

PCTEL, Inc.

GPS Permanent Mount User Installation Guide: 397XD, 817XD & 507XD Product Series

Mounting to a Flat Surface

General Notes

The 397XD, 817XD & 507XD series have been designed to be hard mounted to a flat surface or to a mast using the MMK1925 Mast Bracket. This guide is intended to aid the installer in properly mounting these antennas for optimum GPS performance to a flat surface. When installed properly as per the following instructions the installation meets IP67 environmental specifications.

Mounting Surface

The mounting surface must not exceed 6.5mm in thickness. The surface must be flat, clean and free of flaking paint or loose metal debris in order to have a watertight (IP67) installation.

Mounting Angle

There will be very little degradation in GPS performance with slopes up to 30 degrees from horizontal. The antenna will function at angles beyond this point but the performance will continue to degrade with increasing slope. It is recommended that the maximum slope not exceed 45 degrees.

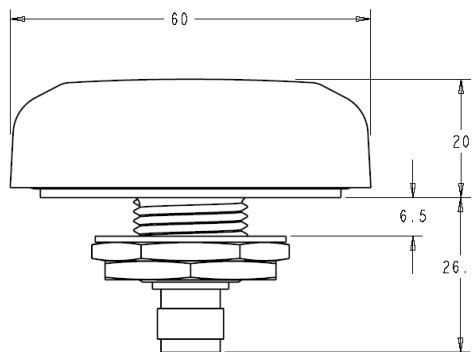


Figure 1. Mechanical Specifications

Installation Procedure

Please refer to the product's datasheet for electrical specifications and refer to Figure 1. for mechanical specifications. For optimum GPS performance, the antenna must have a clear view of the sky and preferably have a ground plane. A metallic ground plane of 10cm diameter (4 inches) is sufficient to realize virtually all ground plane benefits. A larger ground plane will provide no additional advantages. The antenna will operate without a ground plane with a slightly wider beam-width.

The product comes equipped with all necessary mounting accessories, 1 silicone rubber gasket (attached to the base), 1 metal washer and 2 nickel-plated brass panel nuts $\frac{3}{4}$ inch size.

1. Select the location on the mounting surface. Make a $\frac{3}{4}$ inch diameter hole using the appropriate hole-punch, saw or drill.
2. Remove from the antenna the 2 panel nuts and the metal washer.
3. Carefully insert the antenna in the $\frac{3}{4}$ inch diameter mounting surface opening.
4. Place the metal washer and 1 panel nut on the thread of the antenna, on the inside of the mounting surface and tighten the first panel nut. The recommended torque for the 1st panel nut is 15-20 in-pounds.
5. Screw on and tighten the 2nd panel nut while holding the 1st panel nut in stationary position. The recommended maximum torque for the 2nd panel nut is 35-45 in-pounds. Do not exceed recommended maximum torque.

About PCTEL, Inc.

PCTEL, Inc. (NASDAQ: [PCTI](#)), is a global leader in propagation and optimization solutions for the wireless industry. PCTEL's **MAXRAD®**, **Bluewave™** and **Wi-Sys™** antenna solutions address public safety, military, and government applications; SCADA, Health Care, Energy, Smart Grid and Agricultural applications; Indoor Wireless, Wireless Backhaul, and cellular applications. Its portfolio includes a broad range of WiMAX antennas, Land Mobile Radio antennas, and GPS antennas that serve innovative applications in telemetry, RFID, WiFi, fleet management, and mesh networks. PCTEL's products are sold worldwide through direct and indirect channels.

For additional information, please contact us at antenna.techsupport@pctel.com



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Warranty Period	Description of Product
Lifetime to Original Purchaser	Connected Solutions Fiber Optic Cable Assembly products
10 Years	PCTEL Coaxial Surge product series PCTEL Data Line Surge products
5 Years	Bluewave™ Series antennas BMOY Series Yagi antennas BOA Series Omni antennas FP Panel Series antennas GPS Airborne Series antennas GPS-TMG Timing Series antennas GPS WAAS antennas MHO Series Omni antennas MLPV Series Omni antennas MPMI Omni antennas MPRC and MPRD Parabolic Reflector antennas PCTEL Bulk Cable products
2 Years	All other PCTEL antennas
1 Year or Pass-Through Warranty offered by applicable third-party manufacturer (whichever is greater)	Enclosure products Coaxial cable assembly products Any other Connected Solutions products

PCTEL's sole and exclusive obligation under the foregoing warranty shall be, at its option, to repair or replace any defective product that fails during the warranty period. The expense of removal and



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WARRANTY PROCEDURES: In the event of a warranty claim, the buyer must contact PCTEL to arrange for product return. No product will be accepted for replacement or repair without first obtaining a Return Material Authorization (RMA) number from PCTEL Customer Service by telephone to 630.372.6800 or by email to antenna.techsupport@pctel.com. PCTEL reserves the right to inspect all defective products. Products returned without an RMA number will not be processed and will be returned to the buyer freight collect. The warranty period of any repaired or replaced product shall not extend beyond its original term.

Equipment to be repaired or replaced under warranty is to be returned, freight prepaid, to the following address with the assigned RMA number displayed on the box:

PCTEL, Inc.
Attention: RMA Coordinator
471 Brighton Drive
Bloomington, Illinois 60108 U.S.A.