

Motorcycle Radio MPE Evaluation Report

(Two of four antennas)

Declaration of Compliance

FCC Rule Part: 47 CFR §90; §2.1091; §1.1310
Device Classification: Licensed Non-Broadcast Station Transmitter (TNB)
Device Type: UHF PTT Radio Transceiver with Motorcycle Mount and Antenna
FCC ID: OWDTR-0021-E
Model Name: M7100 (IP)
Modulation: FM
Tx Frequency Range: 450 - 512 MHz
Max. RF Conducted Power: 25 W (factory configured for motorcycle applications; 1.05 multiplier)
Power Supply: 12 VDC
Antenna Type: Loaded 5/8 over half wave vertical (P/N LE-OM470BK/TNC)
Antenna Gain: 5.5 dbi (3.55 numeric)
Minimum Antenna Distance: 48.59 cm Limits for Occupational/Controlled Exposure.
109.36 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 = 1.57/.31 (Controlled/Uncontrolled) at Tx frequency 470 MHz (frequency when applicable).

Calculated controlled distance: 48.59 cm

Calculated uncontrolled distance: 109.36 cm



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