

INSTALLATION AND INSTRUCTION MANUAL INCLUDING HUMAN EXPOSURE STATEMENT

As required by § 2.1033(c)(3), here is a part of the User's Guide and Technical Manual"that describes modem features, installation, and operation.

Also provided, in User's Manual, is a statement addressing human exposure to radio frequency radiation. This information is necessary to ensure that equipment installers, operators and users are made aware of the dangers of exposure to radio frequency radiation and that the Modem is installed and operated in compliance with 47 CFR Part 24, Subpart E and 47 CFR Part 22, Subpart H of the FCC Rules and Regulations. Pursuant to § 24.52

RF hazards, all emissions from the Modem, both fundamental and unwanted, are subject to the radio frequency radiation exposure requirements given in § 1.1307(b), § 2.1091 and § 2.1093, as appropriate.

For fixed transmitters, § 1.1307(b) requires the preparation of an Environmental Assessment (EA) if the transmitter would cause human exposure to levels of radio frequency radiation in excess of the applicable limits given in § 1.1310. However, determination of compliance with these limits and preparation of an EA if they are exceeded is required only for licensed PCS facilities, operations and transmitters with the following characteristics:

1. Personal Communications Services (part 24)

Broadband PCS (subpart E): non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 2000 W ERP (3280 W EIRP)

Building-mounted antennas: total power of all channels > 2000 W ERP (3280 W EIRP)

2. Cellular Radiotelephone Service (subpart H of part 22).

Non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 1000 W ERP (1640 W EIRP)

Building-mounted antennas: total power of all channels > 1000 W ERP (1640 W EIRP)

Fixed" in this context means that the device is physically secured at one location and is not able to be easily moved to another location. **Since the modem transmits on a single channel with a maximum peak output power of 0.224 W (23.5 dBm) at 1900 MHz and 0.224 W (23.5 dBm) at 850 MHz nominal, the maximum specified antenna gain of 13.5dBi / 8.93dBD results by using maximum permissible Exposure for general population of 1 mW/cm² / 0,57 mW/cm²,**

below the level which would trigger a routine environmental evaluation. Therefore, in fixed applications, the modem is categorically excluded from performance of a routine environmental evaluation or preparation of an EA.

In § 2.1091(b), a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's antenna and the body of the user or nearby persons. In accordance with § 2.1091(c), mobile PCS devices are categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use if their e.r.p is less than 3 W (34.8dBm) for 1900 MHz operations and 1.5 W for 850 MHz operations.

The Modem user's manual requires a separation distance of at least 20 cm between the unit's antenna and the body of the user and nearby persons for all uses and applications, both mobile

and fixed. Furthermore, for mobile applications, the maximum e.i.r.p. will not exceed 2 W (33 dBm), in accordance with the requirements of § 24.232(b). Therefore, for mobile applications, the modem is categorically excluded from a routine environmental evaluation for RF exposure.

In all applications and uses, compliance with current FCC RF regulations limiting human exposure to radio frequency exposure is dependent upon installation, operation and use of the equipment in accordance with all instructions provided.

HUMAN EXPOSURE COMPLIANCE STATEMENT

Pursuant to 47 CFR § 24.52 of the FCC Rules and Regulations, personal communications services (PCS) equipment is subject to the radio frequency radiation exposure requirements specified in § 1.1307(b), § 2.1091 and § 2.1093, as appropriate. Wavecom, Inc. certifies that it has determined that the Modem complies with the RF hazard requirements applicable to broadband PCS equipment operating under the authority of 47 CFR Part 24, Subpart E and 47 CFR Part 22, of the FCC Rules and Regulations. This determination is dependent upon installation, operation and use of the equipment in accordance with all instructions provided.

The Modem is designed for and intended to be used in fixed and mobile applications. "Fixed" means that the device is physically secured at one location and is not able to be easily moved to another location. "Mobile" means that the device is designed to be used in other than fixed locations and generally in such a way that a separation distance of at least 20 cm is normally maintained between the transmitter's antenna and the body of the user or nearby persons. The Modem is not designed for or intended to be used in portable applications (within 20 cm of the body of the user) and such uses are strictly prohibited. To ensure that the Modem complies with current FCC regulations limiting both maximum RF output power and human exposure to radio frequency radiation, a separation distance of at least 20 cm must be maintained between the unit's antenna and the body of the user and any nearby persons at all times and in all applications and uses. **Additionally, in mobile applications, maximum antenna gain must not exceed 9.5 dBi for 1900 MHz operations and 8.26dBD for 850 MHz operations.**

CALCULATIONS:

Limit for 1900MHz fixed operation:

1mW/cm² @ 20cm=5W (37dBm)

Ant. Gain = 37dBm - measured cond. Power = 37-23.5 = 13.5dBi

Limit for 1900MHz mobile operation:

2W (33dBm) EIRP

Ant. Gain = 33dBm - measured cond. Power = 33-23.5 = 9.5dBi

Limit for 850MHz fixed operation:

0.57mW/cm² @ 20cm=2.865W (34.57dBm)

Ant. Gain = 34.57dBm - measured cond. Power = 34.57-23.5 = 11.07dBi - 2.14= 8.93dBD

Limit for 850MHz mobile operation:

1.5W (31.76dBm) ERP

Ant. Gain = 31.76dBm - measured cond. Power = 31.76-23.5 = 8.26dBD