

IR 2037 - UK Interface Requirement 2037

**Performance parameters for fixed UHF network for telemetry,
telecontrol or data services**

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Section 1

References

- 1.1 The future of UHF scanning telemetry and telecontrol frequency assignments – A report for DTI, Joint Radio committee (JRC) and Technical Advisory Group (TAG).
- 1.2 OFW49 Fixed point-to-point and point-to-multipoint scanning telemetry radio services with analogue modulation operating in the frequency ranges 457.5 MHz to 458.5 MHz paired with 463.0 MHz to 464.0 MHz.

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 scanning telemetry systems in the specified frequency band.
- 2.2 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 2014/53/EU.
- 2.3 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 the equipment must meet the minimum requirements specified in this UK Interface Requirement.
- 2.4 The criteria given in the main body of this UK Interface Requirement will apply in the licensing of scanning telemetry systems. The frequency band administered by Ofcom in the UK for fixed UHF network for telemetry, telecontrol or data services is 457.5 MHz to 458.5 MHz and 463.0 MHz to 464.0 MHz. An adaptable cellular plan has been devised as a means of maximising the use of the service and for providing a defined planning and frequency co-ordination environment. (References 1 and 2 provide more detail).
- 2.5 This UK Interface Requirement will be revised as necessary to reflect changing requirements.
- 2.6 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 scanning telemetry systems).
- 2.7 Further information on this document can be obtained from the technical enquiry contact given on the back cover of this document.
- 2.8 All UK 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>.
- 2.9 Further information on this UK Interface Requirement can be obtained from the technical enquiry contact given on the back of this document.

Section 3

Minimum requirements for operation within the UK

- 3.1 The minimum radio 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 Interface Requirement indicates how the spectrum in the UK is used for fixed UHF network for telemetry, telecontrol or data systems. It does not prescribe a technical interpretation of the “essential requirements” of Directive 2014/53/EU.
- 3.3 This UK Interface Requirement therefore sets out the channel occupation rules and frequency planning assumptions appropriate to scanning telemetry systems in tables 3.1.
- 3.4 Directive 2015/1535/EU requires Member States to notify technical regulations, such as this Interface Requirement, to the European Commission in advance to give the Commission and other Member States the opportunity to consider and, if thought fit, object to their implementation.
- 3.5 The Technical Frequency Assignment Criteria for fixed UHF network for telemetry, telecontrol or data services describes the principles used to assign the minimum EIRP transmit power requirements to meet the desired performance objectives for a scanning telemetry system. Assignment methodology is based on ‘reasonable use’ of equipment and assignment principles to encourage the efficient use of the radio spectrum. Ofcom may preclude systems that are not suitable for deployment in the UK.
- 3.6 The UK believes that this UK Interface Requirement brings maximum benefit to the fixed UHF network for telemetry, telecontrol or data services industry while promoting enterprise, innovation and competition.
- 3.7 The Harmonised Standards EN 300 086- 2 and EN 300 113-2 are suitable for these radio services.
- 3.8 This UK Interface Requirement therefore sets out the (high level) assignment conditions and planning assumptions with respect to the planning of scanning telemetry systems in the UK.

Table 3.1: Minimum equipment requirements

Mandatory (1-8)		
1	Frequency band (MHz)	457.5 MHz to 458.5 MHz and 463.0 MHz to 464.0 MHz
2	Radio Service	Fixed.
3	Application	UHF network for telemetry, telecontrol or data systems (also referred to as Scanning Telemetry).
4	Channelling modulation	Analogue base-band in 12.5 kHz. Channel spacing is 12.5 kHz in adaptable cellular plan. More details are given in reference 2.
5	Transmit power limit	Maximum transmitter power 10 dBW
6	Channel occupation rules	The band comprises of 80 channels, 72 of which are reserved for adaptable cellular plan. 8-channels are reserved for other users and these are not subject to the adaptable cellular plan. More details are given in reference 2.
7	Licensing regime	Frequency assignment and licence per operator or group of operators. 72 channels are arranged on a 12-cell, 6- channel per cell, regular re-use plan. Each utility, namely gas, electricity and water, has access to two exclusive channels per cell.
8	Additional essential requirements	N/A
Informative(9-10)		
9	Frequency planning assumptions	Described in reference 2.
10	Remark	1. Reference 1 gives a full description and discussion of the Adaptable Cellular Plan.

Section 4

Additional performance parameters

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| 1 | Omni –directional antennas as base stations | In the absence of any European Standard for this band Ofcom refers reference 2 for advice on equipment parameters. |
| 2 | Sector Antennas as base stations | In the absence of any European Standard for this band Ofcom refers reference 2 for advice on equipment parameters. |
| 3 | Directional antennas as base stations | In the absence of any European Standard for this band Ofcom refers reference 2 for advice on equipment parameters. |

Section 5

Contact details

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Section 6

Document history

Version	Date	Changes
1.0	Dec 2003	Rebranded to Ofcom style
2.0	Jan 2015	Updated to incorporate VNS2111 and RA386.
3.0	January 2018	Replaced R&TTE Directive 1999/5/EC and Directive 98/34/EC with Radio Equipment Directive and Directive (EU) 2015/1535 respectively. Minor editorials