



Date: October 26, 1999

Mr. Frank Coperich  
Authorization & Evaluation Division  
Federal Communications Commission Laboratory  
7435 Oakland Mills Road  
Columbia, MD 21046

Dear Mr. Coperich;

Motorola Inc., 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322, herein submits its response to the October 13 request for information on FCC ID: AZ489FT5797, EA95186.

- 1) This will serve to confirm the intended use of the modem is in vehicles with an external antenna connected to the output jack and mounted to the automobile with an antenna to human separation distance of greater than 20 cm consistent with the definition of a mobile device given in 47 CFR 2.1091(b). No antenna is provided with the modem, so a user must obtain the antenna separately. Three (3) dB gain (relative to a quarter wave whip, 2 dB relative to the dipole reference used for ERP considerations) antenna accessories are provided by Motorola, but other commercially available antennas may be used instead, including some with higher gain or lower loss cables.
- 2) For categorical exclusion of a 0.7 watt 800 MHz band radio per 47 CFR 2.1091© the antenna gain must not exceed 3.3 dBd (or equivalently, 4.3 dBq) including cable loss. None of the Motorola antenna accessories cited exceed this value, so the product and all 3 associated accessory antennas being offered qualify for categorical exclusion. Antenna cable loss for the Motorola antennas also serve to reduce antenna system gain another 1.5 to 2 dB and is not considered in the gain rating. This cable loss may differ with antenna accessories from other commercial vendors so an antenna with sufficient gain and low cable loss might not qualify for categorical exclusion.

Attached per your request is MPE evaluation data obtained in several mounting positions at a separation distance of 20 cm for the 3 categorically excluded Motorola, Inc. antenna accessories cited. The maximum power density measured, as stated in paragraph 3.0, was 0.021 mW/cm<sup>2</sup>. This is about 3.9% of the general population Maximum Permitted Exposure (MPE) limit specified in table 1B in 47 CFR 1.1310.

We trust this adequately provides the information you requested. Please contact me at (954) 723-5793 if you require any additional information.

Sincerely,

Mike Ramnath  
FCC Liaison  
Email: emr003@email.mot.com