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Draft IR 2030 – UK Interface Requirements 2030

Licence Exempt Short Range Devices (SRDs)

Publication Date: 8 December 2022

Contents

Section

1. Overview

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, whist 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 factoproduct requirement.

3. Definitions

3.1 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 radiodevices, regardless of the application or the purpose, which fulfil thetechnical 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 datafrom that equipment.
IR2030/3	Databuoy Telemetry	Databuoy Telemetry apparatus is equipment designed or adapted fortelemetry in a maritime environment.
IR2030/4	Active Medical Implants and associated peripherals	The active medical implants device category covers the radio part ofactive implantable medical devices that are intended to be totally orpartially introduced, surgically or medically, into the human body orthat of an animal, and where applicable, their peripherals.
IR2030/6	Medical Body Area Network Systems	Medical Body Area Network Systems (MBANSs), used for medical dataacquisition, 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 biologicalapplications 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'shome, as prescribed by duly authorised healthcare professional.
IR2030/7	Wideband Data transmission Devices (WBDTS)	The wideband data transmission device category covers radio devicesthat use wideband modulation techniques to access the spectrum. Typical uses include wireless access systems such as radio local areanetworks (WAS/RLANs) or wideband short-range devices in data networks.

IR2030/8	Wireless Access Systems (WAS)	Equipment, including Radio Local Area Networks, designed for highspeed 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 betweenthe track and railway vehicles.
IR2030/12	Radio determination	The radio determination device category covers radio devices that areused 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 batterypowered. 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 radiodevices 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 and determination applications. 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-theftinduction 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:-

		to produce a controlled magnetic field; and a predetermined recognisable signal when operating within thatmagnetic field
IR2030/17	Low Duty Cycle / High ReliabilityDevices	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 that use radio communication for indicating an alert condition at adistant 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 assistelderly 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 themovement 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 ofprojecting 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 includeone 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 asubstance.
IR2030/31	Networked SRDs	A short-range device in a data network, which potentially also coverswider areas; all nomadic and mobile devices within the data network shall be controlled by a master network access point.
IR2030/32	Metering device	The metering device category covers radio devices that are part ofbidirectional 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 Σ(Ton)/(Tobs) where Ton is the "on" time of a single transmitter device and Tobs is the observation period. Ton is measured in an observation frequency band (Fobs). Unless otherwise specified in the technical provisions, Tobs is acontinuous one hour period and Fobs is the applicable frequency band.

Informative information only: 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.

Table: Minimum requirements for the use of Short Range Devices

Non-specific short-range devices

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative 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 dBµA/m at 10 m		Channel spacing ≥ 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 dBµA/m at 10 m				EN 300 718
IR2030/1/1	Non-specific short-range devices	Equipment may be used airborne.	6765 - 6795 kHz	42 dBµA/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 dBµA/m at 10 m				EN 300 330

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/1/3	Non-specific short-range devices	Equipment may be used airborne.	26.957 - 27.283 MHz	10 mW e.r.p. 42 dBµA/m at 10 m				EN 300 220 EN 300 330
IR2030/1/40	Non-specific short-range devices	Equipment may be used airborne.	26.99 – 27.00 MHz 27.04 – 27.050 MHz 27.09 – 27.10 MHz 27.14 – 27.15 MHz 27.19 – 27.20 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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
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 Notices of publication (See Section 6) 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 Notices of publication (See Section 6) must be used. Alternatively, a duty cycle limit of 0.001% may be used.	EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
							Between 00:00h and 06:00h local time a duty cycle limit of 0.1% may be used.	
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 Notices of publication (See Section 6) must be used. Alternatively, a duty cycle limit of ≤ 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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
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.	417.9 - 418.1 MHz	250 mW e.r.p.				EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		Music is only permitted when using a digitised signal.						
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
IR2030/1/12	Non-specific short-range devices	Voice applications are allowed with advanced mitigation techniques. Other audio and video applications are excluded. Equipment may be used airborne.	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.		

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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.		
IR2030/1/13	Non-specific short-range devices	Analogue audio applications other than voice are excluded. Analogue video applications are excluded. Equipment may be used airborne.	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 Notices of publication (See Section 6) must be used. Alternatively, a duty cycle limit of ≤ 0.1% may be used.	EN 300 220
	Non-specific short-range devices		867.4 - 867.6 MHz		Compatibility as APC must be used.		Notices of publication (See Section 6) must be used. Maximum Duty cycle for data network access points: ≤ 10 % Maximum Duty cycle for other data network devices: ≤ 2.5	

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/1/15	Non-specific short-range devices	Analogue audio applications otherthan voice are excluded. Analogue video applications areexcluded. Equipment may beused airborne.	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 Notices of publication (See Section 6) 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 atleast equivalent performance to the techniques described in designated standards specified in the Notices of publication (See Section 6) must be used. Alternatively, a duty cycle limit of ≤ 1 % may be used.	EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/1/17	Non-specific short-range devices	Equipment may beused 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 Notices of publication (See Section 6) must be used. Alternatively, a duty cycle limit of ≤ 0.1 % may be used.	EN 300 220
IR2030/1/18	Non-specific short-range devices	Equipment may beused airborne.	869.30 - 869.40 MHz	10 mW e.r.p.		Channel bandwidth ≤ 25 kHz	Duty cycle limit ≤ 10 %	EN 300 220
IR2030/1/19	Non-specific short-range devices	Equipment may beused 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 Notices of publication (See Section 6)	EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
							must be used. Alternatively, a duty cycle limit of ≤ 10 % may be used.	
IR2030/1/20	Non-specific short-range devices	Equipment may beused airborne. Analogue audio applications otherthan voice are excluded. Analogue video applications areexcluded.	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 Notices of publication (See Section 6) must be used. Alternatively, a duty cycle limit of ≤ 1% may be used.	EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/1/21	Non-specific short-range devices	Equipment may beused airborne. Analogue audio applications otherthan voice/speechare 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 ≤ 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 ≤ 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 ≤ 1%	EN 300 220
IR 2030/1/47	Non-specific short- range devices	This set of usage conditions is only available for short range devices in data networks. All mobile and nomadic devices within the data network shall be	870 - 874.4 MHz	500 mW e.r.p.	Adaptive Power Control (APC) required, alternatively other mitigation techniques which achieve at least an	Bandwidth: ≤ 200 kHz	Duty cycle: ≤ 10 % for network access points, ≤2.5 % otherwise. Techniques to access spectrum and mitigate interference that provide at least equivalent	

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		controlled by a master network access point. Airborne use is not permitted.			equivalent level of spectrum compatibility.		performance to the techniques described in relevant designated standards specified in the Notices of publication (See Section 6) 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	EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
							transmit on-time of 5ms/1s	
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 datanetworks. All mobile and nomadic deviceswithin the data network shall be controlled by a master network access point. Airborne use is not permitted.	917.3 - 918.9 MHz	500 mW e.r.p.	Transmissions only permitted within thefrequency 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	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 Notices of publication (See Section 6) must be used.	

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
					equivalent level of spectrum compatibility			
IR2030/1/48	Non-specific short- range devices	This set of usage conditions is only available for short-range devices in data networks. All mobile and nomadic deviceswithin the data network shall be controlled by a master network access point. Airborne use is not permitted.	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 Notices of publication (See Section 6) must be used.	
IR2030/1/38	Non-specific short-range devices	Airborne use is not permitted.	918.5 - 918.9 MHz 919.7 - 920.1	100 mW e.r.p.			Duty Cycle limit ≤ 0.01% and limited to a maximum transmit on-time of 5ms/1s	EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
			MHz					
IR2030/1/22	Non-specific short-range devices	Equipment may beused airborne.	2400 - 2483.5 MHz	10 mW e.i.r.p.				EN 300 440
IR2030/1/23	Non-specific short-range devices	Equipment may beused airborne.	5725 - 5875 MHz	25 mW e.i.r.p.				EN 300 440
IR2030/1/24	Non-specific short-range devices	Equipment may beused 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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
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

Industrial/ Commercial Telemetry and Tele-command

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/2/4	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 25 kHz. Channel numbers 1 to 5 inclusive are available with a channel centre frequency of 173.2 MHz plus (Channel Spacing times channel number).		EN 300 220
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		EN 300 220

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
						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

Databuoy Telemetry

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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

Medical & biological

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/4/2	Active Medical Implants and associated peripherals	Airborne use is not permitted.	Article II. 00 kHz– - 30 MHz	9 dBµA/m at 10m			Duty cycle limit: 10%	EN 300 330
IR2030/4/8	Active Medical Implants and associated peripherals	Animal Implantable Devices. Equipment may be used airborne.	15 - 600 kHz	-5 dBµA/m at 10m			Duty cycle limit: 10%	EN 302 536
IR2030/4/9	Active Medical Implants and associated peripherals	Animal Implantable Devices. Equipment may be used airborne.	12.5 - 20 MHz	-7 dBµA/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 ≤ 10%.	EN 302 510

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/4/4	Active Medical Implants and associated peripherals	Equipment may be used airborne.	401 - 402 MHz	25 µW e.r.p.		Channel spacing 25kHz. Individual transmittersmay 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 Notices of publication (See Section 6) mustbe used.	EN 302 537
IR2030/4/5	Active Medical Implants and associated peripherals	This category coversthe radio part of active implantable medical devices. Equipment may be used airborne.	402 – 405 MHz	25 µW e.r.p.		Channel spacing 25kHz. Individual transmittersmay 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 Notices of publication (See Section 6) mustbe used.	EN 301 839

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/4/6	Active Medical Implants and associated peripherals	Equipment may be used airborne.	405 – 406 MHz	25 µW e.r.p.		Channel spacing 25kHz. Individual transmittersmay 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 Notices of publication (See Section 6) mustbe used. Alternatively, a duty cycle limit of 0.1% may be used.	EN 302 537
IR2030/4/7	Active Medical Implants and associated peripherals	This set of usage conditions is only available to active implantable medicaldevices. Peripheral master units are for indooruse only. Equipment may be used airborne.	2483.5 - 2500 MHz	10 mW e.r.p.		Channel spacing 1MHz. The whole frequency band may also be useddynamically as a single channel for high-speeddata transmissions.	Techniques to access spectrum and mitigate interference that provideat least equivalent performance to the techniques described in relevant designated standards specified in the Notices of publication (See Section 6) mustbe used. Alternatively, a duty cycle	EN 301 559

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
							limit of 10 % may be used.	
IR2030/6/1	Medical and Biological Applications	These bands may also be used for thetracking of birds. Equipment affixed toa bird may be used airborne.	173.7 – 174 MHz	10 mW e.r.p.		Channel Spacing 12.5kHz. Channel numbers 1 to24 inclusive are available with channelcentre frequency of 173.7 MHz plus (Channel Spacing times channel number).		EN 300 220

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/6/2	Medical and Biological Applications	These bands may also be used for thetracking of birds. Equipment affixed toa bird may be used airborne.	173.7 – 174 MHz	10 mW e.r.p.		Channel Spacing 25kHz. Channel numbers 1 to11 inclusive are available with channelcentre frequency of 173.7 MHz plus (Channel Spacing times channel number).		EN 300 220
IR2030/6/3	Medical and Biological Applications		173.7 – 174 MHz	10 mW e.r.p.				EN 300 220
IR2030/6/4	Medical and Biological Applications	These bands may also be used for thetracking of birds. Equipment affixed toa bird may be used airborne.	458.9625 – 459.1000 MHz	10 mW e.r.p.		Channel Spacing 12.5kHz. Channel numbers 37 to 47 inclusive are available with		EN 300 220

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
						channel centre frequency of 458.5 MHz plus (Channel Spacing times channel number).		
IR2030/6/5	Medical and Biological Applications	Airborne use is notpermitted.	458.9625 – 459.1000 MHz	500 mW e.r.p.		Channel Spacing 12.5kHz. 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

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/6/6	Medical and Biological Applications	These bands may also be used for thetracking of birds. Equipment affixed toa bird may be used airborne.	458.9625 – 459.1000 MHz	10 mW e.r.p.		Channel Spacing 25kHz. 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
IR2030/6/7	Medical and Biological Applications	Airborne use is notpermitted.	458.9625 - 459.1000 MHz	500 mW e.r.p.		Channel Spacing 25kHz. Channel numbers 19 to 23 inclusive are available with channel centre frequency of 458.5 MHz plus (Channel		EN 300 220

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
						Spacing times channel number).		
IR2030/6/8	Medical data acquisition devices (MBANS)	The set of usage conditions is only available for medicalbody area network system (MBANS) for indoor use within healthcare facilities. Airborne use is notpermitted.	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 Notices of publication (See Section 6) mustbe used. Alternatively, a duty cycle of ≤ 2 % must be used.	EN 301 559
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	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 Notices of	EN 301 559

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		thepatient's home. Airborne use is notpermitted.					publication (See Section 6) must be used. Alternatively, a duty cycle of ≤ 2 % must be used.	
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 Medical Capsule Endoscopy (ULP-	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 outsideof the patient's body)				EN 303 520

Interface / Notification number / Date	Application	Comments to application	Frequencyband	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		WMCE) applications. Airborne use is notpermitted.						

Wideband Data Transmission Systems (WBDTS), Wireless Access Systems (WAS) & Short Range Indoor Data Links

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
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	EN 300 220

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
							techniques described in designated standards specified in the Notices of publication (See Section 6) must be used.	
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 mobile and nomadic devices within the data network shall be controlled by a master network access point. Airborne use is not permitted.	917.4 - 919.4 MHz	25 mW e.r.p.	Bandwidth ≥ 600 kHz	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 Notices of publication (See Section 6) must be used.	

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
IR2030/7/1	Wideband Data Transmission System (WBDTS)	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 Notices of publication (See Section 6) must be used.	EN 300 328 EN 303 422
IR2030/7/2	Wideband Data Transmission System (WBDTS)	Equipment must not form part of a fixed outdoor installation. Equipment may be used airborne.	57 – 71 GHz	40 dBm e.i.r.p. / 23 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 Notices of publication (See Section 6) must be used.	EN 302 567
IR2030/7/4	Wideband Data Transmission	Equipment forming part of a	57 – 71 GHz	40 dBm e.i.r.p / 27 dBm maximum			Techniques to access spectrum and mitigate interference that provideat least equivalent	EN 302 567

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
	System (WBDTS)	fixed outdoor installation. Airborne use is not permitted. For operation in the 59 – 63.9 GHz band, transmission 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.		transmit output power* *total conducted power delivered to antenna port/ports			performance to the techniques described in designated standards specified in the Notices of publication (See Section 6) must be used.	

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
IR2030/8/1a	Wireless Access Systems (WAS)	Airborne use outside of an aircraft is only permitted in 5170 – 5250 MHz. Outdoor use is permitted provided that the equipment must not form part of a fixed outdoor installation. The apparatus may be used within a building or aircraft or any other enclosed space(including road vehicles and trains with attenuation characteristics at least as strong as those of either a building, an aircraft or an	5150- 5250 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. If an installation within a road vehicle can not meet the attenuation limits set then a 40 mW maximum mean e.i.r.p. applies.			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 (See Section 6) must be used.	EN 301 893

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
		attenuation loss on average of less than 12 dB . Devices can only be used to establish a connection with a station or apparatus within the same building or aircraft or other enclosed space.						
IR2030/8/1b	Wireless Access Systems (WAS)	Aeronautical mobile use is not permitted. The apparatus may only be used within a building, aircraft or any other enclosed space with attenuation characteristics at least as strong as those of either a building or an	5250- 5350 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, 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 Notices of publication (See Section 6) must be used.	EN 301 893

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
		aircraft, and only to establish a connection with a station or apparatus within the same building or aircraft or other enclosed space.						
30/8/2	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 Notices of publication (See Section 6) 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

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
								Where the band 5725 – 5730 MHz is used see 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	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 Notices of publication (See Section 6) for the 5150 – 5250 MHz band must be used.	

[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 EN301 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).

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
		apparatus within the same aircraft.						
IR2030/7/6	Wireless Access Systems (WAS)	Equipment must not form part of a fixed outdoors installation Airborne use is not permitted 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	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 density of 12.6mW/ 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 Notices of publication (See Section 6) for the 5150 – 5250 MHz band must be used.	

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
		or aircraft or other enclosed space for communications purposes.						
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 when using a digitised signal. Airborne use is not permitted.	5725 – 5875 MHz	25 mW e.i.r.p.				EN 300 440
IR2030/9/3	Short Range Indoor Data Links	This frequency band is no longer available. However, equipment that was put into service before 30	10.675 – 10.699 GHz	1 W e.i.r.p.				EN 300 440

Interface / Notificationnumber / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
		December 2014 may continue to operate within the band. Music and speech are only permitted when using a digitised signal.						

Railway applications

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/10/2	Railway Applications	Airborne use is not permitted.	516 – 8516 kHz	7 dBµA/m at 10 m		Centre Frequency 4516 kHz		EN 300 330
IR2030/10/4	Railway Applications	Airborne use is not permitted.	27.09 – 27.10 MHz	42 dBµA/m at 10 m 5 dBµA/m at 10 m -1 dBµA/m at 10 m	Fo ± < 5 kHz Fo ±5 to 200 kHz Fo ±5 to 500 kHz	Centre Frequency (Fo) 27.095 MHz		EN 300 330 EN 302 608

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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

Location devices

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/11/1	Devices for locating victimsin 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 dBµA/m at 10 m				
IR2030/11/2	Devices for locating victimsin distress or at risk	Airborne use is not permitted.	456.9 - 457.1 kHz	7 dBµA/m at 10 m				EN 300 718

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/12/1	Radio determination	This frequency band is no longer available. However, equipmentthat was put into service before 31 December 2003 may continue to operate within the band.	888.0 - 889.0 MHz	500 mW e.r.p.		Channel Spacing 25 kHz		
IR2030/12/2	Radio determination	Equipment may beused 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 beused airborne.	5725 – 5875 MHz	25 mW e.i.r.p.				EN 300 440

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/12/12	Radio determination	Equipment may beused airborne. This set of usage conditions is only available to Tank Level Probing Radar(TLPR). Equipment must be within a closed tank, which is intended to contain substances andwhich is constructed ofmetal or reinforced concrete; or any other material that provides an equivalent level of attenuation to radio frequencies as metal orreinforced concrete.	4.5 – 7.0 GHz	24 dBm e.i.r.p.	Equipment must onlyemit emissions which would (if the equipment were used within an enclosed tank, whichhas the specificationsset out in Annex E of ETSI standard EN 302372-1), 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 beused airborne. This set of usage conditions is onlyavailable to LevelProbing Radar. Established exclusionzones around radio astronomy	6.0 - 8.5 GHz	7 dBm/50 MHz peak e.i.r.p. / - 33 dBm/MHz meane.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	EN 302 729 Exclusion zones defined in

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		(RAS) site Jodrell Bank must be obeyed. (53°14'10"N, 02°18'26" W)					performance to the techniques described in designated standards specified in the Notices of publication (See Section 6) must be used.	the EN 302 729; Emissions are prohibited within 4 km radius of RAS sites. The antenna heightshall be less than 15m within 40 km
IR2030/12/13	Radio determination	Equipment may beused airborne. This set of usage conditions is only available to Tank Level Probing Radar(TLPR). Equipment must be within a closed tank, which is intended to contain substances andwhich is constructed ofmetal or	8.5 – 10.6 GHz	30 dBm e.i.r.p.	Equipment must onlyemit emissions which would (if the equipment were used within a closed tank, which has the specifications set outin Annex E of			EN 302 372

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		reinforced concrete; or any other material that provides an equivalent level of attenuation to radio frequencies as metal orreinforced concrete.			ETSI standard EN 302 372-1), when measured in any direction, have a maximum e.i.r.p. density of -41.3 dBm/MHz.			
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 forindoor use only. This frequency band is no longer available. However, equipmentthat 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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 Notices of publication (See Section 6) 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/12/18	Radio determination	This set of usage conditions is onlyavailable to LevelProbing Radar. Established exclusionzones around radio astronomy (RAS) sitemust 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) Equipment may beused airborne.	24.05 - 26.5 GHz	26 dBm/50 MHz peak e.i.r.p. /- 14 dBm/MHzmean 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 Notices of publication (See Section 6) 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 heightshall be less than 15m within 40 kmradius of RASsites.

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/12/14	Radio determination	This set of usage conditions is only available to Tank Level Probing Radar(TLPR). Equipment must be within a closed tank, which is intended to contain substances andwhich is constructed ofmetal or reinforced concrete; or any other material that provides an equivalent level of attenuation to radio frequencies as metal orreinforced concrete. Equipment may beused airborne	24.05 – 27.0 GHz	43 dBm e.i.r.p.	Equipment must onlyemit emissions which would (if the equipment were used within a closed tank, which has the specifications set outin 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
IR2030/12/10	Radio determination	Airborne use is not permitted.	24.150 - 24.250 GHz	2 W e.i.r.p.				EN 300 440

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/12/11	Radio determination	Applications are for use in mobile applications only, fixed installations arenot 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	This set of usage conditions is only available to Tank Level Probing Radar(TLPR). Equipment must be within a closed tank, which is intended to contain substances andwhich is constructed ofmetal or reinforced concrete; or any other material that provides an equivalent level of attenuation to radio frequencies as metal orreinforced concrete. Equipment may beused airborne.	57 - 64 GHz	43 dBm e.i.r.p.	Equipment must onlyemit emissions which would (if the equipment were used within a closed tank, which has the specifications set outin 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/12/19	Radio determination	This set of usage conditions is onlyavailable to LevelProbing Radar. Equipment may beused airborne	57 - 64 GHz	35 dBm/50 MHz peak e.i.r.p. / - 2 dBm/MHzmean 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 Notices of publication (See Section 6) must be used.	EN 302 729
IR2030/12/16	Radio determination	This set of usage conditions is only available to Tank Level Probing Radar(TLPR). Equipment must be within a closed tank, which is intended to contain substances andwhich is constructed ofmetal or reinforced concrete; or any other material that provides an equivalent	75 - 85 GHz	43 dBm e.i.r.p.	Equipment must onlyemit emissions which would (if the equipment were used within a closed tank, which has the specifications set outin Annex E of ETSI standard EN 302			EN 302 372

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		level of attenuation to radio frequencies as metal orreinforced concrete. Equipment may beused airborne.			372-1), when measured in any direction, have a maximum e.i.r.p. density of -41.3 dBm/MHz.			
IR2030/12/20	Radio determination	This set of usage conditions is onlyavailable to LevelProbing Radar. Equipment may beused airborne.	75 - 85 GHz	34 dBm/50 MHz peake.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 Notices of publication (See Section 6) must be used.	EN 302 729

Radio Frequency Identification (RFID)

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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 to3. 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 to13. Channel centre frequencies are 864.9 MHz plus (0.2 MHz times		EN302 208

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
						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.		IR2030/13/45

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/13/9	Radio Frequency Identification (RFID)	Airborne use is not permitted.	916.1 - 918.9 MHz	4W e.r.p.	Interrogator transmissions at 4 W e.r.p. onlypermitted at the centre frequencies: 916.3 MHz; 917.5 MHz; and 918.7 MHz the band 915.3 - 920.9 MHz.	≤ 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 Notices of publication (See Section 6) must be used.	IR2030/13/9
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 indooruse 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 buildingor 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 millisecondsis required.	EN 300 440

Transport and Traffic Telematics

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
Access IR2030/14/18	Transport and Traffic Telematics	Railway Applications Airborne use is not permitted.	984 - 7484 kHz	9 dBµA/m		Center Frequency 4234 kHz		EN 300 330 EN 302 608
IR2030/14/19	Transport and Traffic Telematics	Railway Applications Airborne use is not permitted.	7.3 - 23 MHz	-7 dBuA/m at 10 m		Center Frequency 13.547 MHz		EN 302 609
IR2030/14/11	Transport and Traffic Telematics	Vehicle-to-vehicle applications only Airborne use is not permitted.	870 - 873 MHz	500 mW e.r.p		≤ 500 kHz	Duty cycle limit ≤ 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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 ≤ 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 ≤ 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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 ≤ 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
IR2030/14/1	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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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 authorised by the owner. Airborne use is not permitted.	5805 - 5815 MHz	2 W e.i.r.p.				EN 300 440
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 Notices of publication (See Section 6) 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			Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in	

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
				Control (TPC) range of 30 dB			designated standards specified in the Notices of publication (See Section 6) 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
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	EN 302 858-1 V1.2.1

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
							(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.	
IR2030/14/7	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 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	EN 302 858-1 V 1.2.1

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
							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 Notices of	EN 302 858

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
							publication (See Section 6) must be used. Duty cycle limits and frequency modulation ranges apply as specified in EN 302 858-1 v1.3.1.	
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 Notices of publication (See Section 6) must be used. Duty cycle limits and frequency modulation ranges apply as specified in EN 302 858-1 v1.3.1.	EN 302 858

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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 Notices of publication (See Section 6) 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 January 2020 may continue to operate within the band. Airborne use is not permitted.	63 - 64 GHz	40 dBm e.i.r.p.				EN 302 686

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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 coexistence with automotive radar systems. Airborne use is not permitted.	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

Inductive

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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/15/10	Inductive	That part of an induction system designed or adapted to produce:- controlled magnetic field; and a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.	148.5 - 1600 kHz	-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 -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.
IR2030/15/9	Inductive	Equipment may be used airborne	148.5 - 5000 kHz	-15 dBµA/m at 10 m in any bandwidth of 10 kHz. -5 dBµA/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 designed or adapted to produce:- controlled magnetic field; and	240 - 315 kHz	24 dBµA/m at 10 m				EN 300 330

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		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 dBµA/m at 10 m				EN 300 330
IR2030/15/13	Inductive	Airborne use is not permitted.	1600 - 2000 kHz	-15 dBµA/m at 10 m in any bandwidth of 10 kHz. -5 dBµA/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 dBµA/m at 10 m (measured underwater), provided that emissions above water are restricted to the transmit power limit of - 15 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
IR2030/15/14	Inductive	That part of an induction system designed or adapted to produce:-	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		The MoD operates high-power underwater communication systems. Users and manufacturers	EN 300 330

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		controlled magnetic field; and a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.			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	
IR2030/15/15	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:- controlled magnetic field; and 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/15/17	Inductive	That part of an induction system designed or adapted to produce:- controlled magnetic field; and 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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/15/21	Inductive	That part of an induction system designed or adapted to produce:- controlled magnetic field; and a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.	6.795 - 13.533 MHz	9 dBµA/m at 10 m 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.	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 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
IR2030/15/22	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: - controlled magnetic field; and a predetermined recognisable signal when	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 MoD operates high-power underwater communication systems. Users and manufacturers of underwater SRD equipment should be aware that this equipment should be constructed so	EN 300 330

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		operating within the magnetic field. Airborne use is not permitted.			the transmit power limit of 9 dBµA/m at 10 m		as to operate safely in the presence of high-power systems	
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.	

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/15/30	Inductive	That part of an induction system designed or adapted to produce:- controlled magnetic field; and a predetermined recognisable signal when operating within the magnetic field. Airborne use is not permitted.	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 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
IR2030/15/31	Inductive	Equipment may be used airborne.	26.957 - 27.283 MHz	42 dBµA/m at 10 m				EN 300 330
IR2030/15/32	Inductive	That part of an induction system designed or adapted to produce:- controlled magnetic field; and a predetermined recognisable signal when operating within the magnetic field.	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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		Airborne use is not permitted.						

Metal detectors

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/16/1	Metal Detectors	That part of an induction system designed or adapted to produce:- to produce a controlled magnetic field; and a predetermined recognisable signal when operating within that magnetic field	9 - 148.5 kHz	70 dBµA/m at 6 m				EN 300 330

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		Airborne use is not permitted.						

Low duty cycle /high reliability devices

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/17/1	Low duty cycle / high reliability devices	This set of usage conditions is for alarm systems. Equipment may be used airborne.	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	Duty cycle limit ≤1%	EN 300 220

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
						frequency allocation.		
IR2030/17/5	Low duty cycle / high reliability devices	This set of usage conditions is for social alarm systems. Equipment may be used airborne.	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
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

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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

Alarms

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/18/3	Social Alarms forthe 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 forthe 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 beused airborne.	169.4750 – 169.4875 MHz	500 mW e.r.p.		Channel spacing 12.5kHz		EN 300 220 / EN 303 406
IR2030/18/6	Social Alarms	Equipment may beused airborne.	169.5875 – 169.600 MHz	500 mW e.r.p.		Channel spacing 12.5kHz		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 12.5kHz		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 1mW.	Channel spacing 12.5kHz		EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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
IR2030/21/1	Mobile, Transportable and Lone WorkerSafety Alarms.	Airborne use is not permitted.	173.1875 MHz	10 mW e.r.p.		Channel spacing 12.5kHz		EN 300 220
IR2030/21/2	Mobile, Transportable and Lone WorkerSafety Alarms.	Airborne use is not permitted.	458.8375 MHz	100 mW e.r.p.		Channel spacing 12.5kHz		EN 300 220
IR2030/22/1	Fixed Alarms	Airborne use is not permitted.	173.225 MHz	10 mW e.r.p.		Channel spacing 12.5kHz		EN 300 220
IR2030/22/2	Fixed Alarms	Airborne use is not permitted.	173.225 MHz	10 mW e.r.p.		Channel spacing 25kHz		EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/22/3	Fixed Alarms	Airborne use is not permitted.	458.825 MHz	100 mW e.r.p.		Channel spacing 12.5kHz		EN 300 220

Model Control

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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) 27.090 - 27.100 MHz (Channel 14)	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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		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

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative 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

Radio microphones

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
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
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

Radio microphones

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
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
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

Assistive Listening Devices (ALD)

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
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 channel centre frequency is equal to		EN 300 422

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
						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	10 mW e.r.p.	A minimum wanted received signal threshold of 35 dBµV/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: ≤ 50 kHz. Devices shall implement the whole frequency range on a tuning-range basis. 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 Notices of publication (See Section 6) must be used.	EN 300 422 EN 301 357
IR2030/25/4	Assistive Listening Devices (ALD)	Indoor Digital Assistive Listening Device Systems only.	916.1 - 916.5 MHz 917.3 - 917.7	10 mW e.r.p.		≤ 400 kHz	Duty cycle limit < 25 %	EN 300 422

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
		Airborne use is not permitted.	MHz 918.5 - 918.9 MHz 919.7 - 920.1 MHz					

Wireless audio and video applications

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
IR2030/26/1	Wireless Audio Applications	Airborne use is not permitted.	36.61 - 36.79 MHz 37.01 - 37.19 MHz	10 µW e.r.p.				EN 300 422 EN 301 357

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
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	10 mW e.r.p.		Channel bandwidth ≤ 50 kHz Frequency band may be used for narrow band applications.		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 ≤ 10 MHz		EN 302 064

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
IR2030/27/2	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.	2400 – 2483.5 MHz	10 mW e.i.r.p.				EN 302 064
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.	1394 MHz	10 mW e.i.r.p.		Channel Bandwidth □ 10 MHz		EN 302 064

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Field strength	Comments to Maximum transmit power / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
		Music and speech only permitted when associated with the video application Airborne use is not permitted.						

Radar Level Gauges

Interface / Notification number / Date	Application	Comments toapplication	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access andoccupation rules	Informative Reference
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

Networked equipment and meter reading

Interface / Notification number / Date	Application	Comments toapplication	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	Informative Reference
IR2030/31/1 2014/88/UK June 2014	Networked SRDs 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. 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.	EN 303 204
IR2030/32/1	Metering Devices	Equipment may be used airborne	169.4 - 169.475 MHz	500mW e.r.p.		Channel Bandwidth ≤ 50kHz	Duty cycle limit 10%	EN 300 220

Interface / Notification number / Date	Application	Comments toapplication	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	Informative Reference
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 ≤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

PMR 446

Interface / Notification number / Date	Application	Comments to application	Frequency band	Maximum transmit power / Power spectral density / Fieldstrength	Comments to Maximum transmitpower / Power spectral density / Field strength	Channelling	Channel access and occupation rules	Informative Reference
IR2030/34/1	PMR446	Airborne use is not permitted.	446.0 – 446.2MHz	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 Notices of publication (See Section 6) must be used.	EN 303 405

4. Contact details

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5. References

5.1 Notices of publication from the Department for Business, Energy and Industrial Strategy are provided for designated standards for radio equipment in England, Scotland and Wales. This is in support of the Radio Equipment Regulations 2017 (as amended). A consolidated list of the standards is also available for reference by businesses.

5.2 European harmonised standards remain the relevant standards for placing goods on the Northern Ireland market, where there is alignment with relevant EU rules. However, the Government is seeking to find a new balance in the Northern Ireland Protocol to place it on a more sustainable footing that would impact on how products are regulated in Northern Ireland.

5.3 Guidance on placing manufactured goods on the market in Northern Ireland is provided by the Government. 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 methodsof measurement.
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 methodsof measurement.
1.2	EN 300 220-2	Short Range Devices (SRD) operating in the frequency range 25MHz to 1 000 MHz; Part 2.
1.3	EN 300 220-3-1	Short Range Devices (SRD) operating in the frequency range 25MHz 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 25MHz 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 andinductive 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 accessto 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 frequencyrange 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 26,65GHz 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 operatingin the frequency range 401 MHz to 402 MHz and 405 MHz to 406MHz.
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 Eurobaliserailway 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.
1.42	EN 302 571	Intelligent Transport Systems (ITS); Radio equipment operating in the 5855 MHz to 5925 MHz frequency band.
1.43	EN 302 729	Short Range Devices (SRD) - Level Probing Radar (LPR) equipment operating in the frequency ranges 6 GHz to 8,5 GHz, 24,05 GHz to 26,5 GHz, 57 GHz to 64 GHz, 75 GHz to 85 GHz

6. Document version 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.
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