LIPPERT COMPONENTS®

SWAY COMMAND® Tow Control Technology BY Trailair

Sway Command®
(AU) BY TRAILAIR
Installation and Owner's Manual
(For Aftermarket Applications)

The use of Sway Command® is only supported/allowed for use on trailers meeting product specifications and trailers with approved brake control modules (BCMs) and integrated trailer brake control modules (ITBCMs). See trailer requirements and approved BCM and ITBCM Lists at:

https://www.lci1.com/sway

⚠WARNING

- **The Sway Command system installed on this trailer may be incompatible with certain manufacturers' brake controllers.**
- **Please refer to the website www.lci1.com/sway for the most current list of brake controllers compatible with Sway Command. Also, refer to your vehicle owner's manual for any further instructions on your vehicle's brake controller function.**
- **Failure to determine compatibility between your brake controller, your tow vehicle and Sway Command may result in the sudden loss of brake controller braking, which can result in a loss of vehicle control and cause serious injury or property damage.**
- **Do not submerge the controller. The Sway Command is not designed to be submerged under water (Water Crossing). Submersion will cause unwarrantable damage.**

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Introduction

The Sway Command® Tow Control system is a self-contained trailer stability control module that detects undesirable trailer movement from external sensors and mitigates it by adaptively applying a variable braking voltage to the left and right trailer electric brakes. This system is currently only for use on trailers.

The Sway Command® Tow Control system uses sensors to detect excessive trailer sway. The system activates automatically and applies voltage proportional to the amount of sway detected to the electric trailer brakes. This dampens the sway and slows the trailer down. When excessive sway is detected, the light pod will blink red and the tow vehicle operator may feel the trailer brakes activate until the sway is dampened.

Causes of Sway

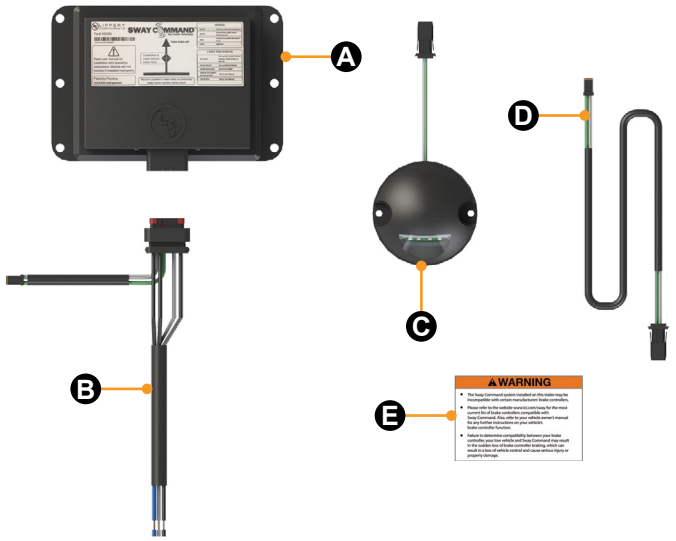
- When the tongue weight is less than 10% of the trailer's weight, it has a natural tendency to sway.
- Improper weight distribution hitch adjustments.
- Crosswinds.
- A transfer truck passing from the rear of the trailer.
- Descending inclines.
- Towing speeds.
- Tow vehicle not properly matched for the trailer.
- Improper loading, overloading and poor weight distribution on the trailer.
- Incorrect tire inflation.

⚠ CAUTION

ALWAYS INFLATE TIRES PER MANUFACTURER'S SPECIFICATIONS. IN ADDITION TO CAUSING SWAY, IMPROPER TIRE INFLATION MAY CAUSE PREMATURE TIRE WEAR, POOR HANDLING, REDUCED FUEL ECONOMY OR BLOWOUTS. CHECK TIRE INFLATION WEEKLY WHILE THE TIRES ARE COLD BEFORE OPERATION.

NOTE: The Sway Command System is not a replacement for using sway control bars when towing a trailer. Sway control bars should be used in conjunction with the Sway Command System.

Parts List



Letter	Part#	Description
	380605	Sway Command Kit (Includes 1 of A - E)
A	664935	Sway Command Controller
B	389951	Sway Command Main Harness
C	380597	Sway Command Light Pod
D	390066	Sway Command Light Pod Extension Harness
E	671639	Sway Command Warning Sticker

NOTE: Part numbers are shown for identification purposes only. Not all parts are available for individual sale. All parts with a link to the Lippert Store can be purchased.

Resources Required

- #12 x ¾" hex head screws (corrosion resistant) (4)
- #12 lock washers (corrosion resistant) (4)
- Cordless or electric drill or screw gun
- #8 x 1" square head wood screws (2)
- #8 - 18 x ¾" self-tapping hex head screws (2)
- Paint marker/grease pencil
- Appropriate drive bits
- Torpedo level
- 5⁄32" drill bit

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Installation

Mounting Controller

Never drill into the Sway Command controller or compromise the pressure equalizer plug hole on the back of the controller. Doing so voids the warranty and could damage the controller.

NOTE: The Sway Command controller is water-resistant, but not waterproof. Do not spray high pressure water directly at the controller.

⚠WARNING

IF THE CONTROLLER IS FITTED TO A CHASSIS SHORTER THAN 8" IN HEIGHT, A PROTECTIVE BRACKET/SHIELD MUST BE FITTED TO PROTECT THE CONTROLLER FROM DAMAGE THAT MAY BE CAUSED BY EXCESS WATER SPRAY AND ROAD DEBRIS. REFER TO FIG. 2.

NOTE: The controller must be mounted to a frame crossmember between 4' and 10' behind the hitch point.

NOTE: The controller must be mounted in a level condition, centered on the crossmember, and according to the orientation arrow on the label **(Fig.2A)**.

NOTE: The controller **MUST** be mounted facing the rear of the trailer.

NOTE: The controller will not operate correctly if mounted improperly.

1. Place the Sway Command warning sticker on the outside of the A-frame of the trailer **(Fig.1A)**.

2. Place the controller **(Fig.2A)** on top of the third party-supplied protective bracket **(Fig.2B)**.

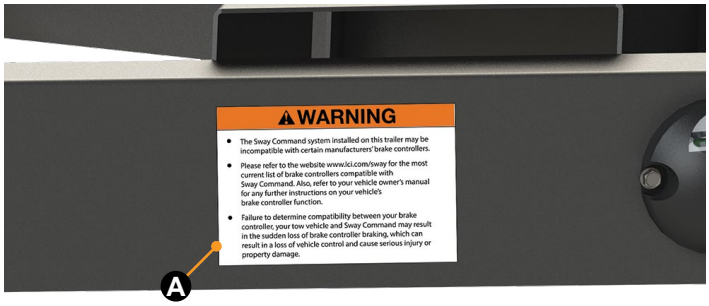


Fig.1

A. Align the top of the controller with the top of the bracket, then center align the two items.

B. Place the bracket and controller on the side face of the crossmember **(Fig.2C)** with the tops of the bracket and controller aligned with the top of the crossmember.

C. The controller must be mounted with the orientation arrow pointing up towards the floor of the trailer **(Fig.2A)**.

3. Make sure the controller is level (parallel) with the front crossmember of the trailer frame.

A. Mark the screw hole locations on the protective bracket **(Fig.2D)** using the controller as a template.

Fig.2

B. Set the controller aside.

4. Using a drill with the 5⁄32" drill bit, drill pilot holes through the bracket and crossmember at the four locations **(Fig.2D)** made in step 3.

5. Using four #12 x ¾" screws with lock washers **(Fig.2D)**, attach the controller **(Fig.2A)** and protective bracket **(Fig.2B)** to the crossmember **(Fig.2C)**.

6. Make sure controller orientation is correct **(Fig.3)**.

Fig.3

Sway Command Wiring

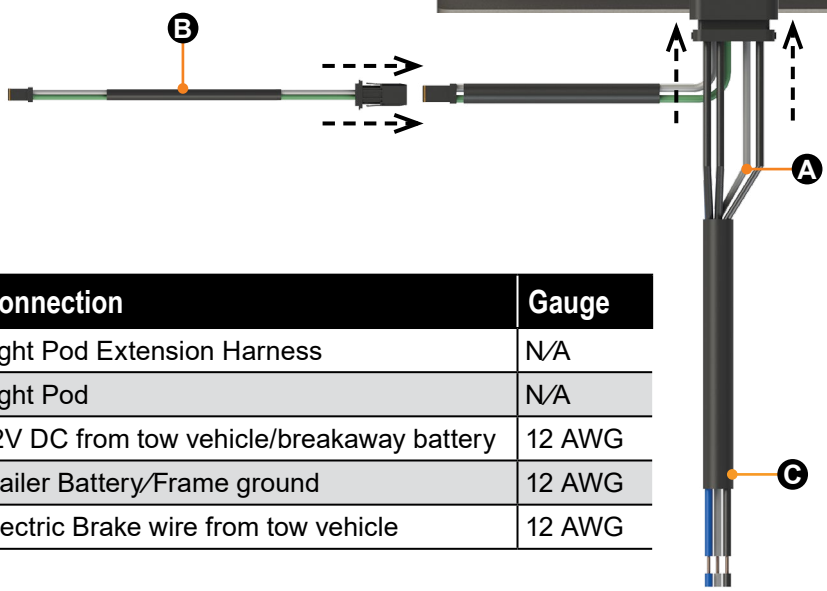
1. Connect the Sway Command main wire harness **(Fig.4A)** to the port on the Sway Command controller.

2. Connect the light pod extension harness **(Fig.4B)** to the two-pin connector on the main harness.

3. Connect the loose wires **(Fig.4C)** on the main wire harness as described in the following table.

NOTE: All wiring connections should be made at the trailer junction box according to RVIA codes.

NOTE: LCI recommends the use of a 20A user-replaceable/sealed fuse between the junction box power connection and the black Sway Command power connection.



Sway Command Wire	Connection	Gauge
2-Pin Connector	Light Pod Extension Harness	N/A
Light Pod Extension Harness	Light Pod	N/A
Black	12V DC from tow vehicle/breakaway battery	12 AWG
White	Trailer Battery/Frame ground	12 AWG
Blue	Electric Brake wire from tow vehicle	12 AWG

Fig.4

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Sway Command Light Pod Mounting

The light pod should be mounted in a location that can be easily seen by the tow vehicle operator. If the light pod is mounted to the A-frame of the trailer **(Fig.5)**, make sure it is mounted on the driver's side of the trailer for clear visibility. Optionally, the light pod can be mounted to the outside, front wall of the trailer **(Fig.6)** and positioned for visibility by the tow vehicle operator.

NOTE: The light pod can be fastened to the A-frame at any time, but can only be connected after the A-frame loom has been routed.

Mounting the light pod on the A-frame:

1. Determine the proper mounting location for the light pod.

2. Fasten the light pod in place next to the A-frame loom hole with two #8 - 18 x ¾" self-tapping screws **(Fig.5A)**.

3. Connect the light pod to the extension harness **(Fig.5B)** that was previously connected to the Sway Command main harness.

NOTE: The light pod wiring and connection point **(Figs.5C and 6C)** can be coiled into the cavity on the back side of the light pod for a cleaner appearance if preferred.

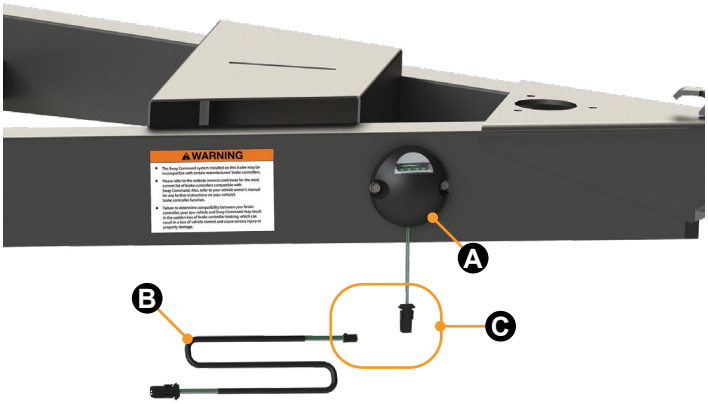

Fig.5

Mounting the light pod on a trailer wall:

1. Determine the proper mounting location for the light pod.

2. Attach the light pod to the trailer wall with two #8 x 1" square head wood screws **(Fig.6A)**.

3. Connect the light pod to the extension harness **(Fig.6B)** that was previously connected to the Sway Command main harness.

4. Make sure all wall penetrations are sealed to prevent water infiltration.

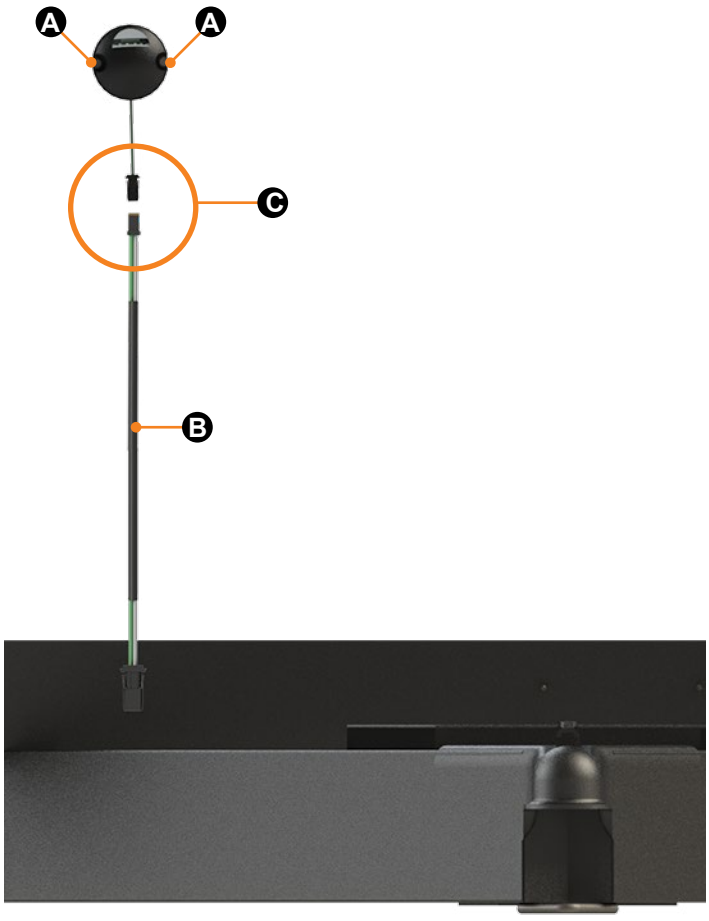

Fig.6

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Sway Command Compatible Tow Vehicle Brake Control Modules

The tow vehicle brake control module (BCM) applies brakes to the trailer when the tow operator presses on the tow vehicle brake pedal or activates a manual switch on the tow vehicle BCM. A tow vehicle BCM may be OEM factory installed or an aftermarket install.

NOTE: LCI attempts to provide compatibility with aftermarket BCMs and integrated trailer brake control modules (ITBCMs) but is unable to anticipate design changes by other manufacturers. LCI is continually testing BCMs and ITBCMs and advises you to visit www.lci1.com/sway for a complete and updated list as the website listing is periodically revised as further testing is completed and approved.

⚠WARNING

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- **Please refer to the website www.lci1.com/sway for the most current list of brake controllers compatible with Sway Command. Also, refer to your vehicle owner's manual for any further instructions on your vehicle's brake controller function.**
- **Failure to determine compatibility between your brake controller, your tow vehicle and Sway Command may result in the sudden loss of brake controller braking, which can result in a loss of vehicle control and cause serious injury or property damage.**

Prior to Operation

⚠WARNING

FAILURE TO FOLLOW THE GUIDELINES BELOW MAY RESULT IN DEATH, SERIOUS PERSONAL INJURY, OR PROPERTY DAMAGE.

1. Sway Command must be installed as detailed in the Sway Command Installation section. Sway Command will not operate correctly if improperly installed.

2. Trailer brakes must be adjusted per OEM specifications to ensure proper trailer braking. The tow operator must ensure trailer brakes are properly adjusted. Sway Command may not operate properly with improperly adjusted brakes. Discuss brake adjustments with the trailer OEM.

3. Trailer brakes must be burnished to ensure proper trailer braking. New electric brakes may contain a coating to prevent rust during shipping. An unburnished brake will reduce trailer braking capacity. The tow vehicle operator must ensure trailer brakes are properly burnished to ensure brakes are effective in slowing the tow vehicle. Sway Command may not operate properly with improperly burnished brakes. Discuss brake burnishing with the trailer OEM.

4. Improperly adjusted tire pressure can reduce braking effectiveness and can be a source of sway. Tire pressure must be adjusted to the tire manufacturer's recommended pressure.

5. Tires must have useful tread life left to ensure proper braking. Tire tread below useful life could cause the trailer to skid during braking. The tow operator must ensure tires have useful tread left.

6. Improperly loaded trailers can be a source of sway. At higher speeds, if the trailer naturally sways, the tongue weight and/or trailer weight distribution must be adjusted. Sway Command could activate frequently in this situation causing excessive brake wear. Ensure proper hitch tongue weights are observed for the trailer.

7. The tow operator must ensure Sway Command is operational by observing the Sway Command light pod status. Ensure the light pod is illuminated green. See Sway Command Status light for status other than green.

8. The operator should operate the tow vehicle as safely as driving and weather conditions allow. Sway Command relies on braking and tire grip to mitigate sway, and overall effectiveness of the system may be reduced or impaired in slippery/icy driving conditions.

Sway Command Controller Operation

1. When Sway Command detects excessive sway, the light pod will blink red and the tow operator may feel the trailer brakes activate until the sway is dampened.

2. Sway Command will "wake up" if it senses external brake activations. During wake up, Sway Command performs self-checks and alternately flashes the light pod lights green and red.

NOTE: The Sway Command light pod will be green if no issues are detected. If an issue is detected, the light pod will blink green once, followed by a number of red flashes. See troubleshooting for a description of the various blink codes.

3. Sway Command will enter a low power mode after 10 minutes when it senses no tow vehicle brake activation or movement.

4. The Sway Command light pod will turn off when it powers down.

Light Codes and Troubleshooting

In the event a tow vehicle brake controller detects a fault after Sway Command detects a sway event, manually activate the tow vehicle brake controller a few times to clear the fault.

Light Flash	Why?	What Should Be Done?
Off	Unit is not powered and not active.	Unit is in low power. Activate tow vehicle brake to wake unit.
		Unit is not connected to 12V DC power supply. Verify wiring.
Green, Red, Repeat	Wake up self-checks in progress.	After a few seconds, the unit will complete self-checks, and set the lights green if unit is ready, or a flashing code if an issue is found.
Green Solid	Unit is awake and monitoring for sway.	Every five seconds there will be a brief time the green LED turns off for a fraction of a second. This indicates unit is functional.
Red Blink (1/2 second on, 1/2 second off, repeats)	Sway Command detected sway event and is activating brakes.	After sway subsides, light will return to green.
Green, 2 Red	A short to 12 volt detected.	Verify the break away switch is not activated.
		Verify blue brake wire not shorted to 12 volts.
Green, 3 Red	Not connected to trailer brakes.	Verify the blue brake wire is connected to the trailer brakes.
Green, 4 Red	A short to ground detected.	Verify the blue brake wire is not shorted to ground or trailer frame.
Green, 5 Red	Low voltage detected.	Verify tow vehicle and tow battery are at 12 volts.
Red Solid	Unit is not functional.	Disconnect harness, wait 10 seconds. Connect harness. If light comes on solid red, unplug unit and contact service department.
Red Fast Blink (100ms on, 100ms off, repeats)		

Notes

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