

## Module Compliance

We want to obtain approval for our radio as a module. Our radio follows all eight module rules as outlined below.

1. The modular transmitter must have its own RF shielding. This is intended to ensure that the module does not have to rely upon the shielding provided by the device into which it is installed in order for all modular transmitter emissions to comply with Part 15 limits. It is also intended to prevent coupling between the RF circuitry of the module and any wires or circuits in the device into which the module is installed. Such coupling may result in non-compliant operation.

The module has a shield covering all electronic components of the circuit board excluding the antenna.

2. The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with Part 15 requirements under conditions of excessive data rates or over-modulation.

There is a FIFO buffer between the onboard microcontroller and radio.

3. The modular transmitter must have its own power supply regulation. This is intended to ensure that the module will comply with Part 15 requirements regardless of the design of the power supplying circuitry in the device into which the module is installed.

The radio has its own 1.8 volt power regulator.

4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204(c). The antenna must either be permanently attached or employ a "unique" antenna coupler (at all connections between the module and the antenna, including the cable). Any antenna used with the module must be approved with the module, either at the time of initial authorization or through a Class II permissive change. The "professional installation" provision of Section 15.203 may not be applied to modules.

The radio antenna is permanently attached. The attached antenna is what was used during the modular approval. No external amplifier will be used on this radio.

5. The modular transmitter must be tested in a stand-alone configuration, *i.e.*, the module must not be inside another device during testing. This is intended to demonstrate that the module is capable of complying with Part 15 emission limits regardless of the device into which it is eventually installed. Unless the transmitter module will be battery powered, it must comply

with the AC line conducted requirements found in Section 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see Section 15.27(a)). The length of these lines shall be a length typical of actual use or, if that length is unknown, at least 10 centimeters to ensure that there is no coupling between the case of the module and any supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified or commercially available (see Section 15.31(i)).

The radio module will be located on both AC and battery powered equipment. During testing, a six foot cord was used to communicate test commands between the radio and an external computer. The radio module passed all conducted emission tests.

6. The modular transmitter must be labeled with its own FCC ID number, and, if the FCC ID is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1." Any similar wording that expresses the same meaning may be used. The grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.

The radio module has its own FCC ID label. In the likely case that this label is not visible, the FCC ID label will be placed on the outermost container. The FCC ID label will also be placed in the user manual if applicable.

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. A copy of these instructions must be included in the application for equipment authorization. For example, there are very strict operational and timing requirements that must be met before a transmitter is authorized for operation under Section 15.231. For instance, data transmission is prohibited, except for operation under Section 15.231(e), in which case there are separate field strength level and timing requirements. Compliance with these requirements must be assured.

The radio module is an intentional radiator in the band from 2.400 GHz to 2.4835 GHz. The radio module will be professionally installed at the Stryker factory.

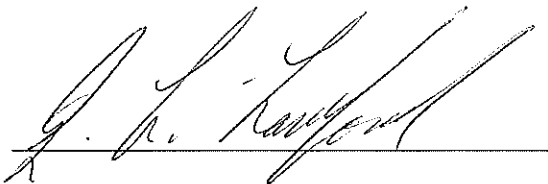
8. The modular transmitter must comply with any applicable RF exposure requirements. For example, FCC Rules in Sections 2.1091, 2.1093 and specific Sections of Part 15, including 15.319(i), 15.407(f), 15.253(f), 15.255(g) and 15.257(g) require that applicants for authorization of Unlicensed PCS, U-NII and millimeter wave devices perform a routine environmental evaluation for RF exposure to demonstrate compliance. In addition, applicants for authorization of spread spectrum transmitters operating under Section 15.247 are required

4100 East Milham Avenue  
Kalamazoo, MI 49001  
Phone (269) 323-7700  
(800) 253-3210

to address RF exposure compliance in accordance with Section 15.247(i). Applicants for authorization of modular transmitters approved under other Sections of Part 15, when necessary, may also need to address certain RF exposure concerns, typically by providing specific installation and operating instructions for users, installer and other interested parties to ensure compliance.

The radio module operates in the 2.400 to 2.4835 GHz band. The radio module uses direct sequence spread spectrum, digital modulation. The radio module output power is 1mW and below. The radio module channel bandwidth is at least 2 MHz per channel. The antenna mounted onto the radio module is a maximum of 3.0dBi directive gain.

Greg Lawford



Date:

2/5/08

Paul Welch



Date:

2/1/08