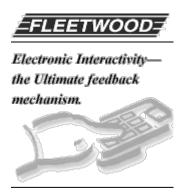
Rhein Tech Laboratories, Inc. 360 Herndon Parkway Suite 1400 Herndon, VA 20170 http://www.rheintech.com

Client: Fleetwood Group, Inc.
Model: WRS8200
Standards: FCC 15.247/IC RSS-210
FCC/IC ID: FBRWRS8200/1859A-WRS8200
Report #: 2009237

#### Appendix I: Manual

Please refer to the following pages.



# **USER MANUAL**

# **WRS8200 Wireless Response Keypad**



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#### **Revision History:**

Rev	Date	Description
A	7/23/2009	Original



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# 1.0 WRS8200

#### 1.1 Description

The WRS8200 is a low power wireless response keypad. The WRS8200 is used to interact with an audience so they can provide real time feed back to questions. It communicates at 2.4GHz, GFSK to a base station. The base unit polls keypads, and displays result.

The overall operation of the WRS8200 is controlled by a microcontroller. This microcontroller uses an 8 MHz reference, and is powered from a 3V and 1.8V regulator. The microcontroller handles control of the RF communications, LED, LCD, audio, buzzer, touch screen inputs, EEPROM, RAM, Smart Card, and USB interface.

RF communications use the Nordic 24L01+ 2.4 GHz transceiver and a power amp. The Nordic chip uses its own 16 MHz reference oscillator. The transceiver and power amp are powered from their own 3V regulator. The Nordic transceiver uses an integral PCB antenna.

# 1.2 FCC, IC, and EU Compliance Information

WRS8200 Wireless Response Keypad Responsible Party Pertaining to the Declaration of Conformity

> Fleetwood Group, Inc. 11832 James Street Holland, MI 49424 Attn: Product Service Coordinator

Phone: 888-467-3759

#### 1.3 Standards and Guidelines

This device complies with the following European Directives and USA/Canada Regulations:

- ➤ Directive 1999/5/EC on radio equipment and telecommunication terminal equipment and the mutual recognition of their conformity
- ➤ Directive 2006/95/EC on the harmonization of laws of member states related to electrical equipment designed for use within certain voltage limits
- ➤ The USA Federal Communications Commission (FCC) Rules and Regulations
- ➤ Industry Canada Rules and Regulations

This device complies with the following national and international standards:

- > EN 301 489-1 V1.8.1
- > EN 301 489-17 V1.3.2
- > EN 300 328 V1.7.1
- ➤ EN 60950-1: 2006
- > FCC 15B, 15.247: 10-01-08
- ➤ IC RSS-210 Issue 7



### 1.4 FCC/IC Compliance

This device complies with Part 15 of the FCC Rules and RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) this device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device. The user is cautioned that changes or modifications to the device that are not approved by the manufacturer could void the user's authority to operate the device.

# 1.5 EU Compliance

This device is a 2.4 GHz low power response system controller intended for residential and commercial use in all EU and EFTA member states.

#### Notice

The keypad and base units may be susceptible to  $\underline{E}$ lectrostatic  $\underline{D}$ ischarge (ESD) and other similar fast transient events causing system interruption. Should system interruption occur, reboot computer, reset base unit by disconnecting and reconnecting USB cable and push any key on keypads which have powered down.