February 27, 2001

Federal Communications Commission
Equipment Authorization Division
7435 Oakland Mills Road
Columbia, MD 21046

FCC ID: KNY21161341911919

Dear Mr. Dichoso:

This letter is to respond to the Correspondence Reference Number 18187 regarding our spread spectrum radio transceiver DGRO9RAS (FCC ID: KNY21161341911919, EA99651).

This letter will address issues regarding our submittal in the order they were addressed in the Correspondence Reference Number 18187.

1. The MPE distance calculations were reviewed and corrected. Please, refer to the new "Technical Description".

2. The center frequency of the lowest channel is 902.2464 MHz, the center frequency of the highest channel is 927.8208 MHz.

3. The DGRO9RAS transceiver complies with the module requirements pursuant to the Public Notice DA00-1407 on modular approval of Part 15 devices.

4. The submitted device is a Class A computer peripheral and is a subject for further verification.

5. The DGRO9RAS transceiver coordinate its hopping sequence with the hopping sequence of other transmitters for the communication purpose, but not to avoid an interference with other transceivers.

   When two or more radio transceivers are combined into a communication network, they use the same hopping pattern. There is always a master radio in the network. The master radio provides a network synchronization and coordinate transmissions from the rest of the radios in the network in a synchronized Aloha without reservation or TDMA manner depending on the network configuration chosen by the user.

6. To comply with the Section 15.203 of FCC Rules, the DGRO9RAS transceiver will be manufactured and supplied to customers with the reverse thread SMA connector.

7. To derive the pseudo-random hopping sequences we used a software written on PowerBasic programming language. This software functionality based on using a random numbers generator function from a programming language build-in library.

   All of the hopping patterns available for the transceiver are loaded into transceiver's read-only-memory. The example of one of the pseudo-random hopping sequences is given in the "Technical description".

8. DGRO9RAS transceivers use the frequency channels from its hopping pattern sequentially and regardless of whether user's data is ready to be sent or not. The RF section of the transceiver is

synchronized to master radio synch pulses in the communication network and totally asynchronous to the RS232 input data of the device. So, the frequency channel to be used by the transceiver to transmit user's data determined by the time when user's data is ready to be sent and by the current frequency channel from the frequency hopping pattern used at that time.

9. The total receiver's input bandwidth defined by the narrowest filter stage in the receiver and in our case is 200 kHz, which matches the occupied bandwidth of the transceiver. The transceiver's front-end bandwidth is 26 MHz, which assures that the radio will be able operate within 902-928 MHz frequency band.

10. The rest of the antenna photos are attached.

11. The list of antennas provided by the FreeWave Technologies with the antenna manufacturers, antenna types and antenna gains is given in the "User Manual". The instructions of how to adjust the output power of the transceiver according to the cable loss and antenna gain are given in the "Installation Manual".

12. The User Manual has been corrected so there is no instruction of how to change transceiver's RF transmit power. However, the Installation Manual has detailed instruction of how to do so. That way we assure that the RF output power will be adjusted once during the installation and this adjustment will be done professionally.

13. The User Manual, RF safety exhibit and the Technical Description refer to the same MPE distance requirements.

Sincerely,

Aleksey Pozhidaev
Engineer