GENERAL INFORMATION

1.1 Product Description

The Equipment Under Test (EUT) is the Axonn L.L.C.'s, Model AXC550 (External), Rev B Transmitter. The EUT utilizes direct sequence spread spectrum technology for communication on the following channels: 905.58, 908.58, 911.58, 914.58, 917.58, 920.58, 923.58, and 926.58 MHz. The transmitter modulation incorporates BPSK modulation for generating a direct-sequence, spread spectrum carrier. The data modulation for the device utilizes either OOK or BPSK data modulation techniques as selectable by the user application.

The EUT it identical to a previously approved version (which was modularly approved under FCC ID: L2VAX550) with the exception that one of the regulators has been removed from the transmitter board and is to be implemented by the outside host devices and this version also incorporates external antennas. This application is being submitted in order to approve the EUT as a stand-alone limited modular approval (limited for use within Axonn L.L.C. products only) since Axonn will maintain control of the final products and ensure that the transmitter module is fully supplied with the proper external regulated voltage. Please refer to the following letter from Axonn L.L.C.

L.L.C

2021 Lakeshore Dr. Suite 500 □ New Orleans, Louisiana 70122 □ (504) 282-8119

July 2, 2002

Federal Communication Commission
Equipment Authorization Division
7435 Oakland mills Road
Columbia, MD 21046

Dear Sir or Madam

This letter requests that the attached filing (FCC ID L2VAXC550EXT) and be submitted for Limited Modular Approval. In reference to FCC Public Notice DA 00-1407, the following is stated:

1. All components except the antennas are enclosed by the metal shielding and ground plane.
2. All data inputs are buffered. The AXC550EXT provides buffering for all of it's external inputs and outputs obtainable by the end user through connectors J1 and J2. No direct connection between any of the AXC550EXT RF circuitry is provided without on-board buffering. The inputs and outputs to the AXC550EXT are digital, with the exception of the +5 Volt, DC supply input. Through specification and interaction with the end user this +5 volt input is closely controlled. The digital inputs to the AXC550 are buffered through the AX602 transmit controller ASIC (U9), the TIP processor (U5), or by dedicated circuitry intended for that purpose. Please refer to the theory of operations document that is supplied with this report for further discussion of these functions
3. The device was submitted as a stand-alone unit for testing.

4. Limited – Modular Approval conditions:

Axonn is launching a product family that incorporates radio products that have previously received modular approval from the FCC. The new Axonn product number is AXC550EXT, which is being combined with a product family marketed under an Axonn part number of AX16xxI where the xx is replaced with numerals denoting specific hardware configurations not impacting radio operation.

The embedded radio to be used in this product family has been previously evaluated as modular compliant and assigned FCC ID of L2VAXC550. A slight power supply modification is necessary to accommodate battery operation in the AX16xxI product

family making it necessary to re-evaluate the overall unit for FCC compliance in light of Public Notice (DA 00-1407, Released: June 26, 2000) item 3 which states:

3. The modular transmitter must have its own power supply regulation. This is intended to ensure that the module will comply with Part 15 requirements regardless of the design of the power supplying circuitry in the device into which the module is installed.

Our intention is to re-certify the radio operation of the unit seeking limited-modular approval. It is the intention of this letter to fully explain the justification for this action.

Circuit Change:

The radio module L2VAXC550 incorporates a linear regulator as the power conditioning circuit. Provisions were made on the copper of the existing device to remove this regulator and bypass it with a wire jumper. This forces the line regulation of the radio device to the outside host and negates the modular approval of the device.

The L2VAXC550EXT will be combined with the L2VAX16xxI product family that takes the identical regulator removed from the radio transceiver and locates it with isolation switches on the host carrier board. This is to provide for complete power shutdown of the device to preserve battery life. While in operation mode, the isolation switches are closed and the regulator operates exactly as designed into the radio product.

There exists no other load on the regulator. The regulator on the host board provides power only for the radio device providing an electrical equivalence to the original configuration.

Failsafe operation of the radio is assured through lock detect circuitry in the radio product. If power fails on the device or on the host carrier board, the radio will disable the transmit section thus protecting the device from transmitting outside the band of allocation.
Additionally, testing of the configuration indicates there is no impact to output power either in band or out of band and to all measurable means any difference in operation of the radio device as a whole.

Intent and Action:
It is therefore our desire to seek limited-modular approval of the L2VAXC550EXT and device as provided for in the Public Notice. This device will only be used with Axonn products.

Sincerely,
Gary Naden

Gary Naden
V.P. Engineering
Axonn LLC