

# Solar Panel Top-of-Pole Mounting Kit For Panels Over 100 Watts

Thank you for purchasing the top-of-pole solar panel mounting kit.

This mounting system is designed to enable the solar panel to be easily rotated and tilted so that an optimum angle to the sun can be achieved.



Solar Panel Tilt Mount Assembly

## Parts included in the mounting kit

Qty	Description
<b>Solar Panel Tilt Mount Assembly</b>	
2	3 1/4" 1/4-20 Bolt, washer, lock nut
4	1 1/2" 1/4-20 Bolt, washer
1	2" 1/4-20 Bolt, washer, nut
1	3 1/4" 3/8-16 Bolt, washer, lock nut
4	1 1/2" 3/8" Bolt, washer
4	1" 10-24 Bolt, washers, nut
1	4" X 2" Tilt block
2	Tilt plate
1	Tilt plate base
2	1" Cross beam
2	1" Lateral beam
1	Spring linchpin

Note: We recommend applying an anti-corrosion product such as **Tef-Gel** by Ultra Safety Systems to all points where stainless steel and aluminum come into contact. This includes all bolts and the pole-mount connection. Tef-Gel can be purchased from many chandleries including [fisheriessupply.com](http://fisheriessupply.com).

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# Solar Panel Top-of-Pole Mounting Kit For Panels Over 100 Watts Assembly Instructions

## Instructions – Solar Panel Mounting Assembly – Generic Solar Panel

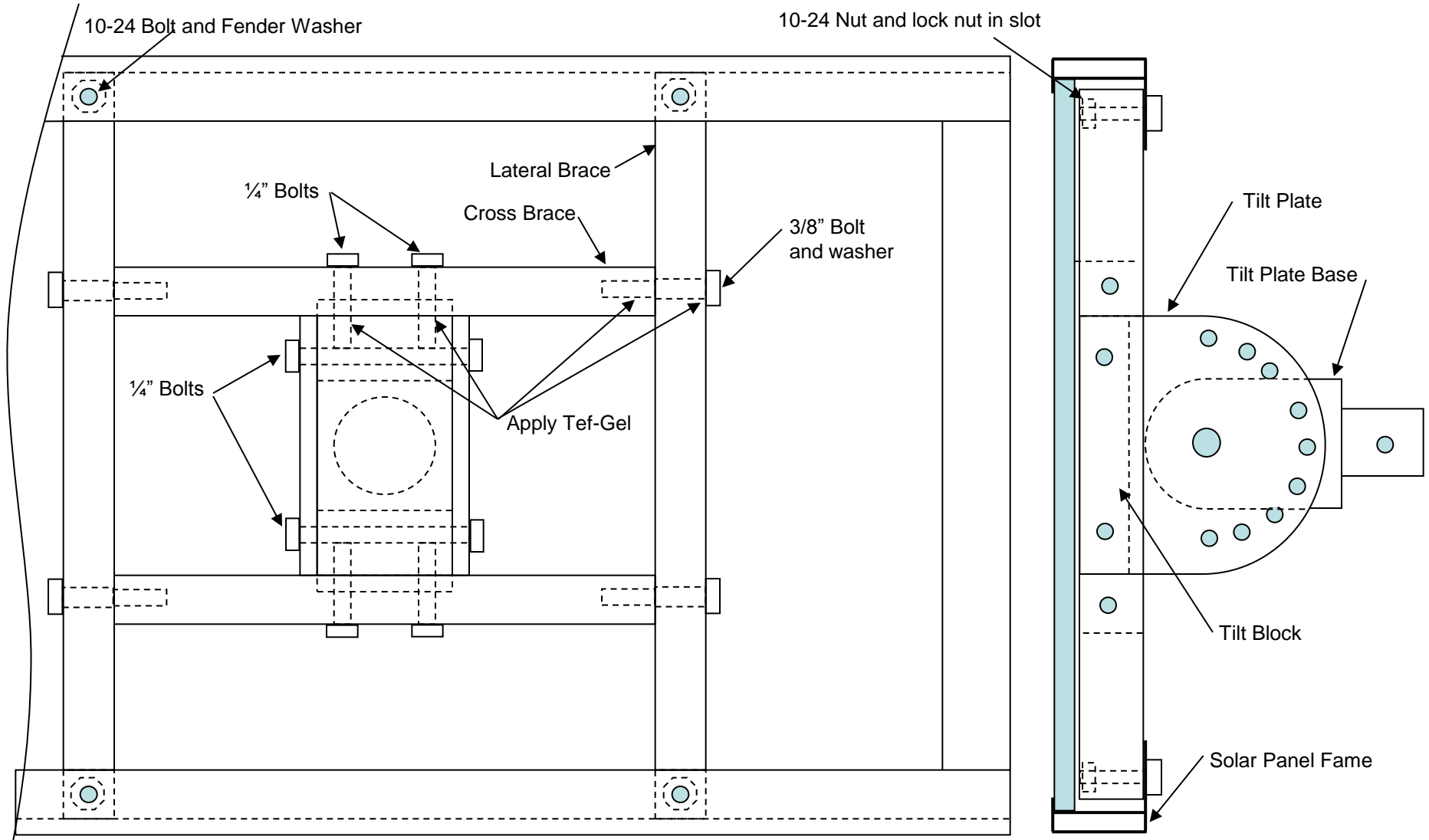
Refer to Diagram 1

1. Remove all components from the packaging and identify using Diagram 1.
2. Attach *Tilt Plates* to the *Tilt Block* using 2 3¼" ¼-20 bolts, washers and nuts. (Note: Don't tighten fasteners until unit is assembled and components are lined up properly.)
3. Attach *Cross Beams* to the *Tilt Block* using 1½" ¼-20 bolts and washers.
4. Cut the *Lateral Beams* to the proper length on each end so they easily slide under the solar panel frame.
5. Attach *Lateral Beams* to the *Cross Beams* using 3/8" bolts and washers.
6. Drill 4 holes in the solar panel frame using a 3/16" or #11 drill bit and using the panel mounting assembly as a guide.
  - Set the solar panel on a clean flat surface.
  - Mark the center of the panel frame on the long sides of the frame.
  - Set the mounting assembly on top of the solar panel centering it in all directions.
  - If the *Lateral Beams* are predrilled, use these holes to mark the position of the holes to be drilled in the panel frame. Otherwise, the holes should be about ¾" from the edge of the frame.
  - Drill 4 holes in the panel frame (and the *Lateral Beams* if not predrilled). Place a block under the spot where the drill will come through to prevent the drill from damaging the back of the panel.
7. Secure the panel mounting assembly to the solar panel using 4 1" 10-24 bolts.
  - Remove one *Lateral Beam* from the mounting assembly.
  - Slide a 10-24 nut and lock washer into the *Lateral Beam* slot closest to the back of the panel and line it up with the hole. Repeat on other 3 holes.
  - Slide the *Lateral Beams* under the panel frame with the slot containing the nuts nearest the back of the panel.
  - Bolt the *Lateral Beams* to the back of the panel placing a fender washer between the head of the bolt and the panel frame.
  - Reattach the *Lateral Beams* to the *Cross Beams*.
8. Attach *Tilt Plate Base* to *Tilt Plates* using a 3 ¼" 3/8 bolt, washers and nuts
9. Line up *Tilt Plate* holes with *Tilt Plate Base* hole and insert *Linchpin*.
10. Tighten all fasteners.

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# Solar Panel Tilt Mount Assembly

# Diagram 1



Drawing not to scale

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# Solar Panel Pole Mounting Kit

## Solar Pole Assembly Instructions

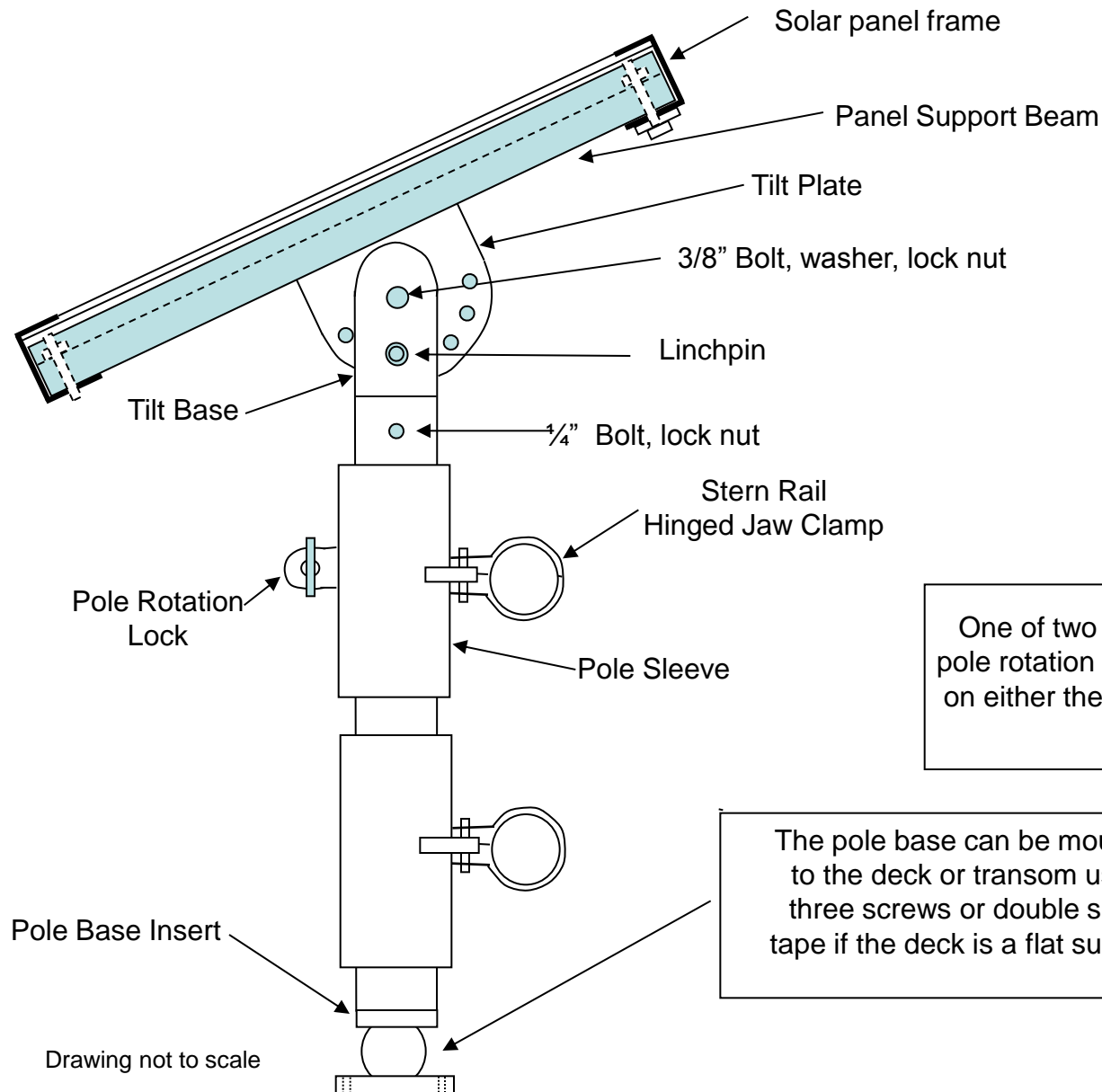
### Instructions – Solar Pole Assembly

Refer to Diagram 2

1. Determine where the pole will be mounted relative to the stern rail(s) by sighting down from above the stern rails. Determine where the pole will set on the deck or transom.
2. Attach the *Stern Rail Split Jaw Clamps* to the stern rails. Do not tighten.
3. Attach the *Pole Sleeves* to the *Stern Rail Split Jaw Clamps*. Note that each *Pole Sleeve* can be mounted in one of three positions depending on the desired distance from the *Pole* to the stern rail.
4. Insert the *Pole Base Insert* into the pole base. It may be necessary to drop the Pole on a smooth surface several times to pound the insert into the *Pole*.
5. Slide the *Pole* into the *Pole Sleeves* and set the *Pole* on the *Ball Swivel Base*.
6. Adjust the position of the *Stern Rail Clamps* and the *Pole Sleeves* such that the *Pole* rotates freely and is vertical.
7. Tighten the *Stern Rail Clamps* and the *Pole Sleeves*.
8. Attach the *Ball Swivel Base* to the deck or transom using three fasteners or VHB double sided tape.
9. Insert the panel mounting assembly into the Pole and secure with bolt and nut.
10. Tighten the *Pole Sleeve* rotation lock as necessary to adjust ease of pole rotation

# Solar Panel Tilt and Pole Assembly

## Diagram 2



One of two Pole Sleeves has a pole rotation lock. It can be placed on either the upper or lower stern rail.

The pole base can be mounted to the deck or transom using three screws or double sided tape if the deck is a flat surface.