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.

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\(^1\) 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


**Harmonised frequency bands and technical parameters for short-range devices**

<table>
<thead>
<tr>
<th>Type of short-range device</th>
<th>Frequency band</th>
<th>Power limit / field strength limit / power density limit</th>
<th>Additional parameters / spectrum access and mitigation requirements</th>
<th>Other usage restrictions</th>
<th>Implementation deadline</th>
<th>Reference standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-specific short-range devices</td>
<td>6765 - 6795 kHz</td>
<td>42 dBµA/m at 10 metres</td>
<td></td>
<td></td>
<td>1 October 2008</td>
<td>EN 300 330</td>
</tr>
<tr>
<td></td>
<td>13.553 - 13.567 MHz</td>
<td>42 dBµA/m at 10 metres</td>
<td></td>
<td></td>
<td>1 October 2008</td>
<td>EN 300 330</td>
</tr>
<tr>
<td></td>
<td>26.957 - 27.283 MHz</td>
<td>10 mW effective radiated power (e.r.p.), which corresponds to 42 dBµA/m at 10 metres</td>
<td>Video applications are excluded</td>
<td></td>
<td>1 June 2007</td>
<td>EN 300 330</td>
</tr>
<tr>
<td></td>
<td>40.660 - 40.700 MHz</td>
<td>10 mW e.r.p.</td>
<td>Video applications are excluded</td>
<td></td>
<td>1 June 2007</td>
<td>EN 300 220</td>
</tr>
<tr>
<td></td>
<td>433.050 – 434.040 MHz</td>
<td>1 mW e.r.p. -13dBm/10 kHz power density for bandwidth modulation larger than 250 kHz</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td></td>
<td>1 October 2008</td>
<td>EN 300 220</td>
</tr>
<tr>
<td></td>
<td>10 mW e.r.p.</td>
<td>Duty cycle: 10%</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td></td>
<td>1 June 2007</td>
<td>EN 300 220</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>Power</td>
<td>Modulation</td>
<td>Duty Cycle</td>
<td>Compliance Date</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
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<td></td>
</tr>
<tr>
<td>434.040 – 434.790 MHz</td>
<td>1 mW e.r.p.</td>
<td>10%</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td>1 October 2008</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-13dBm/10 kHz power density for bandwidth modulation larger than 250 kHz</td>
<td>10 mW e.r.p.</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td>1 June 2007</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Duty cycle6: 100% subject to channel spacing up to 25 kHz</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td>1 October 2008</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td>863.000 – 868.000 MHz</td>
<td>25 mW e.r.p.</td>
<td>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 cycle6 of 0.1% may also be used</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td>1 October 2008</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td>868.000 – 868.600 MHz</td>
<td>25 mW e.r.p.</td>
<td>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 cycle6 of 1% may also be used</td>
<td>Video applications are excluded</td>
<td>1 October 2008</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>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 cycle6 of 0.1% may also be used</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td>1 October 2008</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td>Frequency Range</td>
<td>EIRP</td>
<td>Techniques to Access Spectrum and Mitigate Interference</td>
<td>Duty Cycle</td>
<td>Date</td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
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<td>------------------------------------------------------</td>
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<td>----------</td>
<td></td>
</tr>
<tr>
<td>868.700 – 869.200 MHz</td>
<td>25 mW</td>
<td>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 of 0.1% may also be used</td>
<td>0.1%</td>
<td>1 October 2008</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td>25 mW</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>869.400 – 869.650 MHz</td>
<td>500 mW</td>
<td>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 of 10% may also be used</td>
<td>10%</td>
<td>1 October 2008</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td>25 mW</td>
<td>Audio and voice signals, and video applications, are excluded</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>869.700 – 870.000 MHz</td>
<td>5 mW</td>
<td>Voice applications allowed with advanced mitigation techniques</td>
<td></td>
<td>1 June 2007</td>
<td>EN 300 220</td>
<td></td>
</tr>
<tr>
<td>25 mW</td>
<td>Audio and video applications are excluded</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Disclaimer: This is a non-binding informative working document, which does not necessarily reflect the official position of the Commission and from which no legal conclusion should be drawn. The Commission accepts no responsibility or liability whatsoever with regard to any information referred to herein.*
<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Power Level</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400-2483.5 MHz</td>
<td>10 mW e.i.r.p.</td>
<td>1 June 2007 EN 300 440</td>
</tr>
<tr>
<td>5725-5875 MHz</td>
<td>25 mW e.i.r.p.</td>
<td>1 June 2007 EN 300 440</td>
</tr>
<tr>
<td>24.150-24.250 GHz</td>
<td>100 mW e.i.r.p.</td>
<td>1 October 2008 EN 300 440</td>
</tr>
<tr>
<td>61.0 - 61.5 GHz</td>
<td>100 mW e.i.r.p.</td>
<td>1 October 2008 Standard under revision</td>
</tr>
<tr>
<td>868.600-868.700 MHz</td>
<td>10 mW e.r.p.</td>
<td>1 October 2008 EN 300 220</td>
</tr>
<tr>
<td>869.250-869.300 MHz</td>
<td>10 mW e.r.p.</td>
<td>1 June 2007 EN 300 220</td>
</tr>
<tr>
<td>869.300-869.400 MHz</td>
<td>10 mW e.r.p.</td>
<td>1 October 2008 EN 300 220</td>
</tr>
<tr>
<td>869.650-869.700 MHz</td>
<td>25 mW e.r.p.</td>
<td>1 June 2007 EN 300 220</td>
</tr>
<tr>
<td>869.200-869.250 MHz</td>
<td>10 mW e.r.p.</td>
<td>1 June 2007 EN 300 220</td>
</tr>
<tr>
<td>20.050 - 59.750 kHz</td>
<td>72 dBµA/m at 10 metres</td>
<td>1 June 2007 EN 300 330</td>
</tr>
<tr>
<td>59.750 - 60.250 kHz</td>
<td>42 dBµA/m at 10 metres</td>
<td>1 June 2007 EN 300 330</td>
</tr>
<tr>
<td>60.250 - 70.000 kHz</td>
<td>69 dBµA/m at 10 metres</td>
<td>1 June 2007 EN 300 330</td>
</tr>
<tr>
<td>70 - 119 kHz</td>
<td>42 dBµA/m at 10 metres</td>
<td>1 June 2007 EN 300 330</td>
</tr>
<tr>
<td>119 - 127 kHz</td>
<td>66 dBµA/m at 10 metres</td>
<td>1 June 2007 EN 300 330</td>
</tr>
<tr>
<td>127 - 140 kHz</td>
<td>42 dBµA/m at 10 metres</td>
<td>1 October 2008 EN 300 330</td>
</tr>
<tr>
<td>140 – 148.5 kHz</td>
<td>37.7 dBµA/m at 10 metres</td>
<td>1 October 2008 EN 300 330</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>Field Strength and Additional Usage Restrictions</td>
<td>Date</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td><strong>148.5 – 5000 kHz</strong> In the specific bands mentioned below, higher field strengths and additional usage restrictions apply:</td>
<td>-15 dBμA/m at 10 metres in any bandwidth of 10 kHz</td>
<td>1 October 2008</td>
</tr>
<tr>
<td></td>
<td>Furthermore the total field strength is -5 dBμA/m at 10 m for systems operating at bandwidths larger than 10 kHz</td>
<td></td>
</tr>
<tr>
<td>• 400 – 600 kHz</td>
<td>-8 dBμA/m at 10 metres</td>
<td>No other application than RFID(^9) allowed</td>
</tr>
<tr>
<td>• 3155 – 3400 kHz</td>
<td>13.5 dBμA/m at 10 metres</td>
<td>1 October 2008</td>
</tr>
<tr>
<td><strong>5000 – 30000 kHz</strong> In the specific bands mentioned below, higher field strengths and additional usage restrictions apply:</td>
<td>-20 dBμA/m at 10 metres in any bandwidth of 10 kHz</td>
<td>1 October 2008</td>
</tr>
<tr>
<td></td>
<td>Furthermore the total field strength is -5 dBμA/m at 10 m for systems operating at bandwidths larger than 10 kHz</td>
<td></td>
</tr>
<tr>
<td>• 6765-6795 kHz</td>
<td>42 dBμA/m at 10 metres</td>
<td>1 June 2007</td>
</tr>
<tr>
<td>• 7400 – 8800 kHz</td>
<td>9 dBμA/m at 10 metres</td>
<td>1 October 2008</td>
</tr>
<tr>
<td>• 10200 – 11000 kHz</td>
<td>9 dBμA/m at 10 metres</td>
<td>1 October 2008</td>
</tr>
<tr>
<td>• 13553 – 13567 kHz</td>
<td>42 dBμA/m at 10 metres</td>
<td>1 June 2007</td>
</tr>
<tr>
<td></td>
<td>60 dBμA/m at 10 metres</td>
<td>No other applications than RFID(^9) and EAS(^{10}) allowed</td>
</tr>
<tr>
<td>• 26957 - 27283 kHz</td>
<td>42 dBμA/m at 10 metres</td>
<td>1 October 2008</td>
</tr>
<tr>
<td>Category</td>
<td>Frequency</td>
<td>Power level</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Active medical implants</td>
<td>9 – 315 kHz</td>
<td>30 dBµA/m at 10m</td>
</tr>
<tr>
<td></td>
<td>402-405 MHz</td>
<td>25 µW e.r.p.</td>
</tr>
<tr>
<td>Wireless audio applications</td>
<td>87.5 – 108.0 MHz</td>
<td>50 nW e.r.p.</td>
</tr>
<tr>
<td></td>
<td>863-865 MHz</td>
<td>10 mW e.r.p.</td>
</tr>
</tbody>
</table>

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 fulfills 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).
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.