From	Our Reference	Telephone	Telefax	Schwieberdingen
GS/MSD3	Nottebom	(07 11) 8 11-3981	(07 11) 8 11-3982	12.12.2002 Page 1 of 1

MPE calculation for the FM4 Telemetry Device

The minimum required safety distance between the antenna of the FM4 telemetry device and any people during operation of the device is calculated as follows:

        Duty Cycle :   up to 100%
        Antenna Gain :   up to 3dB
        Power of the FM4 :   up to 10W = +40dBm

    ⇨   average radiated power (ERP) = 20W = +43dBm max.

The limits are according to the FCC 96-326 Appendix C
"Limits for General Population/Uncontrolled Exposure" (page 96)

        Maximum power density = f/1500MHz mW/cm²

        For the FM4 device operating from 400 MHz :

    ⇨   Maximum allowed Power Density : 0.266mW/cm² = -5,7dBm/cm²

Calculation of the minimum required distance (worst case) :

$$\frac{20W}{4 \cdot p \cdot r^2} \le 0,266 \frac{mW}{cm^2}$$

$$r \ge \sqrt{\frac{20W}{4 \cdot p \cdot 0,266mW / cm^2}} = 77,4cm$$

Conclusion :
To comply with FCC RF exposure compliance requirements, a separation distance of at least 78 cm must be maintained between the antenna of this device and all persons.

Checked by:	Phone:	Date:	Signature:
D.-Depart.:	Phone:	Date:	Signature:
D.-Manager:	Phone:	Date:	Signature:
Note(s):	Report sent to the client:		