

UK Interface Requirement 2050

Ground based primary radar equipment of the aeronautical radionavigation service in the frequency bands 1215 MHz-1350 MHz, 2700 MHz-3100 MHz, 9300 MHz-9500 MHz and 15.4 GHz-15.7 GHz.

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Section 3

References

- 1.1 Statutory Instrument 2014 No. 774, The Wireless Telegraphy (Limitation of Number of Licences) Order 2014, as amended.
- 1.2 ITU Radio Regulations Edition 2004 – Appendix 3.
- 1.3 Recommendation ITU-R SM. 329-10 (Unwanted emissions in the spurious domain).
- 1.4 Recommendation ITU-R SM. 1541-1 (Unwanted emissions in the out-of-band domain).

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 primary aeronautical radar 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 primary aeronautical radar 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 primary aeronautical radar equipment in the aeronautical radionavigation service. It does not prescribe technical interpretation of the 'essential requirements' of Directive 2014/53/EU.
- 3.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licensing of ground based primary aeronautical radar equipment in the radionavigation service 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 primary aeronautical radar equipment in the 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 in Directive 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 service 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 ground based aeronautical primary radar in the bands shown below.

Mandatory Elements (1-9)		
1	Frequency band (or bands)	1215 – 1350 MHz, 2700 – 3100 MHz, 9300 – 9500 MHz and 15.4 - 15.7 GHz
2	Radio service	Aeronautical radionavigation
3	Application	Primary radar for Air Traffic Control
4	Channelling modulation	Pulse and Phase modulation P0N**, G0N**
5	Transmit power limit	For each individual licence, the maximum effective radiated power (e.i.r.p.) shall be specified.
6	Channel occupation rules	Transmissions shall be contained within the bands 1215–1350 MHz, 2700–3100 MHz, 9300–9500 MHz and 15.4-15.7 GHz.
7	Duplex type/separation	N/A
8	Licensing Regime	Aeronautical radionavigation equipment – individual aeronautical licence required.
9	Additional essential requirements	N/A
Informative Elements (10-13)		
10	Frequency planning assumptions	In accordance with ITU Radio Regulations Appendix 3, Recommendation ITU-R SM. 329-10 (Unwanted emissions in the spurious domain) and Recommendation ITU-R SM.1541-1 (Unwanted emissions in the out-of-band domain). See Refs 1.2, 1.3 and 1.4.
11	References	N/A.
12	Remarks	Land based primary radar equipment used for air traffic control. NB - See Ref 1.1 schedule 6 aeronautical parts 1, 2 and 3 for limitations on WT Act licences.
13	Notification Number	2005/488/UK

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.
1.1	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