

AN-125: Solar Product Mounting Instructions

2-inch Pole Mounting Kit

The standard 2-inch pole mounting kit consists of the following parts:

- (4) 2-inch U-bolts
- (4) U-bolt washers
- (8) 7/16-inch nuts



These instructions follow installation on a building parapet often found at commercial sites. The material list reflects this type of installation. If sinking a pole in the ground, a U-Channel sign pole might be more secure.

Other materials needed:

(1) 8-foot, 1-7/8-inch galvanized chain link fence pole. This seems to be the cheapest, lightest, and most efficient material for a mounting pole. Available at any Home Depot. About \$20.00 for an 8 foot pole.

About 4 feet of 3/8-inch commercial all-strut

Polyurethane caulking

Flat washers

Tapcon 1-1/2-inch fasteners for stucco or masonry

(3) 1-1/2-inch strut pipe clamps

AN-125: Solar Product Mounting Instructions

Step 1: Securing Pole to Roof Parapet



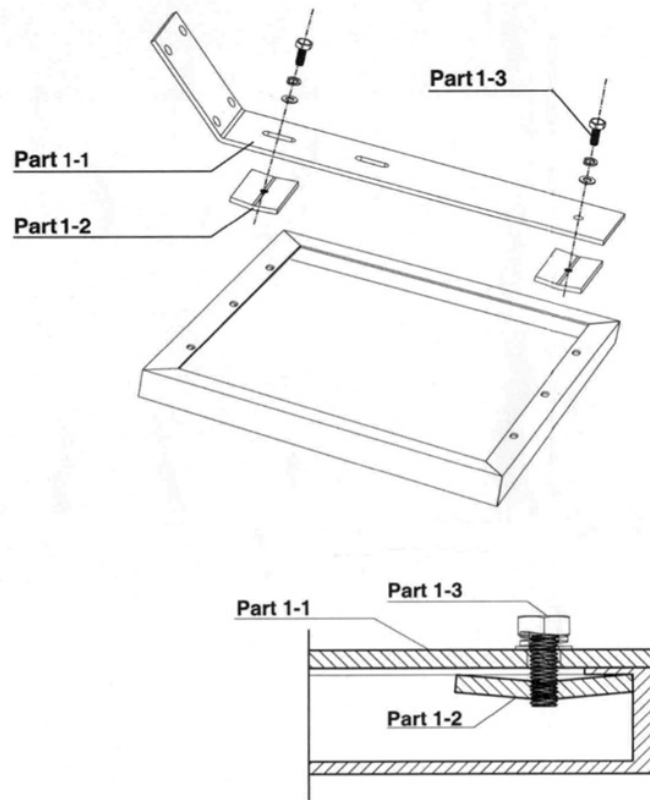
Cut all-strut pieces to length. Three pieces ensure a robust connection to the parapet that can sustain gusty winds.

Attach all-strut pieces to the parapet using the Tapcon fasteners. Note: It is very important, when penetrating a roof parapet with fasteners, that you put a dab of polyurethane caulking under the screws before sending them home to ensure a positive water seal, especially if the substrate material is stucco. This is critical; an ounce of prevention is worth a ton of cure here.

Attach the strut pipe clamps to the struts and run the pole through them. Secure the pipe clamps for a tight fit.

AN-125: Solar Product Mounting Instructions

Step 2: Assemble Solar Panel and Bracket



Step 3: Attach Equipment to the Pole

Pass the u-bolts through the mounting holes on the Repeater box and the solar mounting bracket. Add the u-bolt washers then the nuts. Tighten nuts until secure. Make sure the panel and Tehama box are aligned and the panel provides as much shade as possible to the Tehama box.

Loosen the strut pipe clamps so you can rotate the pole assembly. Rotate the pole so the solar panel is facing due South. Using a phone compass is recommended. Re-secure the strut pipe clamps.

The advantages of a roof installation are immense, this abates nearly all RF interference issues, especially if going across large parking lots.

AN-125: Solar Product Mounting Instructions

Roof Installation:



Finished Repeater, Ground View:



Notes:

A big chunk of the labor time is getting everything up to the roof, especially when working solo. You will want to use both hands when climbing typical roof access ladders. It's often necessary to climb the roof then send down rope to tie off a bucket with tools and material, ladders, and the repeater. It takes a few trips up and down the roof access ladder to do so. A helper would be most efficient if one is available.

Figure about 3-6 hours for this type of installation, including the time is devoted to schlepping tools and material up a high roof.

AN-125: Solar Product Mounting Instructions

12-inch Mounting Kit

The 12-inch mounting kit contains the following parts:

- (4) cut strut pieces
- (8) square no-spin strut washers
- (8) strut nuts and (8) nulock nuts
- (8) centering washers
- (16) bolts
- (4) 36-inch band clamps



Tools needed:

- #3 Philips screwdriver
- 7/16-inch open ended wrench

AN-125: Solar Product Mounting Instructions

Step 1

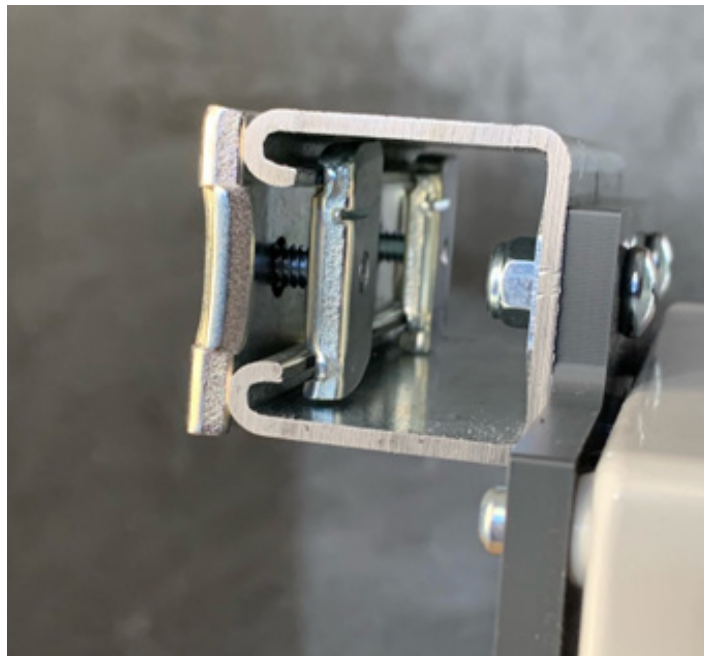
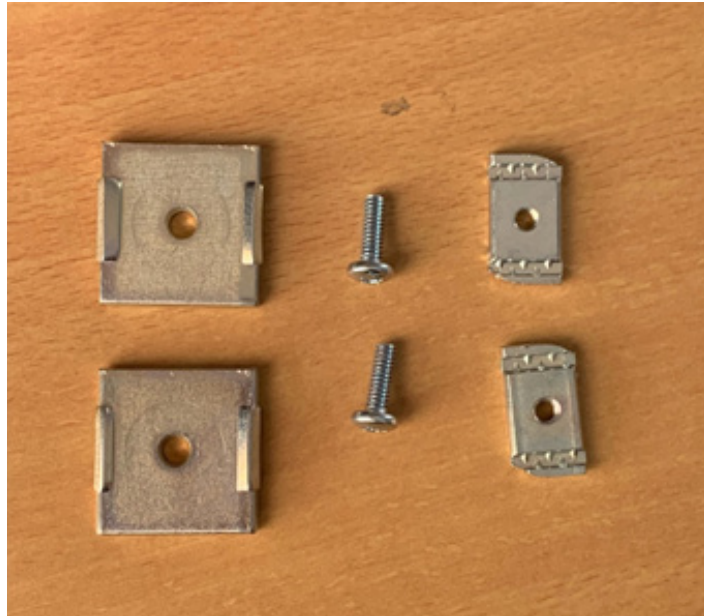
With each strut piece, take a pair of bolts, unlock nuts, and centering washers and attach the strut pieces to the Repeater box and the solar mount arm.



AN-125: Solar Product Mounting Instructions

Step 2

With a pair of bolts, square washers, and strut nuts, mount the washers on the strut rail.



AN-125: Solar Product Mounting Instructions

Step 3

Run the band clamps through the strut channel and around the mounting pole. Tighten the band clamp. Always place the solar panel right above the Repeater box to protect the repeater from the heat of direct sunlight.

