



9409 E. 55th Place South
Tulsa, Ok 74145
April 5, 2010

FCC

Dear FCC:

We are submitting a single model new application for a data radio to your office. The device is transmitting and receiving, approximately 2 watts, in the frequency band of 138 ~ 153 MHz. In our various documents, we call it our MCDT (Multi Channel Data Transceiver).

The MCDT is a multi channel data transceiver that operates on 12.5 kHz spaced channels from 138 MHz to 153 MHz.

This MCDT unit fulfills the requirements for a modular transmitter as enumerated below:

1. The MCDT has its own built in shielding system on top and bottom of the MCDT pc board. This shield completely encloses various sections of the unit: The transmitter, the power supply, the processor, the synthesizer/first IF, and the second IF.
2. The MCDT has buffered modulation inputs and Low pass filter. The actual modulation inputs come directly and only from the on board processor.
3. The MCDT has its own power supplies. It has a linear supply for the on board processor, a linear supply for the synthesizer/first IF, and a linear supply

for the second IF. It also has an on board switching regulator that takes the input voltage and either steps it up or down to a selected voltage to provide power to the transmitter to control its output power. This supply is well filtered (rf wise) from the power input and its output to the power amplifier.

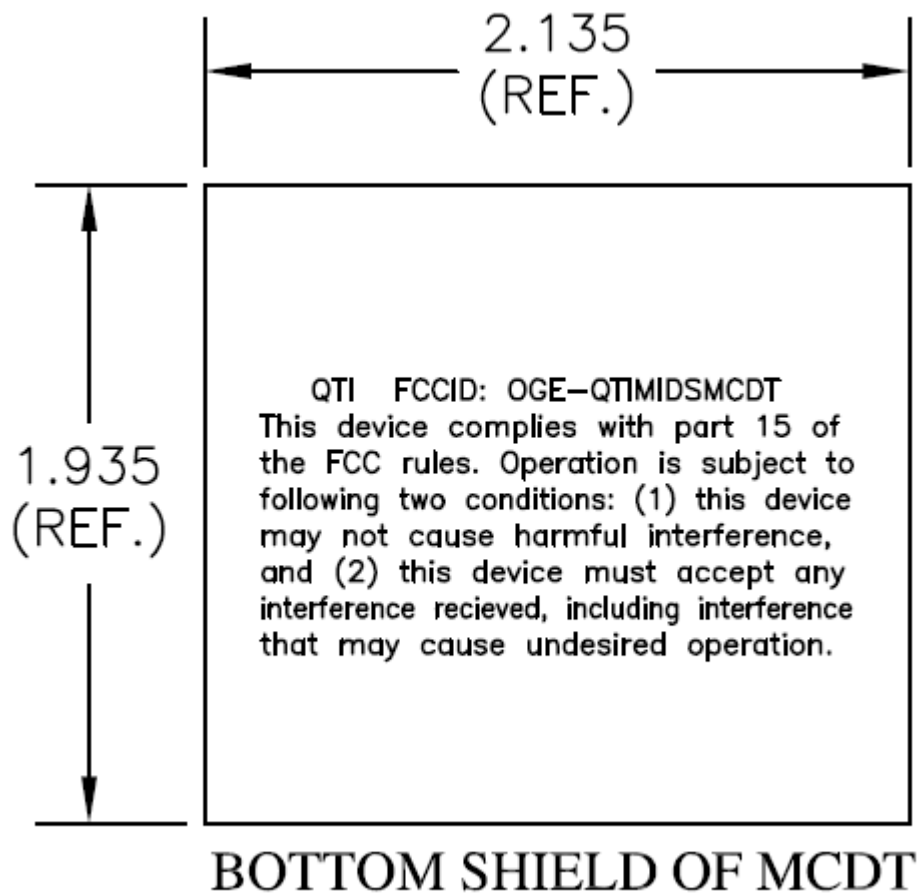
In addition, the unit has a “piggy back power supply” that is attached to the top of the MCDT that provides filtered regulated dc voltage to the MCDT itself.

This unit provides additional rf filtering to isolate the unit from external interface circuits.

4. The MCDT board antenna connector is an MMCX connector. The MCDT antenna is a specially built Qualtron antenna that is a $\frac{1}{4}$ wave wire antenna that has a unique antenna connection system consisting of an SMB male connector on the main unit and an SMB female connector on the antenna.

5. The MCDT was tested as a stand alone unit. The unit is normally battery powered.

6. The MCDT will be labeled as follows on the bottom shield:



7. The MCDT complies with all applicable operating requirements as determined by Timco conformance testing.

8. The MCDT complies with the MPE requirements by providing a safe separation distance of 30 cm between the antenna, including any radiating structure, and any persons when normally operated.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This device is approved with emissions having a source-based time-averaging duty factor not exceeding 50%.

Please contact us or our agent Timco Engineering Inc. if you have questions.

Sincerely:

John C. Moore