

LoadMaxx Installation Guide



Full and Dual Trailer Scale

Air-Weigh Customer Support: 888-459-3247

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About LoadMaxx Full and Dual Trailer Scales

Installation Overview

There are five major components of the LoadMaxx scale that you will install:

- Trailer scale display
- Power interface and extension cables
- Sensor interface and extension cables
- Bracket
- Optional ComLink cable

Tools Required

You will need the following tools to install the trailer scale and air sensors:

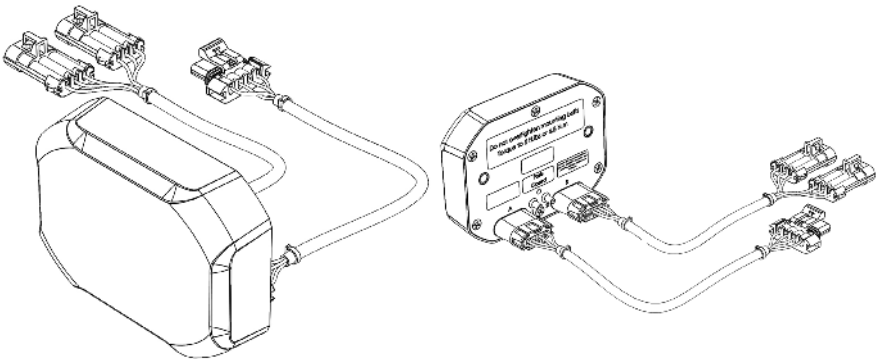
- Standard wrench set or adjustable wrench
- Drill with ¼-inch drill bit, or larger if flush mounted
- Flush wire cutter
- Needle nose pliers
- Chalk or permanent marker
- Tape measure
- Flat-blade screwdriver

Mounting the Scale

There are three ways you can mount the trailer scale:

- Flush mounted to the trailer frame itself
- Using a van bracket
- Using a frame rail bracket

Choose the mounting method that will work the best with your trailer configuration. Mount the trailer scale in a position that is easy to view while you are loading your trailer, and protected from direct tire spray and road debris. In regions where severe weather is a consideration, contact Air-Weigh for more information on protective enclosures.



Note: Do not place strain on the wires. If there is a sharp bend in the wires, the environmental seal could fail, allowing water to damage the scale. If the scale is disconnected from the trailer, the power cable in Port A and/or the sensor cable in Port B will not support the scale weight.

Mounting Flush to the Trailer

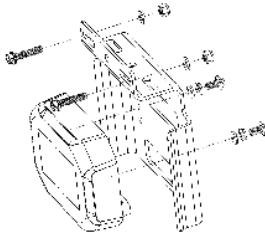
A flush mounted scale is mounted directly to the side of the trailer.

1. Determine the best location to mount the scale. This should be a flat area of the trailer, thin enough to make drilling possible and accessible from both front and back. Make sure the back side of the location is free of obstacles and debris that would interfere with the installation.
2. Hold the scale in the location you will mount it. You can either choose to mount the scale low enough so that the port connections fit below the edge of the trailer (**Air-Weigh recommends this option, if possible**), or drill a hole large enough to fit the two port connections.
3. Mark the trailer surface that touches each of the screw holes in the back of the scale. If you choose to drill a hole to fit the port connections, mark a circle on the trailer surface around the two ports.
4. Drill two 1/4-inch holes into the surface of the trailer where you previously marked two screw holes. If you marked an area for the two ports, drill a hole into the surface of the trailer large enough to accommodate the two ports.

At this point, determine whether you want to connect the power and sensor interface cables to the display before or after you secure it to the trailer. If after, proceed to step 8 before completing steps 5, 6 and 7.

5. Feed the power and sensor interface cables to the back of the trailer display from below the edge of the trailer or through the previously drilled hole.
6. Plug the power interface cable into Port A at back of scale.
7. Plug the sensor interface cable into Port B at back of scale.
8. Place the scale over the space you have prepared on the trailer, making sure the two holes line up with the holes on the back of the scale casing. Use the provided bolts, nuts and washers to secure the scale to the side of the trailer.

Mounting with a Van Bracket



Van Mounting Bracket

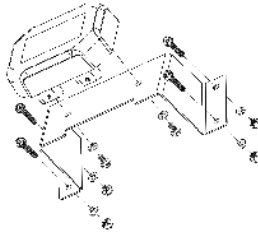
The Van bracket is used mainly for van and refrigerated-type trailers. However, this bracket can be used on any surface-mounted installation.

1. Determine the best location to mount the scale. The bracket screws should be mounted on a ledge, and the scale itself should hang off the ledge with no obstacles blocking it.
2. Hold the bracket in the location you will mount it. Mark the trailer surface that is visible through the holes in the top of the bracket using a permanent marker.
3. Using the marked areas as a guide, drill two 1/4-inch holes into the surface of the trailer.
4. Secure the scale to the bracket. Insert one bolt and washer through each of the holes in the trailer casing and tighten.

At this point, determine whether you want to connect the power and sensor interface cables to the display before or after you secure the bracket to the trailer. If after, proceed to step 8 before completing steps 5, 6 and 7.

5. Feed the power and sensor interface cables to the back of the trailer display.
6. Plug the power interface cable into Port A at back of scale.
7. Plug the sensor interface cable into Port B at back of scale.
8. Secure the bracket to the trailer surface. Insert a bolt through each of the holes in the bracket and through the holes you drilled in the trailer surface. Secure in back using the supplied nuts.

Mounting With a Frame Rail Bracket



Frame Rail Mounting Bracket

A Frame Rail bracket is used primarily for lowboy or flatbed-style trailers. However, you can use this bracket on any trailer frame rail.

1. Determine the best location to mount the scale on the frame rail. The location should be easily visible while loading and protected from direct tire spray.
2. Hold the bracket in the location you will mount it. Mark the surface of the frame rail that is visible through the four holes in the sides of the bracket using a permanent marker.
3. Using the marked areas as a guide, drill four 1/4-inch holes into the surface of the frame rail.
4. Secure the scale to the bracket. Insert one bolt and washer through each of the holes in the trailer casing and tighten.

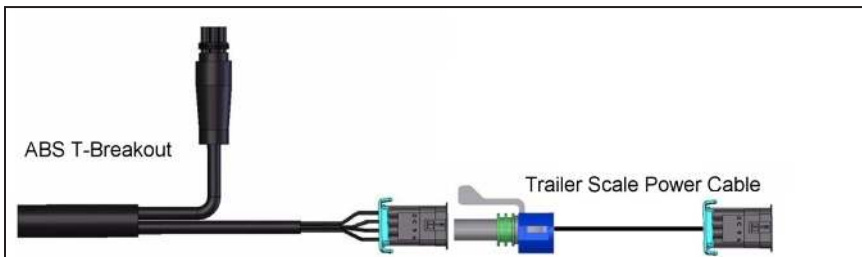
At this point, determine whether you want to connect the power and sensor interface cables to the display before or after you secure the bracket to the trailer. If after, proceed to step 8 before completing steps 5, 6 and 7.

5. Feed the power and sensor interface cables to the back of the trailer display.
6. Plug the power interface cable into Port A at back of scale.
7. Plug the sensor interface cable into Port B at back of scale.
8. To secure the bracket to the frame rail, insert a bolt through each bracket hole and then insert those bolts through the drilled frame rail holes. Secure in back using the supplied nuts.

Connecting Power to the Scale

You can connect the LoadMaxx trailer scale to the trailer's power either through the ABS brake harness or directly through the lighting junction box. Both methods are equally effective regardless of your trailer setup; choose the method that is most convenient.

Connecting Power with the ABS Connector



North American trailer manufacturers use one of two standard connectors to connect the ABS brake system to the trailer's wiring harness: USA, which uses a 6-pin plug, or Sealco, which uses a 5-pin plug. Air-Weigh provides T-breakout connectors that do not require splicing or soldering and do not interrupt power to the ABS system for each of these connector types. When you order your LoadMaxx trailer kit you must specify which type of connector your trailer uses.

1. Locate the ABS system harness. Trace the harness to the breakout connection.
2. Disconnect the 5- or 6-pin breakout connection.
3. Connect the supplied ABS T-breakout connector to both ends of the ABS harness breakout. Make sure the locking tabs are locked securely. If you are using the USA connector, make sure all pins are properly aligned and the white plug is firmly seated in its locking hole. Failure to do so will cause faults in your ABS system.
4. Connect the scale's power cable to the T-breakout connector.
5. Route the scale's power cable along the frame of the trailer

toward the location where the scale is installed. If possible, route along an existing wiring harness. If the trailer has a sliding suspension you **must** use an existing wiring harness or umbilical to avoid damaging or breaking the cable.


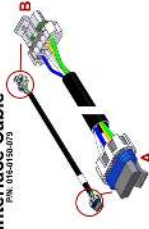
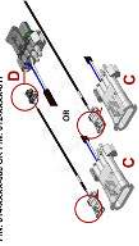



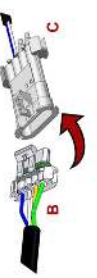
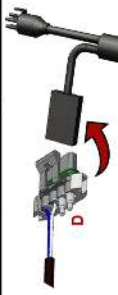


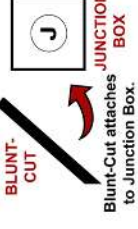



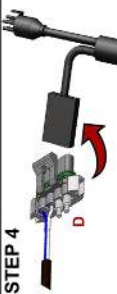
6. Secure the cable loosely to the frame using zip ties.
7. Connect the end of the power cable to the power connection on the interface cable. Make sure the cable is under no strain and is not bent.
8. Tighten and trim all zip ties.

Connecting Power to the Junction Box

If you plan to power your scale through the lighting junction box, use the blunt cut power cable included in your kit. Or, if you ordered a cable with a connector, you can use wire cutters to cut off the connector before connecting to the junction box.

1. Starting at the 7-way connector at the front of the trailer, follow the lighting harness until you reach/find the junction box. Trace the trailer wiring harness to where it connects to a junction box. Remove the cover of the junction box to expose the wiring. Find the blue ABS power wire.
2. Using the supplied ring terminals, connect the blue power wire on the end of the trailer scale power cable to the blue ABS wire in the junction box. Connect the white ground wire on the end of the scale power cable to the white ground wire in the junction box.
3. Route the power extension cable along the frame of the trailer toward the location where the scale is installed. If possible, route along an existing wiring harness. If the trailer has a sliding suspension you **must** use an existing wiring harness or umbilical to avoid damaging or breaking the cable.
4. Secure the cable loosely to the frame using zip ties.
5. Connect the end of the power extension cable to the power interface cable. Make sure the cable is under no strain and is not bent.

LoadMaxx Power and ComLink Cable Installation Guide

Basic Components		Optional Components		
<p>LoadMaxx P/N: 1034303</p>  <p>PORT A</p>	<p>Interface Cable P/N: 104154075</p> 	<p>Power Cable P/N: 104300048 OR P/N: 104300047</p>  <p>BLUNT-CUT</p>	<p>ABS-T Connector P/N: 104304046</p> 	<p>ComLink Cable P/N: 101725046</p> 
<p>STEP 1</p>  <p>Plug interface connector A into LoadMaxx Port A.</p>	<p>STEP 2</p>  <p>Plug interface connector B into power cable connector C.</p>	<p>STEP 3</p>  <p>Plug power cable connector D into ABS T-Breakout connector.</p>		
<p>STEP 1</p>  <p>Plug interface connector A into LoadMaxx Port A.</p>	<p>STEP 2</p>  <p>Plug interface connector B into power cable connector C.</p>	<p>STEP 3</p>  <p>BLUNT-CUT</p> <p>Blunt-Cut attaches to Junction Box.</p>	<p>NOTE: For Blunt-Cut installs with the optional ComLink cable components, follow the optional ComLink cable install through STEP 3 and then attach the Blunt-Cut to the junction box.</p>	
<p>STEP 1</p>  <p>Plug interface connector A into LoadMaxx Port A.</p>	<p>STEP 2</p>  <p>Plug interface connector B into ComLink connector E.</p>	<p>STEP 3</p>  <p>Plug ComLink connector F into power cable connector C.</p>	<p>STEP 4</p>  <p>Plug power cable connector D into ABS T-Breakout connector.</p>	

ABS

JUNCTION BOX

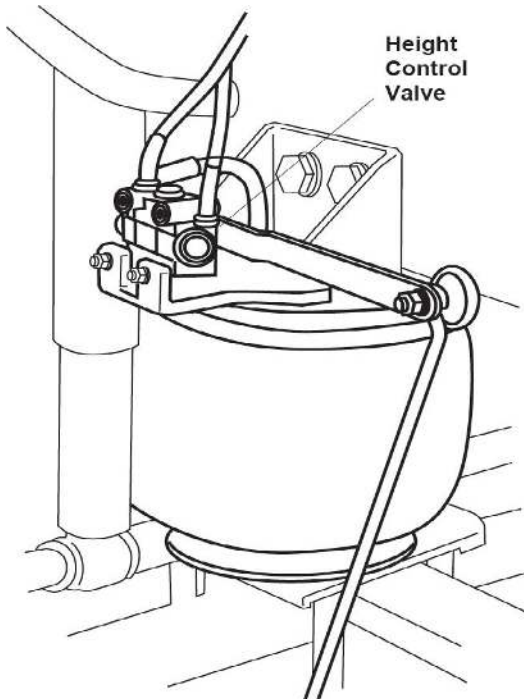
COMLINK

Installing Air Sensors

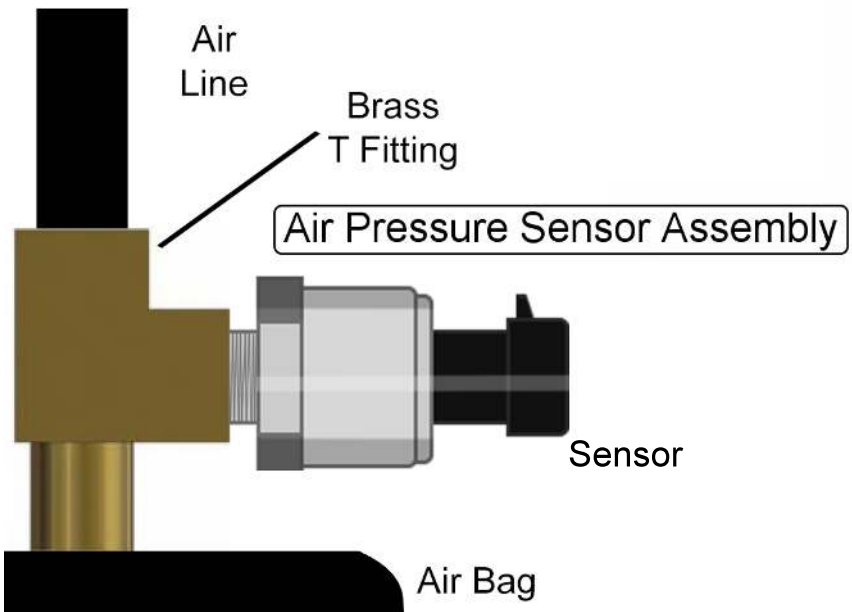
Note: Avoid dropping sensors. Dropping can cause the sensors to fail immediately or shorten their lifespan.

Note: This process will be repeated for both air sensors.

1. Locate the height control valves and the air bags they control. Full and dual trailers require two air sensors to be installed, so you will install one sensor on each height control valve.
2. Follow the airline from the height control valve to the top of the air bag. The air sensor will be installed here.
3. Detach the airline connection from the top of the air bag.
4. Insert the brass T fitting provided in your trailer kit into the top of the air bag and tighten securely.



5. Insert the airline into the top of the T fitting.
6. Connect the airline fitting to the side of the brass T fitting and tighten securely.
7. Insert the air sensor into the airline fitting. See diagram of the T fitting and sensor set up below.
8. Repeat steps 4-7 for the second air sensor.



Routing Cables

Depending on whether you are installing LoadMaxx on a trailer with dual height control valves or on a full trailer, the process of routing sensor cables will differ slightly. Follow the instructions in the applicable section.

Routing Sensor Cables for Dual HCVs




1. Find the two sensor cables provided in your scale kit and connect each to the air sensors you installed earlier.
2. Route the two cables along the axle and the frame of the trailer toward the location you chose earlier for the scale. Leave enough length to connect the sensor cable to the interface cable. If at all possible, route along an existing wiring harness. Be careful to avoid routing along pieces of the frame that may move or cause wiring to rub.
3. Secure the cables loosely to the frame using zip ties.
4. Connect the end of the sensor cables to the two three-pin connectors on the interface cable. Make sure all cables are under no strain and are not bent.
5. Tighten and trim all zip ties.

Routing Sensor Cables for a Full Trailer

1. Find the two sensor cables provided in your scale kit and connect each to the air sensors you installed earlier.
2. Route the two cables along the axle and the frame of the trailer toward the location you chose earlier for the scale. Leave enough length to connect the sensor cable to the interface cable. If at all possible, route along an existing wiring harness. Be careful to avoid routing along pieces of the frame that may move or cause wiring to rub.
3. Secure the cables loosely to the frame using zip ties.
4. Connect the end of the sensor cables to the two three-pin connectors on the interface cable. Connect the sensor cable for the *front* axle group to Sensor A, and the sensor cable for the *rear* axle group to Sensor B.
5. Tighten and trim all zip ties.

Checking for Correct Installation

After you finish installing your LoadMaxx scale, follow the steps below to make sure you have installed the scale correctly. This will prevent the end user from running into issues when calibrating and using the scale. **You should see 2 sensors in your A/D readings in Scale Diagnostics. If not, navigate through the setup wizard. See your user guide for step by step instructions.**

1. Turn on your scale and select the image of a wrench  to go to the Setup menu.
2. Select the image of a medical bag  to go to Scale Diagnostics.
3. Press the down arrow  until you see information on A/D readings. The screen should read "EXT A and EXT B" and show a number for each.
4. From your tractor cab, empty the height control valve on your trailer and refill it. Wait 15 to 30 seconds and check the A/D readings on your trailer again.
5. Repeat Step 4 above again.
6. If the A/D readings are appropriate (see table below) in all three instances, your trailer scale has been installed correctly. If they are inaccurate, check all connections and make sure they are securely attached.
7. Check the height control valve to see if it is loose or broken, which can cause inaccurate weight readings.

A/D Reading	Should Reflect
0 or 409	Air bag deflated, no sensor, or bad cable, no weight - equivalent to 0 pounds.
570 to 1200	Appropriate for an empty trailer.
1400 to 2100	Appropriate for a trailer loaded to full capacity.

Limited Warranty

For product failures due to material or manufacturing defects, Air-Weigh will replace or repair all components for up to 3 years from shipment date to the end-user Air-Weigh customer. These three-year components include: Displays, ComLinks, Sensors, Power Cables, Sensor Assemblies, Sensor Harnesses, and all other associated external components. Air-Weigh assumes no responsibility for administering warranty claims directly with any third party end users.

The responsibility of Air-Weigh under this warranty is limited to the repair, replacement, or credit of the defective part or assembly.

This warranty does not cover incidental or consequential damage to persons or property caused by use, abuse, misuse, or failure to comply with installation or operating instructions. This limited warranty does not apply to any product that has failed due to accident, abuse, alteration, installation not consistent with printed installation instructions, improper maintenance, improper operation, or as a result of system integration or installation not explicitly approved in writing by Air-Weigh.

Air-Weigh and its resellers shall have no responsibility or liability for damages if the purchaser or any other person alters the vehicle incorporating Air-Weigh products. This limited warranty shall not apply to any product that has been repaired or altered by anyone not employed by Air-Weigh or not operated in accordance with the manufacturer's printed material delivered with this product.

Air-Weigh hereby expressly disclaims any and all implied warranties of any type, kind of nature whatsoever, and particularly any implied warranty of merchantability or fitness for a particular purpose not expressly stated by Air-Weigh in its printed material delivered with its products.

Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in the terms and conditions of this Warranty may not apply. This warranty gives you specific legal rights and you may also have other rights, which vary state to state.

May be covered by U.S. Patent Nos. 5478974, 5780782, 7478001
Foreign Patent Nos. 260494, 677998, 2122766

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Procedure For Warranty Claims

ALL customers should first contact Air-Weigh Customer Support Department at (888) 459-3247 for questions regarding the use, operation, repair or return of any Air-Weigh product.

In the event Air-Weigh requests to examine the product prior to disposition OR for repair or replacement, Air-Weigh requires a Return Material Authorization (RMA) number be issued before the item is returned. Customer Support will issue the RMA number. Please reference this RMA number in all correspondence.

Claimed items shall be shipped freight pre-paid to:

Air-Weigh
Customer Support Department
1730 Willow Creek Circle, Suite 100
Eugene, Oregon 97402, USA

The Air-Weigh RMA number must appear on the outside of the return packaging. Air-Weigh shall examine returned material within 30 days after receipt, or sooner if mutually agreed upon. If Air-Weigh determines that the part or assembly was defective in material or workmanship and within the warranty period, Air-Weigh will repair or replace the part or assembly and return freight pre-paid. In the event Air-Weigh determines that the part or assembly cannot be repaired or replaced and is within the warranty period, a credit not to exceed the purchase price will be issued to the Air-Weigh customer.

For our customers using purchase orders Air-Weigh will process a credit memo and notify the customer by email or fax. The customer will process a corresponding debit memo and notify Air-Weigh accordingly.

If the part or assembly received by Air-Weigh does meet the requirements of the warranty program set forth above, at the Air-Weigh customer's request the part or assembly will either be discarded, returned freight collect, or repaired or replaced at Air-Weigh customer's expense and returned freight collect.

Notes

Notes

Air Weigh

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