



# Spectrum 2.4Ghz, TX Board User Manual

Version 1.0

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2.4GHz Transmitter	Version: 1.0
User Interface Specification	Date: 12/12/2011 10:41:00 AM

## Revision History

<b>Date</b>	<b>Version</b>	<b>Description</b>	<b>Author</b>
8/1/2011	1.0	Original.	Chris S. Russell

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## 1. Introduction

The user manual contains information pertaining to output power, operating frequency, operating channels, data rates, tuning range, intended use, general installation instructions, and antenna connector and gain information.

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## 2. Users Guide Information

It is required that Traxxas LLP place the text below in the product user guide along with all other pertinent regulatory information.

We are only using the module on our own motherboard, and there is sufficient filtering on the module for the supplied voltage supply.

The requirements for FCC Limited Modular Approval were released in **March 2009**, in the FCC's Public Notice: FCC Public Notice **DA-08-672**, Part 15 Unlicensed Modular Transmitter Approvals.

### Design Criteria for Modular Approval

General Conditions:

The following conditions must be strictly adhered to for modular approval:

- 1. No modification to the module including the circuitry is permitted.**
- 2. Design criteria to include antenna, interconnects, and local oscillator.**
- 3. Testing of the final device configuration for Digital Emissions Compliance**

The Spectrum 2.4Ghz, TX Board may not be altered or modified in any manner by the OEM or other entity. Additionally, no component may be added which could change the radio frequency (RF) characteristics. These include, but are not limited to unintentional or spurious emissions, immunity, ESD characteristics, or other items commonly associated with RF devices. This includes all components; passive and active. Additionally, no RF components may be placed between the RF output of the module and the antenna.

### 2.1 Antenna Regulation

The antenna has been selected and specifically tested with the Spectrum 2.4GHz, TX Board, and has been certified through the regulatory agencies in the US and European Union authorized use. Use of any other antenna type used with this unit voids the LMA grant for the said module.

### 2.2 Emissions Compliance Testing

Notwithstanding the Modular Approval for the device with associated antenna, the end product configuration must meet digital emissions compliance and must be tested in accordance with FCC Part 15 requirements confirming radiated emissions are within specified limits.

Applicable FCC guidelines:

- Part 15 Section 15.109 Sub-paragraph A, Class B Radiated Emission Limits.

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These emission tests can be conducted by the manufacturer or by contacting an approved test facility equipped and certified accordingly. The results of these emissions tests are not required to be submitted to the FCC or Traxxas, but should be kept on file by the OEM.

### 2.3 Working with Additional Transmitters

The Spectrum 2.4GHz, TX Board should not be operated with any other transmitter in the end product. However, if such an application comes about, further regulatory compliance from the FCC must be obtained.

### 2.4 Product Labeling Requirements

FCC product labeling requirements stipulate an FCC label, including specific text, be placed on the device containing the module. The product label must include the following text and must be affixed to the exterior of the final product. The text should be located beneath the FCC compliance logo.

This product contains the Spectrum 2.4GHz, TX Board

**FCC ID: XVE-SA10044**

In addition to the above text FCC Part 15.21 stipulates that the Digital Electronic Devices manufacturers must also have the following statements printed in their user/operations manual and/or indicate this exact text on the side of the final device.

**“This device 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.**

**Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.**

**Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user’s authority to operate the equipment”**

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### 3. FCC RF Exposure Statement

“This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specified operating instructions for satisfying RF exposure compliance. The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.”

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