



LIPPERT
COMPONENTS®



Sway Command®

PREPPED UNIT

Installation and Owner's Manual

(For Aftermarket Applications)

IF THIS STICKER IS NOT ON THE FRONT WALL OF THE TRAILER, IT HAS NOT BEEN PREPARED AND IS NOT APPROVED FOR THIS INSTALLATION.



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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.**



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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 down the trailer. 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.

⚠ WARNING

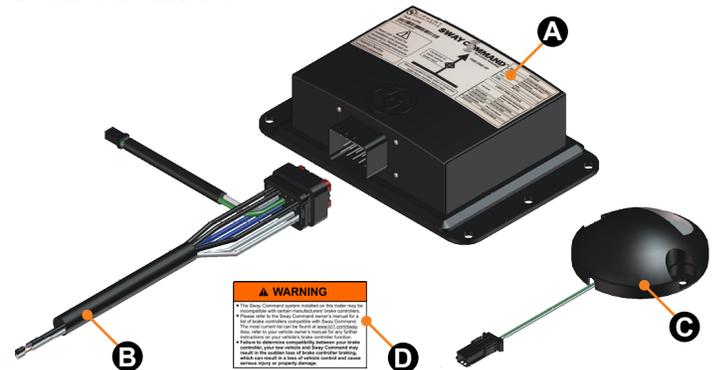
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⚠ CAUTION

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 WHEN 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
	405150	Sway Command Kit (Includes 1 of A, B,C and D)
A	664935	Sway Command Control Module
B	389951	Sway Command Main Harness
C	380597	Sway Command Light Pod
D	671639	Sway Command Warning Sticker

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Installation

Resources Required

- Cordless or Electric Drill or Screw Gun
- Hook Tool or Awl with Bent Tip
- 1" Wide Butyl Tape x 12" Long
- 1/4" Washer HD Lag Screws (4)
- #8 x 1" Phillips HD Screws (2)
- 3/8" Socket Bit for Screw Gun
- #10 10-12 GA Ring Terminal
- Wire Crimpers/Strippers
- 3/8" Socket and Ratchet
- Appropriate Drive Bits
- 1 1/4" Hole Saw
- Red Wire Nut
- Putty Stick

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



Fig.1

2. (Fig.2) shows the Sway Command controller and the light pod. Locate the Sway Command light pod sticker on the front of the trailer (Fig.3).



Fig.2



Fig.3

NOTE: The Sway Command controller will be referred to as "the controller" for the remainder of these instructions.

3. The light pod sticker (Fig.3) identifies the mounting location for the light pod. A 1 1/4" hole will need to be drilled in this location.

4. Drill the 1 1/4" diameter hole using the center circle on the sticker as your guide (Fig.4).

5. (Fig.5) shows the finished hole drilled only partially through the wall. There is a wire and connector inside the front wall that will be damaged by drilling too deep.

NOTE: If the trailer has an outside storage door (on the roadside sidewall) at the front of the trailer, look inside to check for a wire harness with a connector for the light pod. If there is a harness that connects to the light pod, when the hole is drilled in Step 4 (Fig.4), the hole needs to be drilled completely through the front wall and into the storage compartment.

⚠ CAUTION

DO NOT DRILL THE HOLE COMPLETELY THROUGH THE FRONT WALL: DRILL ONLY THROUGH THE SHEET METAL/FIBERGLASS AND THE WOOD BACKER IMMEDIATELY BEHIND IT.



Fig.4

6. Fish out the wire and connector inside the front wall (Fig.6) using a hooked tool (such as a bent awl) to reach up in the wall.



Fig.5



Fig.6



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7. Prep the back side of the light pod with butyl tape as shown (Fig.7 and 8).

8. Plug the connector on the light pod to the one fished out of the inside of the wall (Fig.9).



Fig.7



Fig.8

9. The connector and wiring should be tucked straight up inside the wall, away from the mounting screws for the light pod.

10. Place the light pod over the sticker with LEDs facing upward as shown (Fig.10). Secure the pod to the front wall using two #8 x 1" screws (Fig.10).



Fig.9



Fig.10

11. Trim all the excess butyl tape from around the light pod (Fig.11).



Fig.11

12. The controller should be mounted as high up on the front frame rail as possible, and within 6 inches of the centerline (Fig.12 and 13).

NOTE: In some cases the spare tire is mounted inside the A-frame leaving insufficient space for the controller on the front of the frame rail. A bracket has been provided behind the front frame rail on which to mount the controller.

NOTE: The controller should also be mounted in as level a position as possible.

13. Secure the controller with the four 1/4" hex head lag screws and the 3/8" socket bit (Fig.13). DO NOT over-tighten the screws as this may cause the controller housing to crack.

14. Unplug the large harness from the controller.

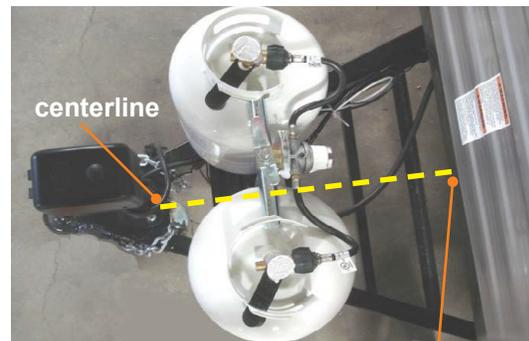


Fig.12

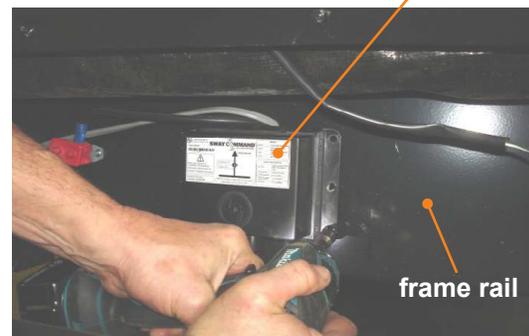


Fig.13



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15. move the cover on the junction box next to the A-frame rail (Fig.14). There is a 20A breaker beside the wire junction box (Fig.15).

16. There are 3 wires on the controller harness (black, blue and white). Strip back the black wire (1/4"), and install a #10 10-12 GA ring terminal on this wire.

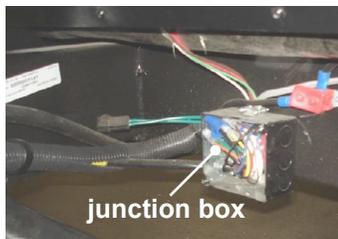


Fig.14



Fig.15

17. Attach the black wire to the protected side stud (should be silver if the breaker is installed properly) of the 20A breaker located beside the junction box (Fig.16). Use a 3/8" socket to remove the nut from the circuit breaker stud and re-tighten it after the terminal is added.

18. Loosen the strain relief screws on top of the junction box and insert the blue and white wires from the controller harness.

19. Re-tighten the strain relief screws. Remove the large blue wire nut from the bundle of white wires inside the junction box (Fig.17).



Fig.16

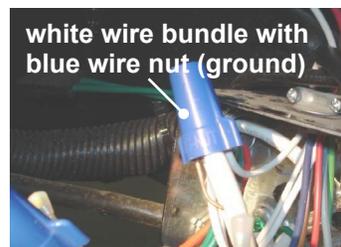


Fig.17

20. Add the white wire (stripped to 3/4") from the controller harness to the white wire bundle and re-install the blue wire nut.

21. Locate the group of blue brake wires connected with a copper crimp connector or wire nut (Fig.18).

22. Cut off the copper crimp connector, strip wires 9/16" and connect with the red wire nut.

23. Attach the blue wire from the controller harness, to the group of blue brake wires with the red wire nut (Fig.19).



Fig.18



Fig.19

24. Tuck the wires inside the junction box and re-install the lid on the junction box. Ensure no wires get pinched while reinstalling the lid on the junction box. Locate and pull down the small harness under the front of the trailer (Fig.20).

25. Plug the large harness into the controller and plug the small harness (Fig.20) into the small connector on the controller harness (Fig.21).



Fig.20

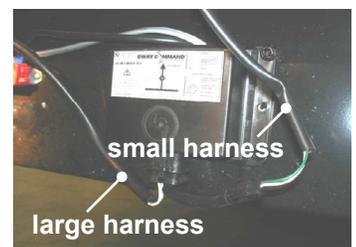


Fig.21



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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 brake control modules and integrated trailer brake control modules (ITBCM) 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.

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Prior to Operation

⚠ WARNING

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

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

1. 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.
2. 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.
3. 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.
4. Tires must have useful tread life left to ensure proper braking. Tire tread below useful life could skid during braking. The tow operator must ensure tires have useful tread left.
5. 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.
6. 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.
7. The operator should operate the tow vehicle 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.



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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. 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 DC 12V 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 5 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 volt.
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)		

