



American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

September 12, 2003

RE: Polymap Wireless LLC

FCC ID: QYPPWR0701

After a review of the submitted information, I have a few comments on the above referenced Application.

- 1) The modified confidentiality letter referenced in the response does not appear to have been provided. Please provide.
- 2) The antenna description on Page 2 of 21 was changed in the revised report and not now longer applies to this device. Please correct.
- 3) An output level adjustment was shown in the power output results. Please confirm this setting used gives the highest output power expected for use with this device.
- 4) The information on page 11 & 15 of 21 says the device has 78 channels. Note that this type of device requires to have 79 channels minimum.
- 5) The plots shown on page 18 & 21 of 21 show a large difference between peak and average readings. This suggests that the transmitter output was in a pulse mode of operation vs. CW or 100% TX signal. Typically if the device is not in a CW or 100% TX duty cycle, a 10 Hz VBW is not considered acceptable for the measurements. Note that $1/(TX \text{ on Time})$ must be $> VBW$ setting to be considered valid. This would likely require a VBW of > 2 kHz for this device. It appears that average measurements may not have been properly taken. However, given that this is a bluetooth based device, we can assume that bluetooth operation theory applies. Bluetooth has different packet lengths that may be used in various modes. The theory of operation for Bluetooth states that their may be 1, 3, or 5 slots used per transmit depending on the mode of operation. For a DH1 packet the TX is on 0.625 us per 49 ms per channel, while for a DH5 packet the TX is on $0.625 * 5$ per 247 ms per channel. These duty cycles equal the following: $20 \log (.625/49) = 37.9$ dB or $20 \log (3.125/100) = -30$ dB. All are greater than the 20 dB difference between the peak and average limits. Therefore if peak measurements meet, it is assumed that all average measurements will as well since the difference in limits is 20 dB, while the duty cycle correction exceeds this. It may be best to remove all average measurements and simply add a note to the fact.

Timothy R. Johnson
Examining Engineer

[mailto: tjohnson@AmericanTCB.com](mailto:tjohnson@AmericanTCB.com)

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.