

Important Information

FLASHING SIGN SYSTEMS

Your guide to install and
connect a TrafficCalm Top of Pole
Solar Panel Kit

Applies to:

M75-SPTOP-060W

M75-SPTOP-100W

M75-SPTOP-150W



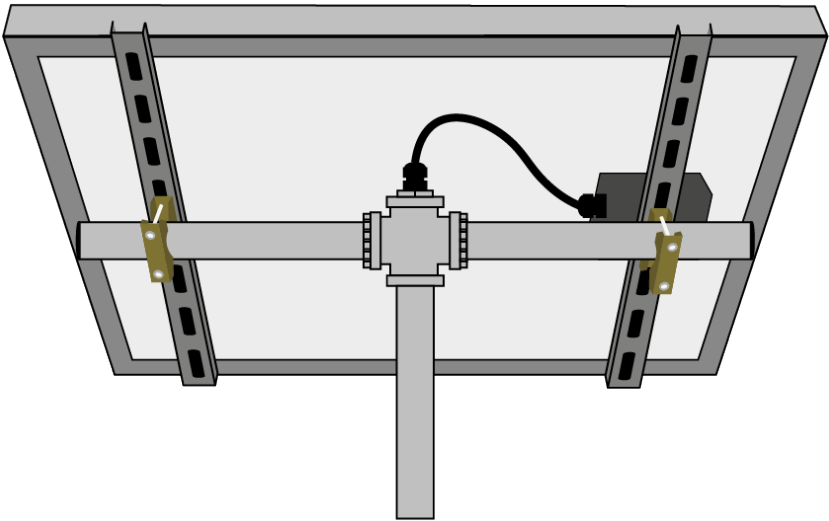
TRAFFICALM[®]

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<Intro>

Fast Facts - *If you read one thing, let this be it.*

- The covered Top of Pole Kits are designed to integrate with our Slimline Controller and Collaborators. They ARE NOT a standalone solution and cannot be installed individually.
- The 100 and 150 Watt kits include a solar charge controller. This module is designed to mount inside the Slimline “Hub” and handle the power produced by these large panels.
- The solar panel kits covered in this manual do not include a battery. The battery must be purchased as part of the Slimline assembly.
- The supplied bracket provides a tremendous amount of flexibility to maximize solar exposure. It is recommended the installer be up to speed on best practices for solar panel aiming. Every installation has its own challenges, bear this in mind when aiming the solar panel.



What's included?

- A 60W, 100W, or 150W solar panel (depending on what was ordered)
- qty 1 NPT/SAE threaded 1-1/2" post extension
- qty 2 single threaded 1-1/2" support pipes
- qty 1 x-pipe fitting
- qty 2 Pelco end caps
- qty 1 x-pipe threaded cap (aluminum)
- qty 2 standard drilled channel brackets
- qty 3 NPT threaded lock rings
- qty 2 serrated pipe clamp assemblies
- Assorted assembly hardware
- Wiring harness, panel to controller
- qty 2 weather tight wiring seals
- Solar Controller (applies to 100 and 150 Watt models only)

<Assemble Bracket>

Before Assembly...

Ensure all set screws and lock rings are loosened or removed. Irreparable thread damage can occur if set screws are left exposed in the thread.

They will all be used later, so don't dispose of them!

Assemble the Post Top Bracket

1. On all three pipe extensions install lock rings to the straight cut threads (SAE), as seen below



2. Fully thread the two single threaded pipes to the x-pipe fitting, directly across from one another, as seen below.
3. Fully thread the straight threaded (SAE) side of the double threaded pipe to the x-pipe fitting at a 90° angle to the pipes assembled in step 1, result seen below



4. Across the bracket from this pipe, install the x-pipe threaded cap, fully seat it in the x-pipe
5. It is now okay to tighten the lock rings and set screws on this assembly, no further adjustment will be required

This assembly provides the structural support to the solar panel. It is important that all parts be threaded and tightened sufficiently.

<Prep Panel>

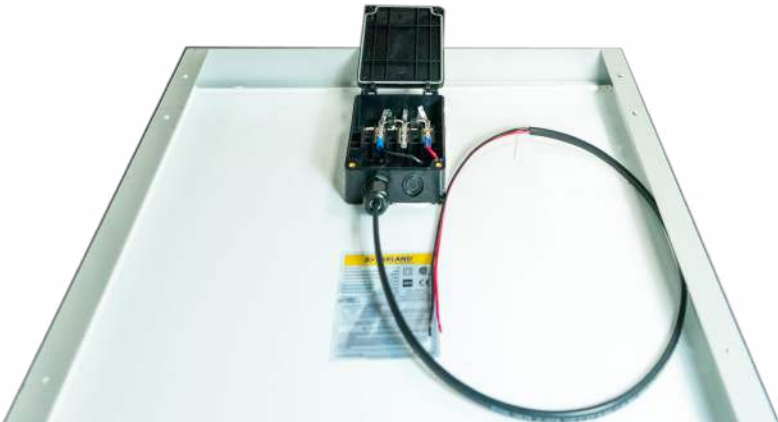
Before Assembly...

Following this sequence is critical. There are components that cannot be accessed past other install steps if done out of order.

Assemble the Panel Wiring Harness

The panel harness features a single cable consisting of two wires- red and black. The wiring harness features fast connections at the panel end to expedite installation.

1. Unless already done, remove one full tapout from the bottom of the junction box with a flat screwdriver and hammer to accommodate cable ingress
2. Open the panel's junction box to access the wiring location terminals
3. Install one (of two supplied) wiring seals to the junction box. Route the cable harness through this seal
4. Each panel is different, and suppliers change the connection methods regularly. But in general connect the black wire as far left as possible, and the red wire as far right as possible. Supplemental guides will be provided where needed
5. Allow the harness to hang loosely and proceed

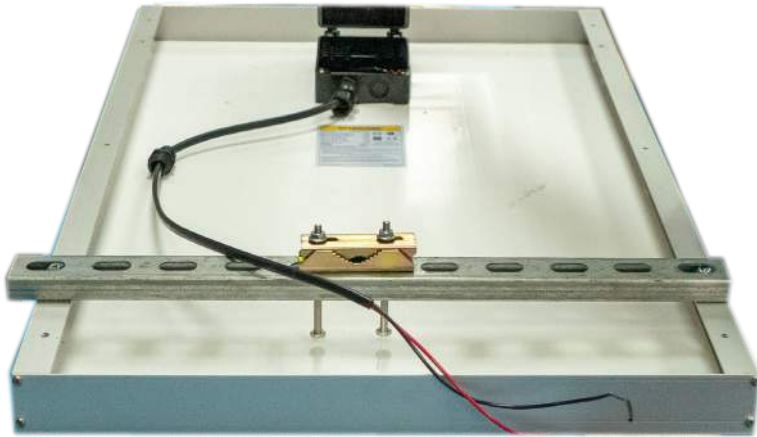


<Prep Panel>

Assemble the mounting structure to the panel

The mounting structure features basic hardware components assembled to the panel's frame, and integrates the frame for support.

1. Assemble qty 4 toothed clamps to universally drilled cross supports with four 3" long x 1/4" bolts and four 1/4" nuts.
2. Assemble the qty 2 universally drilled supports across the height of the panel as shown below



3. The cross support bolts can be fully secured to the solar panel frame. The nuts are sprung to assist with assembly, so ensure the spring is fully compressed and the bolt is tightened sufficiently to prevent loosening.
4. Do not assemble the panel to the support structure yet.

A Note Before Proceeding...

We recommend that as much assembly be accomplished on the ground before hoisting the assembly up on the pole. We have determined that at this point the solar panel is ready to be mated to the SlimLine Controller or Collaborator Hub already installed on the pole. If circumstances would benefit from more assembly before mating to the pole, proceed at your own discretion.

Mating the mounting structure to the pole top hub (Controller or Collaborator)

The mounting structure is supported by the double-threaded pipe assembled on page 4. This will thread into the pole top Hub. As mentioned before, loosen the set screw on the Hub before affixing the structure.

Thread the assembly to the Hub as much as possible. The result will appear as seen below. Do not tighten the set screw just yet.



<Assemble To Post>

Mating the solar panel to the mounting structure

1. With the serrated clamps fully assembled, but loose, slide one side onto one side of mounting structure as shown below

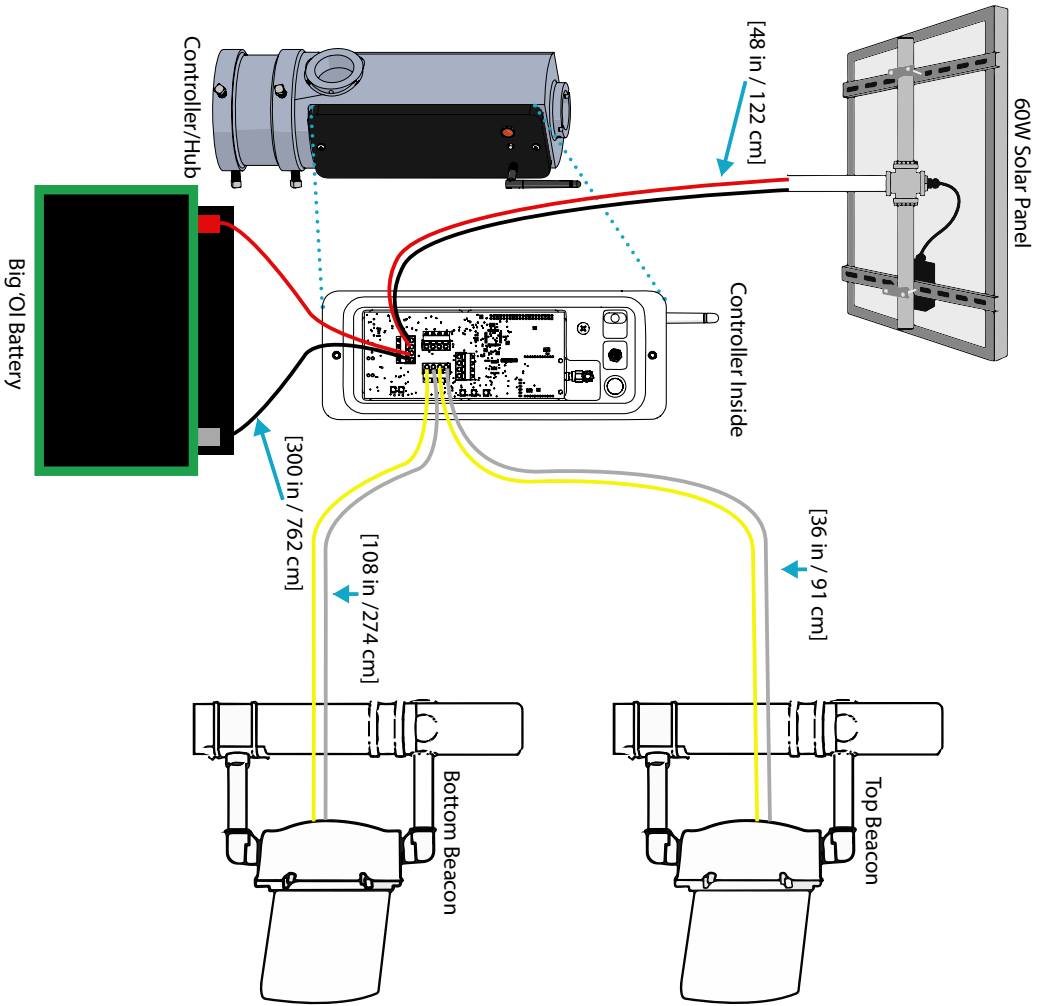


2. Slide the panel the opposite direction to capture both serrated clamps on the mounting structure's horizontal pipes
3. Tighten all bolts just tight enough to allow for adjustment, but not slack.
4. To maximize solar panel aiming consider the following best practices
 - The angle of the panel should equal the geographical latitude of the installation
 - The panel should face geographical (not magnetic) south
 - If heavy snow cover is expected a steeper angle may be more effective beyond matching the latitude
 - If shadowing is expected throughout the day, rotating the panel toward the best exposure to sunlight is advisable.

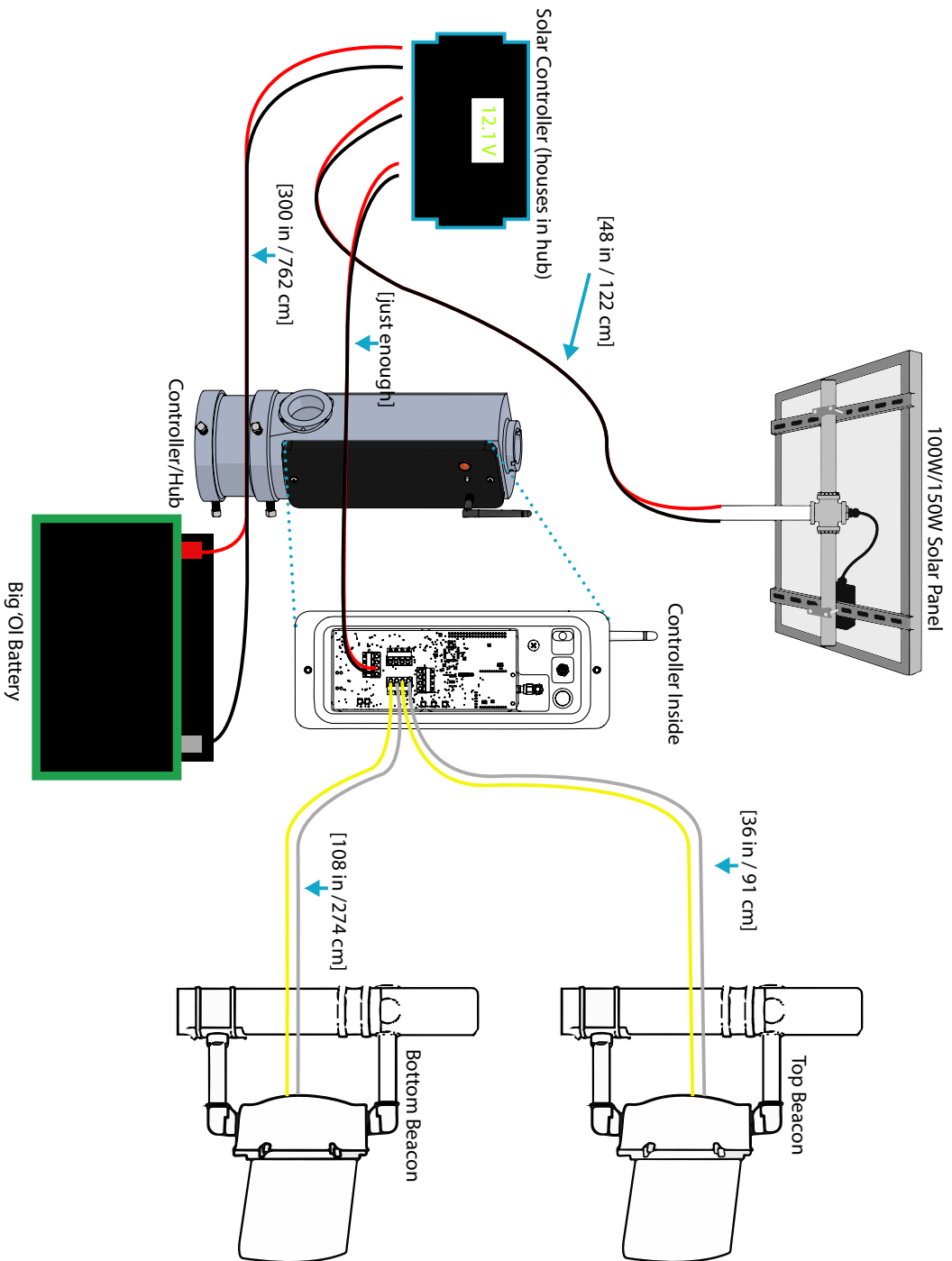
Making sure it performs for years to come...

1. With the panel aimed as best as possible, all the clamps and set screws previously left loose can be tightened to prevent movement, especially consider loosening from wind. All the clamping components are robust, so you can apply a fair amount of torque to ensure tightness; use your best judgment for torquing.
2. Route the solar panel cable down the center tube and into the Slimline Controller or Collaborator hub.
3. For 100 Watt and 150 Watt Kits, install the included stand-alone solar charger inside the Slimline hub as shown below.
4. All connections are made inside the hub and are detailed in the manual included with that assembly.
5. This concludes the assembly and installation of your Top of Pole Solar Panel Kit. Please refer to other literature included with the Controller for further instructions.

<60W Wiring Diagram>



<100W/150W Wiring Diagram>



<Warranty Statement>

TraffiCalm Systems provides the following warranty for its traffic calming solutions whether sold directly by TraffiCalm or by an authorized TraffiCalm distribution partner.

- TraffiCalm Systems warrants this product, excluding batteries, will be free of defect in materials and workmanship for a period of five (5) years beginning on the day the end user receives the product. Warranty is only valid if the product is ineffective for its intended purpose due to defects in materials or workmanship.
- Warranty is only valid if the product is installed, operated and maintained in accordance with the manufacturer's instructions and recommendations (available upon request).
- TraffiCalm's sole responsibility, and the purchaser's and users' exclusive remedy, shall be that TraffiCalm will either repair or furnish replacements for defective parts.
- Replacement parts will carry the unexpired warranty of the parts they replace. Any repairs conducted on out-of-warranty items will carry a 90 day warranty.
- Claims made under this warranty will be honored only if TraffiCalm is notified of a failure within the warranty period, reasonable information requested by TraffiCalm is provided, and TraffiCalm is permitted to verify the cause of the failure.
- TraffiCalm assumes no liability for any incidental or consequential damages, in any way related to the product regardless of the legal theory on which the claim is based.
- TraffiCalm Flashing Sign Systems are designed, tested, and warranted to operate as a matched component system. The warranty is voided if all system components for controllers, collaborators, and LED rings are not TraffiCalm equipment and third party devices are substituted without prior written approval from TraffiCalm.

This warranty does not cover damage resulting from:

- Accidents, vandalism, impact with a foreign object, or acts of God.
- Product modifications made by someone not authorized by TraffiCalm
- Failure of Customer to follow TraffiCalm's published operating instructions,
- Failure to follow TraffiCalm's published site selection and installation instructions,
- Removal or relocation of the unit,
- Electrical work external to the unit, virus/hacker activity, and external computer errors.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY.