

# IMPORTANT INFORMATION

## ADD-A-FLASH FLASHING SIGN INSTALLATION MANUAL

### START HERE

To install your Flashing Sign System  
components

## Warnings and Information

### Liability Statement

Important Note: Flashing Signs are not a safety device. The Company, , along with their employees or owners shall be held harmless and will not be liable for any indirect, special, consequential, or punitive damages arising out of or relating to any traffic or other incident resulting in damage, injury, or death whether or not it is successful in alerting the approaching driver. This includes any type of equipment malfunction whatsoever.

### DANGER!

To reduce the risk of electric shock related injury resulting from contacting hazardous AC voltage: Portions of this equipment derive power from sources that have high voltage levels. These must be serviced by qualified personnel, who have previous training or certification to safely work on high voltage equipment.  
Consult a Qualified Electrician

### CAUTION!

This product uses devices that radiate RF energy in the course of normal operation. Radar RF energy can be harmful to the eyes:  
To reduce exposure to the risk of RF energy, do not stare into the radar antenna. Keep a minimum safe distance of 20cm (8-inches) from the radar face.

### CAUTION!

Strain or back injury may result from lifting equipment improperly:  
To reduce the risk of strain or back injury, use proper lifting techniques and have adequate help available when needed.

### CAUTION!

To avoid the possibility of injury due to falling or unstable equipment:  
Be certain the equipment is mounted to an appropriately rated pole or equivalent mounting surface.  
Use appropriately rated mounting hardware.

### NOTICE

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off or on, the user is encouraged to try to correct the interference by one or more of the following methods:

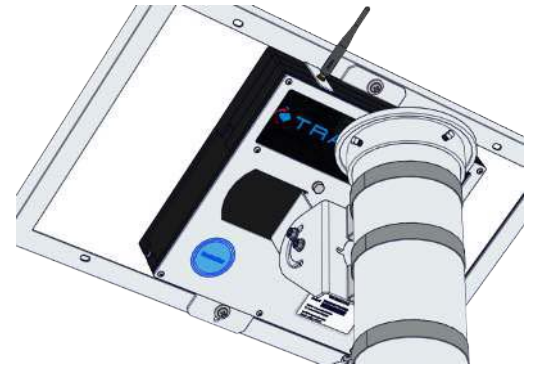
**Re-orient or relocate the receiving antenna.**  
**Increase the separation between the equipment and the receiver.**  
**Consult an experienced radio /TV technician for help.**

## Installing a Solar Controller

1. The applicable Controller or Collaborator, an 20W solar panel, and mounting bracket ship as a complete assembly, ready to band or bolt to most standard post types. Note that banding material is not included.
2. The integrated mounting bracket accommodates mounting to the side of a round post (using banding) or square post (using bolts drilled on 1" centers. ie. Telespar). Note that the device must be mounted at the topmost part of the post to maximize solar exposure.



3. Allow 4 – 6 inches of post above any sign to prevent shadowing at midday (if using the standard bracket).
4. The solar panel must be aimed **south-facing** to ensure optimal charging. The solar bracket can be angled according to standard solar aiming practice for the geography of the installation (step 7, below).

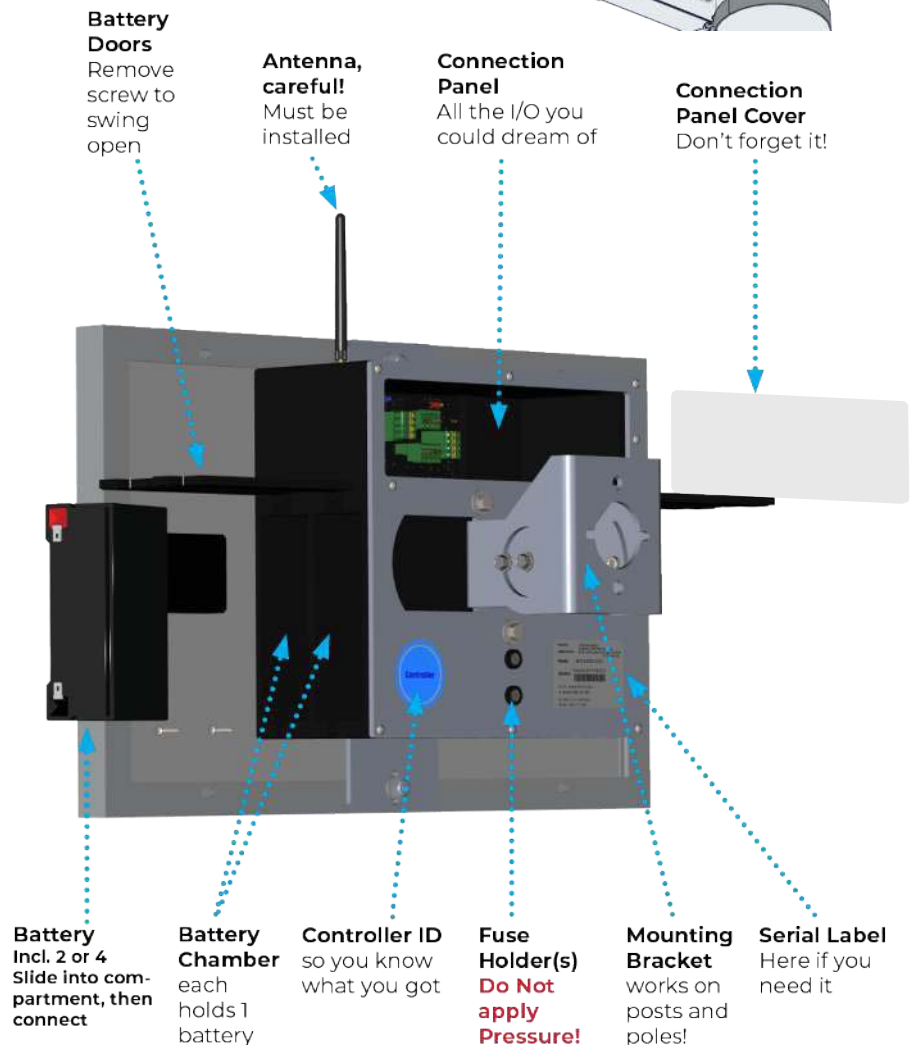


5. If true-south facing cannot be achieved, mount facing as near as possible to true south.
6. Affix the assembly to the post with (2) 3/8" bolts or banding.

7. Loosen bolts on the side of the standard bracket (see image at left) and decline the solar panel so that it is  $15^\circ + \text{installation latitude}$  below the zero axis and tighten to secure solar panel in place. Additional declination can be added to prevent snow buildup.

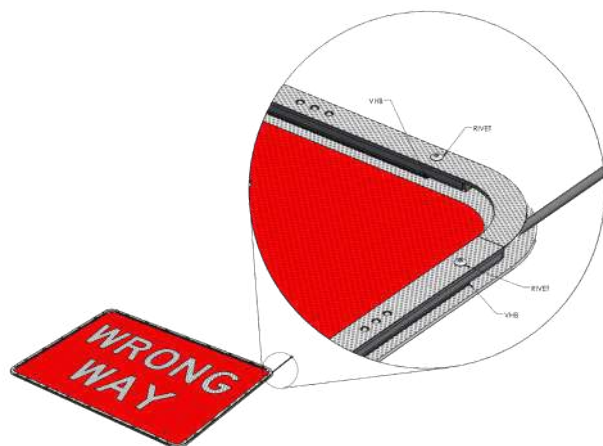
8. Install batteries (up to 4) into the cabinet and connect to the integrated harness. Red is 12V positive, black is negative. As it should be.

9. Finally, connections between devices are covered on page 5



## Installing an LED Sign Ring

LED Sign Rings provide unmistakable warning to approaching drivers. Designed for most signs including stop, warning, speed, school zone, pedestrian crossing, and much more, the LED sign ring is quick to apply and completely compatible with any Controller or Collaborator.



Unlike other solutions on the market, our rings apply to existing static signs of the correct size. If the LED ring is not factory mounted to a sign, there are two options for application.

**Option 1:** Pre-applied Double Sided Tape (VHB) provides secure mounting to most signs. It is important to note that signs treated with anti-graffiti laminate will not adhere to VHB tape.



**VHB Tape, adhesive exposed**



**Sign area to clean and prep highlighted**

### **Option 1** Process:

1. Prep the LED ring by exposing approx. 2" of adhesive at the end of each run. Crease the red masking to stick out past the ring edge, you'll see why at stage 5
2. Treat the mounting surface on the sign by cleaning with the supplied alcohol wipe, then apply the tube of 3M Primer 94 to only the surface the ring applies to
3. The scary part! VHB tape is really sticky, so be intentional while lining up the ring to the sign.
4. With the ring as centered as possible, very gently press the corners to the sign surface
5. Pull one edge of red masking out at a time, slowly progressing around the ring and applying some pressure while centering the ring.

**Option 2:** Self-tapping screws are supplied to use in addition to, or in place of, the VHB Tape. This method provides the option to dismount the ring in the event the sign is damaged

### **Option 2** Process:

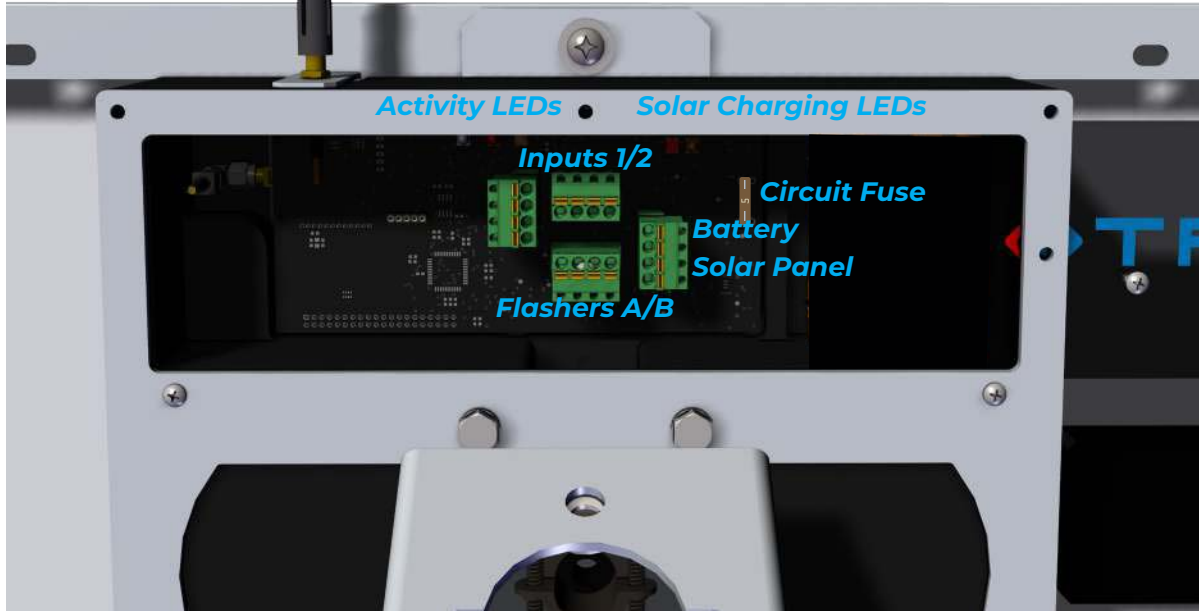
1. Locate the mounting holes in each corner of the ring, if necessary clear reflective sheeting from these holes so that screws can pass through easily
2. Optionally, expose a few small sections of VHB tape to hold the ring in place while applying screws
3. Using a power drill and the correct size Phillips bit, carefully screw the ring to the sign face
4. Exposed screws at the back of the sign may be unwanted; correctly sized rivets may be used, but are not supplied

Now you're ready to bolt the sign to the post, just like any other sign.

It is best practice to create a drip loop in the cable, and to trim or stow excess cabling after all components have been assembled and tested.

## Making Connections

### Mesh-Net Antenna



### Terminals Info

Mesh-Net Antenna- must be attached before powering on, only applies to Intelligent Controllers and Collaborators

Activity LEDs- respond per system activity, amber on the far right is charging status, white on far left is Mesh-net activity status

Inputs 1 and 2- provides the positive and negative connections for two input devices (Push Buttons, Water Presence Detector, etc.)

Flashers A and B- provide powered outputs to flashing devices less than 10W per channel (sign rings, RRFBs, Beacons)

Battery and Solar Panel- provides positive and negative connections for 12V battery(s) and 12V solar panels

Circuit Fuse- provides protection for I/O board, batteries fused separately.

## Cable Management

Weather tight, strain relief cable management is provided on every cabinet type, as shown below. Fasten seals tightly to prevent moisture entry.



## Troubleshooting

Symptom	Resolution
Solar power system will not power on	<ul style="list-style-type: none"><li>Check Fuse</li><li>Check PCT (Power Connection Terminal)</li><li>Check Connections to LED Rings</li><li>Check Battery for 12VDC</li><li>Check Voltage Output of Solar Panel for at least 12V</li></ul>
LED Rings not working	<ul style="list-style-type: none"><li>Check connections. Refer to wiring label inside Controller box for proper terminal connections.</li></ul>
Battery not charging	<ul style="list-style-type: none"><li>Check for cleanliness of the solar panel surface and clean as necessary.</li><li>Check fuse, check all power connections and output and verify at least 12VDC</li><li>Make sure the solar panel face is directed in a southern direction.</li><li>Check for proper solar panel illumination each day. (must have minimum 2 hours unobstructed light each day) A low battery may take 2-5 days to fully recharge depending on hours of good sun received.</li></ul>
Sign is flashing slowly	<ul style="list-style-type: none"><li>This is a fall-back "Zombie" mode to signify radio communication failure</li></ul>