
UK Interface Requirement 2038

Programme Making and Special Events (PMSE)

Interface Requirement

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About this document

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 radio equipment for Programme Making and Special Events in the specified frequency bands.

Contents

Section

1. Document History	1
2. References	2
3. Foreword	3
4. Minimum requirements for operation within the UK	4
5. Additional performance parameters (informative)	6
6. Contact Details	7

Annex

A1. Annex A	8
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1. Document History

Version	Date	Changes
1.0	Jan 2001	Initial publication
2.0	Oct 2004	Editorial changes
2.1	Feb 2006	Published in Ofcom format
2.2	Jan 2018	Replaced R&TTE Directive 1999/5/EC with Radio Equipment Directive 2014/53/EU; addition of new sub-bands (961 to 1015 MHz; 1045 to 1075 MHz; 1105 to 1154 MHz) for low power audio; addition of 700 MHz guard band (694 to 703 MHz); frequencies and frequency band edges updated, geo-restrictions removed and minor editorial changes, such as move to new Ofcom document template.

2. References

ETSI European Standards

- EN 300 422 - Electromagnetic compatibility and Radio Spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range;
 - Part 1: Technical characteristics and test methods.
- EN 300 086 - Electromagnetic compatibility and Radio Spectrum Matters (ERM); Land Mobile Service; Radio equipment with an internal or external RF connector intended primarily for analogue speech;
 - Part 1: Technical characteristics and methods of measurement.
- EN 300 113 - Electromagnetic compatibility and Radio Spectrum Matters (ERM); Land mobile service; Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector;
 - Part 1: Technical characteristics and methods of measurement.
- EN 300 454 - Electromagnetic compatibility and Radio Spectrum Matters (ERM); Wide band audio links;
 - Part 1: Technical characteristics and test methods.
- EN 301 489 - Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services;
 - Part 1: Common technical requirements
 - Part 9: Specific conditions for wireless microphones, similar Radio Frequency (RF) audio link equipment, cordless audio and in-ear monitoring devices.
- EN 302 064 - Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless Video Links (WVL) operating in the 1.3 GHz to 50 GHz frequency band;
 - Part 1: Technical characteristics and methods of measurement.

Note: these references are included for information purposes only. Compliance with these referenced standards is not mandatory.

3. Foreword

- 3.1 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 radio equipment for Programme Making and Special Events in the specified frequency bands.
- 3.2 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with Directive 2014/53/EU.
- 3.3 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, 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.
- 3.4 The requirements given in the main body of this UK Radio Interface Requirement will apply to the licensing and use of radio equipment for Programme Making and Special Events in the UK.
- 3.5 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 Programme Making and Special Events.
- 3.6 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>
- 3.7 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given at the back of this document.

4. Minimum requirements for operation within the UK

- 4.1 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.
- 4.2 This UK Radio Interface Requirement gives a high-level description of how the spectrum in the UK is used for Programme Making and Special Events. It does not prescribe technical interpretation of the 'essential requirements' of Directive 2014/53/EU.
- 4.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licensing of Programme Making and Special Events in the UK. Table 4.1 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 Programme Making and Special Events equipment 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.
- 4.4 The technical parameters specified in the UK Radio Interface Requirement are applied to achieve the desired level of compatibility within the Programme Making and Special Events services and with other radiocommunications services, whilst promoting enterprise, innovation and competition.
- 4.5 This UK Radio Interface requirement provides the necessary technical information which facilitates access to the Programme Making and Special Events spectrum by making clear the assumptions that are made in planning the use of the Programme Making and Special Events 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 4.1: Minimum requirements for the use of Programme Making and Special Events spectrum.		
Mandatory Elements (1-9)		
1	Frequency band (or bands)	See Annex A
2	Radio service	Programme Making and Special Events
3	Application	Programme Making and Special Events Licence
4	Channelling modulation	See Annex A
5	Transmit power limit	See Annex A.
6	Channel occupation rules	N/A.
7	Duplex type/separation	See Annex A
8	Licensing Regime	See Annex A
9	Additional essential requirements	See Annex A
Informative Elements (10-13)		
10	Frequency planning assumptions	EN 300 422, EN 300 086, EN 300 113, EN 300 454, EN 301 489, EN 302 064
11	References	EN 300 422, EN 300 086, EN 300 113, EN 300 454, EN 301 489, EN 302 064
12	Remarks	Licensing may be restricted to geographical and technical restrictions
13	Notification Number	2000/703/UK

5. Additional performance parameters (informative)

5.1 None specified.

6. Contact Details

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A1. Annex A

Annex A1: Minimum Requirements for Radiomicrophones

Annex A1 - Minimum Requirements for Radiomicrophones				
Wireless telegraphy apparatus designed or adapted for telephony, for the purpose of aids to project personal voice or music.				
Frequencies or Frequency Band Edges (MHz)	Maximum Radiated Level ¹	Typical Channel Bandwidth	Notes	Reference Standard ²
175.150 to 175.350 175.425 to 175.625 176.300 to 177.100 184.500 to 185.100 191.600 to 193.100 199.600 to 201.100 207.600 to 210.100	10 mW ERP	200 kHz		EN 300 422
470.000 to 703.000	10 mW ERP	200 kHz		
703.000 to 790.000	10 mW ERP	200 kHz	700 MHz band subject to clearance	
823.000 to 832.000	In accordance with EU Decision 2014/641/EU ³	In accordance with EU Decision 2014/641/EU		
961.000 to 1015.000	10 mW ERP	200 kHz	Maximum channel bandwidth is 200 kHz	
1045.000 to 1075.000	10 mW ERP	200 kHz	Maximum channel bandwidth is 200 kHz	
1105.000 to 1154.000	10 mW ERP	200 kHz	Maximum channel bandwidth is 200 kHz	
1785.000 to 1805.000	In accordance with EU Decision 2014/641/EU	In accordance with EU Decision 2014/641/EU		

¹ Radiated level may be increased to 50 mW ERP for transmitting equipment designed to be worn in close contact with the body.

² Assumed to be fulfilled in frequency planning and defining the equipment type – compliance with which is not mandatory.

³ EU Decision of 1 September 2014 on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events in the Union (2014/641/EU).

Annex A2: Minimum Requirements for Talkback

Annex A2 - Minimum Requirements for Talkback				
Wireless telegraphy apparatus designed or adapted for telephony, for the purpose of communicating the instructions of the director instantly to all those concerned in making the programme; these include presenters, interviewers, cameramen, sound operators, lighting operators and engineers.				
Frequencies or Frequency Band Edges (MHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard ⁴
47.550 to 48.800 52.000 to 52.950	25 W ERP	12.5 kHz	For on-site use at temporary locations. Duplex Base Tx – 52 MHz band. Duplex Portable Tx – 48 MHz band.	EN 300 086
67.7500 to 67.8375	25 W ERP	12.5 kHz	For on-site use at temporary locations. Base Tx. Duplex with 75 MHz band.	
69.15625 to 69.18125	25 W ERP	12.5 kHz	For on-site use at temporary locations. Base Tx. Duplex with 82 MHz band.	
74.68125 to 74.71875	25 W ERP	12.5 kHz	Simplex.	
75.26250 to 75.30000	5 W ERP	12.5 kHz	For on-site use at temporary locations. Portable Tx. Duplex with 67 MHz band.	
76.80625 to 76.84375	25 W ERP	12.5 kHz	For wide-area use. Mobile Tx. Duplex with 86 MHz band.	
78.18375 to 78.25875	25 W ERP	12.5 kHz	For wide-area or on-site use at temporary locations. Simplex.	
82.65625 to 86.68125	25 W ERP	12.5 kHz	For on-site use at temporary locations. Portable Tx. Duplex with 69 MHz band.	
86.6750	25 W ERP	12.5 kHz		
86.80625 to 86.84375	25 W ERP	12.5 kHz	For wide-area use. Base Tx. Duplex with 76 MHz band.	
139.550, 139.575	10 W ERP	12.5 kHz		

...continued

⁴ Assumed to be fulfilled in frequency planning and defining the equipment type – compliance with which is not mandatory.

Annex A2: Minimum Requirements for Talkback (continued)

Annex A2 - Minimum Requirements for Talkback (continued)				
Wireless telegraphy apparatus designed or adapted for telephony, for the purpose of communicating the instructions of the director instantly to all those concerned in making the programme; these include presenters, interviewers, cameramen, sound operators, lighting operators and engineers.				
Frequencies or Frequency Band Edges (MHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard ⁵
139.64375 to 139.66875	10 W ERP	12.5 kHz		EN 300 086
140.98750 to 141.48750	25 W ERP	12.5 kHz	For wide-area use. Simplex and Duplex Base Tx. Duplex with 212 MHz band.	
148.575, 148.725	10 W ERP	25.0 kHz		
181.69375 to 181.80625	25 W ERP	12.5 kHz		
189.69375 to 189.80625	25 W ERP	12.5 kHz		
425.3125 to 425.5625	25 W ERP	50.0 kHz		
427.7625 to 428.0125 442.2625 to 442.5125	25 W ERP	12.5 kHz	For wide-area or on-site use at temporary locations. Simplex and Duplex.	
446.42500 to 447.51250	5 W ERP	12.5 kHz	For on-site use at temporary locations. Base Tx. Duplex with 467 MHz band.	
454.98750 to 455.47500	5 W ERP	12.5 kHz	For on-site use at temporary locations. Base Tx. Duplex with 468 MHz band.	
457.25000 to 457.47500	5 W ERP	12.5 kHz	For on-site use at temporary locations. Base Tx. Duplex with 467 MHz band.	
461.23125 to 461.25625	5 W ERP	12.5 kHz	For on-site use at temporary locations. Base Tx. Duplex with 468 MHz band.	
462.75000 to 463.0000	1 W ERP	12.5 kHz	For indoor use at permanent locations. Base Tx. Duplex with 469 MHz band.	
467.2625 to 469.8750	1 W ERP	12.5 kHz	For on-site use at temporary locations. Portable Tx. Duplex with 455, 457 and 462 MHz bands. For indoor use at permanent locations. Portable Tx. Duplex with 462 MHz band.	
470.000 to 606.000 614.000 to 694.000	1 W ERP	25 kHz	For indoor use at permanent locations.	
694.000 to 790.000	1 W ERP	25 kHz	For indoor use at permanent locations.	

⁵ Assumed to be fulfilled in frequency planning and defining the equipment type – compliance with which is not mandatory.

Annex A3: Minimum Requirements for Audio Links and Audio Distribution Systems (ADS)

Annex A3 - Minimum Requirements for Audio Links and Audio Distribution Systems (ADS)				
Wireless telegraphy apparatus designed or adapted for telephony, for the purpose of carrying broadcast-quality monophonic or stereophonic music and speech signals or for carrying multiple communications-quality talkback signals.				
Frequencies or Frequency Band Edges (MHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard ⁶
48.425, 48.475, 48.525, 52.875, 52.925	10 W ERP	50 kHz	For temporary and permanent point-to-point links.	EN 300 454
48.300, 52.750	10 W ERP	200 kHz	For temporary and permanent point-to-point links.	
53.750 to 55.750 60.750 to 62.750	5 W ERP	75 kHz	For portable links at temporary locations.	
60.750 to 62.750	1 W ERP	200 kHz	For Audio Distribution Systems.	
191.700, 199.700, 199.900, 200.100	1 W ERP	200 kHz	For portable links at temporary locations. Vertical polarisation only.	
425.3375, 425.3875, 425.4375, 425.4875, 425.5375	25 W ERP	50 kHz	For temporary point-to-point links.	
446.5125 to 447.5125 454.9875 to 455.4750	25 W ERP	50 kHz	For temporary point-to-point links.	
467.2625 to 469.875	25 W ERP	50 kHz	For portable and temporary point-to-point links.	
470.000 to 606.000	5 W ERP	200 kHz	For temporary point-to-point links.	
606.700, 607.000	10 W ERP	200 kHz	For temporary point-to-point links.	
614.000 to 694.000	5 W ERP	200 kHz	For temporary point-to-point links.	
694.000 to 790.000	5 W ERP	200 kHz	For temporary point-to-point links.	
1517.000 to 1525.000	20 dBW ERP	500 kHz	For temporary and permanent point-to-point links.	

⁶ Assumed to be fulfilled in frequency planning and defining the equipment type – compliance with which is not mandatory.

Annex A4: Minimum Requirements for Wireless Cameras and Video Links

Annex A4 - Minimum Requirements for Wireless Cameras and Video Links				
Wireless telegraphy apparatus designed or adapted for carrying broadcast-quality video together with music and/or speech signals.				
Frequencies or Frequency Band Edges (GHz)	Maximum Radiated Level	Typical Channel Bandwidth	Notes	Reference Standard ⁷
2.010 to 2.110	20 dBW ERP	10 MHz		EN 302 064
2.200 to 2.290	20 dBW ERP	10 MHz	Typically for low-power wireless cameras.	
2.290 to 2.300	0 dBW ERP	10 MHz	For low-power wireless cameras only.	
2.390 to 2.500	20 dBW ERP	20 MHz		
3.400 to 3.410	13 dBW ERP	10 MHz		
5.472 to 5.588 5.6825 to 5.7025 5.7050 to 5.7250 5.7325 to 5.7525 5.770 to 5.790 5.795 to 5.815 5.850 to 5.925	40 dBW ERP	20 MHz		
7.110 to 7.250	40 dBW ERP	10 MHz		
7.300 to 7.410	40 dBW ERP	10 MHz		
7.410 to 7.425	40 dBW ERP	10 MHz		
8.460 to 8.500	40 dBW ERP	20 MHz		
10.300 to 10.360	40 dBW ERP	20 MHz		
12.200 to 12.475 24.250 to 24.500	40 dBW ERP	25 MHz		
48.000 to 48.400	30 dBW ERP	100 MHz		

⁷ Assumed to be fulfilled in frequency planning and defining the equipment type – compliance with which is not mandatory.

Annex A5: Minimum Requirements for Telemetry and Telecommand Links

Annex A5 - Minimum Requirements for Telemetry and Telecommand Links				
Wireless telegraphy apparatus designed or adapted for the remote control of cameras and other programme making equipment and for signalling.				
Frequencies or Frequency Band (MHz)	Maximum Radiated level	Typical Channel Bandwidth	Notes	Reference Standard ⁸
181.74375, 181.76875, 181.79375, 189.70625, 189.78125, 189.79375	10 W ERP	12.5 kHz		EN 300 113
462.76875, 462.85625, 462.93125, 462.98125	1 W ERP	12.5 kHz		
470.000 to 478.000	1 W ERP	25 kHz		

⁸ Assumed to be fulfilled in frequency planning and defining the equipment type – compliance with which is not mandatory