



UK Interface Requirement 2011

Analogue and digital cordless telephony service

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Section 1

References

The following additional performance parameters are included for information only and have no regulatory status. These reference specifications contain additional performance parameters and limits to those specified in this Interface Requirement. Ofcom assume these parameters are fulfilled by cordless telephones when planning and managing the radio spectrum in the UK.

Equipment Type	Reference Specification
CT0	MPT 1322: Angle-modulated MF and VHF radio equipment for use at base and hand portable stations in the Cordless Telephone Service. <i>Revised & Reprinted December 1999</i> ¹ .
CT2	I-ETS 300 131: European Technical Specification – Digital cordless telephone operating in the 864.1 – 868.1 MHz frequency band – published in July 1992 ² .
DECT	EN 301 406 : Digital Enhanced Cordless Telecommunications - (DECT); Harmonized EN for Digital Enhanced Cordless Telecommunications (DECT) covering essential requirements under article 3.2 of the Radio Equipment Directive (Directive 2014/53/EU); Generic radio - Published July 2003 ³ .

¹ Available for download at <http://www.ofcom.org.uk/static/archive/ra/publication/mpt/mpt2.htm>

² Available for download at <http://www.ero.dk/>

³ Available for download at <http://www.etsi.org/>

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 use of base and handheld cordless telephone 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 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 for the stated equipment types and for the stated frequency bands.
- 2.4 The requirements given in the main body of this UK Radio Interface Requirement will apply to the use of licence exempt base and handheld cordless telephone equipment in the specified frequency ranges.
- 2.5 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 cordless telephone equipment.
- 2.6 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>
- 2.7 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 equipment 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 cordless telephone equipment. 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 licence exemption of cordless telephone equipment in the UK. Tables 3.1, 3.2, 3.3, 3.4 and 3.5 contain the relevant equipment parameters. These together with the 'essential requirement' detailed in Article 3.2 of Directive 2014/53/EU constitute the minimum equipment requirements for cordless telephone equipment within the UK.
- 3.4 Cordless telephone equipment, meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations and is used for private self provided communications. Details of the relevant exemption regulations are available from Ofcom on request.
- 3.5 As from 1 April 2005 Ofcom have withdrawn certain analogue cordless frequencies from use. It is not permitted to establish cordless telephony of the type referred to in tables 1, 2 and 4 in this Interface Requirement. Equipment in service before 1 April 2005 may continue to operate on a non protected, non interference basis.
- 3.6 Interface Requirements are applied to achieve the desired level of compatibility for Cordless Telephony and with other radiocommunications services, whilst promoting enterprise, innovation and competition.
- 3.7 This UK Radio Interface requirement provides the necessary technical information which facilitates access to the Cordless Telephony spectrum by making clear the assumptions that are made in planning the use of Cordless Telephony 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 product requirement.

Table 3.1: Minimum Equipment Requirement for CT0⁴ analogue cordless telephones

Parameters	Base Unit	Portable Unit	Additional Technical Requirements/Information
Licensing Requirement	Licence Exempt for private self provided communication.		<ol style="list-style-type: none"> As of 1 April 2005 it is not permitted to establish or install cordless telephony equipment operating on the frequencies identified in this table and sales of such equipment should have ceased. Ofcom will in due course phase in new services operating in the 1.7 and 47 MHz frequency band currently utilised by CT0. Eventually the use of this band by CT0 will cease, although no end date is yet specified. The equipment shall provide for transmission and reception of frequency modulated emissions on not more than two pairs of radio frequencies (2 channels) by manual means, or on one pair of frequencies (1 channel) by dynamic means. If the equipment is capable of operation on more than one pair of frequencies, the operating frequencies shall be selected by means of manual switches at the base and handset units. The transmit and receive frequencies shall not be separately selected. Alternatively, one channel pair from the eight available channel pairs may be selected by dynamic means.
Available Frequencies. (Channel Number.)			
(1)	1642.00 kHz	47.45625 MHz	
(2)	1662.00 kHz	47.46875 MHz	
(3)	1682.00 kHz	47.48125 MHz	
(4)	1702.00 kHz	47.49375 MHz	
(5)	1722.00 kHz	47.50625 MHz	
(6)	1742.00 kHz	47.51875 MHz	
(7)	1762.00 kHz	47.53125 MHz or 47.44375 MHz (Note 1)	
(8)	1782.00 kHz	47.54375 MHz	
Channel Spacing	20 kHz	12.5 kHz	
Modulation	Frequency	Frequency	
Maximum Permitted ERP	10 mW	10 mW	

Note 1 - The frequency 47.44375 MHz may be used as an alternative to 47.53125 MHz where problems are experienced due to the 27th harmonic relationship between 1762 kHz and 47.53125 MHz

⁴ In the past the first generation cordless telephony has been variously referred to as CT1 and CT0, in the latter case to distinguish it from another European cordless systems also designated as 'CT1'

Table 3.2: Minimum Equipment Requirements for CT0 (Extended) analogue cordless telephone

Parameters	Base Unit	Portable Unit	Additional Technical Requirements/Information
Licensing Requirement	Licence Exempt for private self provided communication.		<ol style="list-style-type: none"> As of 1 April 2005 it is no longer permitted to establish or install cordless telephony equipment operating on the frequencies identified in this table and sales of such equipment should have ceased. Ofcom will in due course phase in new services operating in the 47 and 77 MHz frequency band currently utilised by CT0 (Extended). Eventually the use of this band by CT0 (Extended) will cease, although no end date is yet specified. The equipment shall provide for transmission and reception of frequency modulated emission on only one of the listed pairs of radio frequencies.
Available Frequencies. (Channel Number.)			
(1)	47.43125 MHz	77.5125 MHz	
(2)	47.41875 MHz	77.5500 MHz	
Channel Spacing	12.5 kHz	12.5 kHz	
Modulation	Frequency	Frequency	
Maximum Permitted ERP	100 mW	100 mW	

Table 3.3: Minimum Equipment Requirements for CT0 (current) analogue cordless telephone

Parameters	Base Unit	Portable Unit	Additional Technical Requirements/Information
Licensing Requirement	Licence Exempt for private self provided communication.		<ol style="list-style-type: none"> The equipment shall not be capable of operating on more than one channel pair at any one time. The equipment shall provide for transmission and reception of frequency modulated emissions on all the channel pairs listed. The equipment shall be able to dynamically select a free channel pair at the start of a call. The equipment should be able to maintain the selected channel for the duration of the call or should be able to dynamically reselect a channel during a call, either automatically or by manual means. Manual reselection of specific channels is not permitted. Alternatively, one channel pair from the eight available channel pairs may be selected by dynamic means.
Available Frequencies. (Channel Number.)			
(1)	31.0375 MHz	39.9375 MHz	
(2)	31.0625 MHz	39.9625 MHz	
(3)	31.0875 MHz	39.9875 MHz	
(4)	31.1125 MHz	40.0125 MHz	
(5)	31.1375 MHz	40.0375 MHz	
(6)	31.1625 MHz	40.0625 MHz	
(7)	31.1875 MHz	40.0875 MHz	
(8)	31.2125 MHz	40.1125 MHz	
Channel Spacing	25 kHz	25 kHz	
Modulation	Frequency	Frequency	
Maximum Permitted ERP	10 mW	10 mW	

Table 3.4: Minimum Equipment Requirements for Cordless Telephony Equipment operating in the Frequency Range 864.1-868.1 MHz (CT2)

Parameters	Base Unit	Portable Unit	Additional Technical Requirements/Information
Licensing Requirement	Licence Exempt for private self provided communication. Licence available for certain public access applications.		<ol style="list-style-type: none"> As of 1 April 2005 it is not permitted to establish or install cordless telephony equipment operating on the frequencies identified in this table and sales of such equipment should have ceased. Ofcom will phase in new services operating in the 864.1 – 868.1 MHz frequency band currently utilised by CT2. No date is proposed from which the use of CT2 equipment already in service should cease. The equipment shall provide for transmission and reception of frequency modulated emissions on not more than two pairs of radio frequencies (2 channels) by manual means, or on one pair of frequencies (1 channel) by dynamic means. The equipment shall provide for transmission and reception of frequency modulated emissions on the same frequency. The equipment shall provide 40 channels. The centre frequency of each will be $864.050 \text{ MHz} + (0.100 \times n) \text{ MHz}$ where n is the channel number between 1 and 40. The first channel shall lie at 864.150 MHz and the last channel (channel 40) shall lie at 868.050 MHz.
Available Frequencies.	864.1 – 868.1 MHz	864.1 – 868.1 MHz	
Modulation	2 level frequency shift keying	2 level frequency shift keying	
Channel Spacing	100 kHz	100 kHz	
Channel Protocol	The equipment shall provide dynamic channel allocation of one of forty channels.		
Maximum Permitted ERP	10 mW	10 mW	

Table 3.5: Minimum Equipment Requirements for Cordless Telephony Equipment operating in the Frequency Range 1880-1900 MHz (DECT).

Parameters	Base Unit	Portable Unit	Additional Technical Requirements/Information
Licensing Requirement	Licence Exempt for private self provided communication. Licence available for certain public access applications		<ol style="list-style-type: none"> All Digitally Enhanced Cordless Telephones (DECT) shall be able to operate on all 10 DECT RF channels. Carrier (channel) frequency $F_c = F_o - c \cdot 1728 \text{ kHz}$. Where $F_o = 1897.344 \text{ MHz}$ and $c = 0, 1, \dots, 9$ The equipment shall provide for transmission and reception of frequency modulated emissions on the same frequency.
Available Frequencies.	1880 - 1900 MHz	1880 – 1900 MHz	
Modulation	Gaussian Minimum Shift Keying (GMSK)	Gaussian Minimum Shift Keying (GFSK)	
Access Technique	Time Division Multiple Access (TDMA)	Time Division Multiple Access (TDMA)	
Maximum Permitted ERP	<250mW	<250mW	

Section 4

Additional performance parameters

(informative)

None specified

Section 5

Contact details

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Section 6

Document history

Version	Date	Changes
1.0	15 Dec 2000	Published
2.0	October 2004	Rebranded to Ofcom format
2.1	30 Jun 2005	Editorial Changes
3.1	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