EUROPEAN
COMMISSION

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ANNEX

ANNEX

to the

Commission Implementing Decision

amending Implementing Decision (EU) 2018/1538 as regards the update of harmonised technical conditions for short-range devices within the 874-876 and 915-921 MHz frequency bands

ANNEX

In the Annex, the table and the table notes are replaced by the following:

Band no	Frequency band	Category of short-range devices	Transmit power limit/ field strength limit/power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
‘1	874-874,4 MHz	Non-specific short-range devices [1]	500 mW e.r.p. Adaptive Power Control (APC) required, alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth ≤ 200 kHz Duty cycle ≤ 10% for	This set of usage conditions is only available for data networks All nomadic and mobile devices within the data network shall be controlled by a master network access point [4, 5, 6, 7]	1 July 2022

				network access points [4] Duty cycle 2,5% otherwise		
2	916,4-919,4 MHz	Wideband data transmission devices [3]	25 mW e.r.p	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth: > 600 kHz and ≤ 1 MHz Duty cycle ≤ 10% for network access points [4] Duty cycle ≤ 2,8%	This set of usage conditions is only available for wideband short-range devices in data networks All nomadic and mobile devices within the data network shall be controlled by a master network access point [4, 5, 6]	1 October 2025

				otherwise		
3	916,1-918,9 MHz [8]	Radio Frequency Identification (RFID) devices [2]	Interrogator transmissions at 4 W e.r.p. only permitted at the centre frequencies 916,3 MHz, 917,5 MHz, 918,7 MHz	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth ≤ 400 kHz	[5,6,7]	1 July 2022
4	917,3-918,9 MHz	Non-specific short-range devices [1]	500 mW e.r.p. Transmissions only permitted within the frequency ranges 917,3-917,7 MHz, 918,5-918,9	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive	This set of usage conditions is only available for data networks All nomadic and mobile devices within	1 July 2022

			MHz Adaptive Power Control (APC) required, alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility	2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth ≤ 200 kHz Duty cycle ≤ 10% for network access points [4] Duty cycle ≤ 2,5% otherwise	the data network shall be controlled by a master network access point [4, 5, 6, 7]	
5	916,1-919,4 MHz	Non-specific short-range devices [1]	25 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised	This set of usage conditions is only available for short-range device in data networks All nomadic and mobile devices within the data network shall be controlled by a	1 October 2025

				standards or parts thereof the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth ≤ 600 kHz Duty cycle ≤ 1%	master network access point [4, 5, 6]	

[1] The non-specific short-range device category covers all kinds of radio devices, regardless of the application or the purpose, which fulfil the technical conditions as specified for a given frequency band. Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications.

[2] The radio frequency identification (RFID) device category covers tag/interrogator based radio communications systems, consisting of radio devices (tags) attached to animate or inanimate items and of transmitter/receiver units (interrogators) which activate the tags and receive data back. Typical uses include the tracking and identification of items, such as for electronic article surveillance (EAS), and collecting and transmitting data relating to the items to which tags are attached, which may be either battery-less, battery assisted or battery powered. The responses from a tag are validated by its interrogator and passed to its host system.

[3] The wideband data transmission device category covers radio devices that use wideband modulation techniques to access the spectrum. Typical uses include wireless access systems such as radio local area networks (WAS/RLANs) or wideband short-range devices in data networks.

[4] A network access point in a data network is a fixed terrestrial short range device that acts as a connection point for the other short range devices in the data network to service platforms located outside of that data network. The term data network refers to several short range devices, including the network access point, as network components and to the wireless connections between them.

[5] According to Article 3(1) the frequency bands shall be designated and made available on a non-exclusive and shared basis. The harmonised technical conditions shall make it possible for most short-range devices in most Member States to be operated subject to a general authorisation regime

under national law. This is without prejudice to Articles 46 and 51 of Directive (EU) 2018/1972 and to Articles 3(2) and 7 of Directive 2014/53/EU. Member States may limit usage of this entry such that installation and operation are performed only by professional users and may consider individual authorisation, e.g. to administer geographical sharing and/or the application of mitigation techniques to ensure protection of radio services.

[6] In Member States where parts or all of this frequency range are used for public order and public security purposes and defence and coordination is not possible, Member States may decide not to implement this entry partially or entirely, in accordance with Article 1(4) of Decision 676/2002/EC and Article 3(2) of this Decision.

[7] National rules, such as local coordination, may also be needed in order to avoid interference to radio services operating in the adjacent bands, for example due to intermodulation or blocking.

[8] RFID tags respond at a very low power level (-10 dBm e.r.p.) in a frequency range around the RFID interrogator channels and must comply with the essential requirements of Directive 2014/53/EU.