Changes to legislation: *There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Wireless Telegraphy (Ultra-Wideband Equipment) (Exemption) Regulations 2015. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes*

STATUTORY INSTRUMENTS

2015 No. 591

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Ultra-Wideband Equipment) (Exemption) Regulations 2015

Made - - - -	*9th March 2015*
Coming into force - -	*25th March 2015*

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 [F1] (the "Act").

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.

F1 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); and 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).

PART 1

INTRODUCTORY

Citation and commencement

1. These Regulations may be cited as the Wireless Telegraphy (Ultra-Wideband Equipment) (Exemption) Regulations 2015 and shall come into force on 25th March 2015.

Revocation

2. The Wireless Telegraphy (Ultra-Wideband Equipment) (Exemption) Regulations 2009 [F2] and The Wireless Telegraphy (Ultra-Wideband Equipment) (Exemption) (Amendment) Regulations 2010 [F3] are hereby revoked.

F2 S.I. 2009/2517

F3 S.I. 2010/2761

Interpretation

3. In these regulations—

"automotive vehicle" has the meaning given for "vehicle" by Article 3 of Council Directive 2007/46/EC of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units for such vehicles [F4];

"building material analysis device" means a type of material sensing device that is designed to detect the location of objects within a building structure or to determine the physical properties of building material;

"dB" means decibel;

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

"dBm/MHz" means decibels of power referenced to one milliWatt per megahertz;

"detect and avoid mitigation technique" means a technique which is used to detect other transmissions and avoid interference with those transmissions;

"e.i.r.p." means equivalent isotropic radiated power, which is the product of the power supplied to an antenna and the absolute or isotropic antenna gain in a given direction relative to an isotropic antenna;

"equivalent transmission level" means the peak level of transmission contained within a bandwidth which is other than 50 MHz, centred on the frequency at which the highest mean radiated power occurs, and which is the relevant maximum peak e.i.r.p. scaled down by a factor of 20log(50/x)dB, where "x" is the bandwidth expressed in MHz;

"ETSI" means European Telecommunications Standards Institute;

"exterior limit" is the maximum mean power spectral density for emissions measured outside a vehicle at elevation angles higher than 0 degrees as described in harmonised standard EN302 065-3 [F5];

"GHz" means gigahertz;

"harmonised standard" means an ETSI standard for ultra-wideband equipment whose reference numbers have been published in the Official Journal of the European Union under Article 5 of Council Directive 1999/5/EC on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity [F6];

"horizontal plane" means a horizontal plane with a tolerance of -20 degrees to 30 degrees elevation;

"indoors" means inside buildings or places in which the shielding will typically provide the necessary attenuation to protect wireless telegraphy against undue interference;

"listen before talk" is a mechanism that detects whether other operating system are transmitting prior to transmission in order to reduce the likelihood of interference between operating systems;

"location tracking system" means a system intended for location tracking of people and objects;

"low duty cycle mitigation technique" means a technique which is used to limit the length of time of transmissions made from ultra-wideband equipment;

"material sensing device" means a radiodetermination device designed to detect the location of objects within a structure or to determine the physical properties of a material;

"maximum mean power spectral density" means the maximum mean e.i.r.p. of a radio device under test at a particular frequency with the average power per unit bandwidth centred on that frequency, radiated in the direction of the maximum level;

"MHz" means megahertz;

"peak power" means the peak e.i.r.p. contained within a 50 MHz bandwidth at the frequency at which the highest mean radiated power occurs, radiated in the direction of the maximum level;

"railway vehicle" has the meaning given by Article 3 of Regulation (EC) No 91/2003 of the European Parliament and of the Council of 16 December 2002 on rail transport statistics [F7];

"the Act" means the Wireless Telegraphy Act 2006;

"total power control" means a mechanism to reduce the amount of power to that necessary for successful communication;

"total radiated power spectral density" means the average of the mean power spectral density values measured over a sphere around the measurement scenario contained within harmonised standard EN302 435-1 [F8] with a resolution of at least 15 degrees between each measurement point;

"transmit power control mitigation technique" means a technique that mitigates interference arising from the aggregate power from a number of items of ultra-wideband equipment by reducing the amount of power necessary for those apparatus to operate; and

"ultra-wideband equipment" means a wireless telegraphy station or wireless telegraphy apparatus incorporating, as an integral part or as an accessory, technology for short-range radiocommunication involving the intentional generation and transmission of radio-frequency energy that spreads over a frequency range wider than 50 MHz, which may overlap several frequency bands allocated to wireless telegraphy.

F4 OJ No L 263, 9.10.2007, p 5. There are amendments to Council Directive 2007/46/EC not relevant to these regulations.

F5 EN 302 065-3 (Version 1.1.1) published in April 2014.

F6 OJ No L 911, 7.4.1999, p10. Article 5 was amended by Regulation (EC) No 596/2009 of the European Parliament and of the Council, OJ L 188, 18.07.2009, p10. There are other amendments to Council Directive 1999/5/EC not relevant to these regulations.

F7 OJ No L 14, 21.1.03, p1. Article 3 was amended by Commission Regulation (EC) No 1192/2003 amending Regulation (EC) No 91/2003 of the European Parliament and of the Council on rail transport statistics, OJ No L 167, 4.7.2003, p13. Regulation (EC) No 91/2003 has also been amended by Commission Regulation (EC) No 1304/2007, OJ No L 290, 8.11.07, p14 and by Regulation (EC) No 219/2009 of the European Parliament and of the Council, OJ L 87, 31.3.09, p109.

F8 EN 302 435-1 (Version 1.3.1) published in December 2009.

PART 2

GENERAL USE OF ULTRA-WIDEBAND EQUIPMENT

Exemption

4. The establishment, installation or use of ultra-wideband equipment complying with the terms, provisions and limitations in regulation 5 is hereby exempt from the provisions of section 8(1) of the Act.

Terms, provisions and limitations

5.—(1) The exemption provided for in regulation 4 shall apply to ultra-wideband equipment which complies with the requirements of paragraphs (2) to (4) of this regulation.

(2) The ultra-wideband equipment must be used—

(a) indoors; or

(b) other than indoors provided it is not attached to—

(i) a fixed installation;

(ii) fixed infrastructure; or

(iii) a fixed outdoor antenna.

(3) The ultra-wideband equipment must not cause or contribute to undue interference to other users of the electromagnetic spectrum.

(4) The ultra-wideband equipment must emit transmissions which are in accordance with the condition in regulation 6.

Transmission limits

6. The condition referred to in regulation 5(4) is that the ultra-wideband equipment only emits transmissions which—

(a) in frequencies up to 1.6 GHz when measured in any direction have—

(i) a maximum mean power spectral density no greater than -90.0 dBm/MHz; and

(ii) a maximum peak power no greater than -50.0 dBm or the equivalent transmission level;

(b) in the frequency band 1.6 GHz to 2.7 GHz when measured in any direction have—

(i) a maximum mean power spectral density no greater than -85.0 dBm/MHz; and

(ii) a maximum peak power no greater than -45.0 dBm or the equivalent transmission level;

(c) in the frequency band 2.7 GHz to 3.1 GHz when measured in any direction have—

(i) a maximum mean power spectral density no greater than -70.0 dBm/MHz; and

(ii) a maximum peak power no greater than -36.0 dBm or the equivalent transmission level;

(d) in the frequency band 3.1 GHz to 3.4 GHz when measured in any direction—

(i) have a maximum mean power spectral density—

(aa) no greater than -70.0 dBm/MHz; or

(bb) no greater than -41.3 dBm/MHz provided that one of the two techniques referred to in regulation 7 is used to mitigate interference to other users of the electromagnetic spectrum; and

(ii) have a maximum peak power—

(aa) no greater than -36.0 dBm or the equivalent transmission level; or

(bb) no greater than 0 dBm or the equivalent transmission level provided that one of the two techniques referred to in regulation 7 is used to mitigate interference to other users of the electromagnetic spectrum;

(e) in the frequency band 3.4 GHz to 3.8 GHz when measured in any direction—

(i) have a maximum mean power spectral density—

(aa) no greater than -80.0 dBm/MHz; or

(bb) no greater than -41.3 dBm/MHz provided that one of the two techniques referred to in regulation 7 is used to mitigate interference to other users of the electromagnetic spectrum; and

(ii) have a maximum peak power—

(aa) no greater than -40.0 dBm or the equivalent transmission level; or

(bb) no greater than 0.0 dBm or the equivalent transmission level provided that one of the two techniques referred to in regulation 7 is used to mitigate interference to other users of the electromagnetic spectrum;

(f) in the frequency band 3.8 GHz to 4.8 GHz when measured in any direction—

(i) have a maximum mean power spectral density—

(aa) no greater than -70.0 dBm/MHz; or

(bb) no greater than -41.3 dBm/MHz provided that one of the two techniques referred to in regulation 7 is used to mitigate interference to other users of the electromagnetic spectrum; and

(ii) have a maximum peak power—

(aa) no greater than -30.0 dBm or the equivalent transmission level; or

(bb) no greater than 0.0 dBm or the equivalent transmission level provided that one of the two techniques set out in regulation 7 is used to mitigate interference to other users of the electromagnetic spectrum;

(g) in the frequency band 4.8 GHz to 6.0 GHz when measured in any direction have—

(i) a maximum mean power spectral density no greater than -70.0 dBm/MHz; and

(ii) a maximum peak power no greater than -30.0 dBm or the equivalent transmission level;

(h) in the frequency band 6.0 GHz to 8.5 GHz when measured in any direction have—

(i) a maximum mean power spectral density no greater than -41.3 dBm/MHz; and

(ii) a maximum peak power no greater than 0.0 dBm or the equivalent transmission level;

(i) in the frequency band 8.5 GHz to 9 GHz when measured in any direction have—

(i) a maximum mean power spectral density—

(aa) no greater than -65.0 dBm/MHz; or

(bb) no greater than -41.3 dBm/MHz provided that the technique referred to in regulation 7(b) is used to mitigate interference to other users of the electromagnetic spectrum; and

(ii) have a maximum peak power—

(aa) no greater than -25.0 dBm or the equivalent transmission level; or

(bb) no greater than 0.0 dBm or the equivalent transmission level provided that the technique referred to in regulation 7(b) is used to mitigate interference to other users of the electromagnetic spectrum;

(j) in the frequency band 9 GHz to 10.6 GHz when measured in any direction have—

(i) a maximum mean power spectral density no greater than -65.0 dBm/MHz; and

(ii) a maximum peak power no greater than -25.0 dBm or the equivalent transmission level; and

(k) in frequency bands above 10.6 GHz when measured in any direction have—