

UK Interface Requirement 2000

Point-to-Point Fixed Wireless Systems Operating in Fixed Service Frequency Bands Administered by Ofcom

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Abbreviations

CEPT	European Conference of Postal and Telecommunications Administrations
EN	European Normative (European Standard)
ETSI	European Telecommunications Standard Institute
GHz	Gigahertz
Ofcom	Office of Communications
ITU	International Telecommunications Union
ITU-R	ITU Radiocommunications Sector
MHz	Megahertz
N/A	Not Applicable
NATO	North Atlantic Treaty Organisation

Section 1

Foreword

- 1.1 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 point to point fixed link radio systems in the specified frequency bands.
- 1.2 Nothing in this UK Interface Requirement shall preclude the need for equipment and antennas to comply with, or impose any additional requirements to, those requirements set out in Directive 1999/5/EC.
- 1.3 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 the equipment must meet the minimum requirements specified in this UK Interface Requirement.
- 1.4 The requirements given in the main body of this UK Interface Requirement will apply to the licensing of point to point fixed link systems. All frequency bands administered by Ofcom in the UK for point to point fixed link services are covered. Note: Licence exempt fixed wireless systems within the frequency range 57.1 – 63.9 GHz are not included in this IR but are covered by IR 2078.
- 1.5 This UK Interface Requirement will be revised as necessary to reflect changing requirements.
- 1.6 UK operators and manufacturers have been consulted through the development of this UK Interface Requirement, including the assumptions made for the technical Frequency Assignment Criteria (based on the planning and propagation aspects required to assign point to point fixed link systems).
- 1.7 All UK 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>
- 1.8 Further information on this UK Interface Requirement can be obtained from the technical enquiry contact given at the back of this document.

Section 2

Assignment conditions and frequency planning within the UK

- 2.1 The requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular maximising spectrum utilisation.
- 2.2 This UK Interface Requirement gives a high level description of how the spectrum in the UK is used for point to point fixed link systems. It does not prescribe technical interpretation of the „essential requirements’ of Directive 1999/5/EC.
- 2.3 This UK Interface Requirement therefore sets out the channel occupation rules and frequency planning assumptions appropriate to each of the frequency bands set out in Table 2.1.
- 2.4 Conformance with Harmonised Standards provides a presumption of compliance with those „essential requirements’ of Directive 1999/5/EC as covered by the said Harmonised Standards.
- 2.5 Directive 98/34/EC requires Member States to notify technical regulations, such as this Interface Requirement, to the European Commission in advance in order to give the Commission and other Member States the opportunity to consider and, if thought fit, object to their implementation.
- 2.6 The Technical Frequency Assignment Criteria, referenced in Annex A, Table A2, describe the principles used in the EIRP/channel assignment process. Assignment methodology is based on reasonable use of equipment and assignment principles to encourage efficient use of the radio spectrum. Ofcom may, for spectrum management purposes, preclude systems that are not considered suitable for deployment in the UK.
- 2.7 The UK believes that this UK Interface Requirement brings maximum benefit to the point to point fixed links industry while promoting enterprise, innovation and competition.
- 2.9 This UK Interface Requirement therefore sets out the (high level) assignment conditions and planning assumptions made with respect to the planning of point to point fixed link systems in the UK.

Table 2.1: Minimum equipment requirements

Frequency Range (M/GHz)	Channelling	Channel Occupation Rules	Assignment Conditions	Remarks
1350 – 1517 MHz	CEPT Recommendation T/R 13-01E		See notes 1, 4, 6, 7, 11, 13 and 15 in Table A1 of Annex A	
3600 – 4200 MHz	CEPT Recommendation 12-08E		See notes 1, 5, 6, 7, 11, 13 and 15 in Table A1 of Annex A	
5925 – 6425 MHz	CEPT Recommendation 14-01E		See notes 1, 3, 6, 7, 11, 13 and 15 in Table A1 of Annex A	
6425 – 7125 MHz	CEPT Recommendation 14-02E		See notes 1, 3, 6, 7, 11, 13 and 15 in Table A1 of Annex A	

7425 – 7900 MHz	ITU-R Recommendation 385-6, Annex 4		See notes 1, 4, 6, 7, 11, 13 and 15 in Table A1 of Annex A	
12.75 – 13.25 GHz	CEPT Recommendation 12-02E		See notes 1, 4, 6, 7, 11, 13 and 15 in Table A1 of Annex A	
14.50 – 15.35 GHz	CEPT Recommendation 12-07E		See notes 1, 4, 6, 7, 8, 11, 13 and 15 in Table A1 of Annex A	
17.7 - 18.45625GHz paired with 18.70 - 19.46625 GHz	CEPT Recommendation 12-03 E		See notes 1, 4, 6, 7, 11, 13 and 15 in Table A1 of Annex A	
18.4625 - 18.7 GHz paired with 19.4705 -19.70 GHz	ITU-R Recommendation F.595 (for 3.5 MHz and 7 MHz assignments)		See notes 1, 4, 6, 7, 11, 13 and 15 in Table A1 of Annex A	

22.00 – 23.60 GHz	CEPT Recommendation T/R 13-02E		See notes 1, 4, 6, 7, 11, 13 and 15 in Table A1 of Annex A	
24.50 – 26.50 GHz	CEPT Recommendation T/R 13-02E, Annex B		See notes 1, 4, 6, 7, 11, 13 and 15 in Table A1 of Annex A	
31.00 – 31.80 GHz	Technical Frequency Assignment Criteria OfW31 National channel plan based on 28 MHz raster with duplex spacing equal to 500.5 MHz		See notes 2, 7, 11, 13 and 16 in Table A1 of Annex A	
37.00 – 39.50 GHz	CEPT Recommendation T/R 12-01E		See notes 1, 4, 6, 7, 11,13 and 15 in Table A1 of Annex A	

51.40 – 52.60 GHz	CEPT Recommendation 12-11E		See notes 1, 4, 6, 7, 9, 11, 13 and 15 in Table A1 of Annex A	
55.78 – 57.00 GHz	CEPT Recommendation 12-12E		See notes 1, 4, 6, 7, 10, 11, 13 and 15 in Table A1 of Annex A	
64.00 – 66.00 GHz			See notes 1, 12 and 13 in Table A1 of Annex A	
71.125-75.825 and 81.125- 85.875 GHz			See notes 1, 12, 13 and 14 in Table A1 of Annex A	

Section 3

Annex A

Table A1: Assignment and Planning Conditions

1	Radio equipment and antennas deployed in this band must comply with the essential requirements of Directive 1995/5/EC. For frequency planning purposes it is assumed that the appropriate specifications set out in ETSI EN 302 217 are met but there is no regulatory requirement for operators to use equipment specified in this ETSI standard.
2	Radio equipment and antennas deployed in this band must comply with the essential requirements of Directive 1995/5/EC. For frequency planning (spectrum management) purposes It is assumed that the appropriate specifications set out in ETSI EN 300 632 and ETSI EN 302 217 (antennas) are met but there is no regulatory requirement for operators to use equipment specified in these documents.
3	Frequency Planning - Radio systems meeting ETSI spectral efficiency class 5 and above which meet the stated channel arrangements may be deployed in this band.
4	Frequency Planning - Radio systems meeting ETSI spectral efficiency class 2 and above which meet the stated channel arrangements may be deployed in this band.
5	Frequency Planning - Radio systems meeting ETSI spectral efficiency class 4 and above which meet the stated channel arrangements may be deployed in this band.
6	Operators will be encouraged to use higher performance antenna options on congested sites. They may also be advised to use a higher performance antenna when assignments are otherwise impossible.
7	The operational EIRP will be determined on the basis of the minimum power required to meet the propagation availability requirements of the applicant and will be specified as a licence condition.
8	National Co-ordination with the Ministry of Defence will be required due to a 1 MHz incursion into the NATO band 14.62 – 15.23 GHz by the lower edge of the sub-band 15.229 – 15.35 GHz, for the lowest specified channel.
9	Staged band release: the first stage covers sub-bands 51.40 – 51.608 GHz duplexed with 52.056 – 52.224 GHz.
10	Staged band release: the first stage covers sub-bands 55.780 –56.010 GHz

	duplexed with 56.458 – 56.626 GHz.
11	Licensed band - inter and intra service sharing studies and co-ordination functions performed by Ofcom (or on behalf of Ofcom).
12	Light licensed band - no formal sharing studies or co-ordination functions performed by Ofcom.
13	Ofcom will consult and agree frequency band management strategies with industry regarding the use of state of the art radio equipment and antennas in the UK.
14	Based on consultation with industry, maximum transmitter output power is limited to a value of 30 dBm for the 71-76 and 81-86 GHz frequency bands. EIRP is limited to 55 dBW in these bands as per Article 21 of the Radio Regulations.
15	Technical Frequency Assignment Criteria is specified in document ofw446, published by Ofcom.
16	Technical Frequency Assignment Criteria is specified in document ofw31, published by Ofcom.

Section 4

Document history

Version	Date	Changes
5.0	09 2003	Published.
6.0	07 2005	Revision of Assignment and Planning Conditions at 58 GHz plus editorial changes.
7.0	09 2006	Includes regulatory arrangements for the 71-76 GHz and 81-86 GHz frequency bands. Removal of Minimum Path Length constraint from Channel Occupation Rules. Editorial corrections.
8.0	06 2008	Removal of regulatory arrangements for the 31.8 to 33.4 GHz frequency band. Removal of Assignment & Planning conditions associated with the „site clearance process‘. Editorial changes.
9.0	07 2010	Removal of regulatory arrangements for the 57 – 59 GHz frequency band from this IR. These arrangements are now covered by IR 2078 “Fixed Wireless Systems in the frequency band 57.1– 63.9 GHz”.
9.1	05 2011	Editorial changes.

Section 5

Contact details

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