



Electronics

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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

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