

Mobile Radio MPE Evaluation Report

(One antenna)

Declaration of Compliance

| | |
|---------------------------|---|
| FCC Rule Part: | 47 CFR §90; §2.1091; §1.1310 |
| Device Classification: | Licensed Non-Broadcast Station Transmitter (TNB) |
| Device Type: | Mobile VHF PTT Radio Transceiver with Vehicle Rooftop Antenna |
| FCC ID: | OWDTR-0035-E |
| Model Name: | M7100 |
| Modulation: | FM |
| Tx Frequency Range: | 136 - 174 MHz |
| Max. RF Conducted Power: | 51.52 W (nominal/rated or lab report value, times 1.2; § 90.205(r)) |
| Power Supply: | 12 VDC |
| Antenna Type: | Quarter wave vertical (P/N AN102800V1 or V2) |
| Antenna Gain: | 2.15 dbi |
| Minimum Antenna Distance: | 64 cm Limits for Occupational/Controlled Exposure. 142 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 = 1.0/.2 (Controlled(f/300)/Uncontrolled(f/1500)) at Tx frequency MHz (frequency when applicable).

Calculated controlled distance: 63.52 cm

Calculated uncontrolled distance: 142.0 cm



Daryl Popowitch
 Regulatory Manager,
 Engineering Project Manager

M/A-COM, Inc. – Lynchburg, VA