Re: FCC ID: RX5-KWTX10

MidiStream transmitter product description

MIDI is an acronym for “Musical Instrument Digital Interface”, a serial interface & protocol used to enable electronic musical instruments and computers to communicate with one another.

The MidiStream transmitter has a MIDI input in the form of a 5 pin DIN socket to receive MIDI data, typically from a portable keyboard. The digital information is then processed by a microcontroller to turn it into a form suitable for transmission, this includes bit balancing the data stream. The data stream is then sent to a proprietory transmitter module and from there to a fixed antenna.

The receiver decodes the data stream and turns it back into standard MIDI information which appears at the MIDI output of the receiver, ready for connection to a MIDI sound module or to a computer.

MidiStream transmitter technical information

The transmitter module is manufactured by Aurel (http://www.aurel.it) and is model XTR-915.

The microcontroller used is an 87C51-RD2 clocked at 12MHz, (manufactered by Temic)

The transmitter antenna is a ¼ wave whip, type M4UHFF85 manufactured by R W Badland Ltd. http://www.badland.co.uk

The intended operating environment of the device is:
On-stage / Theatre / Club / entertainment venue use, attached to a portable MIDI instrument.

Weight of transmitter unit:	155 grams, not including battery
Size of transmitter unit:	100 x 70 x 30 mm (not including antenna)
Interface ports on transmitter:	MIDI port (serial interface)
Duty cycle:	100%
Carrier frequency:	914.5MHz
Occupied bandwidth:	50KHz (+/- 25KHz)
Modulation:	FM (digital modulation – data only)
Channels:	One – carrier frequency fixed at 914.5MHz
Method of frequency control:	Crystal controlled

The electronics inside the transmitter run from two separate 5 volt low dropout regulators, one for the microprocessor and one for the transmitter module, to minimise noise coupling.

The transmitter warns the user when the battery voltage is 6.5 volts or below by flashing an LED on both the transmitter and the receiver. When the battery voltage reaches 4.5 volts, the unit is shut down to avoid possible unpredictable operation with insufficient voltage.