UK Interface Requirement 2016

Land mobile satellite systems

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Section 1

References

1.1 EN 301 426 – Satellite Earth Stations and Systems (SES); Low data rate Land Mobile satellite Earth Stations (LMES) operating in the 1.5/1.6 GHz frequency bands.

1.2 EN 301 427 – Satellite Earth Stations and Systems (SES); Low data rate Land Mobile satellite Earth Stations (LMES) operating in the 11/12/14 GHz frequency bands.

1.3 EN 301 444 - Satellite Earth Stations and Systems (SES); Land Mobile Earth Stations (LMES) operating in the 1.5 GHz and 1.6 GHz bands providing voice and/or data communications.

1.4 EN 300 733 V1.1.1 (1998-05) - Satellite Personal Communications Networks (S -PCN); Mobile Earth Stations (MES) including handheld earth stations, for S-PCN in the 1.6/2.4 GHz bands, providing voice and/or data communications under the Mobile Satellite Service (MSS).

1.5 EN 301 681 v1.3.2 – Satellite earth stations and systems (SES); Harmonized EN for mobile earth stations (MES) of geostationary mobile satellite systems, including handheld earth stations, for satellite personal communications networks (SPCN) in the 1.5/1.6 GHz bands under the mobile satellite service (MSS) covering the essential requirements under Article 3(2) of the R&TTE Directive.

Section 2

Foreword

2.1 The Radio Equipment and Telecommunications Terminal Equipment Directive 99/5/EC (R&TTE Directive) was implemented in the United Kingdom (UK) on the 8 April 2000 by The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000, Statutory Instrument 2000 No. 730. In accordance with Articles 4.1 and 7.2 of Directive 1999/5/EC, this UK Interface Requirement contains the requirements for the licensing and use of land mobile satellite systems in the specified frequency bands.

2.2 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with Directive 1999/5/EC.

2.3 It is required by the Wireless Telegraphy Act 1949 that no radio equipment is installed or used in the UK except under the authority of a licence granted by or otherwise exempted by regulations made by Ofcom. It is a condition of such a licence or exemption regulations as appropriate that, in order to be installed or used in the UK, the equipment must meet the minimum requirements specified in this UK Interface Requirement for the stated equipment types and for the stated frequency bands. Nothing in this UK Interface Requirement shall preclude equipment from being placed on the market in the UK that complies with the 'essential requirements' specified in Directive 1999/5/EC.

2.4 The requirements given in the main body of this UK Radio Interface Requirement will apply to land mobile satellite services in the UK.

2.5 This UK Radio Interface Requirement will be revised as necessary, for example to follow:

i) current technology developments for reasons related to the effective and appropriate use of the spectrum in particular maximising spectrum utilisation; and

ii) changes to the available spectrum allocated for land mobile satellite systems.

2.6 All UK Radio Interface Requirements notified under Directive 1998/34/EC will be published and will be made available free of charge from the Ofcom web-site at http://www.ofcom.org.uk

2.7 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given at the back of this document.

Section 3

Minimum requirements for operation within the UK

3.1 The minimum requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular maximising spectrum utilisation.

3.2 This UK Radio Interface Requirement gives a high level description of how the spectrum in the UK is used for mobile satellite services. It does not prescribe technical interpretation of the ‘essential requirements’ of Directive 1999/5/EC.

3.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licence exemption of mobile satellite services equipment in the UK. Table 3.1 contains the relevant equipment parameters. These taken together with the ‘essential requirements’ detailed in Article 3.2 of Directive 1999/5/EC constitute the minimum requirements for the installation and use of mobile satellite systems equipment within the UK. Nothing in this UK Interface Requirement shall preclude equipment from being placed on the market in the UK that complies with the 'essential requirements' specified in Directive 1999/5/EC.

3.4 The installation and use of mobile satellite equipment meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations. Details of the relevant exemption regulations are available from the Ofcom website http://www.ofcom.org.uk.

3.5 The technical parameters specified in the UK Radio Interface Requirement are applied to achieve the desired level of compatibility within the land mobile satellite service and with other radiocommunications services, whilst promoting enterprise, innovation and competition.

3.6 This UK Radio Interface requirement provides the necessary technical information which facilitates access to the land mobile satellite spectrum by making clear the assumptions that are made in planning the use of the land mobile satellite spectrum in the UK. It is not the intention of this UK Radio Interface Requirement to duplicate or impose any additional ‘essential requirements’ of the Directive 1999/5/EC on products. Any specified parameters within this document are for the purpose of identifying product options and not as a national de facto product requirement

Table 3.1: Minimum requirements for the use of land mobile satellite systems in the bands shown below.		
Mandatory Elements (1-9)		
1	Frequency band (or bands)	See relevant parts of Annex A
2	Radio service	Land mobile satellite
3	Application	Land mobile satellite
4	Channelling modulation	N/A
5	Transmit power limit	See relevant part of Annex A.
6	Channel occupation rules	N/A
7	Duplex type/separation	N/A
8	Licensing Regime	Licence Exempt in accordance with requirements of Exemption Regulations.
9	Additional essential requirements	N/A
Informative Elements (10-13)		
10	Frequency planning assumptions	N/A
11	References	EN 301 426, EN 301 427, EN 301 444, EN 301 681, EN 300 733 and EN 301 681. EN 301 721, and CTR 42 Common technical regulation EU O.J. No. L247, 5.9.98, p13 See also Annex B
12	Remarks	N/A.
13	Notification Number	2000/390/UK

Section 4

Additional performance parameters

(informative)

Prescribed apparatus in the band 1610MHz to 1626.5MHz shall cease operation at or within a distance determined by Ofcom for each relevant radio astronomy site for the duration of any radio astronomy observation.

Section 5

Annex A

Type (see SI) (Informative element)	Frequency of Operation (MHz) (Mandatory element)		Maximum Tx Power (Mandatory Element)
	Earth to space	Space to earth	
ETSI 301 427	14,000-14,250 12,500-12,750	10,700-11,700	19dBW
MSS Low data rate ETSI 301 426	1626.5-1645.5 1646.5-1660.5	1525.0-1544.0 1545.0-1559.0	+37dBW
ETSI 300 733 using TDMA carrier modulation	1621.35-1626.5	1621.35-1626.5	-3dBW/4kHz
CTR 42 Common technical regulation EU O.J. No. L247, 5.9.98, p13	1997.5-2010.0	2187.5-2200.0	9.8dBW/25kHz
ETSI 300 733 using CDMA carrier modulation	1610.0-1621.35	2483.5-2500.00	-3dBW/4kHz
MSS Voice and Data ETSI 301 444	1626.5-1645.5 1646.5-1660.5	1525.0-1544.0 1545.0-1559.0	+37dBW
MSS Satellite-PCS ETSI 301 681	1626.5-1645.5 1646.5-1660.5	1525.0-1544.0 1545.0-1559.0	+37dBW
ETSI 301 721	149-150	137-138	+10dBW/5kHz

Section 6

Annex B (Informative)

Type (See S.I.)	**It is assumed for Spectrum Planning purposes that equipment will operate in accordance with following ECC Decisions or their notified replacement:-**	
Eutelsat Euteltracs (Omnitracs)	ERC(98)15	
Italsat	ERC(98)03 ERC(98)04	
Iridium	ECTRA/ERC Decision (97) 05 and ERC Decision ERC/DEC (97) 03 decided by the CEPT in June 1997 respectively	
ICO	ECTRA/ERC Decision (97) 05, ERC Decision ERC/DEC (97) 03 and ERC Decision ERC/DEC (97) 04 decided by the CEPT June 1997.	
Globalstar	ECTRA/ERC Decision (97) 05 ERC Decision ERC/DEC (97) 03.	
Inmarsat (A)	ERC(97)05	
(B)	ERC(99)19 and ERC(99)18	
(C)	ERC(98)13	
(D+)	ERC(98)01and ERC(98)12	
(M)	ERC(98)02 and ERC(98)14	
Mini – M (transportable)	ERC(98)02 and ERC(98)14	
Mini – M (mobile/LAMM)	ERC(98)02 and ERC(98)14	
GAN	ECC Decision (02)08 and (02)11	
R BGAN (data only)	ECC Decision (02)08 and (02)11	
BGAN 9201 Briefcase	ECC Decision (02)08 and (02)11	
BGAN Explorer 500 Notebook	ECC Decision (02)08 and (02)11	
BGAN WorldPro 1000 Pocket	ECC Decision (02)08 and (02)11	
Thuraya	ERC(01)25	
Orbcomm		
Space Checker	ERC(01)22	

Section 6

Contact details

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Technical enquiries to the Strategic Resources 2 – Space team:-

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- Website: http://www.ofcom.org.uk/radiocomms/ifi/licensing/classes/satellite/

Section 7

Document history

Version	Date	Changes
1.0	15 Dec 2000	Initial publication
2.0	30 Jan 2001	Revised to include Thuraya satellite system.
3.0	21 Jan 2003	Revised to include Orbcomm and Space Checker satellite systems, and standards for Iridium and Globestar
3.1	26 Apr 2006	Rebranded to Ofcom format and updated for Inmarsat BGAN systems
4.0	July 2007	Removed Specific LMSS terminal Manufacturer type names