MPE Calculations for FCC ID Number WCS-PM6

1.0 SCOPE:

This Report Demonstrates Evaluation and Compliance for Human Exposure to Radio Frequency Electromagnetic Fields as Outlined by the Federal Communications Commission Office of Engineering and Technology Bulletin 65.

2.0 REVISION LEVEL:

DATE	COMMENTS	REVISION
June 16, 2008	Created.	1.0

3.0 REFERANCE DOCUMENTS:

(A) Limits for Maximum Permissible Exposure (MPE). Code of Federal Regulations Title 47, Volume 1, Section 1.1310.
(B) Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields. OET Bulletin 67 Edition 97-01.

4.0 CALCULATIONS:

The Model SRM PowerMeter6 utilizes a low power 2.4 GHz radio located approx 10 cm from the leg. The following worst case emissions are based on a PPt (Peak Power Total) measurement of -20.5 dBm. The worst case antenna gain on axis is found to be 0.6 dBi.

Total radiated power at the Transmitter:

A) Pt = -20.5 dBm + 0.6 dBi = -19.9 dBm EIRP

-19.9 dBm EIRP = 0.000008912 Watts. (8.912uW)

Power density at a distance of 10 cm from the antenna is:

B) $S = EIRP/4\pi \cdot r^2$

Where S is Power density in units of mW/cm2 and EIRP is Equivalent Isotropic Radiated Power in units of mW and r is the distance to the center of radiation of the antenna in units of cm

$S = 0.008912mW/(4\ \pi\ (10cm)^2) = 7.09E\text{-}6\ mW/cm^2$

5.0 CONCLUSION:

Based on the FCC Limits for Maximum Permissible Exposure (MPE) given in Table 1 of reference document (A) this device falls significantly under the required limits.