

PRODUCT WARRANTY

GENERAL WARRANTY. PCTEL, Inc. ("PCTEL") warrants that the PCTEL antenna products furnished herewith shall be free from defects in material and workmanship for a period of two (2) years from the date of shipment by PCTEL under normal use and operation; provided, however, that (a) MPRC and MPRD parabolic reflector antennas, Bluewave series antennas, and PCTEL bulk cable products are similarly warranted for five (5) years from the date of shipment by PCTEL; (b) PCTEL enclosure and coaxial cable assembly products are similarly warranted for one (1) year from the date of shipment by PCTEL; and (c) PCTEL data line surge and PCT series coaxial surge products are similarly warranted for ten (10) years from the date of shipment by PCTEL. 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 reinstallation of any item is not included in this warranty. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTIES ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE WITH RESPECT TO THE PRODUCTS. Repair or replacement in the manner provided herein shall be the sole and exclusive remedy of the buyer for breach of warranty and shall constitute fulfillment of all liabilities of PCTEL with respect to the quality and performance of the product.

EXCEPTIONS. PCTEL DOES NOT WARRANT THAT THE OPERATION OF THE PRODUCTS IS ERROR-FREE OR THAT OPERATION WILL BE UNINTERRUPTED. IN NO EVENT SHALL PCTEL BE LIABLE FOR: (i) ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES TO THE BUYER OR ANY THIRD PARTY ARISING OUT OF THESE TERMS AND CONDITIONS OR ANY DEFECTIVE PRODUCT WHETHER THE DEFECT IS WARRANTED AGAINST OR NOT, WHETHER THE CLAIM IS BASED UPON CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE, (ii) ANY AMOUNT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT, (iii) SYSTEM PERFORMANCE, INCLUDING COVERAGE, (iv) THE BUYER'S SELECTION OF PRODUCTS FOR THE BUYER'S APPLICATION, AND/OR (v) FAILURE OF PRODUCTS TO MEET GOVERNMENT OR REGULATORY REQUIREMENTS. The foregoing general warranty shall apply only if: (a) the product has been properly installed and used at all times in accordance, in all material respects, with the applicable product documentation; (b) no modification, alteration or addition has been made to the product by persons other than PCTEL or PCTEL's authorized representatives or otherwise approved by PCTEL in writing; and (c) the product has not been subjected to abuse, misuse, neglect or unusual physical, electrical or electromagnetic stress, or some other type of accident.

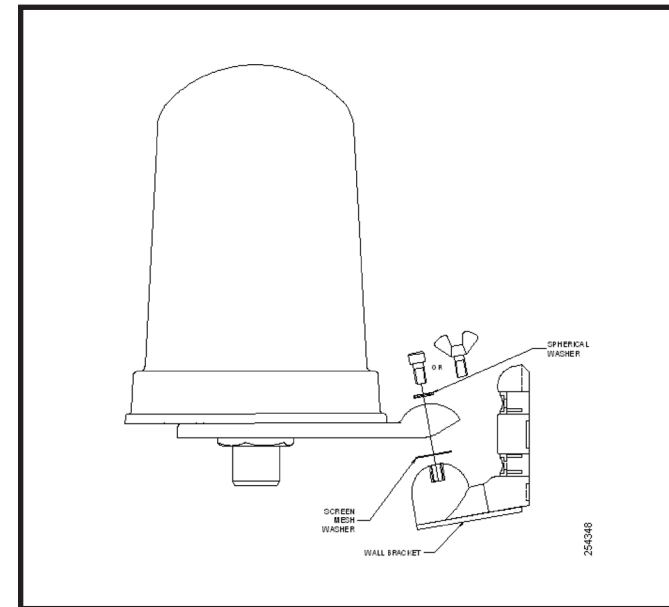
WARRANTY PROCEDURES: In the event of a warranty claim, the buyer must contact PCTEL to arrange for product return. No product will be accepted for replacement or repair without first obtaining a Return Material Authorization (RMA) number from PCTEL Customer Service by telephone to 630.372.6800 or by 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.



**471 Brighton Drive
Bloomington, IL 60108**



MPMI2458 Mount

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INSTALLATION NOTES

Antennas transmit and receive radio signals which are susceptible to RF obstructions and common sources of interference that can reduce throughput and range of the device to which they are connected. Follow these guidelines to ensure the best possible performance:

- Install the antenna vertically and mount it with the cables pointing toward the ground
- Keep the antenna away from metal obstructions such as heating and air-conditioning ducts, large ceiling trusses, building superstructures, and major power cabling runs. If necessary, use a rigid conduit to lower the antenna away from these obstructions.
- The density of the materials used in a building's construction determines the number of walls the signal can pass through and still maintain adequate signal strength. Consider the following before choosing the location for your antenna:
 - Signals penetrate paper and vinyl walls with little change to signal strength
 - Signals penetrate only one or two solid and pre-cast concrete walls without degrading signal strength.
 - Signals penetrate three or four concrete and wood block walls without degrading signal strength
 - Signals penetrate five or six walls constructed of drywall or wood without degrading signal strength
 - Signals will likely reflect off a thick metal wall and may not penetrate it at all.
 - Signals will likely reflect off a chain link fence or wire mesh spaced between 1 and 1.5 inches (2.5 and 3.8 cm). The fence acts as a harmonic reflector that blocks the signal.
- Install the antenna away from microwave ovens and 2 GHz cordless phones. These products can cause signal interference because they operate in the same frequency range as the device to which your antenna is connected.

CHOOSING A MOUNTING LOCATION

The antenna should be mounted clear of any obstructions to the sides of the radiating elements. Generally, the higher an antenna is above the floor, the better it performs. If possible, find a mounting place directly above your wireless device to ensure the lead-in cable can be as short as possible.

INSTALLING THE ANTENNA

You can install the antenna on any flat vertical surface, on a pole, or on a ceiling. All hardware for mounting the antenna on a wall or ceiling is provided. If you intend to install your antenna on another surface, you must provide the appropriate hardware.

TOOLS AND EQUIPMENT REQUIRED

A mounting installation kit is included with the antenna and consists of the following:

- Mount interface bracket
- Mount base
- Wall bracket
- One 1/4-20 x 1/2-in. cap screw
- One 1/4-20 wing screw
- Two #10 x 3/4-in. screws
- Two #10 x 1/2-in. screws
- One screen mesh washer
- One spherical washer
- 3/16 allen wrench
- Rubber gasket
- Jam nut

You may need the following tools and equipment, which are not provided:

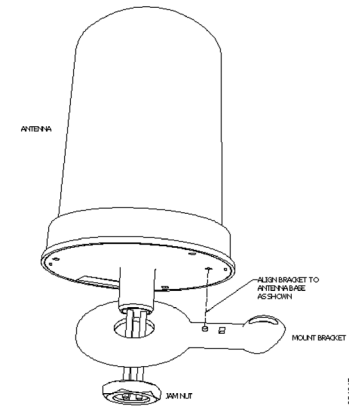
- A #2 Phillips screwdriver
- A drill and drill bit
- A pencil
- Two hose clamps

MOUNTING ON A VERTICAL SURFACE

STEP 1:

Attach the antenna bracket to the antenna using the jam nut provided (Figure 1).

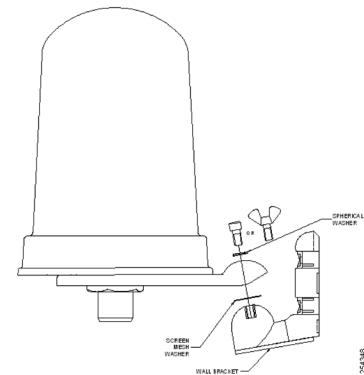
Figure 1 Antenna Bracket



STEP 2:

With the screen mesh washer between the two brackets, attach the antenna bracket to the mounting bracket using the spherical washer and wing bolt provided (Figure 2).

Figure 2 Antenna Bracket Attached to Mounting Bracket



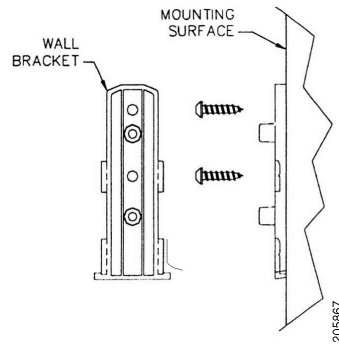
STEP 3:

Determine the mounting location for the antenna.

STEP 4:

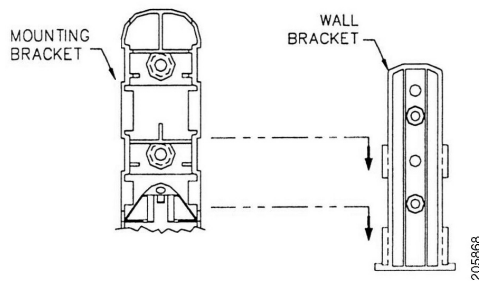
Attach the wall bracket to the wall using the two screws provided (Figure 3).

Figure 3 Wall Mounting



STEP 5:
Slide the mounting bracket onto the wall bracket and secure it in place (optional) with the two screws provided (Figure 4).

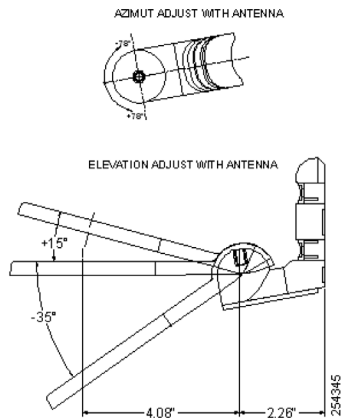
Figure 4 Attaching Mounting Bracket to Wall Bracket



Once the antenna is secured on the wall, you can adjust the azimuth and elevation.

STEP 6:
To adjust the azimuth and elevation, loosen the bolt that attaches the antenna bracket to the mounting bracket (Figure 5). Azimuth can be adjusted $\pm 90^\circ$. Elevation can be adjusted $+15^\circ$ and -35° .

Figure 5 Azimuth and Elevation Adjustment



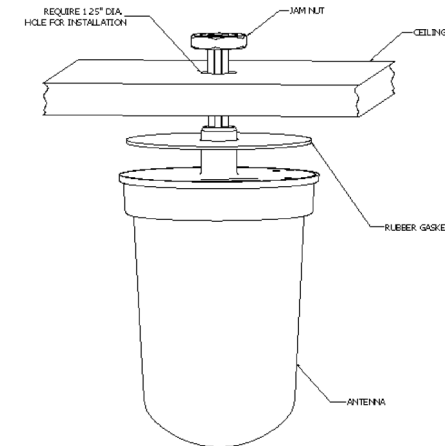
OUTDOOR INSTALLATIONS

You can mount this antenna outdoors. If you mount the antenna outdoors, you must ensure that the antenna cables exit from the bottom to prevent any water intrusion and to provide a drain for any moisture that may accumulate inside the antenna.

MOUNTING ON A CEILING

- STEP 1:**
Drill a hole in the ceiling approximately 1.25 inches in diameter.
- STEP 2:**
Fit the rubber gasket onto the bottom of the antenna.
- STEP 3:**
Insert the antenna shaft through the hole in the ceiling.
- STEP 4:**
Thread the jam nut onto the antenna shaft and tighten.
- Figure 6 shows the ceiling mount process.

Figure 6 Mounting on a Ceiling



MOUNTING ON A MAST

The antenna can be mounted on a mast rather than on a wall using two 1/2 inch-wide hose clamps (not provided). To mount the antenna on a mast, follow these steps:

- STEP 1:**
Follow Step 1 & Step 2 from the "Mounting on a Vertical Surface" section.
- STEP 2:**
Position the antenna, mounting bracket, and hose clamps on the mast.
- STEP 3:**
Tighten the hose clamps until the antenna is secure on the mast. Once the antenna is secured on the mast, you can adjust the azimuth and elevation.
- STEP 4:**
To adjust the azimuth and elevation, loosen the bolt that attaches the antenna bracket to the mounting bracket (Figure 5). Azimuth can be adjusted $\pm 90^\circ$. Elevation can be adjusted $+15^\circ$ and -35° .