

# IR 2080 - UK Interface Requirement 2080

## Railway Level Crossing Radar Sensor Systems

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## Section 1

# References

- 1.1 EN 300 440-1 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Part 1: Technical characteristics and test methods.
- 1.2 EN 300 440-2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Part 2: Harmonized EN under article 3.2 of the Radio Equipment Directive (Directive 2014/53/EU).

## Section 2

# Foreword

- 2.1 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. This document contains minimum requirements for the **establishment, installation and use** of licence exempt short range devices in the UK in the specified frequency bands.
- 2.2 The Radio Equipment Directive (Directive 2014/53/EU) was implemented in the United Kingdom (UK) by the Radio Equipment Regulations, 2017 (the “RED Regulations”).
- 2.3 Nothing in these UK Radio Interface Requirements shall preclude the need for equipment to comply with Directive 2014/53/EU or the RED Regulations. This document does not prescribe technical interpretation of the ‘essential requirements’ of Directive 2014/53/EU. Nothing in these UK Interface Requirements shall preclude equipment from being **placed on the market** in the UK if it complies with the ‘essential requirements’ specified in Directive 2014/53/EU.
- 2.4 The requirements in these UK Radio Interface Requirements are made for reasons related to the effective and appropriate use of the radio spectrum in the UK, in particular, maximising spectrum utilisation. These UK Radio Interface Requirements will be revised as necessary, for example to take account of:
  - 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 for the use of licence exempt devices.
- 2.5 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>.
- 2.6 Further information on these UK Radio Interface Requirements can be obtained from the contact given at the back of this document.

## Section 3

# Minimum requirements for operation within the UK

- 3.1 The following Table is the UK Radio Interface Requirements for railway Level Crossing Radars. This Table is to be interpreted in accordance with Sections 2 and 3 of this document.
- 3.2 The “Normative Part” of the Table, including comments, sets out minimum requirements relating to that Interface Requirement. Unless otherwise stated, terrestrial use only is permitted.
- 3.3 The “Informative Part” of the Table is not a part of the minimum requirements for that Interface Requirement. It gives a reference for relevant technical standards.
- 3.4 References to documents in the form “EN 111 111” are references to standards published by ETSI.
- 3.5 In this document, the following words shall have the following meanings:
  - i) “e.i.r.p.” means equivalent isotropic radiated power;
  - ii) “GHz” means gigahertz;
  - iii) “mW” means milliWatt;



**Table 3.2: Minimum requirements for the use of: - Railway Level Crossing Radar Sensor Systems**

Mandatory (1-10)		
1	Frequency band(s)	24.100 GHz to 24.350 GHz
2	Radiocommunication Service	N/A
3	Application	Radar Sensor System for Level Crossing Free Detection
4	Channelling	N/A
5	Modulation / Occupied bandwidth	N/A
6	Direction / Separation	N/A
7	/Maximum Transmit Power / Power Density	500 mW e.i.r.p.
8	Channel access and occupation rules	N/A
9	Authorisation regime	Equipment may only be installed or operated at railway level crossings. Equipment is Licence Exempt providing installations and operation are not within 20 km of Radio Astronomy sites listed in Section 4.
10	Additional essential requirements	N/A
Informative (11-13)		
11	Frequency planning assumptions	N/A
12	Planned changes	N/A
13	Reference	EN 300 440
14	Notification	2010/156/UK
15	Remarks	N/A



## Section 4

# Authorisation regime requirements

Figure 1: Radio Astronomy exclusion zones

Site	Location	Exclusion zone
Jodrell Bank	02° 18' 22.8" W 53° 14' 06.7" N	20 km
Cambridge	00° 02' 12.4" E 52° 10' 00.0" N	20 km
Defford	02° 08' 40.1" W 52° 06' 02.0" N	20 km
Darnhall	02° 32' 08.5" W 53° 09' 22.7" N	20 km
Knockin	02° 59' 49.6" W 52° 47' 25.1" N	20 km
Pickmere	02° 26' 43.5" W 53° 17' 19.1" N	20 km

## Section 5

# Contact details

Ofcom Spectrum Licensing  
PO Box 1285  
Warrington. WA1 9GL

Tel: 020 7981 3131

Email: [spectrum.licensing@ofcom.org.uk](mailto:spectrum.licensing@ofcom.org.uk)

Website: <https://www.ofcom.org.uk/>

## Section 6

# Document history

<b>Version</b>	<b>Date</b>	<b>Changes</b>
1.0	October 2010	First Publication EU No. 2010/156/UK
2.0	September 2017	Replaced R&TTE Directive 1999/5/EC and Directive 98/34/EC with Radio Equipment Directive and Directive (EU) 2015/1535 respectively. Minor editorials