
IR 2030 – UK Interface Requirements 2030

Licence Exempt Short Range Devices

Contents

Section

1. Forward	3
2. Minimum equipment requirements for operation within the UK	4
3. Definitions	5
4. Table: Minimum requirements for the use of Short Range Devices	9
5. Contact details	78
6. References	79
7. Document history	83

1. Forward

- 1.1 The Radio Equipment Regulations 2017 (SI 2017/1206) set out the obligations on economic operators for placing radio equipment on the market. This UK Interface Requirement contains the requirements for the licensing and use of Short Range Devices in the specified frequency bands.
- 1.2 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.
- 1.3 The requirements given in the main body of this UK Radio Interface Requirement will apply to the licensing of Short Range Devices.
- 1.4 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 public wireless networks.
- 1.5 All UK Radio Interface Requirements will be published and will be made available free of charge from the Ofcom website.
- 1.6 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given at the back of this document.

2. Minimum equipment requirements for operation within the UK

- 2.1 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.
- 2.2 This UK Radio Interface Requirement gives a high-level description of how the spectrum in the UK is used for Short Range Devices. It does not prescribe technical interpretation of the 'essential requirements' of the Radio Equipment Regulations 2017 .
- 2.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licensing or licence exemption of Short Range Devices in the UK. The table at Section 6 contains the relevant equipment parameters. These together with the 'essential requirements' detailed in Regulation 6 of Radio Equipment Regulations 2017 constitute the minimum equipment requirements for short range devices within the UK.
- 2.4 The technical parameters specified in the UK radio Interface Requirement are applied to achieve the desired level of compatibility within Short Range Devices and with radiocommunications services, whilst promoting enterprise, innovation and competition.
- 2.5 This UK Radio Interface requirement provides the necessary technical information which facilitates access to Short Range Devices spectrum by making clear the assumptions that are made in planning the use of Short Range Devices in the UK. It is not the intention of this UK Radio Interface Requirement to duplicate or impose any additional 'essential requirements' of the Radio Equipment Regulations 2017 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.

3. Definitions

The following definitions apply in relation to the specified Radio Interface Requirements:

Number	Defined term	Definition
IR2030/1	Non-Specific Short-Range Device	The non-specific short-range device category covers all kinds of radio devices, regardless of the application or the purpose, which fulfil the technical conditions as specified for a given frequency band. Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications.
IR2030/2	Industrial / Commercial Telemetry and Telecommand	Used for the control of remote equipment or transmission of data from that equipment.
IR2030/3	Databuoy Telemetry	Databuoy Telemetry apparatus is equipment designed or adapted for telemetry in a maritime environment.
IR2030/4	Active Medical Implants and associated peripherals	The active medical implants device category covers the radio part of active implantable medical devices that are intended to be totally or partially introduced, surgically or medically, into the human body or that of an animal, and where applicable, their peripherals.
IR2030/6	Medical Body Area Network Systems	Medical Body Area Network Systems (MBANSs), used for medical data acquisition, are intended to be used in healthcare facilities and patients' homes. They are low power radio systems used for the transmission of non-voice data to and from medical devices for the purposes of monitoring, diagnosing and treating patients as prescribed by duly authorised healthcare professionals and are defined in the context of medical applications only.
	Medical and Biological Applications	Covers the transmission of information used by medical and biological applications on humans or animals. It can be used for the tracking of animals including birds where applicable.
	Medical data acquisition devices	Covers the transmission of nonvoice data to and from non-implantable medical devices for the purpose of monitoring, diagnosing and treating patients in healthcare facilities or patient's home, as prescribed by duly authorised healthcare professional.
IR2030/7	Wideband Data transmission Devices (WBDTS)	The wideband data transmission device category covers radio devices that use wideband modulation techniques to access the spectrum. Typical uses include wireless access systems such as radio local area networks (WAS/RLANs) or wideband short-range devices in data networks.
IR2030/8	Wireless Access Systems (WAS)	Equipment, including Radio Local Area Networks, designed for high speed data communication.
IR2030/9	Short Range Indoor Data Links	Equipment designed for data communication for indoor use.

IR2030/10	Railway Applications	Equipment designed or adapted for the purpose of railway vehicle identification or for the provision of short range data links between the track and railway vehicles.
IR2030/12	Radio determination	The radio determination device category covers radio devices that are used for determining the position, velocity and/or other characteristics of an object, or for obtaining information relating to these parameters. Radiodetermination equipment typically conducts measurements to obtain such characteristics. Any kind of point-to-point or point-to-multipoint radio communications is outside of this definition.
IR2030/13	Radio Frequency Identification (RFID)	The radio frequency identification (RFID) device category covers tag/interrogator based radio communications systems, consisting of radio devices (tags) attached to animate or inanimate items and of transmitter/receiver units (interrogators) which activate the tags and receive data back. Typical uses include the tracking and identification of items, such as for electronic article surveillance (EAS), and collecting and transmitting data relating to the items to which tags are attached, which may be either battery-less, battery assisted or battery powered. The responses from a tag are validated by its interrogator and passed to its host system.
IR2030/14	Transport and Traffic Telematics (TTT)	The transport and traffic telematics (TTT) device category covers radio devices that are used in the fields of transport (road, rail, water or air, depending on the relevant technical restrictions), traffic management, navigation, mobility management and in intelligent transport systems (ITS). Typical applications are used for different modes of transport, communication between vehicles (e.g. car to car), between vehicles and fixed locations (e.g. car to infrastructure) as well as communication from and to users.
R2030/15	Inductive	The inductive category covers radio applications intended to use magnetic fields with inductive loop systems for near field communications. Typical uses include devices for car immobilisation, animal identification, alarm systems, cable detection, waste management, personal identification, wireless voice links, access control, proximity sensors, anti-theft systems, including RF anti-theft induction systems, data transfer to hand-held devices, automatic article identification, wireless control systems and automatic road tolling.
IR2030/16	Metal detectors	That part of an induction system designed or adapted to produce:- (a) to produce a controlled magnetic field; and (b) a predetermined recognisable signal when operating within that magnetic field
IR2030/17	Low Duty Cycle / High Reliability Devices	The low duty cycle/high reliability device category covers radio devices that rely on low overall spectrum utilisation and low duty cycle spectrum access rules to ensure highly reliable spectrum access and transmissions in shared bands. Typical uses include alarm systems

IR 2030 Licence Exempt Short Range Devices (April 2021)

		that use radio communication for indicating an alert condition at a distant location and social alarms systems that allow reliable communication for a person in distress.
IR2030/18	Social Alarm Devices	Social alarm devices are radio communications systems that allow reliable communication for a person in distress in a confined area to initiate a call for assistance. Typical uses of social alarm are to assist elderly or disabled people.
IR2030/20	Alarms	An alarm system is a device which uses radio communication support for indicating an alert to a system or a person, as a main functionality, at a distant location when a problem or a specific situation occurs. Radio alarms include social alarms and alarms for security and safety.
IR2030/23	Model Control	Model control devices are a specific kind of telecommand and telemetry radio equipment that is used to remotely control the movement of models (principally miniature representations of vehicles) in the air, on land or over or under the water surface.
IR2030/24	Radio Microphones	Equipment designed or adapted for telephony, for the purpose of projecting the user's voice or music.
IR2030/25	Assistive Listening Device (ALD)	The assistive listening device (ALD) category covers radio communications systems that allow persons suffering from hearing disability to increase their listening capability. Typical systems include one or more radio transmitters and one or more radio receivers.
IR2030/26	Wireless Audio Applications (WAS)	Wireless audio and multimedia streaming systems used for audio/video transmissions and audio/video synchronisation signals including cordless loudspeakers and cordless headphones.
IR2030/27	Wireless Video Cameras - Non Broadcasting	Apparatus designed or adapted for Television. Where required, associated audio may also be used within the specified frequency band.
IR2030/28	Video Distribution for Private Use	Apparatus designed or adapted for Television. Where required, associated audio may also be used within the specified frequency band.
IR2030/29	Tank Level Probing Radar	Tank Level Probing Radar (TLPR) is a specific type of radiodetermination application, which is used for tank level measurements and is installed in metallic or reinforced concrete tanks, or similar structures made of material with comparable attenuation characteristics. The purpose of the tank is to contain a substance.
IR2030/31	Networked SRDs	A short-range device in a data network, which potentially also covers wider areas; networked short-range devices are under the control of network access points.
IR2030/32	Metering device	The metering device category covers radio devices that are part of bidirectional radio communications systems which allow remote monitoring, measuring and transmission of data in smart grid infrastructures, such as electricity, gas and water.

IR2030/33	High Duty / Cycle Continuous Transmissions	The high duty cycle/continuous transmission device category covers radio devices that rely on low latency and high duty cycle transmissions. Typical uses are for personal wireless audio and multimedia streaming systems, mobile phones, automotive or home entertainment system, wireless microphones, cordless loudspeakers, cordless headphones, radio devices carried on a person, assistive listening devices, in-ear monitoring, wireless microphones for use at concerts or other stage productions, and low power analogue FM transmitters.
IR2030/34	PMR446	PMR446 equipment is hand portable (no base station or repeater use) and uses integral antennas only in order to maximise sharing and minimise interference. PMR 446 equipment operates in short range peer-to-peer mode and shall be used neither as a part of infrastructure network nor as a repeater.

“**duty cycle**” means the ratio, expressed as a percentage, of $\Sigma(T_{on})/(T_{obs})$ where T_{on} is the “on” time of a single transmitter device and T_{obs} is the observation period. T_{on} is measured in an observation frequency band (F_{obs}). Unless otherwise specified in the technical provisions, T_{obs} is a continuous one hour period and F_{obs} is the applicable frequency band.

4. Table: Minimum requirements for the use of Short Range Devices

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/50	Non-specific short-range devices	This set of usage conditions is only available for person detection and collision avoidance devices. Airborne use is not permitted.	442.2 - 450.0 kHz		7 dB μ A/m at 10 m		Channel spacing \geq 150 Hz		
IR2030/1/39	Non-specific short-range devices	Devices for detection of buried victims and valuable items. Airborne use is not permitted.	456.9 - 457.1 kHz		7 dB μ A/m at 10 m				EN 300 718
IR2030/1/1	Non-specific short-range devices	Equipment may be used airborne.	6765 - 6795 kHz		42 dB μ A/m at 10 m				EN 300 330
IR2030/1/2	Non-specific short-range devices	Equipment may be used airborne.	13.553 – 13.567 MHz		42 dB μ A/m at 10 m				EN 300 330
IR2030/1/3	Non-specific short-range devices	Equipment may be used airborne.	26.957 - 27.283 MHz		10 mW e.r.p. 42 dB μ A/m at 10 m				EN 300 220 EN 300 330

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/40	Non-specific short-range devices	Equipment may be used airborne.	26.990 – 27.000 MHz 27.040 – 27.050 MHz 27.090 – 27.100 MHz 27.140 – 27.150 MHz 27.190 – 27.200 MHz		100 mW e.r.p.			Duty Cycle limit ≤ 0.1%	EN 300 220 Model Control limits set out at IR2030/23/1
IR2030/1/4	Non-specific short-range devices	Equipment may be used airborne.	40.66 - 40.70 MHz		10 mW e.r.p.				EN 300 220
IR2030/1/5	Non-specific short-range devices	Airborne use is not permitted.	49.82 - 49.98 MHz		10 mW e.r.p.				EN 300 220
IR2030/1/26	Non-specific short-range devices		138.20 – 138.45 MHz		10 mW e.r.p.			Duty Cycle limit < 1.0 %	EN 300 220
IR2030/1/41	Non-specific short-range devices	Equipment may be used airborne.	169.4 - 169.475 MHz		500 mW e.r.p.		≤ 50 kHz	Duty Cycle limit ≤ 1.0%	EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/42	Non-specific short-range devices	Equipment may be used airborne.	169.4 - 169.4875 MHz		10 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of 0.1% may be used	EN 300 220
IR2030/1/43	Non-specific short-range devices	Equipment may be used airborne.	169.4875 - 169.5875 MHz		10 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of 0.001% may be used. Between 00:00h and 06:00h local time a duty cycle limit of 0.1% may be used.	EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/44	Non-specific short-range devices	Equipment may be used airborne.	169.5875 - 169.8125 MHz		10 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of $\leq 0.1\%$ may be used.	EN 300 220
IR2030/1/6	Non-specific short-range devices	Music is only permitted when using a digitised signal. Airborne use is not permitted.	173.20 - 173.35 MHz		1 mW e.r.p.		Channel Spacing 12.5 kHz Channel numbers 1 and 3 to 11 inclusive; are available with a channel centre frequency of 173.2 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/1/7	Non-specific short-range devices	Music is only permitted when using a digitised signal. Airborne use is not permitted.	173.20 - 173.35 MHz		1 mW e.r.p.		Channel Spacing 25 kHz Channel numbers 2 to 5 inclusive are available with a channel centre frequency of 173.2 MHz plus (Channel Spacing times channel number).		EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/8	Non-specific short-range devices	Telemetry and telecommand may only be used in conjunction with telephony with a non-locking push to talk key or voice operated carrier. Airborne use is not permitted.	173.5875, 173.6 MHz		10 mW e.r.p.		Channel Spacing 12.5 kHz		EN 300 220
IR2030/1/9	Non-specific short-range devices	New equipment cannot be taken into service. However existing equipment brought into service prior to 31 December 2007 may continue to operate within the band. Music is only permitted when using a digitised signal.	417.9 - 418.1 MHz		250 mW e.r.p.				EN 300 220
IR2030/1/10	Non-specific short-range devices	Equipment may be used airborne.	433.05 - 434.79 MHz		10 mW e.r.p.			Duty cycle limit ≤ 10%	EN 300 220
IR2030/1/11	Non-specific short-range devices	Equipment may be used airborne.	433.05 - 434.79 MHz		1 mW e.r.p.				EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Analogue audio applications other than voice / speech are excluded. Airborne use is not permitted.							
IR2030/1/12	Non-specific short-range devices	Equipment may be used airborne. Voice applications are allowed with advanced mitigation techniques. Other audio and video applications are excluded.	434.04 - 434.79 MHz		10 mW e.r.p.		Channel Spacing ≤ 25 kHz		EN 300 220
IR2030/1/51	Non-specific short-range devices	Voice applications are allowed with advanced mitigation techniques. Other audio and video applications are excluded.	434.04 - 434.79 MHz		10 mW e.r.p.		Duty cycle limit: 100 % subject to channel spacing up to 25 kHz.		
IR2030/1/52	Non-specific short-range devices	Airborne use is not permitted.	862 - 863 MHz		25 mW e.r.p.	Duty cycle limit: ≤ 0.1%.	Bandwidth: ≤ 350 kHz.		

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/13	Non-specific short-range devices	Equipment may be used airborne. Analogue audio applications other than voice are excluded. Analogue video applications are excluded.	863.0 - 865 MHz		25 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of $\leq 0.1\%$ may be used.	EN 300 220
IR2030/1/14	Non-specific short-range devices	Equipment may be used airborne. Analogue audio applications other than voice are excluded. Analogue video applications are excluded.	865 - 868 MHz		25 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of $\leq 1\%$ may be used.	EN 300 220
IR2030/1/46	Non-specific short-range devices	This set of usage conditions is only available for devices used in data networks. Airborne use is not permitted.	865.6 - 865.8 MHz 866.2 - 866.4 MHz 866.8 - 867.0 MHz		500 mW e.i.r.p.	Adaptive Power Control (APC) or other mitigation techniques providing at least the equivalent level of spectrum	Maximum bandwidth: ≤ 200 kHz	Techniques to access spectrum and mitigate interference providing at least equivalent performance to techniques described in designated standards specified in the	EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
			867.4 - 867.6 MHz			compatibility as APC must be used.		notice of publication must be used. Maximum Duty cycle for data network access points: ≤ 10 % Maximum Duty cycle for other data network devices: ≤ 2.5	
IR2030/1/15	Non-specific short-range devices	Equipment may be used airborne. Analogue audio applications other than voice are excluded. Analogue video applications are excluded.	868 – 869.7 MHz		25 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of 0.1% may be used.	EN 300 220
IR2030/1/16	Non-specific short-range devices	Equipment may be used airborne.	868.0 - 868.6 MHz		25 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
								Alternatively, a duty cycle limit of $\leq 1\%$ may be used.	
IR2030/1/17	Non-specific short-range devices	Equipment may be used airborne.	868.7 - 869.2 MHz		25 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of $\leq 0.1\%$ may be used.	EN 300 220
IR2030/1/18	Non-specific short-range devices	Equipment may be used airborne.	869.30 - 869.40 MHz		10 mW e.r.p.		Channel bandwidth ≤ 25 kHz	Duty cycle limit $\leq 10\%$	EN 300 220
IR2030/1/19	Non-specific short-range devices	Equipment may be used airborne.	869.40 - 869.65 MHz		500 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of $\leq 10\%$ may be used.	EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/20	Non-specific short-range devices	Equipment may be used airborne. Analogue audio applications other than voice are excluded. Analogue video applications are excluded.	869.7 - 870 MHz		25 mW e.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of $\leq 1\%$ may be used.	EN 300 220
IR2030/1/21	Non-specific short-range devices	Equipment may be used airborne. Analogue audio applications other than voice/speech are excluded.	869.7 - 870 MHz		5 mW e.r.p.				EN 300 220
IR2030/1/29	Non-specific short-range devices	Airborne use is not permitted.	870 – 874.4 MHz		25 mW e.r.p.		≤ 200 kHz	Duty Cycle limit $\leq 0.1\%$	EN 300 220
IR2030/1/30	Non-specific short-range devices	Airborne use is not permitted.	873 - 876 MHz		25 mW e.r.p.		≤ 200 kHz	Duty Cycle limit $\leq 0.01\%$ and limited to a maximum transmit on-time of 5ms/1s	EN 300 220
IR2030/1/31	Non-specific short-range devices	Airborne use is not permitted.	870 – 874.4 MHz		25 mW e.r.p.		≤ 600 kHz	Duty Cycle limit $\leq 1\%$	EN 300 220
IR 2030/1/47	Non-specific short- range devices	This set of usage conditions is only available for data	870 - 874.4 MHz		500 mW e.r.p.	Adaptive Power Control (APC) required,	Bandwidth: ≤ 200 kHz	Duty cycle: $\leq 10\%$ for network access points, \leq	

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		networks. All devices within the data network shall be under the control of network access points Airborne use is not permitted.				alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility.		2.5 % otherwise. Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in relevant designated standards specified in the notice of publication must be used.	
IR2030/1/32	Non-specific short-range devices	Airborne use is not permitted.	873 - 875.8 MHz		25 mW e.r.p.		≤ 600 kHz	Duty Cycle limit ≤ 0.01% and limited to a maximum transmit on time of 5ms/1s	EN 300 220
IR2030/1/33	Non-specific short-range devices	Airborne use is not permitted.	915 - 918 MHz		25 mW e.r.p.		≤ 200 kHz	Duty Cycle limit ≤ 0.1%	EN 300 220
IR2030/1/34	Non-specific short-range devices	Airborne use is not permitted.	918 - 921 MHz		25 mW e.r.p.		≤ 200 kHz	Duty Cycle limit ≤ 0.01% and limited to a maximum transmit on-time of 5ms/1s	EN 300 220
IR2030/1/35	Non-specific short-range devices	Airborne use is not permitted.	915.2 - 918 MHz		25 mW e.r.p.		≤ 600 kHz	Duty Cycle limit ≤ 1%	EN 300 220
IR2030/1/36	Non-specific short-range devices	Airborne use is not permitted.	918 - 920.8 MHz		25 mW e.r.p.		≤ 600 kHz	Duty Cycle limit ≤ 0.01% and limited to a maximum transmit on-time of 5ms/1s	EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/37	Non-specific short-range devices	Airborne use is not permitted.	916.1 - 916.5 MHz 917.3 - 917.7 MHz		100 mW e.r.p.			Duty Cycle limit ≤ 1%	EN 300 220
IR2030/1/49	Non-specific short- range devices	This set of usage conditions is only available for short-range devices in data networks. All devices within the data network shall be under the control of network access points. Airborne use is not permitted.	917.3 - 918.9 MHz		500 mW e.r.p.	Transmissions only permitted within the frequency ranges 917.3 - 917.7 MHz, 918.5 - 918.9 MHz Adaptive Power Control (APC) required, alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility	Bandwidth: ≤ 200 kHz Duty cycle: ≤ 10 % for network access points Duty cycle: ≤ 2.5 % otherwise	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	
IR2030/1/48	Non-specific short- range devices	This set of usage conditions is only available for data networks. All devices within the data network shall be under the control of network access points.	917.4 - 919.4 MHz		25 mW e.r.p.		Bandwidth: ≤ 600 kHz	Duty cycle: ≤ 1 % Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Airborne use is not permitted.							
IR2030/1/38	Non-specific short-range devices	Airborne use is not permitted.	918.5 - 918.9 MHz 919.7 - 920.1 MHz		100 mW e.i.r.p.			Duty Cycle limit $\leq 0.01\%$ and limited to a maximum transmit on-time of 5ms/1s	EN 300 220
IR2030/1/22	Non-specific short-range devices	Equipment may be used airborne.	2400 - 2483.5 MHz		10 mW e.i.r.p.				EN 300 440
IR2030/1/23	Non-specific short-range devices	Equipment may be used airborne.	5725 - 5875 MHz		25 mW e.i.r.p.				EN 300 440
IR2030/1/24	Non-specific short-range devices	Equipment may be used airborne.	24.150 - 24.250 GHz		100 mW e.i.r.p.				EN 300 440
IR2030/1/45	Non-specific short-range devices	Equipment may be used airborne.	57 - 64 GHz		100 mW e.i.r.p. 13 dBm/MHz e.i.r.p. 10 dBm transmitter power				EN 305 550
IR2030/1/25	Non-specific short-range devices	Equipment may be used airborne.	61.0 - 61.5 GHz		100 mW e.i.r.p.				EN 305 550
IR2030/1/27	Non-specific short-range devices	Equipment may be used airborne.	122 - 123 GHz		100 mW e.i.r.p.				EN 305 550

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/1/28	Non-specific short-range devices	Equipment may be used airborne.	244 - 246 GHz		100 mW e.i.r.p.				EN 305 550
IR2030/2/1	Industrial/ Commercial Telemetry and Tele-command	Use is limited to remote meter reading. Equipment may be used airborne.	169.4 – 169.475 MHz		500 mW e.r.p.		Channel Bandwidth ≤ 50kHz	Duty cycle limit 10%	EN 300 220
IR2030/2/2	Industrial/ Commercial Telemetry and Tele-command	Use is limited to asset tracking and tracing. Equipment may be used airborne.	169.4 – 169.475 MHz		500 mW e.r.p.		Channel Bandwidth ≤ 50kHz	Duty cycle limit ≤ 1%	EN 300 220
IR2030/2/3	Industrial/ Commercial Telemetry and Tele-command	Music and speech are only permitted when using a digitised signal. Airborne use is not permitted.	173.2 - 173.35 MHz		10 mW e.r.p.		Channel Spacing 12.5 kHz. Channel numbers 1 and 3 to 11 inclusive; are available with a channel centre frequency of 173.2 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/2/4	Industrial/ Commercial Telemetry and Tele-command	Music and speech are only permitted when using a digitised signal.	173.2 - 173.35 MHz		10 mW e.r.p.		Channel Spacing 25 kHz.		EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Airborne use is not permitted.					Channel numbers 1 to 5 inclusive are available with a channel centre frequency of 173.2 MHz plus (Channel Spacing times channel number).		
IR2030/2/5	Industrial/ Commercial Telemetry and Tele-command	Music and speech are only permitted when using a digitised signal. Airborne use is not permitted.	173.2 - 173.35 MHz		10 mW e.r.p.				EN 300 220
IR2030/2/6	Industrial/ Commercial Telemetry and Tele-command	Music and speech are only permitted when using a digitised signal. Airborne use is not permitted.	458.5 - 458.95 MHz		500 mW e.r.p.		Channel Spacing 12.5 kHz. Channel numbers 1 to 25 inclusive and 28 to 31 inclusive and 33 to 35 inclusive are available with a channel centre frequency of 458.5 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/2/7	Industrial/	Music and speech are only permitted	458.5 - 458.95 MHz		500 mW e.r.p.		Channel Spacing 25 kHz.		EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
	Commercial Telemetry and Tele-command	when using a digitised signal. Airborne use is not permitted.					Channel numbers 1 to 12 inclusive and 14 to 15 inclusive and 17 are available with a channel centre frequency of 458.5 MHz plus (Channel Spacing times channel number).		
IR2030/2/8	Industrial/ Commercial Telemetry and Tele-command	Music and speech are only permitted when using a digitised signal. Airborne use is not permitted.	2445 - 2455 MHz		100 mW e.i.r.p.				EN 300 440
IR2030/3/1	Databuoy Telemetry	Airborne use is not permitted.	34.5 - 34.995 MHz		250 mW e.r.p.		Channel Spacing 25 kHz.		EN 300 220
IR2030/3/2	Databuoy Telemetry	Airborne use is not permitted.	35.225 - 35.5 MHz		250 mW e.r.p.		Channel Spacing 25 kHz.		EN 300 220
IR2030/4/1	Active Medical Implants and associated peripherals	Equipment may be used airborne.	Article I. – 315 kHz		30 dBµA/m at 10m			Duty cycle limit ≤ 10 %.	EN 302 195
IR2030/4/2	Active Medical Implants and	Airborne use is not permitted.	Article II. 00 kHz– 30 MHz		9 dBµA/m at 10m				EN 300 330

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
	associated peripherals								
IR2030/4/8	Active Medical Implants and associated peripherals	Equipment may be used airborne. Animal Implantable Devices.	15 - 600 kHz		-5 dB μ A/m at 10m			Duty cycle limit: 10%	EN 302 536
IR2030/4/9	Active Medical Implants and associated peripherals	Equipment may be used airborne. Animal Implantable Devices.	12.5 - 20 MHz		-7 dB μ A/m at 10m in a 10 kHz bandwidth			Duty cycle limit: 10%	EN 300 330
IR2030/4/3	Active Medical Implants and associated peripherals	Equipment may be used airborne.	30 - 37.5 MHz		1 mW e.r.p.			Duty cycle limit \leq 10%.	EN 302 510
IR2030/4/4	Active Medical Implants and associated peripherals	Equipment may be used airborne.	401 - 402 MHz		25 μ W e.r.p.		Channel spacing 25 kHz. Individual transmitters may combine adjacent channels for increased bandwidth up to 100 kHz.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in relevant designated standards specified in the notice of publication must be used.	EN 302 537

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
								Alternatively, a duty cycle limit of 0.1% may be used.	
IR2030/4/5	Active Medical Implants and associated peripherals	This category covers the radio part of active implantable medical devices. Equipment may be used airborne.	402 – 405 MHz		25 µW e.r.p.		Channel spacing 25 kHz. Individual transmitters may combine adjacent channels for increased bandwidth.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in relevant designated standards specified in the notice of publication must be used.	EN 301 839
IR2030/4/6	Active Medical Implants and associated peripherals	Equipment may be used airborne.	405 – 406 MHz		25 µW e.r.p.		Channel spacing 25 kHz. Individual transmitters may combine adjacent channels for increased bandwidth up to 100 kHz.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in relevant designated standards specified in the notice of publication must be used. Alternatively, a duty cycle limit of 0.1% may be used.	EN 302 537
IR2030/4/7	Active Medical Implants and associated peripherals	Equipment may be used airborne. This set of usage conditions is only available to active	2483.5 - 2500 MHz		10 mW e.r.p.		Channel spacing 1 MHz. The whole frequency band may also be used dynamically as a single	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in	EN 301 559

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		<p>implantable medical devices.</p> <p>Peripheral master units are for indoor use only.</p>					channel for high-speed data transmissions.	<p>relevant designated standards specified in the notice of publication must be used.</p> <p>Alternatively, a duty cycle limit of 10 % may be used.</p>	
IR2030/6/1	Medical and Biological Applications	<p>These bands may also be used for the tracking of birds.</p> <p>Equipment affixed to a bird may be used airborne.</p>	173.7 – 174 MHz		10 mW e.r.p.		<p>Channel Spacing 12.5 kHz.</p> <p>Channel numbers 1 to 24 inclusive are available with channel centre frequency of 173.7 MHz plus (Channel Spacing times channel number).</p>		EN 300 220
IR2030/6/2	Medical and Biological Applications	<p>These bands may also be used for the tracking of birds.</p> <p>Equipment affixed to a bird may be used airborne.</p>	173.7 – 174 MHz		10 mW e.r.p.		<p>Channel Spacing 25 kHz.</p> <p>Channel numbers 1 to 11 inclusive are available with channel centre frequency of 173.7 MHz plus (Channel Spacing times channel number).</p>		EN 300 220
IR2030/6/3	Medical and Biological Applications		173.7 – 174 MHz		10 mW e.r.p.				EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/6/4	Medical and Biological Applications	These bands may also be used for the tracking of birds. Equipment affixed to a bird may be used airborne.	458.9625 – 459.1000 MHz		10 mW e.r.p.		Channel Spacing 12.5 kHz. Channel numbers 37 to 47 inclusive are available with channel centre frequency of 458.5 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/6/5	Medical and Biological Applications	Airborne use is not permitted.	458.9625 – 459.1000 MHz		500 mW e.r.p.		Channel Spacing 12.5 kHz. Channel numbers 37 to 47 inclusive are available with channel centre frequency of 458.5 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/6/6	Medical and Biological Applications	These bands may also be used for the tracking of birds. Equipment affixed to a bird may be used airborne.	458.9625 – 459.1000 MHz		10 mW e.r.p.		Channel Spacing 25 kHz. Channel numbers 19 to 23 inclusive are available with channel centre frequency of 458.5 MHz plus (Channel Spacing times channel number).		EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/6/7	Medical and Biological Applications	Airborne use is not permitted.	458.9625 - 459.1000 MHz		500 mW e.r.p.		Channel Spacing 25 kHz. Channel numbers 19 to 23 inclusive are available with channel centre frequency of 458.5 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/6/8	Medical data acquisition devices (MBANS)	The set of usage conditions is only available for medical body area network system (MBANS) for indoor use within healthcare facilities. Airborne use is not permitted.	2483.5 - 2500 MHz		1 mW e.r.p.		Modulation Bandwidth: ≤ 3 MHz	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in relevant designated standards specified in the notice of publication must be used. Alternatively, a duty cycle of ≤ 2 % must be used.	EN 301 559

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/6/9	Medical data acquisition devices (MBANS)	The set of usage conditions is only available for medical body area network system (MBANS) for indoor use within the patient's home. Airborne use is not permitted.	2483.5 - 2500 MHz		10 mW e.r.p.		Modulation Bandwidth: ≤ 3 MHz	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Alternatively, a duty cycle of $\leq 2\%$ must be used.	EN 301 559
IR2030/6/10	Medical data acquisition devices	Wireless medical capsule endoscopy is used for medical data acquisition designed for use in medical doctor-patient scenarios with the aim of acquiring images of human digestive tract. The set of usage conditions is only available for Ultra-Low Power Wireless	430 - 440 MHz		-50 dBm/100kHz e.r.p. power density but not exceeding a total power of -40 dBm/10MHz (both limits are intended for measurement outside of the patient's body)				EN 303 520

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Medical Capsule Endoscopy (ULP-WMCE) applications. Airborne use is not permitted.							
IR2030/7/3	Wideband Data Transmission devices	Airborne use is not permitted.	863 - 868 MHz		25 mW e.r.p.		Maximum channel bandwidth: ≤ 1 MHz	This set of usage conditions is only available for wideband devices used in data networks. Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 300 220
IR 2030/7/5	Wideband Data Transmission Systems	This set of usage conditions is only available for wideband short-range devices in data networks. All devices within the data network shall be under the control of	917.4 - 919.4 MHz		25 mW e.r.p.		Bandwidth: ≤ 1 MHz Duty cycle: ≤ 10 % for network access points Duty cycle: ≤ 2.8 % otherwise	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		network access points. Airborne use is not permitted.							
IR2030/7/1	Wideband Data Transmission Systems	Equipment may be used airborne.	2400 - 2483.5 MHz		100 mW e.i.r.p. In addition equipment must only emit emissions of 100 mW/100 kHz e.i.r.p. when frequency hopping modulation is used, or 10 mW/MHz e.i.r.p. when other types of modulation are used.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in relevant designated standards specified in the notice of publication must be used.	EN 300 328 EN 303 422
IR2030/7/2	Wideband Data Transmission Systems	Equipment must not form part of a fixed outdoor installation. Equipment may be used airborne.	57 – 71 GHz		40 dBm e.i.r.p. / 13 dBm/MHz e.i.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 302 567
IR2030/7/4	Wideband Data Transmission Systems	Equipment forming part of a fixed outdoor installation.	57 – 71 GHz	For operation in the 59 – 63.9 GHz band, transmission not permitted	40 dBm e.i.r.p / 27 dBm maximum transmit output power*			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the	EN 302 567

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Airborne use is not permitted.		within six kilometres of any of the following locations (expressed by latitude and longitude coordinates)- (i)07° 23' 36.6" W, 57° 21' 3.6" N; (ii)04° 58' 21" W, 51° 37' 16.8" N; and (iii)00° 36' 22.8" W, 52° 38' 1.8" N.	*total conducted power delivered to antenna port/ports			techniques described in designated standards specified in the notice of publication must be used.	
IR2030/8/1	Wireless Access Systems (WAS)	Aeronautical mobile use is not permitted. The apparatus may only be used within a building or aircraft or any other enclosed space with attenuation characteristics at least as strong as those of either a	5150 - 5350 MHz		200 mW mean e.i.r.p. / 10 mW/MHz mean e.i.r.p.			Techniques to access spectrum and mitigate interference, including Dynamic Frequency Selection (DFS) and Transmit Power Control, that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication for 5150-5250	EN 301 893 Nominal Centre Frequency (MHz) 5180, 5200, 5220, 5240, 5260, 5280,

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		building or an aircraft, and only to establish a connection with a station or apparatus within the same building or aircraft or other enclosed space.						must be used.	5300, 5320.
IR2030/8/2	Wireless Access Systems (WAS)	Aeronautical Mobile use is not permitted. The apparatus may also be used airborne within an aircraft, only to establish a connection with a station or apparatus within the same aircraft.	5470 - 5730 MHz		1 W mean e.i.r.p. / 50 mW/MHz mean e.i.r.p.			Techniques to access spectrum and mitigate interference, including Dynamic Frequency Selection (DFS) and Transmit Power Control, that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	Where the band 5470 – 5725 MHz is used, Dynamic Frequency Selection and Transmit Power Control are assumed to be implemented as specified in EN 301 893 Where the band 5725 – 5730 MHz is used see

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
									footnote1 for information
IR2030/8/3	Wireless Access Systems (WAS)	Equipment must not form part of a fixed outdoors installation when operating in 5730 – 5850 MHz. Airborne use is not permitted except within an aircraft to establish a connection with a station or apparatus within the same aircraft.	5725 – 5850 MHz		Maximum mean e.i.r.p of 200 mW and maximum mean e.i.r.p density of 10 mW/MHz in any 1 MHz band.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication for the 5150 – 5250 MHz band must be used.	
IR2030/7/6	Wireless Access Systems (WAS)	Equipment must not form part of a fixed outdoors installation Airborne or outdoor use is not permitted	5925 – 6425 MHz		Maximum mean EIRP of 250mW for Low Power indoor and 25mW for Very Low Power indoor and mobile Outdoor. Maximum mean EIRP			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards	

¹ Although a matter for users to determine, if Dynamic Frequency Selection and Transmit Power Control are implemented as elements of the techniques to access spectrum and mitigate interference referred to under ‘Channel access and occupation rules’, one possible approach may be to apply Dynamic Frequency Selection and Transmit Power Control as specified in EN 301 893 (applied to this band in the same way as applied to the 5150 – 5350 and 5470 – 5725 bands) and Dynamic Frequency Selection detection radar test signals as specified in EN 302 502 (as applied to WAS equipment).

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Low Power Indoor apparatus may only be used within a building or within an aircraft or any other enclosed space, having attenuation characteristics at least equivalent to those of a building or an aircraft, to establish a connection with stations or apparatus within the same building or aircraft or other enclosed space for communications purposes.			density of 12.6mW/MHz in any 1 MHz band.			specified in the notice of publication for the 5150 – 5250 MHz band must be used.	
IR2030/9/1	Short Range Indoor Data Links	Music and speech are only permitted when using a digitised signal. Airborne use is not permitted.	2445 – 2455 MHz		100 mW e.i.r.p.				EN 300 440
IR2030/9/2	Short Range Indoor Data Links	Music and speech are only permitted	5725 – 5875 MHz		25 mW e.i.r.p.				EN 300 440

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		when using a digitised signal. Airborne use is not permitted.							
IR2030/9/3	Short Range Indoor Data Links	Music and speech are only permitted when using a digitised signal. This frequency band is no longer available. However, equipment that was put into service before 30 December 2014 may continue to operate within the band.	10.675 – 10.699 GHz		1 W e.i.r.p.				EN 300 440
IR2030/10/2	Railway Applications	Airborne use is not permitted.	516 – 8516 kHz	Center Frequency 4516 kHz	7 dBμA/m at 10 m				EN 300 330
IR2030/10/4	Railway Applications	Airborne use is not permitted.	27.090 – 27.100 MHz	Center Frequency (Fo) 27.095 MHz	42 dBμA/m at 10 m	Fo ± < 5 kHz			EN 300 330 EN 302 608
					5 dBμA/m at 10 m	Fo ±5 to 200) kHz			
					- 1 dBμA/m at 10 m	Fo ±> 500 kHz			
IR2030/10/5	Railway Applications	Airborne use is not permitted.	2446 – 2454 MHz		500 mW e.i.r.p.		Channel Bandwidth ≤ 1.5 MHz		EN 300 761

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/11/1	Devices for locating victims in distress or at risk	This frequency band is no longer available. However, existing Avalanche Victim detection equipment may continue to operate within the band.	2275 Hz		42 dB μ A/m at 10 m				
IR2030/11/2	Devices for locating victims in distress or at risk	Airborne use is not permitted.	456.9 - 457.1 kHz		7 dB μ A/m at 10 m				EN 300 718
IR2030/12/1	Radio determination	This frequency band is no longer available. However, equipment that was put into service before 31 December 2003 may continue to operate within the band.	888.0 - 889.0 MHz		500 mW e.i.r.p.		Channel Spacing 25 kHz		
IR2030/12/2	Radio determination	Equipment may be used airborne.	2400 – 2483.5 MHz		25 mW e.i.r.p.				EN 300 440
IR2030/12/3 June 2014	Radio determination	Airborne use is not permitted.	2445 - 2455 MHz		100 mW e.i.r.p.				EN 300 440
IR2030/12/4	Radio determination	Equipment may be used airborne.	5725 – 5875 MHz		25 mW e.i.r.p.				EN 300 440

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/12/12	Radio determination	Equipment may be used airborne. This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	4.5 – 7.0 GHz		24 dBm e.i.r.p. Equipment must be within a closed tank, which is intended to contain substances and which is constructed of metal or reinforced concrete; or any other material that provides an equivalent level of attenuation to radio frequencies as metal or reinforced concrete.	Equipment must only emit emissions which would (if the equipment were used within an enclosed tank, which has the specifications set out in Annex E of ETSI standard EN 302 372-1), when measured in any direction, have a maximum e.i.r.p. density of -41.3 dBm/MHz.			EN 302 372
IR2030/12/17	Radio determination	Equipment may be used airborne. This set of usage conditions is only available to Level Probing Radar. Established exclusion zones around radio astronomy (RAS) site Jodrell Bank must be obeyed. (53°14'10" N, 02°18'26" W)	6.0 - 8.5 GHz		7 dBm/50 MHz peak e.i.r.p. / - 33 dBm/MHz mean e.i.r.p.			Automatic power control and antenna requirements as well as equivalent techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 302 729 Exclusion zones defined in the EN 302 729; Emissions are prohibited within 4 km radius of RAS sites. The antenna height shall be less than 15m within 40 km

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
									radius of RAS sites.
IR2030/12/13	Radio determination	Equipment may be used airborne. This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	8.5 – 10.6 GHz		30 dBm e.i.r.p. Equipment must be within a closed tank, which is intended to contain substances and which is constructed of metal or reinforced concrete; or any other material that provides an equivalent level of attenuation to radio frequencies as metal or reinforced concrete.	Equipment must only emit emissions which would (if the equipment were used within a closed tank, which has the specifications set out in Annex E of ETSI standard EN 302 372-1), when measured in any direction, have a maximum e.i.r.p. density of -41.3 dBm/MHz.			EN 302 372
IR2030/12/5	Radio determination	Airborne use is not permitted.	10.575 - 10.600 GHz		1 W e.i.r.p.				EN 300 440
IR2030/12/6	Radio determination	Applications are for indoor use only. This frequency band is no longer available. However, equipment that was put into	10.675 - 10.699 GHz		1 W e.i.r.p.				EN 300 440

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		service before 30 December 2014 may continue to operate within the band.							
IR2030/12/7	Radio determination	Airborne use is not permitted.	13.4 - 14.0 GHz		500 mW e.i.r.p.				EN 300 440
IR2030/12/8	Radio determination	Equipment must form part of a ground-based radio determination system. Airborne use is not permitted.	17.1 – 17.3 GHz		26 dBm e.i.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 300 440
IR2030/12/9	Radio determination	Airborne use is not permitted.	24.050 – 24.150 GHz		100 mW e.i.r.p.			Minimum sweep rate 2 MHz/mS	EN 300 440
IR2030/12/18	Radio determination	Equipment may be used airborne. This set of usage conditions is only available to Level Probing Radar. Established exclusion zones around radio	24.05 - 26.5 GHz		26 dBm/50 MHz peak e.i.r.p. /- 14 dBm/MHz mean e.i.r.p.			Automatic power control and antenna requirements as well as equivalent techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 302 729 Exclusion zones defined in the EN 302 729; Emissions are prohibited within 4 km radius of RAS sites. The antenna height shall be less

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		astronomy (RAS) site must be obeyed. Cambridge (52°09'59" N, 00°02'20" E) Darnhall (53°09'22" N, 02°32'03" W) Jodrell Bank (53°14'10" N, 02°18'26" W) Knockin (52°47'24" N, 02°59'45" W) Pickmere (53°17'18" N, 02°26'38" W)							than 15m within 40 km radius of RAS sites.
IR2030/12/14	Radio determination	Equipment may be used airborne This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	24.05 – 27.0 GHz		43 dBm e.i.r.p. Equipment must be within a closed tank, which is intended to contain substances and which is constructed of metal or reinforced concrete; or any other material that provides an equivalent level of	Equipment must only emit emissions which would (if the equipment were used within a closed tank, which has the specifications set out in Annex E of ETSI standard EN 302 372-1), when measured in any			EN 302 372

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
					attenuation to radio frequencies as metal or reinforced concrete.	direction, have a maximum e.i.r.p. density of - 41.3 dBm/MHz.			
IR2030/12/10	Radio determination	Airborne use is not permitted.	24.150 - 24.250 GHz		2 W e.i.r.p.				EN 300 440
IR2030/12/11	Radio determination	Applications are for use in mobile applications only, fixed installations are not permitted. Airborne use is not permitted.	24.250 - 24.350 GHz		2 W e.i.r.p.				EN 300 440
IR2030/12/15	Radio determination	Equipment may be used airborne This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	57 - 64 GHz		43 dBm e.i.r.p. Equipment must be within a closed tank, which is intended to contain substances and which is constructed of metal or reinforced concrete; or any other material that provides an equivalent level of attenuation to radio frequencies as metal or reinforced concrete.	Equipment must only emit emissions which would (if the equipment were used within a closed tank, which has the specifications set out in Annex E of ETSI standard EN 302 372-1), when measured in any direction, have a maximum e.i.r.p. density of -41.3 dBm/MHz.			EN 302 372

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/12/19	Radio determination	Equipment may be used airborne This set of usage conditions is only available to Level Probing Radar.	57 - 64 GHz		35 dBm/50 MHz peak e.i.r.p. / - 2 dBm/MHz mean e.i.r.p.			Automatic power control and antenna requirements as well as equivalent techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 302 729
IR2030/12/16	Radio determination	Equipment may be used airborne This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	75 - 85 GHz		43 dBm e.i.r.p. Equipment must be within a closed tank, which is intended to contain substances and which is constructed of metal or reinforced concrete; or any other material that provides an equivalent level of attenuation to radio frequencies as metal or reinforced concrete.	Equipment must only emit emissions which would (if the equipment were used within a closed tank, which has the specifications set out in Annex E of ETSI standard EN 302 372-1), when measured in any direction, have a maximum e.i.r.p. density of -41.3 dBm/MHz.			EN 302 372

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/12/20	Radio determination	Equipment may be used airborne This set of usage conditions is only available to Level Probing Radar.	75 - 85 GHz		34 dBm/50 MHz peak e.i.r.p./ 3 dBm/MHz mean e.i.r.p.			Automatic power control and antenna requirements as well as equivalent techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 302 729
IR2030/13/1	Radio Frequency Identification (RFID)	Equipment may be used airborne.	13.553 - 13.567 MHz		60 dBμA/m at 10 m				EN300 330 EN 302 291
IR2030/13/2	Radio Frequency Identification (RFID)	Equipment may be used airborne.	865 – 865.6 MHz		100 mW e.r.p.		Channel spacing 200kHz. Channel numbers 1 to 3. Channel centre frequencies are 864.9 MHz plus (0.2 MHz times channel number.		EN302 208
IR2030/13/3	Radio Frequency Identification (RFID)	Equipment may be used airborne.	865.6 – 867.6 MHz		2W e.r.p.		Channel spacing 200kHz. Channel numbers 4 to 13.		EN302 208

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
							Channel centre frequencies are 864.9 MHz plus (0.2 MHz times channel number.		
IR2030/13/45	Radio Frequency Identification (RFID)	Equipment may be used airborne.	867.6 – 868 MHz		500 mW e.r.p.		Channel spacing 200kHz. Channel numbers 14 to 15. Channel centre frequencies are 864.9 MHz plus (0.2 MHz times channel number.		EN302 208
IR2030/13/9	Radio Frequency Identification (RFID)	Airborne use is not permitted.	916.1 - 918.9 MHz	Interrogator transmissions at 4 W e.r.p. only permitted at the centre frequencies: 916.3 MHz; 917.5 MHz; and 918.7 MHz	4W e.r.p.		≤ 400 kHz	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 302 208
IR2030/13/8	Radio Frequency Identification (RFID)	Operation only when necessary to perform the intended operation, i.e. when RFID tags are expected to be present.	919.7 - 920.1 MHz	Passive RFID tags responding to RFID interrogators may operate in	4 W e.r.p.		≤ 400 kHz	Detect And Avoid (DAA) mechanism is required.	

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
				the band 915.3-920.9 MHz.					
IR2030/13/5	Radio Frequency Identification (RFID)	Equipment may be used airborne.	2446 – 2454 MHz		500 mW e.i.r.p.				EN 300 440
IR2030/13/6	Radio Frequency Identification (RFID)	Equipment is restricted to indoor use only.	2446 – 2454 MHz		4 W e.i.r.p.	For enforcement purposes, any emission shall not exceed 500 mW when measured 10 metres from either the installed building or boundary of the operator's premises.		For applications with radiated powers greater than 500 mW, a duty cycle limit of < 15% with a maximum transmit power on time of 30 milliseconds is required.	EN 300 440
Access IR2030/14/18	Transport and Traffic Telematics	Railway Applications Airborne use is not permitted.	984 - 7484 kHz	Center Frequency 4234 kHz	9 dBµA/m				EN 300 330 EN 302 608
IR2030/14/19	Transport and Traffic Telematics	Railway Applications Airborne use is not permitted.	7.3 - 23 MHz	Center Frequency 13.547 MHz	-7 dBuA/m at 10 m				EN 302 609
IR2030/14/11	Transport and Traffic Telematics	Vehicle-to-vehicle applications only	870 - 873 MHz		500 mW e.r.p		≤ 500 kHz	Duty cycle limit ≤ 0.1%	EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Airborne use is not permitted.						Adaptive Power Control (APC) is required. The APC is able to reduce a link's transmit power from its maximum to ≤ 5 mW.	
IR2030/14/13	Transport and Traffic Telematics	In-vehicle applications only Airborne use is not permitted.	870 - 873 MHz		100 mW e.r.p.		≤ 500 kHz	Duty cycle limit $\leq 0.1\%$ Adaptive Power Control (APC) is required. The APC is able to reduce a link's transmit power from its maximum to ≤ 5 mW.	EN 300 220
IR2030/14/12	Transport and Traffic Telematics	Vehicle-to-vehicle applications only Airborne use is not permitted.	873 - 875.8 MHz		500 mW e.r.p.		≤ 500 kHz	Duty cycle limit $\leq 0.01\%$ and limited to a maximum transmit on-time of 5ms/1s. Adaptive Power Control (APC) is required. The APC is able to reduce a link's transmit power from its maximum to ≤ 5 mW.	EN 300 220
IR2030/14/14	Transport and Traffic Telematics	In-vehicle applications only Airborne use is not permitted.	873 - 875.8 MHz		100 mW e.r.p.		≤ 500 kHz	Duty cycle limit $\leq 0.01\%$ and limited to a maximum transmit on-time of 5ms/1s. Adaptive Power Control (APC) is required.	EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
								The APC is able to reduce a link's transmit power from its maximum to ≤ 5 mW.	
IR2030/14/1	Transport and Traffic Telematics	For Road Tolling or the provision of short range data links which respond to a signal initiated by a network operator Airborne use is not permitted.	5795 - 5815 MHz		2 W e.i.r.p.				EN 300 674 ES 200 674
IR2030/14/2	Transport and Traffic Telematics	Use by Smart tachograph, weight and dimension applications for the provision of short range data links which respond to an initiated signal.	5805 - 5815 MHz		2 W e.i.r.p.				EN 300 674 ES 200 674
IR2030/14/3	Transport and Traffic Telematics	For the provision of short range data links which respond to a signal initiated by a private system used and operated by the owner or persons	5805 - 5815 MHz		2 W e.i.r.p.				EN 300 440

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		authorised by the owner. Airborne use is not permitted.							
IR2030/14/20	Transport and Traffic Telematics	Airborne use is not permitted.	5855 – 5865 MHz		33 dBm e.i.r.p, 23 dBm/MHz e.i.r.p. density and Transmitter Power Control (TPC) range of 30 dB			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	
IR2030/14/21	Transport and Traffic Telematics	Airborne use is not permitted.	5865 – 5875 MHz		33 dBm e.i.r.p, 23 dBm/MHz e.i.r.p. density and Transmitter Power Control (TPC) range of 30 dB			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	
IR2030/14/4	Transport and Traffic Telematics	Airborne use is not permitted.	24.050 - 24.075 GHz		100 mW e.i.r.p.				EN 302 858
IR2030/14/5	Transport and Traffic Telematics	Airborne use is not permitted.	24.075 - 24.150 GHz		0.1 mW e.i.r.p.				EN 302 858

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/14/6	Transport and Traffic Telematics	For vehicle radar only. Airborne use is not permitted.	24.075 - 24.150 GHz		100 mW e.i.r.p.			4µs/40kHz dwell time every 3ms The spectrum access and mitigation requirement is given for devices mounted behind a bumper. If mounted without a bumper, the requirement is 3µs/40kHz maximum dwell time every 3ms. A requirement for minimum frequency modulation range (applicable to FMCW or step frequency signals) or minimum instantaneous bandwidth (applicable to pulsed signal) of 250 kHz applies in addition to the requirement on maximum dwell time.	EN 302 858-1 V1.2.1
IR2030/14/7	Transport and Traffic Telematics	For vehicle radar only. Airborne use is not permitted.	24.075 - 24.150 GHz		100 mW e.i.r.p.			1ms/40kHz dwell time every 40ms. The spectrum access and mitigation requirement is given for devices mounted either behind a bumper or	EN 302 858-1 V1.2.1

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
								mounted without a bumper. A requirement for minimum frequency modulation range (applicable to FMCW or step frequency signals) or minimum instantaneous bandwidth (applicable to pulsed signal) of 250 kHz applies in addition to the requirement on maximum dwell time.	
IR2030/14/8	Transport and Traffic Telematics	Airborne use is not permitted.	24.150 - 24.250 GHz	.	100 mW e.i.r.p				EN 302 858
IR2030/14/15	Transport and Traffic Telematics	This set of usage conditions is only available to ground-based vehicle radars operating in the harmonised 24 GHz frequency range. Airborne use is not permitted.	24.25 – 24.495 GHz		- 11 dBm e.i.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Duty cycle limits and frequency modulation ranges apply as specified in EN 302 858-1 v1.3.1.	EN 302 858

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/14/16	Transport and Traffic Telematics	This set of usage conditions is only available to ground-based vehicle radars operating in the harmonised 24 GHz frequency range. Airborne use is not permitted.	24.25 - 24.5 GHz		20 dBm e.i.r.p. (forward- facing radars) 16 dBm e.i.r.p. (rear-facing radars)			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Duty cycle limits and frequency modulation ranges apply as specified in EN 302 858-1 v1.3.1.	EN 302 858
IR2030/14/17	Transport and Traffic Telematics	This set of usage conditions is only available to ground-based vehicle radars operating in the harmonised 24 GHz frequency range. Airborne use is not permitted.	24.495 - 24.5 GHz		- 8 dBm e.i.r.p.			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used. Duty cycle limits and frequency modulation ranges apply as specified in EN 302 858-1 v1.3.1.	EN 302 858
IR2030/14/10	Transport and Traffic Telematics	No new deployments permitted. Devices placed on the market equipment before 1	63 - 64 GHz		40 dBm e.i.r.p.				EN 302 686

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		January 2020 may continue to operate within the band. Airborne use is not permitted.							
IR2030/14/22	Transport and Traffic Telematics	This set of usage conditions is only available to vehicle-to-vehicle, vehicle-to-infrastructure and infrastructure-to-vehicle systems. Airborne use is not permitted.	63.72 – 65.88 GHz		40 dBm e.i.r.p.				
IR2030/14/9	Transport and Traffic Telematics	This set of usage conditions applies to terrestrial vehicle and infrastructure systems only. Fixed infrastructure radars have to be of a scanning nature in order to limit the illumination time and ensure a minimum silent time to achieve	76 - 77 GHz		55 dBm peak e.i.r.p. and 50 dBm mean e.i.r.p. and 23.5 dBm mean e.i.r.p. for pulsed radars				EN 301 091

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		coexistence with automotive radar systems. Airborne use is not permitted.							
IR2030/15/1	Inductive	Equipment may be used airborne	9 - 59.75 kHz		72 dB μ A/m at 10 m				EN 300 330
IR2030/15/2	Inductive	Equipment may be used airborne	59.75 - 60.25 kHz		48 dB μ A/m at 10 m				EN 300 330
IR2030/15/3	Inductive	Equipment may be used airborne	60.25 - 90 kHz		72 dB μ A/m at 10 m				EN 300 330
IR2030/15/4	Inductive	Equipment may be used airborne	90 - 119 kHz		48 dB μ A/m at 10 m				EN 300 330
IR2030/15/5	Inductive	Equipment may be used airborne	119 - 127 kHz		66 dB μ A/m at 10 m				EN 300 330
IR2030/15/6	Inductive	Equipment may be used airborne	127 - 135 kHz		66 dB μ A/m at 10 m				EN 300 330
IR2030/15/7	Inductive	Equipment may be used airborne	135 - 148.5 kHz		48 dB μ A/m at 10 m				EN 300 330
IR2030/15/8	Inductive	Airborne use is not permitted.	148.5 - 185 kHz		48 dB μ A/m at 10 m				EN 300 330

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/15/10	Inductive	That part of an induction system designed or adapted to produce:- (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.	148.5 - 1600 kHz		-5 dB μ A/m at 10 m	Only when the device is submerged in water, the power may be increased to 40 dB μ A/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of -5 dB μ A/m at 10 m		The MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be aware that this equipment should be constructed so as to operate safely in the presence of high-power systems.	EN 300 330.
IR2030/15/9	Inductive	Equipment may be used airborne	148.5 - 5000 kHz		-15 dB μ A/m at 10 m in any bandwidth of 10 kHz. -5 dB μ A/m at 10 m for systems operating at bandwidths larger than 10 kHz.				EN 300 330
IR2030/15/11	Inductive	That part of an induction system	240 - 315 kHz		24 dB μ A/m at 10 m				EN 300 330

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		designed or adapted to produce:- (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field Airborne use is not permitted.							
IR2030/15/12	Inductive	Equipment may be used airborne Any inductive device may be used, including RFID.	400 - 600 kHz		-5 dB μ A/m at 10 m				EN 300 330
IR2030/15/13	Inductive	Airborne use is not permitted.	1600 - 2000 kHz		-15 dB μ A/m at 10 m in any bandwidth of 10 kHz. -5 dB μ A/m at 10 m for systems operating at bandwidths larger than 10 kHz.	Only when the device is submerged in water, the power may be increased to 40 dB μ A/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of - 15 dB μ A/m at 10 m		The MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be aware that this equipment should be constructed so as to operate safely in the presence of high-power systems.	EN 300 330

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/15/14	Inductive	That part of an induction system designed or adapted to produce:- (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.	2 - 3.155 MHz		9 dBµA/m at 10 m	Only when the device is submerged in water, the power may be increased to 40 dBµA/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of 9 dBµA/m at 10 m.		The MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be aware that this equipment should be constructed so as to operate safely in the presence of high-power systems	EN 300 330
IR2030/15/15	Inductive	Equipment may be used airborne.	3.155 - 3.400 MHz		13.5 dBµA/m at 10 m				EN 300 330
IR2030/15/16	Inductive	That part of an induction system designed or adapted to produce:- (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.	3.155 - 3.400 MHz		13.5 dBµA/m at 10 m	Only when the device is submerged in water, the power may be increased to 40 dBµA/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of 13.5 dBµA/m at 10 m.		The MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be aware that this equipment should be constructed so as to operate safely in the presence of high-power systems	EN 300 330

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/15/17	Inductive	That part of an induction system designed or adapted to produce:- (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.	3.400 - 6.765 MHz		9 dBμA/m at 10 m	Only when the device is submerged in water, the power may be increased to 40 dBμA/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of 9 dBμA/m at 10 m		The MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be aware that this equipment should be constructed so as to operate safely in the presence of high-power systems	EN 300 330
IR2030/15/18	Inductive	Equipment may be used airborne.	5 – 30 MHz		-20 dBμA/m at 10 m in any bandwidth of 10 kHz. Total field strength -5 dBμA/m at 10 m for systems operating at bandwidths larger than 10 kHz.				EN 300 330
IR2030/15/20	Inductive	Equipment may be used airborne	6.765 - 6.795 MHz		42 dBμA/m at 10 m				EN 300 330
IR2030/15/21	Inductive	That part of an induction system	6.795 - 13.533 MHz		9 dBμA/m at 10 m	Only when the device is submerged in water, the power may be increased to		The MoD operates high-power underwater communication systems. Users and manufacturers	EN 300 330

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		designed or adapted to produce:- (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.				40 dBµA/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of 9 dBµA/m at 10 m.		of underwater SRD equipment should be aware that this equipment should be constructed so as to operate safely in the presence of high-power systems	
IR2030/15/22	Inductive	Equipment may be used airborne.	7.400 – 8.800 MHz		9 dBµA/m at 10 m				EN 300 330
IR2030/15/25	Inductive	Equipment may be used airborne.	10.200 – 11.000 MHz		9 dBµA/m at 10 m				EN 300 330
IR2030/15/28	Inductive	That part of an induction system designed or adapted to produce: - (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field.	13.533 - 13.553 MHz		21.5 dBµA/m at 10 m	Only when the device is submerged in water, the power may be increased to 40 dBµA/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of 9 dBµA/m at 10 m		The MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be aware that this equipment should be constructed so as to operate safely in the presence of high-power systems	EN 300 330

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Airborne use is not permitted.							
IR2030/15/29	Inductive	Equipment may be used airborne	13.553 - 13.567 MHz		42 dBµA/m at 10 m	The transmit power may be increased to 60 dBµA/m at 10 m for Radio Frequency Identification and Electronic Article Surveillance applications.			EN 300 330 EN 302 291
IR2030/15/33	Inductive		13.553 – 13.567 MHz		42 dBµA/m at 10 metres	Transmission mask and antenna requirements for all combined frequency segments apply. The transmit power may be increased to 60 dBµA/m at 10 m for Radio Frequency Identification and Electronic Article Surveillance applications		Antenna requirement and Transmission mask must comply with the essential requirements of UK SI 2017/1206.	
IR2030/15/30	Inductive	That part of an induction system	13.567 - 26.957 MHz		9 dBµA/m at 10 m	Only when the device is submerged in water, the power may be increased to 40 dBµA/m at 10 m (measured		The MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be	EN 300 330

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		<p>designed or adapted to produce:- (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field.</p> <p>Airborne use is not permitted.</p>				underwater), provided that emissions above water are restricted to the transmit power limit of 9 dBμA/m at 10 m		aware that this equipment should be constructed so as to operate safely in the presence of high-power systems	
IR2030/15/31	Inductive	Equipment may be used airborne.	26.957 - 27.283 MHz		42 dBμA/m at 10 m				EN 300 330

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/15/32	Inductive	That part of an induction system designed or adapted to produce:- (a) controlled magnetic field; and (b) a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.	27.283 - 30 MHz		9 dBµA/m at 10 m	Only when the device is submerged in water, the power may be increased to 40 dBµA/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of 9 dBµA/m at 10 m.		The MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be aware that this equipment should be constructed so as to operate safely in the presence of high-power systems	EN 300 330
IR2030/16/1	Metal Detectors	That part of an induction system	9 - 148.5 kHz		70 dBµA/m at 6 m				EN 300 330

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		<p>designed or adapted to produce:- (a) to produce a controlled magnetic field; and (b) a predetermined recognisable signal when operating within that magnetic field</p> <p>Airborne use is not permitted.</p>							
IR2030/17/1	Low duty cycle / high reliability devices	<p>Equipment may be used airborne.</p> <p>This set of usage conditions is for alarm systems.</p>	868.60 – 868.70 MHz		10 mW e.r.p.		Channel spacing ≤25 kHz. Consecutive channels may be combined where a larger bandwidth is required, due to the modulation of the signal, up to the maximum sub-band frequency allocation.	Duty cycle limit ≤1%	EN 300 220
IR2030/17/5	Low duty cycle / high reliability devices	<p>Equipment may be used airborne.</p> <p>This set of usage conditions is for social alarm systems.</p>	869.2 - 869.25 MHz		10 mW e.r.p.		Channel spacing 25 kHz	Duty cycle limit 0.1%	EN 300 220 / EN 303 406

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/17/2	Low duty cycle / high reliability devices	Equipment may be used airborne. This set of usage conditions is for alarm systems. Airborne use is not permitted.	869.25 – 869.30 MHz		10 mW e.r.p.		Channel spacing ≤25 kHz	Duty cycle limit ≤0.1%	EN 300 220
IR2030/17/3	Low duty cycle / high reliability devices	Equipment may be used airborne. This set of usage conditions is for alarm systems. Airborne use is not permitted.	869.3 – 869.4 MHz		10 mW e.r.p.		Channel spacing ≤25 kHz	Duty cycle limit ≤1%	EN 300 220
IR2030/17/4	Low duty cycle / high reliability devices	Equipment may be used airborne. This set of usage conditions is for alarm systems.	869.65 – 869.70 MHz		25 mW e.r.p.		Channel spacing ≤25 kHz	Duty cycle limit ≤10%	EN 300 220
IR2030/18/1	Social Alarms for the Elderly and Infirm	Airborne use is not permitted.	27.450MHz		500 mW e.r.p.		Channel bandwidth 12.5 kHz		EN 300 220 / EN 303 406
IR2030/18/2	Social Alarms for the Elderly and Infirm	Airborne use is not permitted.	34.925 MHz		500 mW e.r.p.		Channel bandwidth 12.5 kHz		EN 300 220 / EN 303 406

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/18/3	Social Alarms for the Elderly and Infirm	Airborne use is not permitted.	34.950 MHz		500 mW e.r.p.		Channel bandwidth 12.5 kHz		EN 300 220
IR2030/18/4	Social Alarms for the Elderly and Infirm	Airborne use is not permitted.	34.975 MHz		500 mW e.r.p.		Channel bandwidth 12.5 kHz		EN 300 220 / EN 303 406
IR2030/18/5	Social Alarms	Equipment may be used airborne.	169.4750 – 169.4875 MHz		500 mW e.r.p.		Channel spacing 12.5 kHz		EN 300 220 / EN 303 406
IR2030/18/6	Social Alarms	Equipment may be used airborne.	169.5875 – 169.600 MHz		500 mW e.r.p.		Channel spacing 12.5 kHz		EN 300 220 / EN 303 406
IR2030/19/1	Vehicle Paging Alarms	Airborne use is not permitted.	47.4 MHz		100 mW e.r.p.		Channel spacing 12.5 kHz		EN 300 220
IR2030/19/2	Vehicle Paging Alarms	Airborne use is not permitted.	458.90 MHz		100 mW e.r.p.	Equipment may also be used to arm or disarm the alarm system at a radiated level not exceeding 1 mW.	Channel spacing 12.5 kHz		EN 300 220
IR2030/20/1	General Alarms Associated with Marine Applications Including Fixed Shore Installations.	Including use on land for the storage or transportation of vessels. Airborne use is not permitted.	161.275 MHz		10 mW e.r.p.		Channel spacing 12.5 kHz		EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/21/1	Mobile, Transportable and Lone Worker Safety Alarms.	Airborne use is not permitted.	173.1875 MHz		10 mW e.r.p.		Channel spacing 12.5 kHz		EN 300 220
IR2030/21/2	Mobile, Transportable and Lone Worker Safety Alarms.	Airborne use is not permitted.	458.8375 MHz		100 mW e.r.p.		Channel spacing 12.5 kHz		EN 300 220
IR2030/22/1	Fixed Alarms	Airborne use is not permitted.	173.225 MHz		10 mW e.r.p.		Channel spacing 12.5 kHz		EN 300 220
IR2030/22/2	Fixed Alarms	Airborne use is not permitted.	173.225 MHz		10 mW e.r.p.		Channel spacing 25 kHz		EN 300 220
IR2030/22/3	Fixed Alarms	Airborne use is not permitted.	458.825 MHz		100 mW e.r.p.		Channel spacing 12.5 kHz		EN 300 220
IR2030/23/1	Model Control	The transmitting equipment may be used airborne in the following frequency bands: 26.990 - 27.000 MHz (Channel 4) 27.040 - 27.050 MHz (Channel 9)	26.96 - 27.28 MHz		100 mW e.r.p.		Channel spacing 10 kHz Channel numbers 1 to 32 inclusive are available with channel centre frequency of 26.955 MHz plus (Channel spacing times channel number).		EN 300 220 Non-specific SRD limits are set out in IR2030/1/40

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		27.090 - 27.100 MHz (Channel 14) 27.140 - 27.150 MHz (Channel 19) 27.190 – 27.200 kHz (Channel 24)							
IR2030/23/2	Model Control	For telecommand to control the movement of airborne models only	34.945 - 35.305 MHz		100 mW e.r.p		Channel spacing 10 kHz. Channel numbers 1 to 36 inclusive are available with channel centre frequency of 34.94 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/23/3	Model Control	For telecommand to control the movement of models on the ground, on water or under the water. Airborne use is not permitted.	40.66 - 41.00 MHz		100 mW e.r.p		Channel spacing 10 kHz . Channel numbers 1 to 34 inclusive are available with channel centre frequency of 40.655 MHz plus (Channel Spacing times channel number).		EN 300 220

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/23/4	Model Control	For telemetry to provide data from the model only, including airborne models.	433.05 - 434.79 MHz		1 mW e.r.p		Channel spacing 25 kHz		EN 300 220
IR2030/23/5	Model Control	For telemetry to provide data from the model only, including airborne models.	434.04 – 434.79 MHz		10 mW		Channel spacing 25 kHz		EN 300 220
IR2030/23/6	Model Control	For telecommand to control the movement of any model.	458.5 - 459.5 MHz		100 mW		Channel spacing 25 kHz. Channel numbers 1 to 40 inclusive are available with channel centre frequency of 458.4875 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/24/1	Radio Microphones	Airborne use is not permitted.	173.775 - 175.075 MHz		10 mW e.r.p.		Channel spacing 50 kHz. Channel numbers 10 to 35 inclusive are available; where the channel centre frequency is equal to 173.3 MHz plus (Channel Spacing times channel number).		EN 300 422

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/24/2	Radio Microphones	Airborne use is not permitted.	173.7 - 175.1 MHz		10 mW e.r.p.	The maximum radiated power may be increased to 50 mW e.r.p. for a radio microphone which is intended to be worn next to or strapped to the user's body.	Channel spacing 200 kHz. Channel numbers 1 to 7 inclusive are available; where the channel centre frequency is equal to 173.6 MHz plus (Channel Spacing times channel number).		EN 300 422
IR2030/24/3	Radio Microphones	Equipment may be used airborne.	863 - 865 MHz		10 mW e.r.p.				EN 300 422 EN 301 357
IR2030/25/1	Assistive Listening Devices (ALD)	Equipment may be used airborne.	169.4000 - 169.4750 MHz		500 mW e.r.p.		Channel Bandwidth ⊠ 50 kHz		EN 300 422
IR2030/25/2	Assistive Listening Devices (ALD)	Equipment may be used airborne.	169.4875 - 169.5875 MHz		500 mW e.r.p.		Channel bandwidth ⊠ 50 kHz		EN 300 422
IR2030/25/3	Assistive Listening Devices (ALD)	Equipment may be used airborne.	173.325 - 175.075 MHz		2 mW e.r.p.		Channel spacing 50 kHz Channel numbers 1 to 5 inclusive and 7 to 9 inclusive are the preferred channels, channels 10 to 35 inclusive may be used as an alternative but are shared with other applications. The		EN 300 422

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
							channel centre frequency is equal to 173.3 MHz plus (Channel Spacing times channel number).		
IR2030/25/5	Assistive Listening Devices (ALD)	Airborne use is not permitted.	173.965 - 216 MHz	Devices shall implement the whole frequency range on a tuning-range basis.	10 mW e.r.p.	A minimum wanted received signal threshold of 35 dB μ V/m is required to ensure protection of a Digital Audio Broadcast (DAB) receiver situated 1.5 m from the ALD, subject to DAB signal strength measurements taken around the ALD operating site.	Maximum channel spacing: \leq 50 kHz. ALD must not be operated less than 300 kHz from the edge of an occupied DAB channel.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	EN 300 422 EN 301 357
IR2030/25/4	Assistive Listening Devices (ALD)	Indoor Digital Assistive Listening Device Systems only. Airborne use is not permitted.	916.1 - 916.5 MHz 917.3 - 917.7 MHz 918.5 - 918.9 MHz 919.7 - 920.1 MHz		10 mW e.r.p.		\leq 400 kHz	Duty cycle limit < 25 %	EN 300 422

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
IR2030/26/1	Wireless Audio Applications	Airborne use is not permitted.	36.61 - 36.79 MHz 37.01 - 37.19 MHz		10 μ W e.r.p.				EN 300 422 EN 301 357
IR2030/26/3	Wireless Audio Applications	Equipment may be used airborne.	863 - 865 MHz		10 mW e.r.p.				EN 300 422 EN 301 357
IR2030/26/4	Wireless Audio Applications	Airborne use is not permitted.	864.8 - 865.0 MHz	Frequency band may be used for narrow band applications.	10 mW e.r.p.		Channel bandwidth \leq 50 kHz		EN 300 220
IR2030/26/5	Wireless Audio Applications	Airborne use is not permitted.	2400 – 2483.5 MHz		10 mW e.i.r.p.				EN 300 422 EN 301 357
IR2030/27/1	Wireless Video Cameras - Non Broadcasting	Apparatus designed or adapted for Television. Where required, associated audio may also be used within the specified frequency band. Airborne use is not permitted.	1394 MHz		500 mW e.i.r.p.		Channel Bandwidth \leq 10 MHz		EN 302 064
IR2030/27/2	Wireless Video Cameras - Non Broadcasting	Apparatus designed or adapted for Television.	2400 – 2483.5 MHz		10 mW e.i.r.p.				EN 302 064

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		Where required, associated audio may also be used within the specified frequency band. Equipment may be used airborne.							
IR2030/27/3	Wireless Video Cameras - Non Broadcasting	Apparatus designed or adapted for Television. Where required, associated audio may also be used within the specified frequency band. Equipment may be used airborne.	5725 – 5875 MHz		25 mW e.i.r.p.				EN 302 064
IR2030/28/1	Video Distribution for Private Use	Apparatus designed or adapted for Television Where required, associated audio may also be used within the specified frequency band. Music and speech only permitted when	1394 MHz		10 mW e.i.r.p.		Channel Bandwidth ⊞ 10 MHz		EN 302 064

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
		associated with the video application Airborne use is not permitted.							
IR2030/29/1	Radar Level Gauges	Airborne use is not permitted.	5150 - 7100 MHz		25 mW Peak e.i.r.p. 0.1 mW Average e.i.r.p.				EN 302 372
IR2030/29/2	Radar Level Gauges	Airborne use is not permitted.	8500 - 10600 MHz		25 mW Peak e.i.r.p. 0.1 mW Average e.i.r.p.				EN 302 372
IR2030/29/3	Radar Level Gauges	Airborne use is not permitted.	10.700 - 10.850 GHz		25 mW Peak e.i.r.p. 0.1 mW Average e.i.r.p.				EN 302 372
IR2030/29/4	Radar Level Gauges	Airborne use is not permitted.	24.3 - 27.7 GHz		100 mW Peak e.i.r.p. 0.36 mW Average e.i.r.p.				EN 302 372
IR2030/31/1 2014/88/UK June 2014	Networked i. Meter Reading ii. Sensors and Actuators		870 – 874.4 MHz		500 mW e.r.p.		≤ 200 kHz	Duty cycle limit ≤ 2.5% Adaptive Power Control (APC) required. The APC Control is able to reduce a link's transmit power from its maximum to ≤ 5 mW.	EN 303 204
IR2030/31/2	Networked SRDs i. Meter Reading ii. Sensors and Actuators	Airborne use is not permitted.	873 - 875.6 MHz		500 mW e.r.p.		≤ 200 kHz	Duty cycle limit ≤ 0.01% and limited to a maximum transmit on time of 5ms/1s.	EN 303 204

IR 2030 Licence Exempt Short Range Devices (April 2021)

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
								Adaptive Power Control (APC) required. The APC Control is able to reduce a link's transmit power from its maximum to ≤ 5 mW e.r.p.	
IR2030/32/1	Metering Devices	Equipment may be used airborne	169.4 - 169.475 MHz		500mW e.r.p.		Channel Bandwidth \leq 50kHz	Duty cycle limit 10%	EN 300 220
IR2030/33/2	High duty cycle / continuous transmission devices	Equipment may be used airborne This set of usage conditions is only available to transmitters with analogue frequency modulation (FM).	87.5 - 108 MHz		50 nW e.r.p.		Channel spacing \leq 200 kHz		EN 301 357
IR2030/33/1	High duty cycle / continuous transmission devices	Equipment may be used airborne. This set of usage conditions is only available to wireless audio and multimedia streaming devices.	863 - 865 MHz		10 mW e.r.p.				EN 300 422 EN 301 357
IR2030/34/1	PMR446	Airborne use is not permitted.	446.0 – 446.2MHz		500 mW e.r.p.			Techniques to access spectrum and mitigate	EN 303 405

	Normative Part								Informative Part
Interface / Notification number / Date	Application	Comments to application	Frequency band	Comments to frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Reference
								interference that provide at least equivalent performance to the techniques described in designated standards specified in the notice of publication must be used.	

Table Annex A. Additional Performance Parameters (Informative)

- 4.1 For Licence Exempt Short Range Devices operating on radio frequencies between 25 MHz and 1 GHz, with power levels up to 500 mW, the guidance published in EN 300 220 should ensure reasonable reliability of the radio link and performance of the receiver.

5. Contact details

Ofcom, Riverside House, 2a Southwark Bridge Road, London, SE1 9HA

Technical enquiries to Exempt Technology Team

Tel: 020 7981 3000

Fax: 020 7981 3333

Email: srd.info@ofcom.org.uk

Website: [Ofcom | Spectrum](#)

6. References

NOTE: References to EN 300 220 refer to the applicable sub-part of that document

- | | | |
|------|----------------|--|
| 1.1 | EN 300 220-1 | Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 1: Technical characteristics and methods of measurement. |
| 1.2 | EN 300 220-2 | Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 2. |
| 1.3 | EN 300 220-3-1 | Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 3-1: Low duty cycle high reliability equipment, social alarms equipment operating on designated frequencies (869,200 MHz to 869,250 MHz). |
| 1.4 | EN 300 220-3-2 | Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 3-2: Wireless alarms operating in designated LDC/HR frequency bands 868,60 MHz to 868,70 MHz, 869,25 MHz to 869,40 MHz, 869,65 MHz to 869,70 MHz. |
| 1.5 | EN 300 220-4 | Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 4: Metering devices operating in designated band 169,400 MHz to 169,475 MHz. |
| 1.6 | EN 303 204 | Network Based Short Range Devices (SRD); Radio equipment to be used in the 870 MHz to 876 MHz frequency range with power levels ranging up to 500 mW. |
| 1.7 | EN 300 328 | Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques. |
| 1.8 | EN 300 330 | Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz. |
| 1.9 | EN 300 422-1 | Audio PMSE up to 3 GHz; Part 1: Class A Receivers; Audio PMSE up to 3 GHz; Part 1: Class A Receivers. |
| 1.10 | EN 300 422-2 | Wireless Microphones; Audio PMSE up to 3 GHz; Part 2: Class B Receivers. |
| 1.11 | EN 300 422-3 | Wireless Microphones; Audio PMSE up to 3 GHz; Part 3: Class C Receivers. |
| 1.12 | EN 300 422-4 | Wireless Microphones; Audio PMSE up to 3 GHz; Part 4: Assistive Listening Devices including personal sound amplifiers and inductive systems up to 3 GHz. |

- 1.13 EN 300 440 Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Harmonised Standard for access to radio spectrum.
- 1.14 EN 300 674-2-1 Transport and Traffic Telematics (TTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5 795 MHz to 5 815 MHz frequency band; Part 2: Sub-part 1: Road Side Units (RSU).
- 1.15 EN 300 674-2-2 Transport and Traffic Telematics (TTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5 795 MHz to 5 815 MHz frequency band; Part 2: Sub-part 2: On-Board Units (OBU).
- 1.16 EN 300 718-1 Avalanche Beacons operating at 457 kHz; Transmitter-receiver systems; Part 1: Harmonised Standard for access to radio spectrum.
- 1.17 EN 300 718-2 Avalanche Beacons operating at 457 kHz; Transmitter-receiver systems; Part 2: Harmonised Standard for features for emergency services.
- 1.18 EN 300 761 European Norm - Electromagnetic compatibility and Radio spectrum Matters (ERM); Automatic Vehicle Identification (AVI) for railways.
- 1.19 EN 301 091-1 Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 GHz to 77 GHz range.
- 1.20 EN 301 091-2 Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 GHz to 77 GHz range.
- 1.21 EN 301 091-3 Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 GHz to 77 GHz range; Part 3: Railway/Road Crossings obstacle detection system applications.
- 1.22 EN 301 357 Cordless audio devices in the range 25 MHz to 2 000 MHz.
- 1.23 EN 301 839 Ultra Low Power Active Medical Implants (ULP-AMI) and associated Peripherals (ULP-AMI-P) operating in the frequency range 402 MHz to 405 MHz
- 1.24 EN 301 893 5 GHz RLAN.
- 1.25 EN 302 195 Short Range Devices (SRD); Ultra Low Power Active Medical Implants (ULP-AMI) and accessories (ULP-AMI-P) operating in the frequency range 9 kHz to 315 kHz.
- 1.26 EN 302 208 Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W.

- 1.27 EN 302 288 Short Range Devices; Transport and Traffic Telematics (TTT); Ultra-wideband radar equipment operating in the 24,25 GHz to 26,65 GHz range.
- 1.28 EN 302 291-1 Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13,56 MHz; Part 1: Technical characteristics and test methods.
- 1.29 EN 302 291-2 Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13,56 MHz; Part 2.
- 1.30 EN 302 372 Short Range Devices (SRD); Tank Level Probing Radar (TLPR) equipment operating in the frequency ranges 4,5 GHz to 7 GHz, 8,5 GHz to 10,6 GHz, 24,05 GHz to 27 GHz, 57 GHz to 64 GHz, 75 GHz to 85 GHz.
- 1.31 EN 302 510 Short Range Devices (SRD); Ultra Low Power Active Medical Membrane Implants (ULP-AMI-M) and Peripherals (ULP-AMI-M-P) operating in the frequency range 30 MHz to 37,5 MHz.
- 1.32 EN 302 536 Short Range Devices (SRD); Radio equipment operating in the frequency range 315 kHz to 600 kHz for Ultra Low Power Animal Implantable Devices (ULP-AID) and associated peripherals.
- 1.33 EN 302 537 Ultra Low Power Medical Data Service (MEDS) Systems operating in the frequency range 401 MHz to 402 MHz and 405 MHz to 406 MHz.
- 1.34 EN 302 567 Multiple-Gigabit/s radio equipment operating in the 60 GHz band.
- 1.35 EN 302 608 Short Range Devices (SRD); Radio equipment for Eurobalise railway systems.
- 1.36 EN 302 609 Short Range Devices (SRD); Radio equipment for Euroloop railway systems.
- 1.37 EN 302 686 Intelligent Transport Systems (ITS); Radiocommunications equipment operating in the 63 GHz to 64 GHz frequency band.
- 1.38 EN 302 858 Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 24,05 GHz to 24,25 GHz or 24,05 GHz to 24,50 GHz range.
- 1.39 EN 305 550 Short Range Devices (SRD); Radio equipment to be used in the 40 GHz to 246 GHz frequency range.
- 1.40 EN 303 405 Land Mobile Service; Analogue and Digital PMR446 Equipment.

- 1.41 EN 303 406 Short Range Devices (SRD); Social Alarms Equipment operating in the frequency range 25 MHz to 1 000 MHz.

7. Document history

Version	Date	Changes
1.0	Jan 2001	First Publication EU No. 2000/0156/UK
1.1	Aug 2001	Amended EU No. 2001/0116/UK
1.2	Oct 2002	Amended EU No. 2002/248/UK
1.3	Nov 2006	Changes for proposed Wireless Telegraphy (Exemption) Regulations 2006 EU No.2006/427/UK
1.4	2008	Changes to ensure alignment to the Draft 2007 amendment to the EC Decision 2006/771/EC – SRD Harmonisation
1.5	Oct 2010	Changes to ensure alignment to the 2010 amendment to the EC Decision 2006/771/EC – SRD Harmonisation
1.6	Dec 2011	Changes to ensure alignment to the 2011 amendment to the EC Decision 2006/771/EC – SRD Harmonisation
1.7	June 2013	Changes to close the 10.68-10.7 GHz bands
1.8	June 2014	Changes to add the 870-876 MHz & 915-921 MHz bands and to ensure alignment to the 2013 amendment to the EC Decision 2006/771/EC – SRD Harmonisation
1.9	July 2017	IR2030/8/2 was updated and IR2030/8/3 was added for 5.8 WAS /RLAN
1.10	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
1.11	February 2018	Updated to align with Decision 2017/1483/EU on the harmonisation of Short Range Devices
1.12	November 2018	Changes to IR2030/7/2 to extend frequency band from 66 GHz to 71 GHz and addition of IR2030/7/4 to permit equipment operating in a fixed outdoor installation in the 57 – 71 GHz band

1.13	May 2020	Updated to align with Decision 2018/1538/EU of 11 October 2018 on the harmonisation of short-range devices within the 874-876 and 915-921 MHz frequency bands.
1.14	April 2021	Update to harmonise conditions in the 870 to 874.4 MHz band, align with European Decision 2019/1345/EU of 2 August 2019, include 5925 to 6425 MHz for Wi-Fi and other RLAN use and remove the DFS requirements for channels used by Wi-Fi in the 5725 to 5850 MHz.