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Motorcycle Radio MPE Evaluation Report

(One 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-OM490BK/TNC)
Antenna Gain:	5.5 dbi (3.55 numeric)
Minimum Antenna Distance:	47.69 cm Limits for Occupational/Controlled Exposure. 105.99 cm Limits for General Population/Uncontrolled Exposure.

Calculation

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

Where: S – power density (mW/cm^2; 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 = 1.63/.33 (Controlled/Uncontrolled) at Tx frequency 490 MHz (frequency when applicable).

Calculated controlled distance: 47.69 cm

Calculated uncontrolled distance: 105.99 cm

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