

## Chris Harvey

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**From:** SMcMillen@metlabs.com  
**Sent:** Tuesday, January 17, 2006 12:01 PM  
**To:** charvey@ieee.org  
**Subject:** RE: Part 90 Carlson Wireless



Carlson Wireless  
revised RF Ex...

Here is the revised MPE Calculation.

Shawn

-----Original Message-----

**From:** Chris Harvey [mailto:Chrisharveyemc@comcast.net]  
**Sent:** Tuesday, January 17, 2006 8:26 AM  
**To:** SMcMillen@metlabs.com  
**Cc:** Mconfroy@metlabs.com  
**Subject:** RE: Part 90 Carlson Wireless

Shawn, the application documented a maximum of 18dBi antenna with a calculated MPE using that 18dBi antenna. Please provide an updated MPE calculation using the maximum allowed antenna gain of 26dBi for Fixed Operation, I will revise the Grant condition to a maximum antenna gain of 26dBi and the new separation distance per your calculation (I know the manual states a 2 meter separation so this should not need to be changed). Please note that the device will be restricted to Fixed and Temporary-Fixed Rapid Deployment operation with the 26dBi antenna as specified in 90.1215. The new note would be as follows:

Power Output listed is Conducted. This device is approved for mobile or fixed operational conditions only. Maximum antenna gain is 25 dBi for mobile operation and 26dBi for Fixed operation. This transmitter must be installed to provide a separation distance of at least xx cm from all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter other than those specified in this application. Users and installers must be provided with appropriate antenna installation instructions and transmitter operating conditions, including antenna co-location requirements of §1.1307(b)(3), for satisfying RF exposure compliance.

Please note that this device has a transmit power of 17dBm, and using an antenna gain of 26dB, which is 17dB above the 9dBi threshold and would calculate to 1dB over the allowed 33dBm limit for mobile operation.

Please let me know if you have any questions.

Chris

Chris Harvey

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-----Original Message-----

From: SMcMillen@metlabs.com [mailto:SMcMillen@metlabs.com]

Sent: Monday, January 16, 2006 6:33 PM

To: Chrisharveyemc@comcast.net

Cc: jcarlson@carlsonwireless.com; Mconfroy@metlabs.com

Subject: Part 90 Carlson Wireless

Hi Chris. Carlson wireless noticed on the grant notes that the antenna gain has been limited to 18dBi. From section 90.1215- Power Limits, the maximum antenna gain for point to point and point to multi point is 26dBi. Just wondering what has to transpire in order to change the limitation of the antenna to 26dBi.

Thanks,

Shawn