5

Table 1

Column 1 *Height above ground in meters*	*Column 2* *Maximum e.i.r.p, from the GSM mobile terminal, for the 1800 MHz band in dBm/200 kHz*	*Column 3* *Maximum e.i.r.p. for the LTE mobile terminal, for the 1800 MHz band in dBm/5 MHz*	*Column 4* *Maximum e.i.r.p, from the UMTS mobile terminal, for the 2100 MHz band in dBm/3, 84 MHz*
3000	-3.3	1.7	3.1
4000	-1.1	3.9	5.6
5000	0.5	5	7
6000	0.8	5	7
7000	2.9	5	7
8000	3.8	5	7

Table 2

Column 1 *Frequency band*	*Column 2* *Systems on the ground*
460-470 MHz	Code Division Multiple Access 2000 (also known as CDMA 2000) Fast Low-latency Access with Seamless Handoff Orthogonal Frequency Division Multiplexing (also known as FLASH OFDM)
791-821 MHz	LTE
921-960 MHz	GSM UMTS LTE Worldwide Interoperability for Microwave Access (also known as WiMAX)
1805-1880 MHz	GSM UMTS LTE Worldwide Interoperability for Microwave Access (also known as WiMAX)
2110-2170 MHz	UMTS LTE
2570-2620 MHz	UMTS LTE Worldwide Interoperability for Microwave Access (also known as WiMAX)
2620-2690 MHz	UMTS LTE

Table 3

Column 1 *Height above ground in meters*	*Column 2* *Maximum e.i.r.p. for the frequency band 460-470 MHz in*	*Column 3* *Maximum e.i.r.p. for the frequency band 791-821 MHz in*	*Column 4* *Maximum e.i.r.p. for the frequency band 921-960 MHz in*	*Column 5* *Maximum e.i.r.p. for the frequency band 1805-1880 MHz in*	*Column 6* *Maximum e.i.r.p for the frequency band 2110-2170 MHz in*

	dBm/1.25 MHz	*dBM/10 MHz*	*dBm/200 kHz*	*dBm/200 kHz*	*dBm/3.84 MHz*
3000	-17.0	-0.87	-19.0	-13.0	1.0
4000	-14.5	1.63	-16.5	-10.5	3.5
5000	-12.6	3.57	-14.5	-8.5	5.4
6000	-11.0	5.15	-12.9	-6.9	7.0
7000	-9.6	6.49	-11.6	-5.6	8.3
8000	-8.5	7.65	-10.5	-4.4	9.5

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations give effect to EU obligations of the United Kingdom contained in the Commission Decision 2013/654/EU of 12th November 2013 amending Decision 2008/294EC to include additional access technologies and frequency bands for mobile communications services on aircraft (MCA services) (OJ No L 303 14.11.2013, p. 48).

These Regulations exempt the use of any wireless telegraphy apparatus which complies with certain terms, provisions and limitations, from the requirement to be licensed under section 8(1) of the Wireless Telegraphy Act 2006 (c.36). The apparatus must be on board an aircraft which is registered in the British Islands or the Isle of Man and the exemption applies when the aircraft is flying over the British Islands and the territorial waters adjacent thereto, or, for the time being, beyond the British Islands and the territorial waters adjacent thereto (Regulation 4).

The terms, provisions and limitations for the exemption to apply are set out in regulation 5. These include the requirement that apparatus complies with specified standards published by the European Telecommunications Standards Institute ("ETSI") (regulation 5(1)). The apparatus must only be used when the aircraft is three thousands metres or more above the ground (Regulation 5(4)(b)). Further technical requirements are also specified in regulation 5. Some of these requirements relate to the base transceiver station to which the apparatus is connected (in the case of UMTS and LTE systems, the base transceiver station is commonly known as "Node B").

The ETSI standards referred to in the Regulations are available to the public from ETSI on their website at http://www.etsi.org or from the ETSI Secretariat at 650 Route des Lucioles, 06921 Sophia-Antipolis Cedex, France (Tel: +33 4 92 94 42 00).

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 website at http://www.ofcom.org.uk or from the OFCOM library at Riverside House, 2A Southwark Bridge Road, London SE1 9HA. Copies of this assessment have also been placed in the library of the Houses of Commons.

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