

**Evaluation of the CSI Model 150 BDA
For
Compliance with FCC Guidelines
For Human Exposure to Radio Frequency
Electromagnetic Fields**

21 May, 2003

General

The CSI Model 150 Bi-directional amplifier is considered to be a “mobile” device operating in the Land Mobile Service authorized under part 24. As such, the equipment is required to be evaluated for RF exposure if operated above 1.5 GHz with an effective radiated power (ERP) of 3 watts or more, as defined in 2.1091 of FCC rules.

Downlink

For the downlink portion of the Model 150 BDA, the maximum rated output power is not greater than +22dbm (100 mW). As stated in the Model 150 Manual, the maximum authorized antenna gain is 8 dBi, corresponding to a high-performance indoor directional antenna. Neglecting cable losses, the worst-case EIRP will be 1.0 watts or an ERP of 0.610 watts, ($ERP = EIRP / 1.64$). This is well below 3 watts, and therefore excludes the downlink from routine evaluation. The Cautions in the Model 150 manual clearly define the antenna selection and installation criteria in order to maintain a minimum 20-centimeter separation.

Uplink

For the uplink portion of the BDA, the maximum rated output power is not greater than +22 dbm (158 mW). As stated in the Model 150 Manual, the maximum authorized antenna gain is 14 dBi, corresponding to a high-performance outdoor directional antenna. Neglecting cable losses, the worst case EIRP will be 3.98 watts, or an ERP of 2.43 watts ($ERP = EIRP / 1.64$). This is below 3 watts, and therefore excludes the uplink from routine evaluation. The Cautions in the Model 150 manual clearly define the antenna selection and installation criteria required to maintain a minimum 120-centimeter separation.