



November 2006

## 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](#).

## SAR Measurement Guidance

**QUESTION:** Our firm manufactures several devices (one operating in the 3 to 6 GHz range and also a 802.11 a/b/g device). Has the FCC published any additional guidance on SAR measurements for such devices?

**ANSWER:** Yes, please refer to the following linked document [SAR 3 to 6 GHz Rev.\(Oct. 2006\)](#). This document is from the FCC's Office of Engineering and Technology and provides SAR measurement procedures for transmitters operating in the 3 to 6 GHz range.

Additionally, please refer to [SAR 802.11 Rev1d1 \(Oct. 2006\)](#). This document is from the FCC's Office of Engineering and Technology and provides SAR measurement procedures for 802.11 a/b/g transmitters.

## FCC Grantee Address Change

**Question:** We recently relocated our corporate offices and need to change our address on the FCC Grant of Application. How do we go about doing this?

**Answer:** Changes to address, contact information or company name for a Grantee Code can be done online. [\(Link\)](#) This information can be changed online using the Grantee code and Grantee code registration number, without FCC intervention and changes take effect immediately.

However, changes in name, ownership, assigning or transferring of responsibility associated with a Grantee Code require FCC review and approval.

## Modification of a 2.4 GHz Device

**QUESTION:** Our company has a FCC Part 15 spread spectrum device with FCC approval in the 2.4 GHz band. We intend on modifying the device with a linear up/down converter to the 5.7 GHz band. Do we need to repeat all measurements at 5.7 GHz?

**ANSWER:** This change would not be permissible as a CLASS I or Class II change under the Section 2.1043. This change would require a new application and all test data must demonstrate compliance. If, in your engineering judgment, some data prevails and accurately represents the device being manufactured, then the details (i.e. test data is from different EUT and done at different times) may be re-submitted in the new test report.

As in your example, the device that utilizes a previously approved spread spectrum transmitter that operates in the 2.4 GHz band has added an up/down converter to the 5.7 GHz band. The previously approved transmitter will require a new certification and new report. This includes new measurements for both all radiated and conducted spurious emissions and output power. Additionally, since many linear devices are operated, by design or otherwise, outside of their linear operating region, the 20 dB bandwidth must also be re-tested to show compliance with the remaining tests for a frequency hopper and/or dwell time. A statement of the results from the other grant's test report of the 2.4 GHz unit may be re-submitted, but a statement pertaining to Section 15.247(b) (4) dealing with RF exposure, must be submitted for the new system.

The remainder of the requirements for a frequency hopper is operational in nature, such as pseudo-random hopping sequence and equal channel usage, etc., but compliance with these requirements may be demonstrated by providing descriptions of the operating parameters. The parameters would only have to be modified to address the addition of the of the 5 GHz band. However, all exhibits submitted must reflect the new band operation. This includes manuals, block diagrams and correspondence.

## EU: RoHS and WEEE for RFIDs

**QUESTION:** Are RFID chips included in the scope of the WEEE and RoHS Directives?

**ANSWER:** RFIDs meet the definition of electrical and electronic equipment provided for in the WEEE and RoHS Directives and can be considered to fall under Category 3 "IT and telecommunications equipment." RFIDs are covered by the RoHS Directive. With regard to the WEEE Directive, if RFIDs are put on the packaging of electrical/electronic equipment then they are considered to fall outside the scope of the Directive because they are part of the product that is not covered by the WEEE Directive. If they are put on the equipment then the manufacturer of the equipment is responsible for recycling.

## EU: RoHS and WEEE for Antennas and Cables

**QUESTION:** Are antennas and cables included in the scope of the WEEE and RoHS Directives?

**ANSWER:** Antennas and cables meet the definition of electrical/electronic equipment under the WEEE and RoHS Directives. All cables inside and or as extensions or connections which are part of the equipment at the time of disposal are considered WEEE. All cables used at fixed installations fall outside the scope of WEEE. Modular cabling systems for voice, data, and video applications fall under Category 3 "IT and telecommunication equipment" of the WEEE Directive and are covered by the RoHS Directive.

- [WEEE and RoHS FAQ](#)

## INTERNATIONAL UPDATE

### *EU: NEW CENELEC STANDARDS RELEASED THIS MONTH*

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

- **EN 50090-5-3:2006** (10/18/06) Home and Building Electronic Systems (HBES) -- Part 5-3: Media and media dependent layers - Radio frequency
- **EN 60601-1:2006** (10/20/06) Medical electrical equipment -- Part 1: General requirements for basic safety and essential performance
- **EN 50470-1:2006** (10/27/06) Electricity metering equipment (a.c.) -- Part 1: General requirements, tests and test conditions - Metering equipment (class indexes A, B and C)
- **EN 60825-4:2006** (10/27/06) Safety of laser products -- Part 4: Laser guards
- **EN 62002-1:2006** (11/9/06) Mobile and portable DVB-T/H radio access -- Part 1: Interface specification
- **EN 62002-2:2006** (11/9/06) Mobile and portable DVB-T/H radio access -- Part 2: Interface conformance testing
- **EN 50116:2006** (11/10/06) Information technology equipment - Routine electrical safety testing in production
- **EN 61291-1:2006** (11/10/06) Optical amplifiers -- Part 1: Generic specification
- **EN 61290-1-1:2006** (11/10/06) Optical amplifiers - Test methods -- Part 1-1: Power and gain parameters - Optical spectrum analyzer method

See [www.cenelec.org](http://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:

- **CISPR 15-am1** (10/19/06) Amendment 1 - Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
- **IEC 60335-2-35-am1** (10/19/06) Amendment 1 - Household and similar electrical appliances - Safety - Part 2-35: Particular requirements for instantaneous water heaters
- **CISPR 16-SER** (10/25/06) Specification for radio disturbance and immunity measuring apparatus and methods - ALL PARTS
- **IEC 60601-1-8** (10/25/06) Medical electrical equipment - Part 1-8: General requirements for basic safety and essential performance - Collateral Standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems
- **IEC 61000-4-1** (10/25/06) Electromagnetic compatibility (EMC) - Part 4-1: Testing and measurement techniques - Overview of IEC 61000-4 series
- **CISPR 16-4-5** (10/25/06) Specification for radio disturbance and immunity measuring apparatus and methods - Part 4- 5: Uncertainties, statistics and limit modelling - Conditions for the use of alternative test methods
- **IEC 60118-4** (10/27/06) Electroacoustics - Hearing aids - Part 4: Induction loop systems for hearing aid purposes - Magnetic field strength
- **CISPR 16-3-am2** (11/8/06) Amendment 2 - Specification for radio disturbance and immunity measuring apparatus and methods - Part 3: CISPR technical reports
- **IEC 61000-4-18** (11/9/06) Electromagnetic compatibility (EMC) - Part 4-18: Testing and measurement techniques - Damped oscillatory wave immunity test
- **ISO/IEC GUIDE 75** (11/14/06) Strategic principles for future IEC and ISO standardization in industrial automation

See [IEC](http://iec.ch) 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 302 194-1 V1.1.2](#) (October 2006) Electromagnetic compatibility and Radio spectrum Matters (ERM); Navigation radar used on inland waterways: Part 1: Technical characteristics and methods of measurement
- [ETSI EN 300 328 V1.7.1](#) (October 2006) Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
- [ETSI EN 301 091-1 V1.3.3](#) (November 2006) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices; Road Transport and Traffic Telematics (RTTT); Radar equipment operating in the 76 GHz to 77 GHz range; Part 1: Technical characteristics and test methods for radar equipment operating in the 76 GHz to 77 GHz range
- [ETSI EN 301 091-2 V1.3.2](#) (November 2006) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices; Road Transport and Traffic Telematics (RTTT); Radar equipment operating in the 76 GHz to 77 GHz range; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
- [ETSI TR 102 554 V1.1.1](#) (November 2006) Electromagnetic compatibility and Radio spectrum Matters (ERM); Code of Practice in respect of the control, use and application of Ground probing radar (GPR) and Wall probing radar (WPR) systems and equipment

See [ETSI](#) for additional information.

## KOREA: FREQUENCY SPECTRUM REVISION

On October 18th 2006, Korea's Ministry of Communication (MOC) revised its frequency spectrum table. Digitally enhanced cordless telephones (DECT) may now utilize the following frequency bands: 1710 – 1980 MHz, 2400 – 2450 MHz, and 2450 – 2483.5 MHz. Existing cordless phones using 46, 49 MHz and 900 MHz will be replaced by DECT in 2008.

## AUSTRALIA: ACMA TO HOLD CONFERENCE

The Australian Communications and Media Authority will hold its first annual conference on spectrum management, RadComms 2006, on December 11th & 12th at the Australian National Maritime Museum in Sydney.

Conference topics include digital radio, satellite spectrum planning issues, the 'digital dividend' - television spectrum in the next decade - and municipal broadband wireless access. Each day will end with a panel-style question and answer session. [Link](#)

## THAILAND: WIMAX SPECTRUM OPENED

Thailand's National Telecommunications Commission (NTC) recently announced the availability of the 2.5 GHz and 3.5 GHz spectrum bands for WiMax operation. The 5 GHz spectrum, which is commonly used for WiMax in other countries, will not be made available at this stage.

Frequency-allocation laws mandate the NTC and the NBC jointly develop a national frequency table, manage the telecom and broadcasting spectrums and prescribe spectrum regulations. [Link](#)

## ABOUT US

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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.

A special thank you to those who have recommended and contributed articles for our newsletter. Please continue to forward new and interesting material to our attention: [multipoint@rheintech.com](mailto:multipoint@rheintech.com). We respect the privacy of our customers and colleagues. If you would like to cancel your MultiPoint updates, please follow the instructions at the end of this email. The information in the MultiPoint update is subject to change without notice.

[Learn More](#)

## WIRELESS SEMINAR (Rescheduled)

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The two day wireless seminar (previously scheduled from Sept 18-19, 2006) has been rescheduled to March 22nd - 23rd, 2007. The seminar is being presented by Rhein Tech Laboratories, Inc, American TCB, and WLL. The seminar is geared towards designers, developers and testers of wireless products. More information to come!

**Registration Fee:** \$675

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