

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](#).

FCC Requirements for Wireless Devices

QUESTION: Our firm manufactures wireless devices and we have the following questions with regard to testing:

1. Does a Part15D DECT phone need to consider SAR?
2. If a mobile phone is not sold in the USA but uses roaming service in the USA, does it still require FCC certification? If yes, what is the related rule or requirement?
3. Under what circumstances may a mixer board be retrofitted or repaired for a previously certified transmitter without application for a new certification?
4. What is the FCC interpretation of 47 CFR 90.214 concerning transient frequency behavior?

ANSWER: Please see below for the answers to your questions:

1. FCC Part 2.1093 mandates that Unlicensed PCS (DECT phones) have SAR testing regardless of power under 15D. A DECT can operate under part 15 as long as the frequency of operation is correct.
2. The short answer is no - if a phone is purchased overseas and then brought into the USA as "personal property," then there is no requirement for applying an FCC ID. The equipment authorization system only applies to devices that are distributed or sold in America.
3. 47 CFR 2.1043 describes the authorization requirements when changes are made to certified equipment. Changes to the basic frequency determining and stabilizing circuitry (including clock and data rates), frequency multiplication stages, basic modulator circuit or maximum power or field strength ratings require a new application for certification per 47 CFR 2.1043 (a). Other types of variations of certified licensed transmitter, includes Class I or Class II Permissive changes.

The general technical requirements for a transmitter operating in the Private Land Mobile Radio Service are contained in 47 CFR Subpart I of Part 90. The requirements for transient frequency behavior are given in 47 CFR 90.214. All units that operate in the frequency bands 150 - 174 and 421 - 512 MHz must be tested and reported, but the time interval (T1 and T3) limits of 47 CFR 90.214 do not apply to units with 6 W or less output power.

Test Data vs. Test Report

QUESTION: We are an ISO/IEC 17025 accredited test laboratory and we have ANSI C63.4 included within our scope. Our client requested measurement data without a test report. We have issued test data for pre-compliance/troubleshooting purposes in the past and this is very common in the industry. We now have a situation in which we did not issue an accredited test report in support of testing as requested by our client, but because compliant FCC 15.207 and 15.209 test data was taken at our accredited measurement facility, the client has created internal test reports documenting the testing as it was observed at our facility in support of their FCC Declarations of Conformity (DoC). We were recently informed that this may be a practice for some clients to create their own test report from compliant FCC test data and observation. Does this fulfill the requirements for DoC as presently stated?

ANSWER: ISO/IEC 17025 requires the testing laboratory to provide a complete test report containing all of the required elements identified in ISO/IEC17025. Section 2.948(d) of FCC rules and regulations states that a "laboratory that has been accredited with a scope covering the required measurements shall be deemed competent to test and submit data for equipment subject to verification, declaration of conformity and certification." The FCC recently interpreted this rule to require test data being prepared for Declaration of Conformity (DoC) to be done by an accredited testing laboratory and that the test report also needs to be prepared by the accredited testing laboratory and shall comply with ISO/IEC 17025.

4. As a result, what you described above in which the test lab data is used by a third party to complete the test report would not be acceptable for the purpose of a DoC.

Product Changes and EU Conformity

QUESTION: The company I work for designs and manufactures amplifiers. How is European Union conformity shown for a device that has multiple sources for "critical components?" Radio frequency parts, such as those in power amps, have different manufacturers but they use the same encapsulation. What kind of product change for CE needs to involve a Notified Body?

ANSWER: There is not a rule or strict requirement on this in the EU as there are no filings, no regulatory certifications, no permissive changes, etc. The manufacturer needs to look at the changes he has made and make a decision regarding how confident he is in the continued compliance of the device. If the manufacturer makes changes of small components (resistors, capacitors in non-critical sections other than Voltage Control Oscillator (VCO), Power amplification (PA) sections etc.) that are deemed not to affect the Electromagnetic Interference (EMI) performance of the device, then the decision may be to do nothing. However, if the component is critical, such as the VCO, PA or filters, then there may be a need to get confidence in the device compliance from other means. If the manufacturer does not and their product is found to be failing, then they will be asked to show proof of compliance. At some point with critical component changes, they have to decide if the device they are now selling is no longer the device they had tested and reviewed.

If they perform some measurements on the device and find the profile looks similar then they may decide to keep the results of his investigations on file (in case someone requests evidence) and continue selling the device. However, if a critical component has changed and he feels he has changed the device's performance thus he no longer has the confidence to make a decision on compliance, then a safe recommendation would always be to have some tests performed and get a new opinion from a Notified Body. The important thing to remember in any CE Marking of products placed on the EU market is the decision of compliance is always 100% up to the manufacturer or his designated agent. It is also the responsibility of the manufacturer or his designated agent to keep such information in the Technical Construction File for reference when needed.

Industry Canada Representative

QUESTION: We have a question regarding the Canadian representative when applying to Industry Canada for a grant. If we provide an address, a phone number and a fax number in Canada, is it acceptable if the contact person is actually located outside Canada or does the contact person have to be a resident in Canada? If the person has to reside in Canada, is it acceptable if they are sales people who would only forward enquiries from Industry Canada to the company headquarters in another country and then forward the answer and/or post- certification audit samples at no charge to Industry Canada? I was also informed that Industry Canada requests evidence that the contact person is aware of his/her responsibility for the product placed in the market. Is this correct?

ANSWER: A company located outside Canada who applies for certification must provide a Canadian representative with a Canadian address and a Canadian telephone number. The Canadian representative must be able to answer telephone calls from Industry Canada during normal business hours within the Canadian time zones. The Canadian Representative is also responsible to provide on request, audit samples free of charges to Industry Canada (no shipping charges or custom duty charges) and Industry Canada must be able to ship back the audit samples free of charges to a Canadian address.

Therefore if the person or company acting as the Canadian representative is providing a Canadian address and telephone number and can meet all conditions listed above but is in reality located outside Canada, this would still satisfy Industry Canada requirements and would be acceptable to Industry Canada. Please see below for samples of the Canadian Representative Letter of Attestation.

CANADIAN REPRESENTATIVE LETTER OF ATTESTATION
(Multiple Certifications or Registrations sample letter)

Canadian Representative

Company Name:

Contact Name:

Address:

Telephone No:

Fax No:

Email:

TO: Industry Canada
3701 Carling Ave., Bldg. 94,
Ottawa, ON, K2H 8S2

ATTENTION: Certification and Engineering Bureau

This letter is to confirm that we have accepted the responsibility to act as Canadian Representative on behalf of the **Applicant** noted below for all future Industry Canada certification/registrations obtained during the period of this agreement which ends at the specified date below (if applicable).

As Canadian Representative, we are aware of the requirements involved as outlined in **Industry Canada** applicable documents (RSP-100, Section 3.4 and/or DC-01, Section 7.2).

Applicant

Company name:

Company Number:

Contact Name:

Address:

Telephone No:

Fax No:

Email:

This Agreement is valid until (expiry date):

Signature:

Date:

Signed by (printed name):

CANADIAN REPRESENTATIVE LETTER OF ATTESTATION

(Single Certification or Registration sample letter)

Canadian Representative

Contact Name:

Company Name:

Address:

Telephone No:

Fax No:

Email:

TO: Industry Canada
3701 Carling Ave., Bldg. 94,
Ottawa, ON, K2H 8S2

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Applicant

Company name:

Company number:

Contact Name:

Address:

Telephone No:

Fax No:

Email:

Certification / Registration Number:

Model Number:

Signature:

Date:

Signed by (printed name):

INTERNATIONAL UPDATE

EU: NEW CENELEC STANDARDS RELEASED THIS MONTH

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

- **EN 60669-1:1999/A2:2008** (10/29/2008) Switches for household and similar fixed-electrical installations -- Part 1: General requirements
- **EN 60598-1:2008** (10/31/2008) Luminaires -- Part 1: General requirements and tests
- **EN 60335-2-27:2003/A1:2008** (10/31/2008) Household and similar electrical appliances - Safety -- Part 2-27: Particular requirements for appliances for skin exposure to ultraviolet and infrared radiation
- **EN 50465:2008** (10/31/2008) Gas appliances - Fuel cell gas heating appliances - Fuel cell gas heating appliance of nominal heat input inferior or equal to 70 kW
- **EN 60335-2-11:2003/A11:2008** (11/4/2008) Household and similar electrical appliances - Safety -- Part 2-11: Particular requirements for tumble dryers
- **EN 50492:2008** (11/7/2008) Basic standard for the in-situ measurement of electromagnetic field strength related to human exposure in the vicinity of base stations
- **EN 50496:2008** (11/7/2008) Determination of workers' exposure to electromagnetic fields and assessment of risk at a broadcast site
- **EN 60065:2002/A11:2008** (11/13/2008) Audio, video and similar electronic apparatus - Safety requirements
- **EN 50514:2008** (11/20/2008) Audio, video and information technology equipment - Routine electrical safety testing in production
- **EN 41003:2008** (11/20/2008) Particular safety requirements for equipment to be connected to telecommunication networks and/or a cable distribution system

See [CENELEC](#) 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 60335-2-102-am1** (10/29/2008) Amendment 1 - Household and similar electrical appliances - Safety - Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections
- **IEC 62320-1-am1** (10/29/2008) Amendment 1 - Maritime navigation and radiocommunication equipment and systems - Automatic identification system (AIS) - Part 1: AIS Base Stations - Minimum operational and performance requirements, methods of testing and required test results
- **IEC 60335-2-31-am2** (10/29/2008) Amendment 2 - Household and similar electrical appliances - Safety - Part 2-31: Particular requirements for range hoods and other cooking fume extractors
- **IEC 61000-4-6** (10/31/2008) Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
- **CISPR 14-1-am1** (11/13/2008) Amendment 1 - Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
- **IEC 61643-12** (11/13/2008) Low-voltage surge protective devices - Part 12: Surge protective devices connected to low-voltage power distribution systems - Selection and application principles
- **IEC 60255-22-5** (11/17/2008) Measuring relays and protection equipment - Part 22-5: Electrical disturbance tests - Surge immunity test
- **ISO/IEC GUIDE 98-3-amSupp Corr. 1** (11/20/2008) Supplement 1 - Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995) - Propagation of distributions using a Monte Carlo 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 TR 102 756 V1.1.1](#) (October 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); System Reference Document for revised spectrum requirements for RFID equipment and inductive loop systems operating in the frequency range 9 kHz to 148.5 kHz
- [ETSI EN 302 608 V1.1.1](#) (November 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment for Eurobalise railway systems; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive
- [ETSI EN 302 609 V1.1.1](#) (November 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment for Euroloop railway systems; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive
- [ETSI EN 300 440-1 V1.5.1](#) (November 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Part 1: Technical characteristics and test methods
- [ETSI EN 300 440-2 V1.3.1](#) (November 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
- [ETSI EN 302 217-4-1 V1.3.1](#) (November 2008) Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 4-1: System-dependent requirements for antennas
- [ETSI EN 301 357-1 V1.4.1](#) (November 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Cordless audio devices in the range 25 MHz to 2 000 MHz; Part 1: Technical characteristics and test methods
- [ETSI EN 301 357-2 V1.4.1](#) (November 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Cordless audio devices in the range 25 MHz to 2 000 MHz; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
- [ETSI TR 102 627 V1.1.1](#) (November 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); System Reference Document; Land Mobile Service; Additional spectrum requirements for PMR/PAMR systems operated by railway companies (GSM-R)
- [ETSI TS 102 754 V1.2.1](#) (November 2008) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Technical characteristics of Detect-And-Avoid (DAA) mitigation techniques for SRD equipment using Ultra Wideband (UWB) technology

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

FCC: RULES ADOPTED FOR WHITE SPACE

On November 4, 2008, the FCC adopted a Second Report and Order (Second R&O) that establishes rules to allow for the use of new and innovative types of unlicensed devices in the unused spectrum to provide broadband data and other services for consumers and businesses. The rules will allow for both fixed and personal/portable unlicensed devices. Such devices must include a geolocation capability and provisions to access over the Internet a data base of the incumbent services, such as full power and low power TV stations and cable system headends, in addition to spectrum-sensing technology. All white space devices are subject to equipment certification by the FCC laboratory. The FCC laboratory will request samples of the devices for testing to ensure that they meet all the pertinent requirements. The FCC also will permit certification of devices that do not include the geolocation and data base access capabilities, and instead rely solely on spectrum sensing to avoid causing harmful interference, subject to a much more rigorous approval process.

The FCC plans to closely oversee and monitor the introduction of TV white space devices. The FCC will act promptly to remove from the market any equipment found to be causing harmful interference. [Link](#)

EU: UPDATED STANDARDS LIST FOR EMC AND R&TTE DIRECTIVES

The EU Commission recently published an updated list of standards used to demonstrate conformity with the essential requirements of the EMC Directive (89/336/EEC). The list was published in the November 4, 2008 issue of the Official Journal of the European Union and replaces all previously published standards list for the directive. [Link](#)

The EU Commission also published an updated list of standards used to demonstrate conformity with the essential requirements of the R&TTE Directive (1999/5/EC). This list was also published on November 4th and replaces all previously published lists for the R&TTE Directive. [Link](#)

CANADA: RELEASE OF CPC-2-0-19, ISSUE 1

In November 2008, Industry Canada released CPC-2- 0-19, Issue 1 - Licensing Procedure for Broadband Public Safety Communications Operating in the Frequency Band 4940-4990 MHz. Canada utilizes the band of 4940-4990 MHz for both fixed and mobile applications used in support of public safety for the preservation of life and protection of property. [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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