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Client: Harris Corporation
Model: M7300 440-512MHz 50W Mobile Radio
IDs: OWDTR-0062-E/3636B-0062
Standards: FCC Part 90/IC RSS-119
Report #: 2010130

Appendix A: FCC Part 1.1307, 1.1310, 2.1091, 2.1093: RF Exposure

Please refer to the MPE Report that follows.



HARRIS CORPORATION

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Mobile Radio MPE Evaluation Report

FCC Rule Part:	47 CFR §90; §2.1091; §1.1310
Device Classification:	Licensed Non-Broadcast Station Transmitter (TNB)
Device Type:	Mobile UHF Transceiver with Vehicle Rooftop Antenna
FCC ID:	OWDTR-0062-E
Model Name:	M7300 UHF-H mobile radio
Modulation:	FM
Tx Frequency Range:	440 – 512 MHz
Max. RF Conducted Power:	50 W (nominal/rated, times 1.2; § 90.205(r))
Power Supply:	13.6 VDC
Antenna Type:	AN-225004-001 and -004, AN-102800V1; vertical vehicle rooftop antenna.
Antenna Gain:	2.15 dbi
Minimum Antenna Distance:	51 cm Limits for Occupational/Controlled Exposure. 114 cm Limits for General Population/Uncontrolled Exposure.

Calculation

$$S = \frac{PG}{4\pi R^2} \quad \text{therefore: } R = \sqrt{\frac{PG}{4\pi S}}$$

Where: S – power density (mW/cm²; as defined in 47 CFR § 1.1310), P – power input to antenna at 50% duty cycle (in mW), G – power gain of the antenna relative to isotropic (numeric value, not db), R – distance to center of antenna (result in cm).

$S = 1.5/.3$ (Controlled(f/300)/Uncontrolled(f/1500)) at Tx frequency 450 MHz (frequency when applicable).

Calculated controlled distance: 51.10 cm

Calculated uncontrolled distance: 114.26 cm

Daryl Popowitch
Regulatory Manager