EuroCom Industries A/S • Porsvej 2 • 9200 Aalborg SV • Denmark
Phone: +45 70 13 70 00 • Telefax: +45 98 18 32 20 • Telex: 69 789

ECI	Concerning: Safety distance to antenna	Initials: HHO	Date: 10-04-2003: 21.56	
	Doc. Relation: Iridium FCC approval	Doc. Name : --	Rev.: A1	Page: 1 of 1

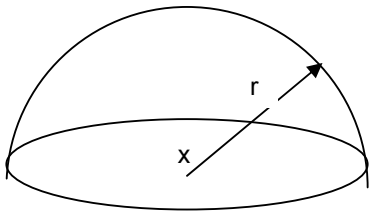
Calculations of the safety distance due to the Rf emission from the Iridium antenna of the ECI Iridium products

According to the FCC rules described in “A local Government Official’s Guide to Transmitting antenna Rf Emission safety: Rules, Procedures and Practical Guidance” the limits for General Population/Unprotected Exposure is stated to 1.0 mW/cm²

This value is basis for the calculation of the safety distance of the iridium antenna under all conditions.

Technical data.

Maximum output Rf power	7 W	
Antenna gain		3 dB equals 2 times
Antenna pattern		Hemispherical
Frequency		1.616 – 1.626 GHz



r = safety distance from the antenna placed at x emitting Rf radiation in an hemispherical pattern

Surface area of the hemisphere $S = 2 \pi r^2$

The calculation is absolutely worst case situation due to the fact that the output RF power is lower due to the pulsing (TDMA system) transmission. The calculation uses the case if the transmission was a continuous operation.

Formula $r = \sqrt{\frac{\text{Power x Antenna gain}}{\text{Surface x Rf limit}}} = \sqrt{\frac{7000 \text{ x } 2}{2 \text{ x } \pi \text{ x } 1}} = \underline{0.47\text{m}}$

The safety distance is therefore stated as **2 feet** equals 0.61m > 0.47m

The safety distance is stated in the manuals