

# Integrated Solar Option Quick Start Guide – Pole mounted



The Integrated Solar Option for your All Traffic Solutions sign is a great choice for lightweight, continuous operation. All of the components of the solar charging system, with the exception of the panel, have been incorporated inside the sign for a convenient and compact design. This guide will show you how to perform system setup.

## The system

The Integrated Solar Option consists of these main parts: the solar panel, either a SpeedAlert Radar Message Sign, Shield Radar Sign, or an InstAlert Message Sign with an integrated solar controller, one or two lithium batteries, depending on your order, and an optional external AC charger. You can mount the panel and sign on an ATS trailer or to a pole. The solar controller and batteries are installed securely inside the battery compartments of the sign.



[Figure 1] Integrated solar pole installation (panel view) [Figure 2] Integrated solar pole installation (side view)

The solar controller receives the power from the solar panel and conditions it for charging the batteries. The integrated solar option has been designed for use with lithium batteries only and sized appropriately for use with the solar panel provided with your sign.

In the integrated solar option, typically two batteries are connected directly together, forming the equivalent of a single large, balanced battery. It is not recommended to remove or charge them individually. In the case of the Shield 12, only one battery is included, and the other compartment is used for the solar controller.

## Positioning the solar panel

- Position the solar panel on a pole in a location with an unobstructed view of the sky, aimed to Solar South or Solar North depending on your hemisphere, and angled toward the Sun. To set the angle more precisely, refer to the included *Single-Arm Solar Panel Mounting Bracket Installation Guide*, and available on the [ATS Support page](#).

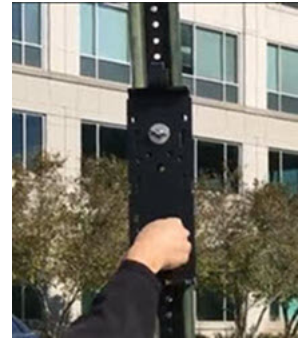
## Mounting instructions

Use the instructions in this section to mount your Integrated solar option on a pole.

### Installing the solar panel and mounting bracket on the pole

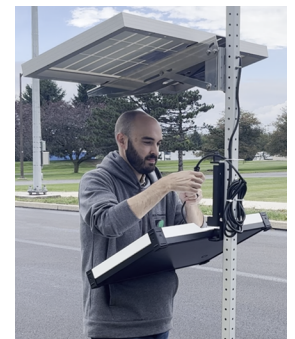
Use the methods in this section to install the mounting bracket for your sign on a pole. To reduce the risk of vandalism, the solar panel and sign should be mounted high enough to be out easy reach for vandals. **The sign should be 7 to 10 feet above the roadway and the solar panel higher than 10 feet.**

1. To mount the solar panel on the pole:
  - If you are installing the solar panel at the top of the pole, loop the banding straps over the pole, and place the pole bracket against the pole at the preferred height.
  - If you are installing the panel further down the pole, open the banding straps, wrap them around the pole at the preferred height, and tighten them. A power drill or screwdriver and hex bit work best to tighten the straps.
2. To mount the sign on the pole:
  - If you are mounting the sign on a U-shaped pole, bolt the mounting bracket to the pole using the supplied carriage bolts or U bolts, and wing nuts. The wing nuts will be secured inside the back of the sign to prevent tampering.
  - If you are mounting the sign on a round pole, thread two banding straps (not included) through the mounting bracket, and then tighten the bracket and straps around the pole. Thread the ends of the banding straps together and then tighten them onto the pole.
3. Recheck your orientation towards True South or True North and make sure the panel is properly aimed. For details, refer to the *Single-Arm Solar Panel Mounting Bracket Installation guide*, included with your Integrated Solar Option sign and posted to the [ATS Support page](#).



### Mounting the sign

1. Power on the sign by pressing the **Power** button inside the sign mounting channel. For details about configuring your sign, refer to the *Hardware Quick Start Guide* provided with your sign or on the [ATS Support page](#).
2. Connect the wiring connectors from the panel to the sign.
3. Set the top channel on the back of the sign onto the tab at the top of the mounting bracket.
4. Rotate the sign down until it's flush with the bracket.
5. Push the locking pin up to lock the sign into place.
6. Strap the excess cable to the pole.



### If you need to recharge the sign

Under normal use, the sign's batteries should be fully maintained by the solar panel. However, if the batteries do become depleted, it's best to turn the sign off and leave it in full Sun until it's recharged.

Alternatively, you can use the optional charger (see *[Figure 3] on the next page*) to recharge the batteries more quickly. To use the charger, take the trailer or sign into a protected environment, plug the charger into a standard 120-VAC outlet, and connect the charging end to the sign's solar connector cable.



**WARNING: RISK OF ELECTRIC SHOCK AND EQUIPMENT DAMAGE:** The charger is not intended for outdoor use. Only charge the system in a protected environment, such as a garage.

The charger may take a couple of minutes to recognize the batteries, due to the presence of the solar controller. Do not be alarmed if it does not start charging right away.

Depending on the size of the batteries it may take up to 24 hours to fully charge the batteries.



*[Figure 3] Battery charger and integrated solar adapter*

## Getting help

We are here to help! If you have any concerns while using your new system, please feel free to call our customer success specialists at 1-800-366-6602, option 2, or email us at [support@alltrafficsolutions.com](mailto:support@alltrafficsolutions.com).