Explanatory document

on the Commission Decision 2008/432/EC amending Commission Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices

1. INTRODUCTION

The aim of this document is to provide guidance on a number of issues related to the conditions of use set by the technical annex of the Commission Decision 2008/432/EC amending Commission Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices.

This document is for information purposes only; no legal conclusions should be drawn from this document.

2. GENERAL CONTEXT

Commission Decision 2008/432/EC amends Commission Decision 2006/771/EC by replacing the technical annex with an updated version. The conditions described in the technical annex have to be implemented in the national spectrum regulations of Member States.

Besides complying with the conditions set out in spectrum regulation, radio equipment must comply with the R&TTE Directive (Directive 1999/5/EC) which establishes a regulatory framework for the placing on the market, free movement and putting into service in the Community of radio equipment.

The technical parameters set in the technical annex of the SRD Decision set the boundaries within which all short-range devices to be used in these bands must at least operate while additional requirements defined via Harmonised Standards may apply in order to meet the essential requirements defined pursuant article 3 of the R&TTE Directive.

Under Article 5 of the R&TTE Directive, equipment meeting relevant Harmonised Standards or parts thereof whose reference numbers have been published in the Official Journal of the EU are presumed to be in compliance with the essential requirements of the R&TTE Directive.

3. RELEVANT HARMONISED STANDARDS FOR SHORT-RANGE DEVICES (SRDS)

Annex 1 links types of SRDs and their frequency bands as described in the technical annex of the updated SRD Decision to Harmonised Standards which can be used for the presumption of compliance with the essential requirements of the R&TTE Directive.

In the table in annex 1, these Harmonised Standards can be found in the column entitled ‘Reference Standard’. The list of Harmonised Standards can not be assumed to be complete. It is possible that other Harmonised Standards will be developed after the publication of this document that can also be used to achieve compliance with the essential requirements. The term ‘Reference Standard’ refers to the state of the art Harmonised Standard applicable at the

time of conformity assessment of the equipment. If a manufacturer decides not to use Harmonised Standards and instead follows an alternative conformity assessment procedure, as foreseen in the R&TTE Directive, he is required to ensure that all relevant essential requirements are met before placing equipment on the European market. In such cases, they should offer a level of protection to other users of the spectrum equivalent to the protection provided by the relevant Harmonised Standard.

All Harmonised Standards under the R&TTE Directive are published in the Official Journal of the EU and a list of Harmonised Standards is published on the European Commission's website (http://ec.europa.eu/enterprise/rtte/harstand.htm). The OJ maintains the list of Harmonised Standards up to date and determines which parts and versions are in force. Manufacturers and users are advised to refer to the latest publication of the OJ for information on currently applicable Harmonised Standards.

4. APPLICATION OF ARTICLE 3.3 OF DECISION 2006/771/EC

Commission Decision 2008/432/EC amends Commission Decision 2006/771/EC by replacing the technical annex with an updated version, while leaving unchanged the articles of the original Decision.

Article 3.3 allows Member States to set 'less restrictive' conditions.

> Article 3.3 of this Decision 2006/771/EC:
> This Decision is without prejudice to the right of Member States to allow the use of the frequency bands under less restrictive conditions than specified in the Annex to this Decision.

Footnotes 6, 7 and 8 of the new technical annex explain in more detail how these provisions can be applied by Member States for specific entries of the annex of the SRD Decision.

It should be emphasised that the choice by a Member States to implement such 'less restrictive' conditions in their national legislation is made at its own risk and is applicable only on its territory. Equipment operating in accordance with these 'less restrictive' conditions can not automatically be used throughout the Community without restrictions. Equipment designed to meet such 'less restrictive' conditions is likely to be classified as 'class 2' under the classification Decision (2000/299/EC) (so classified unless all MS decide to choose a common less restrictive condition).

5. EQUIPMENT AGGREGATING SUB-BANDS

The technical annex is structured along ascending frequency ranges for different applications. Certain frequency ranges[1] include a series of optional sets of usage conditions; this allows users to choose the set of parameters to which they decide to comply, in combination with the fulfilment of the essential requirements of the R&TTE Directive.

The way in which the frequency bands are presented in the technical annex should not be interpreted as preventing equipment from aggregating spectrum sub-bands as necessary.

[1] For example: 433.050 – 434.040 MHz.

Equipment can operate across different frequency bands (i.e. by combining different allocations).

Examples in the technical annex are:

- the 433.050 – 434.790 MHz band, where it is possible to combine the two allocations 433.050 – 434.040 MHz and the adjacent 434.040 – 434.790 MHz bands (in both cases, it is possible to emit up to 10 mW).

- the band 863.000 – 870.000 MHz were equipment (non-specific SRDs) can combine different allocations (863.000 – 868.000, 868.000-868.600, 868.700-869.200, 869.400-869.650 & 869.700-870.000 MHz) and the attached conditions of use.

ANNEX 1

Technical annex of Commission Decision 2008/432/EC and reference standards

(Harmonised frequency bands and technical parameters for short-range devices)

Type of short-range device	**Frequency band**	**Power limit / field strength limit / power density limit[1]**	**Additional parameters / spectrum access and mitigation requirements[2]**	**Other usage restrictions[3]**	**Implementation deadline**		**Reference standard**
Non-specific short-range devices[4]	6765 - 6795 kHz	42 dBµA/m at 10 metres			1 October 2008		EN 300 330
	13.553 - 13.567 MHz	42 dBµA/m at 10 metres			1 October 2008		EN 300 330
	26.957 - 27.283 MHz	10 mW effective radiated power (e.r.p.), which corresponds to 42 dBµA/m at 10 metres		Video applications are excluded	1 June 2007		EN 300 330
	40.660 - 40.700 MHz	10 mW e.r.p.		Video applications are excluded	1 June 2007		EN 300 220
	433.050 – 434.040[5] MHz	1 mW e.r.p. -13dBm/10 kHz power density for bandwidth modulation larger than 250 kHz		Audio and voice signals, and video applications, are excluded	1 October 2008		EN 300 220
		10 mW e.r.p.	Duty cycle[6]: 10%	Audio and voice signals, and video applications, are excluded	1 June 2007		EN 300 220

Non-specific short-range devices (cont.)	434.040 – 434.790[5] MHz	1 mW e.r.p. -13dBm/10 kHz power density for bandwidth modulation larger than 250 kHz		Audio and voice signals, and video applications, are excluded	1 October 2008		EN 300 220
		10 mW e.r.p.	Duty cycle[6]: 10%	Audio and voice signals, and video applications, are excluded	1 June 2007		EN 300 220
			Duty cycle[6]: 100% subject to channel spacing up to 25 kHz	Audio and voice signals, and video applications, are excluded	1 October 2008		EN 300 220
	863.000 – 868.000 MHz	25 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. Alternatively a duty cycle[6] of 0.1% may also be used	Audio and voice signals, and video applications, are excluded	1 October 2008		EN 300 220
	868.000 – 868.600[5] MHz	25 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. Alternatively a duty cycle[6] of 1% may also be used	Video applications are excluded	1 October 2008		EN 300 220
		25 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. Alternatively a duty cycle[6] of 0.1% may also be used	Audio and voice signals, and video applications, are excluded	1 October 2008		EN 300 220

Non-specific short-range devices (cont.)	868.700 – 869.200[5] MHz	25 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. Alternatively a duty cycle[6] of 0.1% may also be used	Video applications are excluded	1 October 2008		EN 300 220
		25 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC shall be used. Alternatively a duty cycle[6] of 0.1% may also be used	Audio and voice signals, and video applications, are excluded	1 October 2008		EN 300 220
	869.400 – 869.650[5] MHz	500 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. Alternatively a duty cycle[6] of 10 % may also be used Channel spacing must be 25 kHz, except that the whole band may also be used as a single channel for high-speed data transmission	Video applications are excluded	1 October 2008		EN 300 220
		25 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. Alternatively a duty cycle[6] of 0.1% may also be used	Audio and voice signals, and video applications, are excluded	1 October 2008		EN 300 220
	869.700 – 870.000[5] MHz	5 mW e.r.p.	Voice applications allowed with advanced mitigation techniques	Audio and video applications are excluded	1 June 2007		EN 300 220
		25 mW e.r.p.	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used. Alternatively a duty cycle[6] of 0.1% may also be used	Audio and voice signals, and video applications, are excluded	1 October 2008		EN 300 220

Non-specific short-range devices (cont.)	2400-2483.5 MHz	10 mW equivalent isotropic radiated power (e.i.r.p.)			1 June 2007		EN 300 440
	5725-5875 MHz	25 mW e.i.r.p.			1 June 2007		EN 300 440
	24.150-24.250 GHz	100 mW e.i.r.p.			1 October 2008		EN 300 440
	61.0 - 61.5 GHz	100 mW e.i.r.p.			1 October 2008		Standard under revision
Alarm systems	868.600-868.700 MHz	10 mW e.r.p.	Channel spacing: 25 kHz The whole frequency band may also be used as a single channel for high-speed data transmission Duty cycle[6]: 1.0%		1 October 2008		EN 300 220
	869.250-869.300 MHz	10 mW e.r.p.	Channel spacing: 25 kHz Duty cycle[6]: 0.1%		1 June 2007		EN 300 220
	869.300-869.400 MHz	10 mW e.r.p.	Channel spacing: 25 kHz Duty cycle[6]: 1.0%		1 October 2008		EN 300 220
	869.650-869.700 MHz	25 mW e.r.p.	Channel spacing: 25 kHz Duty cycle[6] : 10%		1 June 2007		EN 300 220
Social alarms[7]	869.200-869.250 MHz	10 mW e.r.p.	Channel spacing: 25 kHz Duty cycle[6]: 0.1%		1 June 2007		EN 300 220
Inductive applications[8]	20.050 - 59.750 kHz	72 dBµA/m at 10 metres			1 June 2007		EN 300 330
	59.750 - 60.250 kHz	42 dBµA/m at 10 metres			1 June 2007		EN 300 330
	60.250 - 70.000 kHz	69 dBµA/m at 10 metres			1 June 2007		EN 300 330
	70 - 119 kHz	42 dBµA/m at 10 metres			1 June 2007		EN 300 330
	119 - 127 kHz	66 dBµA/m at 10 metres			1 June 2007		EN 300 330
	127 –140 kHz	42 dBµA/m at 10 metres			1 October 2008		EN 300 330
	140 – 148,5 kHz	37.7 dBµA/m at 10 metres			1 October 2008		EN 300 330

Inductive applications (cont.)	148.5 – 5000 kHz In the specific bands mentioned below, higher field strengths and additional usage restrictions apply:	-15 dBµA/m at 10 metres in any bandwidth of 10 kHz Furthermore the total field strength is -5 dBµA/m at 10 m for systems operating at bandwidths larger than 10 kHz			1 October 2008		EN 300 330
	• 400 – 600 kHz	• -8 dBµA/m at 10 metres		No other application than RFID[9] allowed	1 October 2008		EN 300 330
	• 3155 – 3400 kHz	• 13.5 dBµA/m at 10 metres			1 October 2008		EN 300 330
	5000 – 30000 kHz In the specific bands mentioned below, higher field strengths and additional usage restrictions apply:	-20 dBµA/m at 10 metres in any bandwidth of 10 kHz Furthermore the total field strength is -5 dBµA/m at 10 m for systems operating at bandwidths larger than 10 kHz			1 October 2008		EN 300 330
	• 6765-6795 kHz	42 dBµA/m at 10 metres			1 June 2007		EN 300 330
	• 7400 – 8800 kHz	9 dBµA/m at 10 metres			1 October 2008		EN 300 330
	• 10200 – 11000 kHz	9 dBµA/m at 10 metres			1 October 2008		EN 300 330
	• 13553 – 13567 kHz	42 dBµA/m at 10 metres			1 June 2007		EN 300 330
		60 dBµA/m at 10 metres		No other applications than RFID[9] and EAS[10] allowed	1 October 2008		EN 300 330
	• 26957 - 27283 kHz	42 dBµA/m at 10 metres			1 October 2008		EN 300 330

Active medical implants[11]	9 – 315 kHz	30 dBµA/m at 10m	Duty cycle[6]: 10%		1 October 2008		EN 302 195
	402-405 MHz	25 µW e.r.p.	Channel spacing: 25 kHz Other channelling restriction: individual transmitters may combine adjacent channels for increased bandwidth with advanced mitigation techniques that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC		1 October 2008		EN 301 839
Wireless audio applications[12]	87.5 – 108.0 MHz	50 nW e.r.p.	Channel spacing up to 200 kHz		1 October 2008		EN 301 357
	863-865 MHz	10 mW e.r.p.			1 June 2007		EN 301 357

1 Member States must allow the usage of spectrum up to the power, field strength or power density given in this table. In conformity with Article 3(3) of Decision 2006/771/EC, they may impose less restrictive conditions, i.e. allow the use of spectrum with higher power, field strength or power density.

2 Member States may only impose these 'additional parameters / spectrum access and mitigation requirements', and may not add other parameters or spectrum access and mitigation requirements. Less restrictive conditions within the meaning of Article 3(3) of Decision 2006/771/EC mean that Member States may completely omit the parameters / spectrum access and mitigation requirements in a given cell or allow higher values.

3 Member States may only impose these 'other usage restrictions', and may not add additional usage restrictions. As less restrictive conditions may be introduced within the meaning of Article 3(3) of Decision 2006/771/EC, Member States may omit one or all of these restrictions.

4 This category is available for any type of application which fulfils the technical conditions (typical uses are telemetry, telecommand, alarms, data in general and other similar applications).

5 For this frequency band Member States must make all the alternative sets of usage conditions possible.

6 'Duty cycle' means the ratio of time during any one-hour period when equipment is actively transmitting. Less restrictive conditions within the meaning of Article 3(3) of Decision 2006/771/EC mean that Member States may allow a higher value for 'Duty cycle'.

7 Social alarm devices are used to assist elderly or disabled people when they are in distress.

8 This category covers, for example, devices for car immobilisation, animal identification, alarm systems, cable detection, waste management, personal identification, wireless voice links, access control, proximity sensors, anti-theft systems, including RF anti-theft induction systems, data transfer to handheld devices, automatic article identification, wireless control systems and automatic road tolling.

9 This category covers inductive applications used for Radio Frequency Identification (RFID).

10 This category covers inductive applications used for Electronic Article Surveillance (EAS).

11 This category covers the radio part of active implantable medical devices, as defined in Council Directive 90/385/EEC of 20 June 1990 on the approximation of the laws of the Member States relating to active implantable medical devices and their peripherals (OJ L 189, 20.7.1990, p. 17).

[12] Applications for wireless audio systems, including: cordless loudspeakers; cordless headphones; cordless headphones for portable use, e.g. portable CD, cassette or radio devices carried on a person; cordless headphones for use in a vehicle, for example for use with a radio or mobile telephone, etc.; in-ear monitoring, for use at concerts or other stage productions.