



Issue 4/June 2003

Dear Customer,

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. Thus, we hope you find our updates valuable, and welcome your calls and or emails if you have any special needs or questions. Please call at 703-689-0368 or email us at <mailto:multipoint@rheintech.com>

Also, please see our newly revised website at www.rheintech.com for MultiPoint archives and other helpful information.

Contents

- [FCC Adoption of European Conducted Limits](#)
- [Multiple Antennas for Low Power Devices](#)
- [FCC Application Confidentiality](#)
- [RF Exposure Evaluation](#)
- [Worldwide Updates](#)
- [Contact Information](#)

FCC Adoption of European Conducted Limits:

Question:

The FCC has adopted the commercial European conducted emissions CE limits. What was the rationale for the difference in limits between Europe and North America?

Response:

Because European radios broadcast down to 150 kHz, EU regulation controls CE limits to 150 kHz under EN55022 and EN55011. This frequency was referred to as the “long wave band” and is now referred to as the “low frequency band”. In North America, AM broadcasts are confined to the “medium wave band.” The 450 kHz cut off includes the AM band IF. The preferred IF in Europe is 450 kHz, since that minimizes problems with image interference even for French low frequency stations. Perhaps low frequency radio broadcasting may become a reality in North America.

Multiple Antennas for Low Power Devices:

Question:

We have a project consisting of a PCMCIA card that uses up to 5 different antennas in the same product. We propose to test all of the antennas of the EUT: pre-testing all of them, but recording only the one showing the greatest emissions. What RF exposure should we consider?

Response:

The FCC requires a representative antenna of EACH TYPE to be included in the test report - not just the one with greatest gain. As an example, if a manufacturer offers two Yagi antennas, test the highest and lowest gain with each antenna family. This would be true regardless of the form factor of the device. Since the issue is with respect to a PCMCIA card, it becomes more complicated because you may have some configurations, which will be "mobile" and others, which may be "portable" from the perspective of RF Exposure. The inclusion of one antenna in the "mobile" RF exposure category may prohibit its use in "portable". To date, the Commission is reluctant to allow one FCC ID to cover both "mobile" and "portable" configurations of the same product.

FCC Application Confidentiality:

Question:

We would like to make our user manual, schematic, block diagram, and product description confidential in our FCC application. What are the FCC requirements?

Response:

A confidentiality letter from the applicant or agent with explanation detailing the reason for confidentiality should be provided. This letter must address the proprietary nature of the requested documents. The FCC generally would not allow the user manual to be held confidential. On the other hand, product description would only be held confidential if it is deemed by the FCC that its public release would cause adverse effect on the company. The only product category in which the block diagram, schematics, internal photos, operational description and parts list are held confidential are scanning receivers and products whereby the manufacturer demonstrates to the FCC that the end user would not gain access to the internal components of the devices (i.e. security alarm systems, etc.).

RF Exposure Evaluation:

Question:

How does the FCC evaluate the RF exposure distance for a steering beam antenna?

Response:

Classical equations are not appropriate for a steering beam antenna, due the beam, which is fully focused at the location of the intended receiver. The surface power of the beam using phased array antennas is very low at the vicinity of the antenna. However, the FCC is still considering an approach to calculate the exposure distance for this type of antenna. Previously the FCC, using the equation 11 of OET Bulletin 65, has approved such antennas. Nonetheless, if you are developing a steering beam antenna, please inform us about it; we could, on your behalf, contact the FCC and consider their position depending of the antenna gain and the maximum power output of the unit. The usual far field MPE estimation formula is probably not appropriate here. A better formula may be given in Reference Data for Engineers: Radio, Electronics, and Communications, 7th ed., SAMS/Macmillan: Indianapolis, IN, pg. 32 6, 1985.



Worldwide updates:

FCC Update

Bush establishes spectrum task force - On June 5th, 2003, the President called for the creation of a task force on radio-frequency spectrum designed to improve spectrum management.

As Wi-Fi increases in popularity, mainly due to the nation's growth in laptops equipped with Wi-Fi cards and demand for 802.11 technology, the government has been struggling over how much spectrum to turn over to private companies and the public while still maintaining enough for government and military use and ensuring the process does not create a security issue. The Secretary of Commerce will lead the task force which will seek to promote efficient and beneficial use of spectrum by the federal government.

According to the President's memorandum, the task force will serve as an advisory body only and make recommendations to address local, state and private spectrum use. Meanwhile, the Federal Communications Commission and politicians such as Sen. Barbara Boxer, D-Calif., and George Allen, R-Va., are also encouraging more spectrum for wireless broadband access. Source: CNET News.com, June 5, 2003.

Proposed revisions to Parts 2 and 15 of the Commission's rules to permit Unlicensed National Information Infrastructure Devices (U-NII) – released June 4, 2003

This notice proposes to make available an additional 255 MHz of spectrum for unlicensed use in the 5.47 – 5.725 GHz band. This will increase the spectrum available to unlicensed devices in the 5 GHz region of the spectrum by nearly 80%. The FCC proposed to forego exclusive use licensings, allowing market forces to determine how the band will be used, and provide potential users the greatest possible flexibility. It is hoped that the increased capacity will encourage the development of a wide range of new and innovative unlicensed devices.

Additionally, the proposed revision includes other changes to the Table of Frequency Allocations to accommodate the needs of other radio services operating in the 5 GHz region of the spectrum. ET Docket NO. 03-122

www.fcc.gov

Australia Update

WLAN information package - Media Release No. 17 - 10 June 2003

The Australian Communications Authority (ACA) recently released a comprehensive information package to target current and potential operators of wireless local area networks (WLANs). The package is designed to educate operators on WLANs issues including licensing requirements, new developments and security risks.

“The issue of whether an operator is required to hold a carrier license is a very important question that must be answered correctly to ensure that operators comply with the existing licensing rules,” ACA Chairman Tony Shaw said. The release of the package follows an upsurge in the use of wireless access systems by small businesses and hobbyists using spread spectrum radio communications equipment which has generated increasing interest in this area of communications.

The information pack is available by either telephoning the ACA’s Licensing and National Interests Team on 03 9963 6996 or on the ACA website at

www.aca.gov.au.

Contact Information

Rhein Tech Laboratories, Inc.
360 Herndon Pkwy, #1400
Herndon, VA 20170
703-689-0368 FAX 703-689-2056
<http://www.rheintech.com/>



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, all FCC rules and regulations, VCCI (Japan), ACA (Australia), and other international standards.

[Back to top](#)

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