

# ATS 5 Trailer Quick Start Guide



Thank you for purchasing an ATS 5 Trailer. This guide will show you how to set up your new trailer and sign. The trailer can be used with any sign, but is typically outfitted with an ATS SpeedAlert 24 Radar Message Sign or InstAlert 24 Variable Message Sign. Power comes from lead acid batteries and an optional solar panel. For additional setup documentation, TrafficCloud subscribers should refer to the *Getting Started with TrafficCloud* guide for your sign. On the TrafficCloud **Help** menu, click the **Getting Started Guides** link. Non-subscribers with data-enabled signs should refer to the configuration section of the *Quick Start Guide* for your sign, which includes details about using TrafficCloud Sign Manager for Windows.



## Initial ATS 5 Trailer setup

**IMPORTANT:** After you receive your ATS 5 Trailer, you'll need to **review the Safe trailering guidelines** on the next page and then perform the following setup steps:

- Step 1: *Inspect and charge the trailer's batteries* on page 4
- Step 2: *Deploy the trailer* on page 5
- Step 3: *Power the sign* on page 8
- Step 4: *Secure the trailer* on page 8

## Check over the trailer

Upon receiving a new ATS 5 Trailer, check to ensure that you have all of the items ordered. If you notice any damage or missing items, contact ATS [Technical Customer Support](#) immediately.

Here's a summary of what's typically included with your trailer. Also check your pack slip for precise details of your order.

What's included	What you'll need
<p>The ATS 5 Trailer includes the following:</p> <ul style="list-style-type: none"><li>» The trailer, with one or two pairs of deep cycle lead acid batteries and optional solar panel,</li><li>» A 12-VDC automatic charger,</li><li>» A SpeedAlert 18 or 24 Radar Message Sign or InstAlert 18 or 24 Variable Message Sign, or Shield 15 Radar Sign (sold separately).</li><li>» This <i>ATS 5 Trailer Setup Guide</i>. All setup and quick start guides are also posted to the <a href="#">ATS Technical Customer Support</a> page.</li></ul>	<ul style="list-style-type: none"><li>» A vehicle equipped with a trailer hitch for towing, including a standard hitch mount with bracket for the safety chain, 2-inch (5-cm) ball, and flat, 4-way wiring socket.</li><li>» A heavy duty three-pronged outdoor extension cord,</li><li>» A partner for trailer hookup and to unfold the upper frame of the trailer,</li><li>» Legal licensing or registration if required for your <i>jurisdiction</i>.</li></ul>

For more details, consult the latest [ATS 5 Trailer spec sheet](#).

## Safe trailering guidelines

**IMPORTANT:** Carefully read and follow all instructions marked with warnings and read and follow all of the instructions in your setup guide *BEFORE* you take your trailer on the road.

### Warning symbols



**WARNING:** Warning symbols draw your attention to serious safety hazards, which can lead to injury, death, or damage to equipment.

### Swaying



**WARNING:** Swaying is a moderate back and forth movement of a trailer behind a tow vehicle and can lead to dangerous whipping unless you slow down.

### Whipping



**WARNING:** Whipping is the violent back and forth movement of a trailer behind a tow vehicle. Whipping can be caused by excessive speed for the driving conditions, turbulence, over-steering, passing vehicles, uneven roadways, or other issues. There is very little time to recover should whipping occur.



### Combination disturbance



**WARNING:** A combination disturbance is swaying or whipping of a trailer AND the tow vehicle (the combination), caused by issues such as excessive speed for the driving conditions or load, turbulence, over-steering, passing vehicles, uneven roadways, or other issues. See *Combination disturbance* above.

### Flat tire



**WARNING:** In the event of a flat tire, DO NOT BRAKE. Take your foot off the gas pedal, slow down below 25 mph (40 kph), and drive to a safe location, where you can stop and change the tire. If necessary, you may need to drive on the flat until you can stop safely.

### Wheel off the roadway




**WARNING:** If a wheel goes off the roadway, DO NOT BRAKE. Take your foot off the gas pedal, turn on your hazard lights, and slow down below 25 mph (40 kph). Then slowly steer back onto the roadway when it's safe to do so.

## Towing checklist

Go over the following checklist before you go on the road:

Checklist item	What to do
<b>Your tow vehicle</b>	<p>Ensure the following:</p> <ul style="list-style-type: none"> <li>» the tow vehicle is equipped with a suitable trailer hitch and the vehicle is properly maintained. Consult your vehicle manufacturer, an authorized repair facility, or hitch installation company.</li> <li>» The vehicle has adequate towing capacity for the trailer, with a load capacity of up to 1,000 lbs (454 kg).</li> <li>» Consult the vehicle owner's manual about vehicle capacity and towing instructions particular to the vehicle.</li> <li>» Any modifications to the vehicle are approved for towing by an authorized dealer or inspector.</li> </ul>

Checklist item	What to do
<b>Trailer hitch</b>	Ensure that the trailer hitch and ball are securely installed and suited to the tow vehicle. Ensure that the coupler and ball are fastened together securely.
<b>Safety chains</b>	Ensure that the safety chains are <ul style="list-style-type: none"> <li>» crossed over under the tongue and hitch,</li> <li>» securely hooked to the tow vehicle, and</li> <li>» not dragging on the pavement.</li> </ul>
	<b>WARNING: Pay close attention to safety chain hookup and do not tow the trailer without the safety chains attached. If the trailer tongue becomes detached from the hitch ball while you are driving, properly attached safety chains can prevent a serious accident by supporting the tongue and keeping the trailer attached to your vehicle temporarily until you can come to an emergency stop.</b>
<b>Electrical harnesses</b>	Ensure that the electrical harnesses are properly connected and the signal, tail, and brake lights are working.
<b>Tires</b>	Ensure that all tires on the tow vehicle and trailer are properly inflated. Consult the information on the tire sidewalls and your vehicle's door decal for inflation pressures.
<b>Sign</b>	Ensure that the upper frame, sign, and solar panel assembly are in the travel position.
<b>Loading</b>	Never load cargo on the bed of the trailer.

## Safe driving practices

Use the following checklist for safe driving practices with a trailer:

Condition	Best practice
<b>Speed</b>	<p>Slow down to avoid accidents and drive defensively. Drive slower than you would without a trailer. The maximum recommended speed with a trailer is 55 mph (90 kph).</p> <p>Anticipate slowdowns in traffic and stops and apply your brakes well in advance.</p> <p>Slow down for curves, road hazards, roadwork, and difficult weather conditions.</p> <p>Don't assume you can speed with the trailer. Driving at high speeds can result in sway and whipping if hazards are present.</p> <p>Your towing vehicle and trailer combination has much higher mass and length than your vehicle by itself. Allow extra distance between your vehicle and vehicles ahead and allow extra distance for braking.</p>
<b>Assisted driving</b>	Avoid using cruise control, overdrive, and other assisted driving technologies while towing a trailer.
<b>What to avoid</b>	<p>Never drink or consume drugs and drive.</p> <p>Never text and drive or allow mobile devices to become distractions while you are driving. Pull over or wait for stops as needed to use them.</p>

Condition	Best practice
<b>Passing and turning</b>	Remember, your car and trailer combination is longer than your vehicle alone. Allow adequate extra space when passing vehicles or making sharp turns, such as in parking lots or gas stations. Be vigilant when passing or being passed by other vehicles. Passing vehicles can cause turbulence leading to a combination disturbance.
<b>For longer trips</b>	Inspect the vehicle and trailer connections at each stop.
<b>Difficult weather conditions</b>	In difficult weather conditions, adjust your driving for the conditions, allowing additional time and space between vehicles.
<b>Backing up</b>	If you need to back the trailer into position, practice beforehand, and have a partner assist you. Backing up with a trailer is a skill that can take time to learn. See <i>Tow the trailer to your location</i> on page 6.

## Step 1: Inspect and charge the trailer's batteries

The trailer's batteries are one of the most important parts of the trailer. New trailers are typically shipped with the batteries near a full charge, however it is still important to check the fluid levels in them and to use the AC charger to fully charge them before the first deployment.

### Available battery options

The standard power supply is a pair of deep cycle 6V batteries in series for 12VDC operation. With the proper battery power cable, a second pair of 6V batteries can be connected in parallel with the first pair. A slow blow fuse is installed between the batteries and the load.



**CAUTION: Using batteries, cables, or chargers not supplied or approved by All Traffic Solutions will void the product warranty.**

### To check battery charge levels:

- Check the power level displayed on any of the following:
  - » The TrafficCloud Equipment page or Dashboard,
  - » The TrafficCloud Mobile app for Android,
  - » On message signs, on sign start up display sequence.



### To check battery fluid levels:



**CAUTION:** Check battery electrolyte levels every three to four months to prolong battery lifespan. Use only distilled water to top them up, NOT tap water. Impurities in water, even in small amounts, can significantly reduce battery lifespan.

- A. Make sure the trailer is powered off. See *Step 3: Power the sign* on page 8.
- B. Remove the battery cover and cell covers. The electrolyte level should be up to the bottom rim, about 1/2 in. (1.27 cm) above the plate in each of the cells.
- C. For any cells that are low or dry, top them up with distilled water to the bottom of the vent.

### To charge the batteries:

- Plug a heavy duty three-pronged outdoor extension cord into the external AC plug on the battery enclosure and plug the other end into a power outlet.

The red light on the charger indicates charging is in process, and the green light indicates a full charge.



## Step 2: Deploy the trailer

Use the instructions in this step for help with deploying the trailer.

### Move the trailer and vehicle into position for hookup

- A. Move the trailer into position on a flat surface so that you can back your vehicle up to it.
- B. Lower the front jacks. Pull the lynch pins (see below right) and rotate the jacks to vertical and then crank the handles to lift the trailer until the coupler is above the height of the hitch ball.
- C. Back the vehicle up to the trailer so that the hitch ball is just in front of the coupler. Have a partner guide you or use a backup camera if it provides a clear view. When your vehicle is in position, turn off the engine.




### Lower the trailer onto the hitch

- A. Pull the lynch pins and spin the front jacks down to lower the coupler onto the hitch ball, as shown in this section.
- B. Close the tongue latch over the ball.
- C. **Important:** Ensure that the ball clamp is securely wrapped around the ball. If necessary, release the tongue latch and reposition the tongue on the hitch ball, or adjust the ball clamp with a wrench.
- D. Optionally, lock the latch with a padlock (not included).
- E. Crank the jacks back up, then pull the lynch-pin and rotate them up to the horizontal position, and secure them in place.





- F. Attach the trailer safety chains to the hitch frame, crossing them under the tongue, and looping the S-hooks back onto the chain. Leave enough slack in the chains to allow for cornering, but make sure they don't drag on the pavement.


 **WARNING: Pay close attention to safety chain hookup and do not tow the trailer without the safety chains attached.**

If the trailer tongue becomes detached from the hitch ball while you are driving, the safety chains can prevent a serious accident by supporting the tongue and keeping the trailer attached to your vehicle temporarily until you can come to an emergency stop.



- G. Connect the wiring harnesses.
- H. Working with a partner, check to ensure that the signal, taillights, and brake lights are functioning properly.
- I. Inspect the hitch connections to ensure that the hookup is complete, and then proceed to the next step. Once all preparations are completed, you are ready to take to the road.

### Tow the trailer to your location

 **WARNING: RISK OF ACCIDENT, INJURY OR DEATH. Do not obstruct the roadway: Always choose a location for the trailer that is far enough away from moving vehicles so as not to interfere with or distract passing traffic. When possible, the trailer should be placed off the shoulder, behind barriers or behind traffic cones.**

- A. Tow the trailer to your chosen location, ensuring that the surface is stable. To enhance accuracy and visibility, position the trailer so that the sign will be visible to motorists, yet the trailer is off the shoulder (see *Tow the trailer to your location* above).
- B. **If you need to back up:** Hold one hand on the bottom of the steering wheel, and move your hand left to turn the trailer to the left. To turn the trailer right, move your hand to the right. If the trailer turns the wrong way, pull ahead until the vehicle and trailer are in a straight line and start again.
- C. **Stabilize the trailer:** Park the trailer on a stable surface, then rotate all four jacks from the travel position and crank them down until the trailer is stable. Aim the trailer as directly as possible towards targeted motorists.



 **WARNING: RISK OF CAPSIZING. Do not raise the display until all four jacks are down at least far enough to prevent capsizing.**

- D. Once the trailer is in the desired position, you're ready to unhitch it from the tow vehicle.

## Unhitch the trailer

Use these instructions to unhitch the trailer, so that you can safely leave it at the roadside.

### To disconnect the trailer:

- A. Disconnect the wiring harness.
- B. Disconnect the safety chains and hook them back onto the trailer.
- C. Open the tongue latch.
- D. Using the front jacks or by hand, lift the trailer off the hitch ball.
- E. Move the tow vehicle away from the trailer.
- F. To secure the trailer in place, crank the jacks down until the trailer wheels lift off the ground and fold down the handles.



### Position the solar panel (if equipped)

Use these steps to position the solar panel before you raise the trailer's upper frame.

#### To position the solar panel:

- A. Pull out the lock pins on either side of the panel.
- B. Rotate the panel to the flat position and replace the lock pins.



### Raise the trailer's upper frame

- A. Remove the lifting handle from its storage position inside the battery box.
- B. Place the lifting handle into the lifting mount, and secure the handle into the mount using the supplied locking pin.
- C. Open the rubber tie-down, and pull the two locking pins that are holding the upper frame in the down position.
- D. Carefully pull down on the lifting handle to raise the upper frame of the trailer. **Move the handle slowly and apply pressure as it nears the upright position. The weight will shift at the top of the rotation.**
- E. Once the upper frame is fully upright, replace the locking pins to secure the frame in place.



### Remove the lifting handle

- A. Once the upper frame is secured you can remove the locking pin holding the lifting handle in place.
- B. Remove the handle from the mount.
- C. Place the lifting handle back into its storage position in the battery box.

### Step 3: Power the sign

Here's how to set the ATS 5 batteries or solar panel (if equipped) to supply power to your sign.

#### To power on the sign:

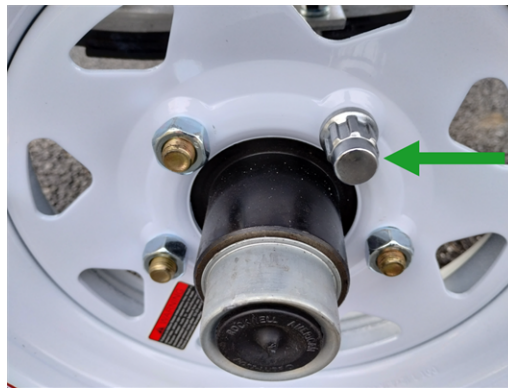


**NOTE:** Make sure you charge the trailer and sign batteries before initial deployment. See *Step 1: Inspect and charge the trailer's batteries* on page 4.

1. Unlock and open the battery box compartment to access the switch and receptacle that is used to power your sign.
2. Flip the switch to the ON position to power it on (or to the OFF position to power it down).

### Step 4: Secure the trailer

Use the steps in this section for help with securing the trailer. The trailer wheels come pre-installed with locking lug nuts (wheel locks), as shown. The key for the locking lug nuts should be in the battery box.



#### To secure the trailer:

- A. Make sure the trailer wheels are off the ground and the four jacks in position. See *Unhitch the trailer* on the previous page.
- B. Pull the latch pin from the lifting handle and remove the handle from the trailer.
- C. Secure the lift handle inside the storage box (see *on page 4*).
- D. Close and lock the storage box to prevent tampering, and the trailer will be ready for use.

### Getting help

We're here to help! If you have any concerns while using your new sign and trailer, please visit our Technical Customer Support page at [www.alltrafficsolutions.com/support](http://www.alltrafficsolutions.com/support).