



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

April 26, 2005

RE: Telematics Wireless, Ltd.

FCC ID: NTAFP200HH

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

- 1) The DTS portion (Part 15 TX) of the TX requires a block diagram of the RF portion of the device. The block diagram should show the frequencies of all oscillators in the DTS portion of the device (CFR 2.1033(a)(5)). Please provide the block diagram for the TX portion of this device.
- 2) It is uncertain where the antennas are relative to the use of the product and which antenna is for which TX. Please provide information on the external and/or internal photographs showing where the antennas are located for each TX.
- 3) The device is of such size that the FCC 2 part statement of 15.19(a)(3) should be placed on the label of the device. Please correct.
- 4) It is uncertain if the 2 transmitters can operate at the same time. Unless something such as software particularly precludes this from happening, it should be assumed they can transmit simultaneously. If this is the case, simultaneous TX results must be investigated for any intermodulation concerns. Please comment or provide necessary data.
- 5) Regarding RF exposure, we are subject to specific requirements and/or limitations by the FCC. Assuming this device could be operated as a portable device, then we are subject to show the following as part of the RF exposure exhibit in order to qualify for TCB evaluation:

- devices containing multiple transmitters with simultaneous transmission, when *routine SAR evaluation* is not required, and the sum of the individual ratios of the output power divided by the high threshold is LESS than one (1)

NOTE: Output power is the higher of EIRP or conducted power. Additionally, please note the possible adjustment of the LMS power from comments below. For further definition of routine SAR evaluation and high threshold. Please see the attachment provided.

Please adjust the RF exposure exhibit to show the device meets the above, taking into consideration the higher of EIRP or conducted power and any possible power changes given below.

- 6) The 731 form only lists 915 MHz, but the operational description mentions it can be factory programmed to any frequency in 902-928 MHz and the test report mentions 915 and 915.44 MHz. What are the frequencies of operation desired to be Certified for the device? Please note that for the band in Part 90 for LMS, there are several bands of operation, each subject to various requirements. It also seems that due to the bandwidth of this device, it will not meet in other LMS bands. Please explain.
- 7) The 731 form only lists 2440 MHz, but the operational description mentions it can be factory programmed to any frequency in 2.4 GHz ISM Band. Additionally, the operational description mentions 2.45 GHz. What are the frequencies of operation desired to be certified for the device? Note that depending on the frequencies involved a Low, Middle, and High channel may be necessary to be tested. Please explain.

- 8) The device is portable and therefore it should be rotated about all 3 axis in order to obtain worse case results. Please explain if this was done for all radiated tests.
- 9) The limit for LMS devices according to 90.205 is 30 Watts ERP, while section 8 appears to cite 1 W. Please explain.
- 10) Table 8.1.2 cites a RBW of 3 kHz. Please explain.
- 11) Because of the wide bandwidth for the LMS portion of the device, it would seem logical that the results need to be corrected by the measurements bandwidth  $10 \log (TX \text{ BW} / \text{Measured Bandwidth})$  to obtain the peak power. Please review
- 12) One of the tables in 7.5.2 cites 2400 MHz. Is this correct or should it list 2440?
- 13) Fundamental power in table 7.3.2 should be based upon the RBW = 100 kHz as well. It appears that the integrated power is listed instead. Please review.
- 14) The statement:

The antenna and therefore the unit, used for this transmitter must be installed to normally provide minimum separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter

is not necessarily considered applicable. Based upon the output power of the device and the RF exposure limits, it would be suggested to simplify this to the following:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

- 15) Based upon the device (handheld PC) and the fact that the manual lists it as Class B, please clarify if you are asking for:
  - a) Certification of the device as a TX, and a DoC has been performed by an appropriately accredited test lab for the device as a Class B PC
  - b) Certification as a TX + Class B PC.

Note 1: The option b) would be considered as a composite application and 2 certificates (one for the TX, one for the Class B PC) would be issued. There are additional review costs associated with this additional certification and additional exhibits may be required.

Note 2: To qualify to perform DoC applications, the test lab must be accredited (i.e. NVLAP or A2LA) to perform testing under the DoC procedure and the device has additional labeling and manual requirements for the DoC. Please explain.

Note 3: Note that for DoC tests, the device is configured with a minimum test configuration as specified by ANSI C63.4 which includes complete computer + appropriate I/O devices attached.

Note 4: Please note that currently the device is not appropriately labeled for a DoC, nor does the manual contain the appropriate 2.1077 information. Alternatively, based upon the use of the device, consideration of the final device as Class A might be suitable to the manufacturer (which will require different manual statements).



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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.