



C-MAC Engineering  
21 Richardson Side rd  
Kanata ON K2K 2C1 · Canada  
Tel 613 763 7847  
Fax 613 763 8091

[www.cmac.com](http://www.cmac.com)

Denis Lalonde  
Radio Compatibility Eng.

January 25, 2001

Federal Communications Commission  
Authorization and Evaluation Division  
Equipment Authorization Branch  
7435 Oakland Mills Road  
Columbia, Maryland, 21046

**Re: AB6CTR2401M0**

Dear Sir or Madam:

This document describes the method used for determining the minimum separation distance between the CTR and the general public in order to prevent RF exposure as per paragraph 1.1310.

The minimum separation distance was determined with calculations. They were done using FCC OST/OET Bulletin 65 ("Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Radiation"). The aperture antenna equations for predicting RF fields from that document were used. They yielded the following results.

The power density of the 24-01M0 CTR:

- at the surface of the antenna is  $0.84 \text{ mW/cm}^2$  (OST/OET Bulletin 65 equation 11)
- in the near field ( $R < 2.5 \text{ m}$ ) is less than  $0.55 \text{ mW/cm}^2$  (equation 12, 13, 14)
- in the transition region ( $2.5 \text{ m} < R < 6.1 \text{ m}$ ) is less than  $0.55 \text{ mW/cm}^2$  (equation 16, 17)
- in the far field ( $R > 6.1 \text{ m}$ ) is less than  $0.23 \text{ mW/cm}^2$  (equation 18)

Power = 23.0 dBm = 1 dB compression point of the CTR

Antenna diameter = 13.7 inches

Frequency = 25150 MHz

Antenna gain = 37.4 dBi

The FCC General Population limit is  $1 \text{ mW/cm}^2$ , hence the equipment meets the requirement at any distance.

A picture of the radiation hazard label has been submitted. The exhibit type of this file is "ID Label/Location Info". The file name is;

- Radiation hazard label.jpg

. A label is installed on both sides of the CTR.

Regards,

Denis Lalonde  
Product Integrity  
email: [dlalonde@kan.cmac.com](mailto:dlalonde@kan.cmac.com)  
C-MAC Engineering