

ATS 3 Trailer Quick Start Guide



Thank you for purchasing an ATS 3 Trailer. This quick start guide will show you how to set up your new trailer. The trailer can be outfitted with an ATS SpeedAlert 18 Radar Message Sign, InstAlert 18 Variable Message Sign, or Shield 12 or Shield 15 Radar Speed Sign. Power comes from an integrated system of lithium batteries and solar charging. The compact trailer has a low tongue weight, making one-person deployment very manageable.



[Figure 1] ATS 3 Trailer with a SpeedAlert 18 Radar Message Sign and solar panel

Check over the trailer

Upon receiving a new ATS 3 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.

What's included	What you'll need
<p>The ATS 3 trailer, includes the following:</p> <ul style="list-style-type: none">• The mast and solar panel, including the joint bolt and shear nut, with washer and lock washer, and a bottle of Vibra-Tite threadlocker,• An ATS SpeedAlert 18 Radar Message Sign, InstAlert 18 Variable Message Sign, or Shield 12 or Shield 15 Radar Speed Sign (sold separately).• An axle lock bar (padlock not included),• This <i>ATS 3 Trailer Quick Start Guide</i>, and the <i>Integrated Solar Option Quick Start Guide - Trailer mounted</i>, <i>Quick Start Guide</i> for your sign, and <i>TraffiCloud Start-Up Instructions</i>. Those guides are also posted to the ATS Technical Customer Support page. <p>For complete details, consult the latest specification.</p>	<ul style="list-style-type: none">• A vehicle equipped with a trailer hitch for towing. See <i>Towing checklist</i> on the next page.• A 15/16" (24 mm) wrench,• A 1-1/8" (29 mm) wrench,• A partner for trailer hookup and to unfold the mast.

Step 1: Safe trailering guidelines

IMPORTANT: Carefully read and follow all instructions marked with warnings and read and follow all of the instructions in this 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.

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.

Towing checklist

Before you go on the road, ensure the following:

Checklist item	Ensure that
Your tow vehicle	<p>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.</p> <p>The vehicle has adequate towing capacity for the trailer, with a minimum load capacity of 500 lbs (227 kg).</p> <p>You consult the vehicle owner's manual about vehicle capacity and towing instructions particular to the vehicle.</p> <p>Any modifications to the vehicle are approved for towing by an authorized dealer or inspector.</p>
Trailer hitch	<p>The trailer hitch includes</p> <ul style="list-style-type: none"> a standard hitch mount with bracket for the safety chains, a 2-inch (5-cm) ball, a 12 VDC wiring socket. <p>The trailer hitch and ball are securely installed and suited to the tow vehicle.</p> <p>The coupler and ball are fastened together securely.</p>

Checklist item	Ensure that
Safety chains	The safety chains are (a) crossed over under the tongue and hitch, (b) securely hooked to the tow vehicle, and (c) not dragging on the pavement. See <i>Lower the trailer onto the hitch</i> on page 6.
Electrical harnesses	The electrical harnesses are properly connected and the signal, tail, and brake lights are working.
Tires	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.
Sign	The mast, sign, and solar panel assembly are in the travel position, parallel to the road. See <i>Rotate the sign</i> on page 5.

Safe driving practices

Use the following checklist for safe driving with a trailer:

Condition	Recommendation
Loading	Never load cargo on the bed of the trailer.
Speed	<p>Slow down to avoid accidents. Drive slower than you would without a trailer. The maximum recommended speed with a trailer is 55 mph (90 kph).</p> <p>Anticipate stops and brake early.</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 is heavier than your vehicle alone. Allow extra distance between your vehicle and vehicles ahead and allow extra distance for braking.</p>
Assisted driving	Avoid using cruise control or overdrive while towing a trailer.
Best practices	<p>Drive defensively.</p> <p>Never drink or consume drugs and drive.</p> <p>Never text and drive.</p>
Passing and turning	<p>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.</p> <p>Passing or being passed by another vehicle can cause a combination disturbance. Be vigilant in such circumstances.</p>
For longer trips	Inspect the vehicle and trailer connections at each stop.
Difficult weather conditions	In difficult weather conditions, adjust your driving for the conditions, allowing additional time and space between vehicles.
Backing up	Backing up with a trailer is a skill that can take time to learn. If you need to back the trailer into position, practice beforehand, and have a partner assist you. See <i>Choose a location</i> on page 7.

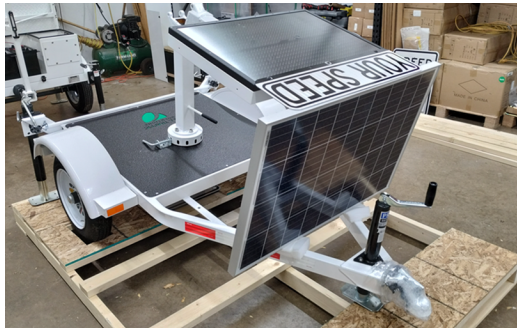
Reference: [U-Haul Trailer User Instructions](#).

Step 2: First-time setup (if necessary)

Use the steps in this section for first-time setup if the trailer has been shipped to you. If the trailer has been delivered with the mast set upright, you can skip to *Step 3: Deploy the trailer and message or speed sign* on the next page.



WARNING: RISK OF INJURY OR DAMAGE TO EQUIPMENT To avoid the possible capsizing of the trailer, do not attempt to raise the trailer mast until all three jacks are down and supporting the trailer.



[Figure 2] Trailer folded view



[Figure 3] Unfolding the trailer mast

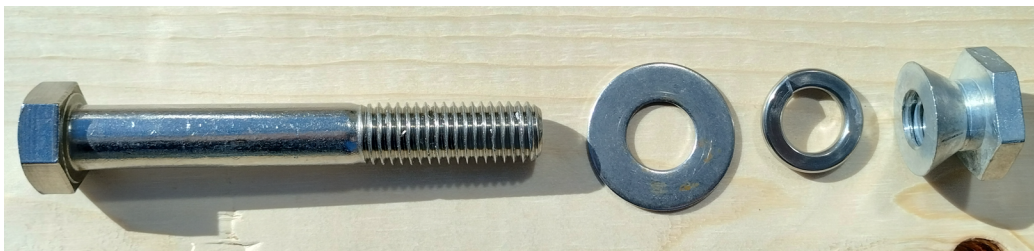
Unfold the mast

- A. Deploy all three jacks into position, supporting the trailer. The back jacks have spring-loaded latch pins you pull to release them from the stowed position, and then they rotate into the vertical position. All of the jacks spin up and down with hand cranks.



WARNING: RISK OF CAPSIZING Before you unfold the mast, stabilize the trailer by rotating the jacks to vertical and lowering them to the ground. Correct deployment of the jacks prevents the trailer from flipping backwards, which could cause injury to personnel or damage to equipment.

- B. Unfold the mast into the upright position, as shown in [Figure 3] above. Unfolding the mast is best done with two people.
- C. Insert the bolt (shown in [Figure 4] below) into the channel on the mast joint to hold the mast upright. Once unfolded and assembled, the hinge will be locked in that position.



[Figure 4] Breakaway nut and bolt set



[Figure 5] Vibra-Tite threadlocker



CAUTION: Vibra-Tite threadlocker contains ethyl 2-cyanoacrylate, ethylene di(acetate), and Methoxy Polyethylene Glycol 1000 Methacrylate, which pose slight to moderate risks to health or can cause fire. Wear appropriate safety gear and avoid contact with the skin and eyes, inhalation, or exposure to open flames or sparks (no smoking). Dispose of contents and the container in accordance with local, regional, national, and international regulations. For details, see the Vibra-Tite website [here](#).

- D. Put the large washer and then the lock washer (shown above) on the end of the bolt.

- E. Apply a few drops of the supplied Vibra-Tite threadlocker (shown in *[Figure 5] on the previous page*) to the bolt where the breakaway nut will be tightened on. At 72 degrees F (22 C), initial curing time is 10-20 minutes and full curing time is 24 hours.
- F. Tighten the 5/8" breakaway nut onto the bolt using a 15/16" (24 mm) bolt wrench until the nut shears off.



WARNING: Do not remove the nuts and bolts in the hinge after assembly. Doing so will void the warranty.



[Figure 6] Mast joint, unfolded



[Figure 7] Mast joint, folded



[Figure 8] Speed limit sign

Install the static speed limit sign (if applicable)

If you have the optional static speed limit sign (see *[Figure 8] above*), use the supplied bolts to install it on the mast below the digital speed sign, and set the speed limit using the inter-changeable digits. The digits range from 5 through 65 for customers within the United States.

Step 3: Deploy the trailer and message or speed sign



WARNING: RISK OF INJURY OR ACCIDENT Before you transport the trailer and sign after erecting the mast, rotate the mast and sign into the "Travel Position", parallel to the direction of travel to avoid the risk of accident and injury due to wind drag, whipping, or vehicle-trailer combination disturbance. See *To rotate the sign:* on the next page.

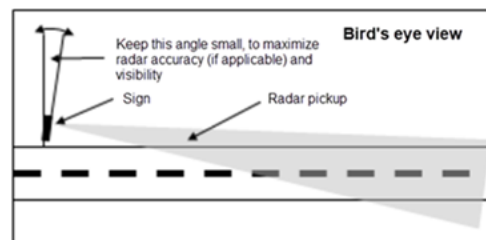


WARNING: RISK OF INJURY OR VEHICULAR DAMAGE Follow these instructions carefully, and always ensure correct and safe trailer hookup and driving with your trailer. See Step 1: Safe trailering guidelines.

Rotate the sign

You'll need to rotate the sign in either of two circumstances:

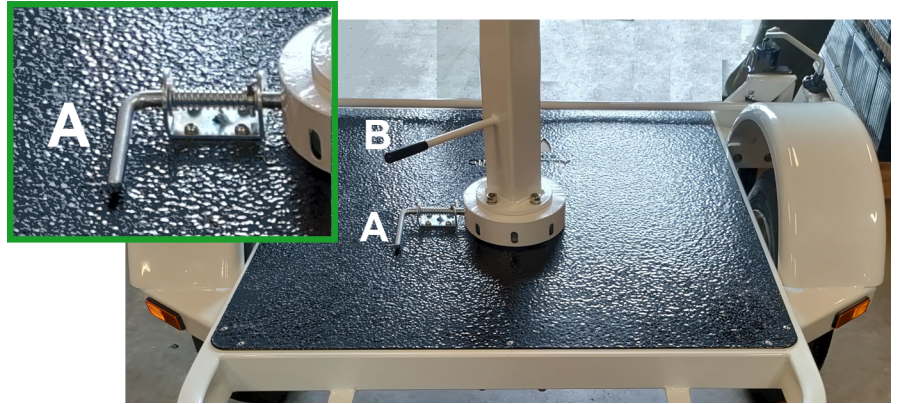
- To place the mast and sign assembly in the travel position (see *[Figure 9] below*), so that you can transport it safely between locations after the mast and sign have been raised.
- To angle the trailer correctly toward the traffic lane (see *[Figure 10] below*). In the case of hills, you can also use the jacks to angle the sign up or down slightly.



[Figure 9] Travel position [Figure 10] Setting the sign angle

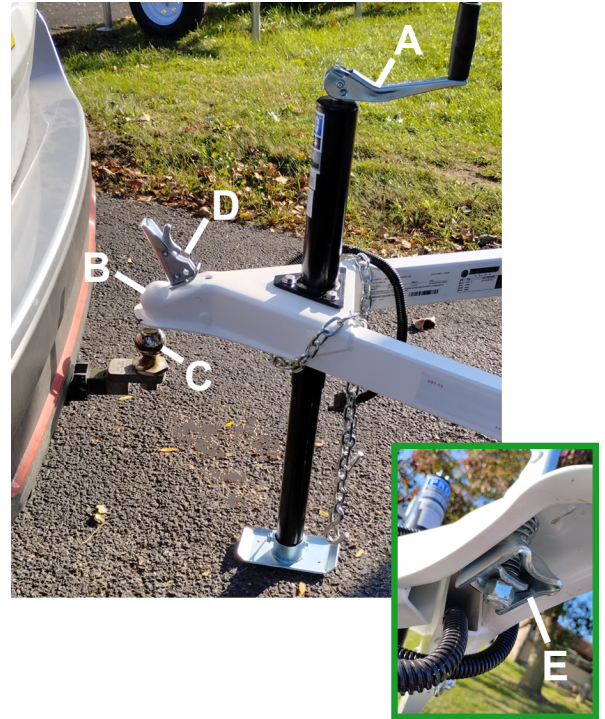
To rotate the sign:

- A. Pull the spring-loaded latch pin (A) to unlock the mast base.
- B. Keeping the latch pin retracted, grasp the mast rotation handle (B), rotate the mast and sign as required. Do either of the following:
 - **Rotate the sign for transport:** To reduce wind resistance, rotate the mast, sign, and solar panel assembly sideways, into **Travel Position**, parallel to the roadway (see [Figure 9] on the previous page). The holes around the mast base are 30 degrees apart.
 - **Rotate the sign to set the display angle:** Use the same procedure to rotate the sign for optimum display towards traffic (see [Figure 10] on the previous page).
- C. Release the latch pin into the new hole to lock the mast in position.



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. Using leverage, the trailer is easy to move around by hand on flat surfaces.
- B. On the front jack (A), as shown at right, turn the handle to lift the trailer until the coupler (B) is above the height of the hitch ball (C).
- C. Back the vehicle up to the trailer so that the hitch ball (C) is just in front of the coupler (B). Use a backup camera or have a partner guide you. When your vehicle is in position, turn off the engine.



Lower the trailer onto the hitch

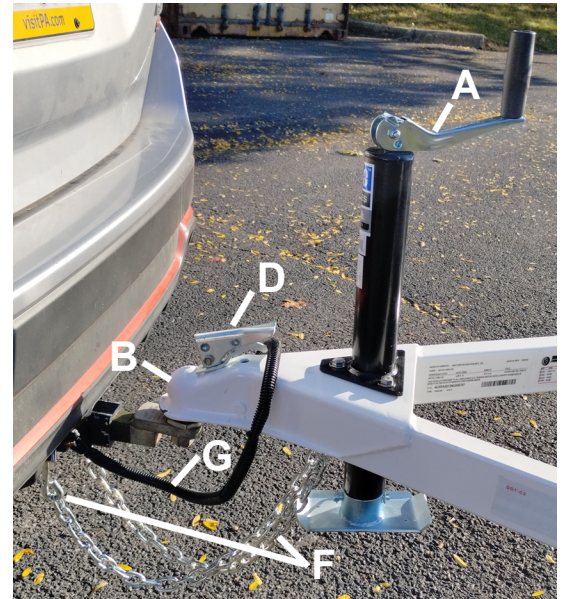
- A. Spin the front jack (A) down to lower the coupler (B) onto the hitch ball, as shown in this section.
- B. Close the tongue latch (D) over the ball.
- C. **Important:** Ensure that the ball clamp (E) is securely wrapped around the ball. If necessary, release the tongue latch and reposition the tongue on the hitch ball, or adjust the ball clamp with a wrench.

- D. Optionally, lock the latch with a lynchpin and padlock (not included).
- E. Crank the jack (A) back up all the way before towing.
- F. Attach the trailer safety chains (F) 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 support the tongue and keep the trailer attached to your vehicle temporarily until you can come to an emergency stop.



- G. Connect the wiring harnesses (G).
- 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.

Choose a 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 the desired location, ensuring the surface is stable.
- B. **If you need to back up:** Hold one hand on the bottom of the steering wheel, and to turn the trailer left, move your hand 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. Once the trailer is in the desired position, you're ready to disconnect the trailer from the tow vehicle.

Disconnect the trailer

Use these instructions to disconnect 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), as shown on the previous page.
- D. Using the front jack or by hand, lift the trailer off the hitch ball.
- E. Move the tow vehicle away from the trailer.
- F. Let the front jack back down to the desired position and fold down the handle again.

Position the trailer and turn on the sign

- A. 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 *Choose a location* on the previous page). You can also adjust the angle of the mast and sign separately (see *Rotate the sign* on page 5).
- B. Lower all three jacks until the trailer is stable and level on the ground. You can raise the tires off the ground. Use a level if necessary.
 - i. For the jacks on the rear of the trailer, pull the spring pins to release them.
 - ii. Rotate the back jacks to vertical. You'll hear a click as they lock into place.
 - iii. For each jack, rotate the handle to lower the foot until it's supporting the trailer securely. Fold the jack handles back down for storage.
- C. Use the key switch on the back of the sign to turn it on. Lift up the cover and turn the barrel-style key to the ON position. See the *Integrated Solar Option Quick Start Guide*, included with your trailer.



Secure the trailer

Use the axle lock bar and a padlock (not included) to prevent theft as well as rolling out of position.



[Figure 11] The axle lock bar installed

To secure the trailer:

- A. Remove the axle lock bar from the back of the trailer.
- B. Thread the axle lock bar through the trailer wheels (as shown in [Figure 11] above).
- C. Thread the padlock through the holes at the end of the axle lock bar (as shown in [Figure 13] below) and lock it.



[Figure 12] The axle lock bar - T-bar end



[Figure 13] The axle lock bar - locking end

Getting help

For documentation for your ATS Trailer and signs, go to All Traffic Solutions [Technical Customer Support](#), or if you have a TrafficCloud subscription, go to the *ATS Start-Up Guides* page. And we're here to help! To speak with a customer success specialist, call us at 1 (866) 366-6602, option 2, or email us at support@alltrafficsolutions.com.