UK Interface Requirement 2057

Ground based microwave landing systems (MLS) at aeronautical stations of the aeronautical radionavigation service.

Publication date: Feb 2006
Date amended: January 2018

2015/1535/EU Notification number:
2005/501/UK

Contents

Section 1

References

1.1 Annex 10 to the Convention on International Civil Aviation (ICAO) as amended.

1.2 Statutory Instrument 2014 No. 774, The Wireless Telegraphy (Limitation of Number of Licences) Order 2014.

Section 2

Foreword

2.1 The Radio Equipment Directive (Directive 2014/53/EU) was implemented in the United Kingdom (UK) by the Radio Equipment Regulations 2017. In accordance with Articles 8 and 7 of Directive 2014/53/EU, this UK Interface Requirement contains the requirements for the licensing and use of ground based microwave landing systems (MLS) aeronautical radionavigation service radio equipment in the specified frequency bands.

2.2 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with Directive 2014/53/EU.

2.3 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with Annex 10 to the convention on International Civil Aviation, where appropriate.

2.4 It is required by the Wireless Telegraphy Act 2006 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 2014/53/EU.

2.5 The requirements given in the main body of this UK Radio Interface Requirement will apply to ground based MLS radio equipment in the UK.

2.6 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 aeronautical radionavigation.

2.7 All UK Radio Interface Requirements notified under Directive 2015/1535/EU will be published and will be made available free of charge from the Ofcom web-site at http://www.ofcom.org.uk

2.8 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 ground based MLS radio equipment in the aeronautical radionavigation service. It does not prescribe technical interpretation of the ‘essential requirements’ ofDirective 2014/53/EU .

3.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licensing of ground based MLS aeronautical radionavigation service radio 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 2014/53/EU constitute the minimum requirements for the installation and use of ground based MLS aeronautical radionavigation service radio equipment in the aeronautical radionavigation service 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 inDirective 2014/53/EU .

3.4 The technical parameters specified in the UK Radio Interface Requirement are applied to achieve the desired level of compatibility within the aeronautical radionavigation band and with other radiocommunications services, whilst promoting enterprise, innovation and competition.

3.5 This UK Radio Interface requirement provides the necessary technical information which facilitates access to the aeronautical radionavigation spectrum by making clear the assumptions that are made in planning the use of the aeronautical radionavigation 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 2014/53/EU 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 microwave landing systems.

Mandatory Elements (1-9)		
1	Frequency band (or bands)	5000 – 5150 MHz
2	Radio service	Aeronautical radionavigation
3	Application	Microwave landing systems
4	Channelling modulation	DPSK. In accordance with ICAO Annex 10 (Ref 1.1), as relevant.
5	Transmit power limit[1]	For each individual licence / frequency assignment, either the maximum and minimum field strength at the limit of DOC[2] may be specified or the maximum effective radiated power (e.i.r.p.).
6	Channel occupation rules	200 channels assigned within the frequencies 5031.0-5090.7 MHz (See table A, ICAO Annex 10 Vol 1, chapter 3, page 60). In accordance with ICAO Annex 10 (Ref 1.1), as relevant.
7	Duplex type/ separation	N/A
8	Licensing Regime	Aeronautical navigation aids (MLS) – Station Identifiers will need to be issued.[3] Individual Aeronautical Licence required.
9	Additional essential requirements	N/A
Informative Elements (10-13)		
10	Frequency planning assumptions	Nominally vertically polarized.
11	References	ICAO Annex 10, Vol 1, chapter 3, 3.11 see Ref 1.1
12	Remarks	MLS is a precision approach and landing guidance system which provides position information and various ground to air data. The position information is provided in a wide coverage sector and is determined by azimuth angle and elevation angle measurements. Range measurement is provided by an associated Distance Measuring Equipment (DME). A more detailed description is contained in Annex 10 to the Convention on International Civil Aviation.
13	Notification Number	2005/501/UK

[1] Radio site clearance considerations may impose restrictions on maximum power use on certain frequency assignments. (Radio site clearance is required for any aeronautical station with an e.r.p. greater than 18dBW (50W) and/or antenna height greater than 30 metres above ground level, or where an existing structure is increased in height by greater than 5 metres.)

[2] DOC - Designated operational coverage (See ITU RR 45.1.1)

[3] See Reference 1.2 Schedule 6 Aeronautical Parts 1, 2 & 3 for limitations on WT Act Licences

Section 4

Additional performance parameters

(informative)

It is suggested that manufacturers refer to the appropriate volumes of Annex 10 to the Convention on International Civil Aviation, aeronautical telecommunications, as amended, for relevant manufacturing standards and guidelines. www.icao.int.

Equipment which complies with this radio interface specification is additionally subject to the putting into service provisions of Article 10.1 of Regulation (EC) No. 552/2004 of 10 March 2004 on the interoperability of the European Air Traffic Management Network (the Interoperability Regulation)

Section 5

Contact details

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Section 6

Document history

Version	Date	Changes
Draft	8 Aug 2005	Notified as Draft
1.0	2 Feb 2006	Initial Publication as final text.
2.0	January 2018	Replaced R&TTE Directive 1999/5/EC and Directive 98/34/EC with Radio Equipment Directive 2014/53/EU and Directive (EU) 2015/1535 respectively. Minor editorials