

DIAMOND ANTENNA

M285S/M285SNMO

144-172 MHz Mobile Antenna

Instruction Sheet

The M285S is a 144-172 MHz tunable mono-band, 5/8 wavelength mobile antenna, optimized for the U.S. amateur and commercial bands. With included cut chart, the M285S is adjustable to work in the 2m Amateur band or to the desired commercial frequency of your choice.
4-6 MHz tuning range 1.5:1 VSWR (Nominal)

Specifications

FREQUENCY:	144-172 MHz
GAIN:	3.4 dB
POWER:	100 Watts
IMPEDANCE:	50 Ohms
VSWR:	1.5:1 (Nominal)
ELEMENT PHASING:	5/8 Wave
GROUNDING:	Required for optimum performance
LENGTH:	50" (Before cutting)
WEIGHT:	0.4 lbs. (170 g)
MOUNT:	UHF MALE (PL259)/NMO
WARRANTY:	1 Year against defects in material or workmanship.

RECOMMENDED MOUNTS M285S: K400C, K400S, K412C, K412S, K600M, or K600S Trunk Mounts.
SPM35 or K702M Magnet Mounts.

M285SNMO: K400CNMO, K400SNMO, K412CNMO or K412SNMO Trunk Mounts.
SPMNMO Magnet Mount.

Installation Instructions

NOTE: THIS ANTENNA REQUIRES TUNING TO DESIRED OPERATING FREQUENCY. USE QUALITY VSWR METER TO INSURE PROPER ADJUSTMENT. VSWR DEPENDANT UPON MOUNTING LOCATION AND IT'S RF GROUND CHARACTERISTICS.

- (1) Remove antenna from package and inspect contents to insure it is complete.
- (2) Choose desired mounting location to insure maximum strength of mount, and best performance of antenna.

Tuning of Antenna

(Note: Mounting location and mounting structures will effect RF grounding and resonant frequency. Before cutting whip, allow an additional 1 to 1 1/2 inch to length shown on chart to protect against over cutting. Trim in 1/4 inch lengths till desired resonant frequency is obtained) Example: 146 MHz=start at 48"

- (3) Check VSWR at your lowest and highest operating frequency to determine center frequency. Cut base of antenna whip to raise resonant center frequency.
- (4) Install antenna on vehicle. With quality VSWR meter, check VSWR for proper antenna tuning. Tuning adjustments or additional trimming may be required to reach optimum VSWR. Tune or trim until lowest VSWR is obtained at center frequency. Tighten setscrews. Recommend using removable Loctite Threadlocker #242 or similar product to insure proper fastening of setscrews.