



March 2008

EMC Regulatory Update

Dear Colleague,

We have provided typical questions and answers that represent in most cases technical opinions with justification in FCC and CE requirements. The particulars of the product for certification must be considered with respect to the applicability of these questions and answers. We hope you find our update valuable and welcome your feedback if you have any special needs or questions. Call at 703-689-0368 or view archived issues of MultiPoint at our [web site](#).

RF Warning Statement

QUESTION: Our firm manufactures wireless keyboards and mice. Do we need to affix the FCC RF warning statement?

ANSWER: Simply stated, the power is below the threshold. The TCB Exclusion List, dated July 2002, states that any device below the "Low Threshold" [60mW/f(GHz)] is not required to have SAR testing. However, it is still necessary to consider co-location issues when the device is adjacent to another transmitter. If one takes a close look at the footnotes in the Exclusion List, devices with an RF Pout (radiated AND/OR conducted) below 5mW are not at risk of co-location problems. Therefore, low power items such as Bluetooth are not concerned with RF Exposure. (The TCB Exclusion List provides essential information, however, the FCC's Knowledge Database provides the most up- to-date information on compliance issues)

Please note that while a device may have a very low power level and is categorically excluded, all devices still must abide by RF exposure and need a RF warning statement. These low power devices are considered categorically excluded but not exempt.

TD-SCDMA Base Stations Operating in North America

QUESTION: Can you provide some information about the FCC/IC certification for a Time Division-Synchronous Code Division Multiple Access (TD-SCDMA) base station operating in the frequency range of 2010- 2025 MHz?

ANSWER: In North America, the 2010-2025 MHz band is not allowed. The closest frequencies are the Part 24 bands of 1850-1910 MHz (subscriber) and 1930- 1990 MHz (base) or Part 27 (2100 MHz and above). For Part 27, you may be at a disadvantage because of advances in Worldwide Interoperability for Microwave Access (WiMax)-related technologies, which will allow very high data transmission rates, more than TS-SCDMA may allow. Currently, 2000-2020 MHz is a Part 25 (satellite services) frequency band and under this allocation, both ATC (Ancillary Terrestrial Components) mobile devices and base stations can operate in this band.

TD- SCDMA (full: Time Division-Synchronous Code Division Multiple Access) is a Third Generation (3G) mobile telecommunications standard primarily adopted by PR China in order to be less dependent on western technology and possibly to reduce patent fees that other 3G formats require. TD- SCDMA is also based on spread spectrum technology that likely would require some payment fees to western patent holders.

SAR Requirements of the R&TTE Directive

QUESTION: We manufacture a walkie-talkie, held-to-face device operating in the 450 MHz frequency band. We would like to know which EN rule part determines if the device requires SAR testing.

ANSWER: The RF exposure for devices not covered by a specific RF exposure standard are not exempt from showing RF exposure compliance. For example, low power devices have a standard that mentions a 20 mW power level at which to begin considering RF exposure. RF exposure for these devices could possibly be made without the involvement of a Notified Body. Some types of devices, such as cell phones, etc, also have specific RF safety standards to refer to and the involvement of a Notified Body is not needed. Some devices, such as the 450 MHz Private Mobile Radio/Private Amateur Mobile Radios, do not have appropriate harmonized standards for RF exposure. Consequently, Annex II or III may not be appropriate as assumption of conformity to harmonized standards is not possible in the case where there are no harmonized standards.

A Notified Body, under Annex IV of the RTTED, may be consulted in order to determine compliance to the essential requirements of the RTTED. The lab and/or manufacturer would need to provide evidence that RF exposure has been addressed for these devices and that the appropriate levels were met. RF exposure concerns and selection of an appropriate RF safety standard to use should be done in consult with the Notified Body prior to testing. If no such evidence is provided, the Notified Body would probably give a negative opinion as the RF safety requirements would not be met in relation to article 3 of the RTTED.

802.11n Products in the EU

QUESTION: What is 802.11n? If countries in the EU accept 802.11 b/g, do they accept 802.11n?

ANSWER: The suffix "n" after the 802.11 name means that it allows a multiple input/multiple output antenna system to be used. This is often known as "MIMO". MIMO operation is allowed for both 802.11b/g and 802.11a. These standards, including the MIMO tests, are harmonized (accepted). Therefore, the addition of "n" should not change anything with regard to acceptance in Europe. If a country accepted 802.11b/g and 802.11a, then there would be no problem with adding 802.11n.

INTERNATIONAL UPDATE

EU: NEW CENELEC STANDARDS RELEASED THIS MONTH

This is a shortened list of the CENELEC standards published during the past month:

- **EN 60068-2-6:2008** (2/29/2008) Environmental testing -- Part 2-6: Tests - Test Fc: Vibration (sinusoidal)
- **EN 61158-4-1:2008** (2/29/2008) Industrial communication networks - Fieldbus specifications -- Part 4-1: Data-link layer protocol specification - Type 1 elements
- **EN 60601-2-33:2002/A2:2008** (3/5/2008) Medical electrical equipment -- Part 2-33: Particular requirements for the safety of magnetic resonance equipment for medical diagnosis
- **EN 60352-5:2008** (3/6/2008) Solderless connections -- Part 5: Press-in connections - General requirements, test methods and practical guidance
- **EN 61162-1:2008** (3/6/2008) Maritime navigation and radiocommunication equipment and systems - Digital interfaces -- Part 1: Single talker and multiple listeners
- **EN 60730-2-19:2002/A2:2008** (3/7/2008) Automatic electrical controls for household and similar use -- Part 2-19: Particular requirements for electrically operated oil valves, including mechanical requirements
- **EN 61228:2008** (3/14/2008) Fluorescent ultraviolet lamps used for tanning - Measurement and specification method

See www.cenelec.org for additional information.

EU: NEW IEC STANDARDS RECENTLY RELEASED

This is a shortened list of the new IEC standards published during the past month:

- **IEC 60519-7** (2/27/2008) Safety in electroheat installations - Part 7: Particular requirements for installations with electron guns
- **IEC 61326-1 Corr.1** (2/27/2008) Corrigendum 1 - Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
- **IEC 60068-2-27** (2/27/2008) Environmental testing - Part 2- 27: Tests - Test Ea and guidance: Shock
- **IEC 62513** (2/27/2008) Safety of machinery - Guidelines for the use of communication systems in safety-related applications
- **IEC 60519-5** (3/11/2008) Safety in electroheat installations - Part 5: Specifications for safety in plasma installations
- **IEC 60825-3** (3/11/2008) Safety of laser products - Part 3: Guidance for laser displays and shows
- **IEC 60695-8-1** (3/11/2008) Fire hazard testing - Part 8-1: Heat release - General guidance
- **IEC 61967-6-am1** (3/12/2008) Amendment 1 - Integrated circuits - Measurement of electromagnetic emissions, 150 kHz to 1 GHz - Part 6: Measurement of conducted emissions - Magnetic probe method
- **IEC 62153-4-9** (3/18/2008) Metallic communication cable test methods - Part 4-9: Electromagnetic compatibility (EMC) - Coupling attenuation of screened balanced cables, triaxial method

See [IEC](#) for additional information.

EU: NEW ETSI STANDARDS RELEASED THIS MONTH

This is a shortened list of the new ETSI standards published during the past month:

- [ETSI EN 300 135-1 V1.2.1](#) (February 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Citizens' Band (CB) radio equipment; Angle-modulated Citizens' Band radio equipment (PR 27 Radio Equipment); Part 1: Technical characteristics and methods of measurement
- [ETSI EN 300 135-2 V1.2.1](#) (February 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Citizens' Band (CB) radio equipment; Angle-modulated Citizens' Band radio equipment (PR 27 Radio Equipment); Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
- [ETSI EN 302 066-1 V1.2.1](#) (February 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Ground- and Wall- Probing Radar applications (GPR/WPR) imaging systems; Part 1: Technical characteristics and test methods
- [ETSI EN 302 066-2 V1.2.1](#) (February 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Ground- and Wall- Probing Radar applications (GPR/WPR) imaging systems; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
- [ETSI EN 302 561 V1.1.1](#) (February 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Radio equipment using constant or non-constant envelope modulation operating in a channel bandwidth of 25 kHz, 50 kHz, 100 kHz or 150 kHz; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
- [ETSI TR 101 994-2 V1.1.2](#) (March 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Technical characteristics for SRD equipment using Ultra Wide Band technology (UWB); Part 2: Ground- and Wall- Probing Radar applications; System Reference Document

See new [ETSI website](#) for additional information.

EU: PUBLIC CONSULTATION TO WITHDRAW FIVE SRD ERC DECISIONS

On January 11, 2008, the Electronics Communications Committee launched a draft decision which dictates the withdrawal of ERC/DEC/(01)04, ERC/DEC/(01)09, ERC/DEC/(01)13, ERC/DEC/(01)15 and ERC/DEC(01)18. These five decisions were reviewed and it was found that their contents were covered by ERC/REC 70-03 and related harmonized ETSI Standards. Therefore, these standards have become obsolete and can be withdrawn. The ERC Decisions are related to the harmonized frequencies, technical characteristics and exemption from individual licensing of various short range devices. [Link](#)

EU: SHORTCOMINGS IN 5 GHZ RLAN HARMONIZED STANDARDS

Recently, the EU member states in the committee of the Directive (TCAM) provided guidelines on the interpretation of versions 1.3.1 and 1.4.1 of the harmonized standard EN 301 893 and the conditions under which those two versions raise a presumption of conformity of 5 GHz high performance RLAN equipment.

This note provides guidance on the implementation of the DFS mechanism of this standard in the sub-band 5600 - 5650 MHz of the 5 GHz band in response to problems with the detection of meteorological radar systems. The note should be read to mean that the option of simply abstaining from transmitting in the meteorological sub-band 5600 - 5650 MHz remains a legal alternative to implementing an appropriate DFS. Such models avoiding the 5600 - 5650 MHz sub-band may be placed on the market until these standards are withdrawn (April 2009). After that date new harmonized standards should resolve the technical deficiency in the standard. [Link](#)

KOREA: MIC NAME CHANGE Recently, the name of Korea's Ministry of Information and Communication (MIC) has been changed. This change was authorized by Korea's new president, Mr. Myung-bak Lee. The name of this agency is now Broadcasting and Communications Commission (BCC).

FCC: END OF 700 MHZ AUCTION The FCC has announced the end of Auction 73 after having received \$19.59 billion in bids in over 260 rounds of bidding. The 700 MHz auction was the first to require anonymous bidding and the FCC has not yet revealed which companies won the rights to the bands that were sold. The auction proceeds are earmarked for support for public safety and digital television transition initiatives. The winners of FCC auctions earn the right to build wireless networks that operate in the 700 MHz spectrum band.

Eight licenses remain unsold and held by the FCC for a future auction. These include the "D block" which was to be shared by commercial and public safety users and only received a single \$472 million bid, below the \$1.3 billion reserve price. [Link](#)

CONTACT RHEIN TECH FOR YOUR INTERNATIONAL REGULATORY APPROVALS Rhein Tech Laboratories' worldwide homologation services offer the best strategy for gaining product approval in a large number of target countries. In addition, we reduce the number of emissions, immunity, and product safety tests required by defining the minimum subset of regulatory standards at the onset, thus reducing the time and cost to enter multiple target countries. We offer research and approvals in over 50 countries.

ABOUT US

RTL has provided EMC compliance engineering & testing services since 1988 and has a superior reputation with both the Federal Communications Commission and others in the industry. RTL provides testing services to meet the emissions, immunity, and safety requirements of the European EMC Directive and the EU R&TTE Directive, all FCC rules and regulations, VCCI (Japan), ACMA (Australia), and other international standards.

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Last revised: March 19, 2008

