Client: M/A COM, Inc. Model: MastrIII w/ Sitepro Base Station Standards: FCC Part 90/IC RSS-119 Report Number: 2003061 FCC ID: OWDTR-0028-E

## APPENDIX A: FCC PART 1.1307, 1.1310, 2.1091, 2.1093: RF EXPOSURE

Please refer to the MPE calculations on the following page.



## М/А-СОМ

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SUBJECT: MPE Calculations

MPE calculations were made assuming worst case in each band with respect to frequency, ERP and Limit. The maximum allowable ERP was determined from the applicable part 90 rules regarding power limitation (90.205, 90.309, 90.635). The formula used was derived from OET 65, section 2, equation 4. The limit used was for "General Population / Uncontrolled Exposure", derived from 47 CFR Part 1.1310 table 1.



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The radius for a given exposure level is:

$$R = \sqrt{\frac{EIRP}{4 \cdot \pi \cdot S}}$$

where R is the radius, EIRP is the effective radiated power, and S is the allowable limit.

The limit over the range 300-1500 MHz is F/1500 in mw /  $\mathrm{cm}^2$ , where F is the frequency. Thus, worst-case exposure is at the minimum frequency in each band. Adding a factor of 1.64 for the gain of a half-wave dipole over an isotropic antenna, this gives a worst-case minimum radius of:

470-512 MHz:

$$R := \sqrt{\frac{1000 \cdot 10^{3} \cdot 1.64}{4 \cdot \pi \cdot \frac{470}{1500}}} \cdot cm$$

$$R = 645.377 cm$$

$$R = 254.086 in$$

$$R = 21.174 ft$$

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