



PARAGON ROBOTICS

October 31, 2017

Dear Application Examiner,

{Paragon Robotics, model: OE3W, FCC ID: 2AAA2-OE3W}, would like to have your authorization as a modular approval specific to the OE3W Module.

The requirements of Public Notice DA00-1407 have been met and shown on the following statements.

1. **“The modular transmitter must have its own RF shielding.”: The OE3W module has a standard surface mount, one piece shield (p/n: BMI-S-103) that offers six sides of protection, with the sixth side being the board itself.**
2. **“The modular transmitter must have buffered modulation/data inputs.”: The OE3W was tested using frequency hopping to cycle through all the channels and transmit a maximum length packet. This is used to evaluate the number and spacing of all channels.**
3. **“The modular transmitter must have its own power supply regulation.”: The OE3W module contains a Texas Instrument boost converter (p/n: TPS61291) that allows the low powered MCU to operate directly from dual alkaline batteries. The input voltage range is 0.9v to 5v with an output of 3.3v.**
4. **“The modular transmitter must comply with the antenna requirements of section 15.203 and 15.204(C).”: The OE3W module has an SMA connector that connects to a pigtail. The SMA connector has epoxy applied all around it so that if someone were to remove the epoxy it would pull off the connector and damage the board, making the device useless. The epoxy would also be applied to the threads of the pigtail that connects to the external antenna. When the antenna is connected and the epoxy has hardened it will be extremely difficult to remove. For instances where the customer requests a modified product with an antenna extension a Paragon Robotics representative would have to install and inspect the antenna. The customer would not have possession of the transmitter with the antenna not permanently attached.**
5. **“The modular transmitter must be tested in a stand-alone configuration”: The OE3W was tested using test tone transmissions at the lowest, middle and highest channel using modulation and wireless parameters to match real world applications. Frequency hopping was used to cycle through all channels and transmit a maximum length packet.**
6. **“The modular transmitter must be labeled with its own FCC ID number.”: The FCC ID number will be printed onto the OE3W module’s PCB board with white silk screen.**
7. **“The modular transmitter must comply with any specific rule or operating requirements applicable to the transmitter and the manufacturer must provide**

adequate instructions along with the module to explain any such requirements.”:
The OE3C complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

8. “The modular transmitter must comply with any applicable RF exposure requirements.”: A caution statement is in manuals to alert users of FCC RF exposure requirements for mobile devices and base station transmission devices that a separation of 20 cm or more should be maintained between the antenna of the device and persons during operation.

Please contact me if you have any further questions.

Regards,

A handwritten signature in blue ink, appearing to read 'Julian Lamb', is positioned above the typed name.

Julian Lamb
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