


Shield Quick Start Guide

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Thank you for purchasing an **All Traffic Solutions Shield Radar Speed Sign**. This Quick Start Guide will show you how to install, power up, and configure your new sign.

 **NOTE:** If your purchase includes the Integrated Solar option, please refer to either the *ATS 3 Trailer with Integrated Solar Setup Guide* or *Pole Mounting Signs with Integrated Solar Option* that came with your sign and available on www.alltrafficsolutions.com/support.



Before you take to the road

Perform the following setup steps in your shop, before you take the Shield to the roadside:

Step 1 Unpacking the equipment, below

Step 2 Charging the batteries, on the next page

Step 3 Installing the batteries, on the next page

Step 4 Choosing a site, on the next page

At the roadside

Step 5 Configuring the Shield locally, on page 4

Step 6 Installing the Your Speed sign attachment, on page 6

Step 7 Mounting the Shield, on page 6

Scan or click the QR code for a brief installation video>>>



Before you begin

If you have a TrafficCloud subscription, the first thing you'll need to get started using your Shield is to create a data collection Site in TrafficCloud. Each Site is configured with a speed limit and the direction of moving traffic. They provide a way to keep traffic data organized for reporting purposes. See "Creating a Site" in the *TrafficCloud User Guide*. If necessary, you can also perform Site setup after you install your Shield at a physical location.

If you'll be using TrafficCloud Sign Manager or the TrafficCloud Mobile app for Site and sign setup, see *Step 5 Configuring the Shield locally, on page 4*.

Step 1 Unpacking the equipment

Upon receiving your new Shield, check to ensure that you have all of the items ordered. If you notice any damage or missing items, contact ATS [Customer Support](#) immediately.

Remove the Shield, batteries, charger, and other optional equipment from the boxes.

If your Shield includes batteries, you should fully charge them before deployment, as explained in *Step 2 Charging the batteries, on the next page*. Shield signs can accommodate up to two lithium batteries internally. Although only one battery is required, two batteries are recommended to increase average sign runtime. Without a solar panel, continuous runtime with two batteries is typically between 7 and 10 days.

For all steps involving batteries, repeat for the second battery as necessary.

To remove the batteries:

- A. In a sheltered environment, place the Shield face down on a flat surface and remove the mounting bracket by unlocking the lock with the supplied key and lifting up on the bottom of the bracket. Pull to remove.

- B. Next, remove the battery compartment cover by removing the thumb screws. Set the key, bracket, and thumb screws aside.
- C. Slide the battery or batteries out of the battery compartment, as shown in [Figure 1, below](#).
- D. Disconnect the connectors, as shown in [Figure 1, below](#).



Figure 1, Slide the battery (left) Disconnect/connect (right)

Step 2 Charging the batteries


If your Shield includes batteries, it arrives with the batteries partially charged and they need to be fully charged before deployment.

 **WARNING: RISK OF ELECTRIC SHOCK AND DAMAGE TO EQUIPMENT** The charger is not intended for outdoor use. Only charge and store the batteries in a controlled environment.

- A. Connect a battery to the charger.
- B. Plug the charger cable into a power outlet. The light on the charger displays red while charging and changes to green when charging is nearly complete. A charge can take up to 7 hours for the 12V 11.5 Ah LFP battery and 11 hours for the 12V 16.5Ah LFP batteries supplied with the sign.
- C. When the indicator on the battery charger turns green, repeat for the second battery if applicable, and then proceed to the next step.
- D. Disconnect the battery from the charger.

Step 3 Installing the batteries

Follow these steps to install the charged batteries.

 **CAUTION: Use only the SHORT (3/8"-length) thumb screws to fasten the battery covers. Do NOT use longer screws in these holes. Screws longer than 3/8" can damage the sign LEDs.**

- A. Place the Shield face down on a flat surface and remove the mounting bracket and battery cover.
- B. Connect the battery wiring harness to the connector inside the battery compartment, as shown in [Figure 1, above](#).
- C. Tuck the connector into the space in the top of the battery compartment.
- D. Holding the connector in place, slide the battery into the compartment.
- E. Replace the cover and fasten it down using the SHORT (3/8"-length) thumb screws.


Step 4 Choosing a site

Next, you'll need to set up a site for your Shield so that you can collect and store traffic data and generate reports. Here are the basic steps and options you'll need to perform:


- A. **Select a street location:** Identify your planned traffic study site to start collecting traffic data so that you can create reports. Carefully consider the physical characteristics of the roadway to ensure optimal performance of the sign and solar panel. See [Selecting a physical location, on the facing page](#).


B. Create and assign a Site in TraffiCloud to hold your data:

Option 1: If you have a Traffic Suite Software subscription,

- i. On the TraffiCloud Web portal, click **Sites** and then click the plus sign  to create a new Site,
- ii. Assign the site to your device: On the **Equipment** page for your device, go to **General > Assigned Site**.

Option 2: If you have a license to use the TraffiCloud mobile app, on the navigation menu, tap the **Site**.

Management tab and then click the **Plus** button 

Option 3: If you'll be using the TraffiCloud Sign Manager application on your PC, on the TraffiCloud Web portal, click **Sites** and then click the plus sign  to create a new Site. Then, assign your data to this Site when you upload it using the application.

For detailed instructions:

- See the video "Creating and Assigning Sites" (select a video based on your sign type) from the [TraffiCloud Training Hub](#).
- If you have the Traffic Suite Software, in the *TraffiCloud User Guide* see "Creating a Site" and "Assigning a Site to your device."

Selecting a physical location

The site you select for the Shield will vary with your requirements, however you should generally adhere to the following guidelines:

Guideline	What to do
Choose the distance from intersections	Place the Shield at least 300 ft. (90 m) away from any intersection (avoid locations near stop signs or traffic lights).
Choose a flat location	Choose a location on a flat straight road section, directly adjacent to the roadway, where the line of sight from the Shield to the vehicles being counted will be uninterrupted by other traffic lanes, parked vehicles, or sidewalks. Consider how the location may develop with time, such as growth of trees or construction of other new structures that may block the Shield or solar panel.
Ensure appropriate sunlight	If you have a solar panel, choose a location where it can be installed higher up on the pole and will remain unobstructed in terms of sunlight throughout the day.
Choose the distance from the roadway	Ideally, place the Shield within 12 ft. (3.7 m) of the roadway.
Set the mounting height	Attach the Shield to the pole at a height anywhere from 5 ft. 6 in. at the bottom of the device to 8 ft. (between 1.7 m and 2.5 m) at the top of the device.
Choose your pole type	You can secure the pole bracket to any type of pole using banding straps, lag screws, or nuts and bolts. The included banding straps are sized to mount the Shield either to a 2-in. (5-cm) Telespar-type pole, a 4-in.- to 5-in. (10-cm to 13-cm) diameter round metal pole, or a 4-in. x 4-in. (10 cm x 10 cm) wooden pole. For larger poles, you'll need longer banding straps, available from hardware stores.

Guideline	What to do
Use a stable structure	Mount the Shield on a stable and firm structure. Avoid structures that are likely to be affected by wind or rain.

Step 5 Configuring the Shield locally

Use this topic for help with configuring the sign at the roadside and for powering up the device.

If you have a TraffiCloud subscription, you should use this step only to power on your Shield and instead configure the Shield on the TraffiCloud Web portal, creating a data collection site, setting the sign display options, setting up alerts, and assigning a Site. It's best to perform sign setup in advance, so that your traffic data is captured in TraffiCloud immediately. See the *TraffiCloud User Guide*.

If you don't have a TraffiCloud subscription, you can do any of the following (see details next page) to perform initial Shield configuration locally, either at your office or after the sign is mounted at the roadside. You can do any of following:

Use the Shield onboard buttons

» Configure the Shield using the onboard buttons: **Speed Limit** and **Display Mode**.

Use the TraffiCloud Mobile app for Android

» Configure the Shield locally using the **TraffiCloud Mobile app** for Android over a Bluetooth connection.

Use TraffiCloud Sign Manager

» Configure the Shield locally using **TraffiCloud Sign Manager for Windows** over the included USB connection or optional Bluetooth.

 **NOTE:** Before attempting a Bluetooth connection, make sure the option was purchased for your equipment.

To power up the Shield:


» Power up the Shield by pressing the **Power** button on the back, inside the mounting channel.

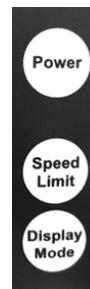
The Shield will go through start-up and self-check sequences. Once the self-check is complete, the sign is ready for configuration. A green LED on the top-left corner flashes every 10 seconds to indicate when the sign is powered on.

To set up the Shield using the onboard buttons:

In addition to the **Power** button, you can use the onboard sign buttons to set the **Speed Limit** and **Display Mode** for your sign. For details about sign modes, see *Shield Display Modes* on the next page.

- Press the **Speed Limit** button until the desired value displays. The first button-press displays the current speed limit.
- Verify or set the display mode on the Shield. The default is **Constant** for the Shield.
- To change the mode, press the **Display Mode** (or **Display Settings**) button until the desired mode displays on the sign.

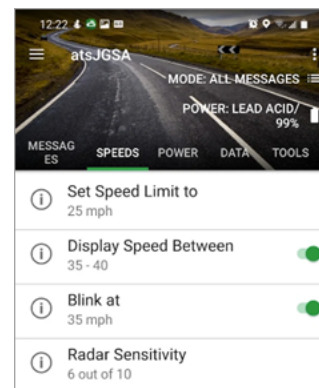
 **NOTE:** To reduce the risk of tampering, the buttons deactivate five minutes after you power on the sign. To reactivate them, press the **Power** button, wait a few seconds, and press it again.



To connect to the sign using the TrafficCloud Mobile app for Android:

Using the TrafficCloud Mobile app you can control a wide range of tasks, such as downloading traffic data, setting the speed limit and display mode, creating Sites, and checking battery power.

Note: If you purchased an Android tablet from us, the TrafficCloud Mobile app is pre-installed. If you have your own Android device, you can purchase a TrafficCloud Mobile perpetual license from ATS and then download the TrafficCloud Mobile app from the [Google Play Store](#).



To connect using the app:

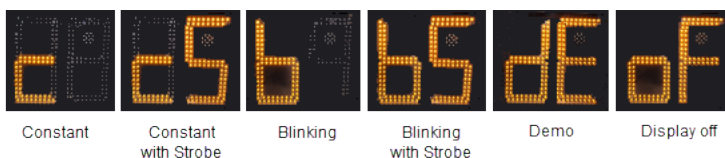
- A. Sign on to the **TrafficCloud Mobile app** on your Android device using your TrafficCloud credentials.
- B. Scan for your Shield. You can connect to any ATS device registered to your account and within Bluetooth range. Only one connection is permitted at a time.
- C. Use the Bluetooth pairing code "ATS" to connect to your Shield.

To connect to the sign using TrafficCloud Sign Manager for Windows:

- A. First, for **TrafficCloud Sign Manager for Windows** installation details, please see the *TrafficCloud Start-Up Instructions* included with your shipment and available from our Customer Support page at <https://www.alltrafficsolutions.com/support/>. For details about using TrafficCloud Sign Manager for Windows, in the application, click **Help > Software User's Manual**.
- B. Do one of the following:
 - **USB:** Plug the supplied USB-A-to-mini-B cable into the back of the sign and then into your computer. The mini-B port is located above the buttons inside the sign's mounting channel, OR
If you're connecting from an ATS trailer, connect the supplied USB cable inside the trailer battery box to your laptop computer, OR
 - **Bluetooth:** Connect to the Shield over the optional Bluetooth connection (use pairing code "ATS"). Once the device is paired, run TrafficCloud Sign Manager and select Bluetooth under the **Connection** menu.

Shield display modes

Here are the sign modes available with the Shield if you use the **Display Mode** button on the sign:



Shield modes	What you can do
c	Constant: Continuously display vehicle speeds as each vehicle passes, changing the speed display as the vehicle speed changes. Constant is the default (recommended) setting.
cS	Constant with strobe: Display vehicle speeds as vehicles pass and flash the violator alert strobe (if equipped) when vehicles exceed the Speed Limit set in the sign. TrafficCloud subscribers typically set the strobe option to 10-15 mph (16 to 24 kph) above the Speed Limit set in the sign.
b	Blinking: Blink the sign slowly, displaying changing speeds as the vehicle passes. TrafficCloud subscribers typically set the blink option to 10 mph (16 kph) above the Speed Limit set in the sign.

Shield modes	What you can do
bS	Blinking with strobe: Blink the sign constantly and flash the violator alert strobe (if equipped) when vehicles exceed the Speed Limit set in the sign. TrafficCloud subscribers can set the blinking and strobe options separately, with blinking typically set at 10 mph (16 kph) above the speed limit, and the strobe at 10-15 mph (16 to 24 kph) above the Speed Limit set in the sign.
dE	Demo: Display a simulation of vehicle approach speeds, from higher to lower, temporarily ignoring actual traffic readings.
oF	Display Off: Leave the display turned off while you collect traffic and status data. This mode, also referred to as "stealth mode", is recommended for performing traffic studies at a Site.

Step 6 Installing the Your Speed sign attachment

Use these steps for detailed instructions about installing the **Your Speed** sign attachment, which ships in the transport position.

To set the sign attachment in the deployed position:

- Remove the 3/4" (19 mm) Torx bolts (wrench included) and washers from the **Your Speed** sign attachment and set them aside. If there is no concern about tampering, you can use the long thumb screws in place of the Torx bolts.
- Reposition the Your Speed sign with its bottom running along the top of the LED display.
- Place a washer over each hole in the sign and push the Torx bolts through the holes, as shown, in the Your Speed sign attachment and the LED display frame.
- Reinstall the fasteners to finish installing the Your Speed sign attachment.



Step 7 Mounting the Shield

Use the instructions in this step for details about mounting the Shield.

To install the Shield mounting bracket:

- If you are mounting the Shield on a round pole, thread two stainless steel banding straps (not included) through the sign mounting bracket, and then tighten the bracket and straps around the pole. Thread the ends of each banding strap together and then tighten them onto the pole.
- If you are mounting the Shield on a U-shaped or square pole, bolt the sign mounting bracket to the pole using the supplied carriage bolts or U bolts and wing nuts.

The wing nuts will be concealed inside the back of the sign to prevent tampering.



To mount the Shield:

Before you mount the Shield, make sure it's turned on. See [Step 5 Configuring the Shield locally](#), on page 4.

- Set the top channel on the back of the Shield onto the tab at the top of the mounting bracket.
- Rotate the Shield down until it's flush with the bracket.
- Push the locking pin up to lock the Shield into place.



Contacting Customer Support

For support for your All Traffic Solutions products,

- visit the Customer Support page at <https://www.alltrafficsolutions.com/support/>,
- send email to support@alltrafficsolutions.com, or
- call 1-866-366-6602, Option 2, anytime between 8:00 a.m. and 6:00 p.m. Eastern Time, Monday to Friday.



Technical documentation and training

To view technical documentation, please click the Help icon [?](#) at the top right of the TrafficCloud Web page.

For online training resources, please click or scan the QR code at right to visit our **TrafficCloud Training Videos Hub**. To discuss additional TrafficCloud training options, please contact Customer Support.





ATS PRODUCT WARRANTIES

All Traffic Solutions (ATS) is committed to providing the best value in all our products. To underscore this ongoing commitment, all ATS-manufactured signs purchased on or after January 1, 2019, come standard with a 3-year manufacturer’s warranty. Products eligible for the 3-year manufacturer’s warranty are Shield 12 and Shield 15 radar speed signs, SpeedAlert 18 and SpeedAlert 24 radar message displays and InstAlert 18 and InstAlert 24 variable message signs.

We also offer the ATS Premier Care Plan with your current ATS TraffiCloud® Remote Management Software subscription.

WARRANTY COMPARISON

ATS Premier Care Plan & ATS 3-Year Manufacturer’s Warranty

All sign batteries are discounted under the Premier Care Plan. All accessories are discounted under Premier Care except:

- Trailer-related items
- Laptops and tablets
- Solar panels
- Carrying cases

Feature	Premier Care Plan	ATS 3-Year Manufacturer’s Warranty
Hardware defect repair	Entire product lifespan, provided the product has an active Premiere Care subscription	Three years from the date of delivery
Dedicated Customer Support Center	Comprehensive hardware and software troubleshooting support	Troubleshooting to determine hardware defects
Remote diagnostics by ATS Support Team	Remote access to signs for performing comprehensive hardware and software diagnostics	Not included
Software and firmware updates	Included	Not included
Shipping to and from ATS repair center <i>(manufacturer defect repairs only)</i>	No charge	No charge
Shipping to and from ATS repair center (non-manufacturer defect repair)	Customer pays shipping	Customer pays shipping
Damage resulting from misuse, abuse, or using the product in ways it was not intended	Covered at 50% of standard ATS repair rates	Standard ATS repair charges apply
Vandalism	Covered at 50% of standard ATS repair rates	Standard ATS repair charges apply
Battery and accessory discounts	50% off the regular price	No discounts
LFP battery replacement	1 year + 50% off additional or replacement batteries	1 year
SLA battery replacement	1 year + 50% off additional or replacement batteries	3 months
Trailer battery	1 year	6 months
Power case batteries <i>(Must be sent back to ATS for repair)</i>	1 year + 50% off replacement batteries	6 months
Accidents	Covered at 50% of standard ATS repair rates	Standard ATS repair charges apply
Damage due to incorrect installation or operation	Covered at 50% of standard ATS repair rates	Standard ATS repair charges apply
Acts of nature	Covered at 50% of standard ATS repair rates	Standard ATS repair charges apply
Normal wear and tear such as frayed cords or cables, broken connectors, scratched or broken enclosures	Covered at 50% of standard ATS repair rates	Standard ATS repair charges apply