

ASCEND™

TRAILER BRAKE CONTROL



Display



Control



Brain Box



Control Bracket (optional)

INSTALLATION PRECAUTIONS

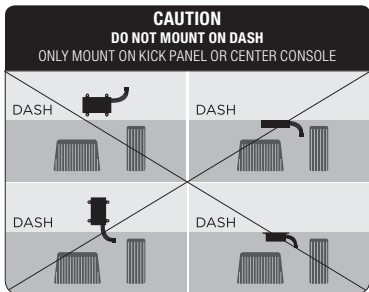
- Braking capacity is for 2, 4, 6 or 8 trailer brake applications.
- This brake control will apply the trailer brakes while in reverse.
- This brake control is inertia activated. When the vehicle is not moving, the brake control will not automatically apply the trailer brakes. In this event, the manual brake must be depressed to actuate the brakes.
- This brake control is not reverse polarity protected. Reversing the connection to the vehicle battery or the breakaway battery on the trailer will damage the brake control.
- This brake control is designed to operate trailers with electric or electric/hydraulic brakes.
- For best results when installing components with double sided tape, make sure to prep the area by cleaning it with rubbing alcohol first.

INSTALLATION INSTRUCTIONS

- **Brain Box Mounting:**
Locate an area under the vehicle dash on center console or kick panel to mount the Brain Box, making sure it is not in a position that interferes with the emergency brake or pedal operation. Orientation of the Brain Box should be where [SIDE A] of the Brain Box mounts against the kick panel or center console. Allow enough room to plug in the brake control harness and peripheral devices easily. Mount with foam tape, cable ties or self-tapping screws (provided).



KICK PANEL



CAUTION

DO NOT MOUNT ON DASH

ONLY MOUNT ON KICK PANEL OR CENTER CONSOLE

Control and Display Mounting:

1. Sit in the driver's seat and decide where you want to install the Display and Control. Make sure that the Display is within sight lines that will allow you to locate it easily while driving. The Control should be mounted in a position that it is within easy reach while driving.
2. Once the installation locations are determined, bring the Display to the area it will be mounted and begin to run the wire either behind vehicle panels or behind weather stripping down to the Brain Box. Use double sided tape to secure the Display to desired mounting location. Apply tape to the bottom of the display bracket, or remove the display bracket and attach the tape directly to the back of the display.

3. With the Control in the desired location, run the wire to the Brain Box using the vehicle's dash seams and panels to conceal the wire. Use double-sided tape to secure the Control to desired mounting location.

[Optional: Use Control Bracket and attach to dash with screws or double sided tape. Optional mounting bracket flexes to allow easy mounting to curved surfaces.]

4. With all wires routed down to the Brain Box location, plug all peripheral wires into the Brain Box.

HOW TO ATTACH TO VEHICLE FACTORY TOW PACKAGE

If your vehicle came equipped with a factory tow package, brake control function wires may exist under the vehicle dash. Consult vehicle manual or call for location. Purchase a vehicle specific brake control connector and simply plug into the factory tow package plug, or splice the wires to the function wires under the dash.

Black wire – positive terminal (+) on battery
Red wire – cold side of stop lamp switch or brake light
White wire – ground/negative terminal (-) on battery
Blue wire – trailer electric brakes

BRAKE CONTROL WIRE COLOR		BLACK	RED	WHITE	BLUE
MAKE	MODEL & YEAR	VEHICLE WIRE COLOR			
CHEVY & GMC	2007 (New Style) - 2013	RED	LIGHT BLUE & WHITE	WHITE	DARK BLUE
CHEVY & GMC	1999 - 2007 (Classic Style)	RED	LIGHT BLUE	BLACK	DARK BLUE
DODGE	2009-2012	RED & YELLOW	WHITE & VIOLET	BLACK & DRK GREEN	DARK GREEN
DODGE	2003-2008	RED & WHITE	BLUE & WHITE	BLACK & GREEN	BLUE
DODGE	1997-2002	RED	WHITE	BLACK	BLUE
FORD	F-250 / 350 2009-2013	RED & BROWN	BLUE ORANGE	BLACK & GRAY	BLUE
FORD	F-150 2009-2013	RED OR GRAY	GREEN OR YEL GRN	WHITE & BROWN	BLUE
FORD	F-150 1994-2008	RED	LIGHT GREEN	WHITE	DARK BLUE
TOYOTA & LEXUS	2003-2012	BLACK	GREEN & YELLOW	BLACK & WHITE	BLUE & RED

VEHICLE MANUFACTURER WIRING CODES

For installations on vehicles **WITHOUT** a factory tow package use the following procedure:

1. Be sure to use proper wire gauge when installing your control (12 gauge for electric brakes and positive power, 16 gauge for the stop lamp switch and ground).
2. Connect the white wire directly to the negative post on the vehicle battery. Grounding to any other location may cause intermittent brake control operation or failure.
3. Attach 20-amp circuit breaker (for 6 or 8 brake use 30-amp) or in-line fuse to the positive terminal on the vehicle's battery. Route black wire from the brake control to the fuse or breaker.
4. Splice the red wire into the cold side of the vehicle's stop lamp switch located by the brake pedal. Find the wire by using a circuit tester and probing for the wire that powers the vehicle stop lamps when the brake pedal is pressed.

5. Route the blue wire from the brake control to the vehicle side towing connector at the rear of the tow vehicle.

NOTES

- Some late model Ford/Mercury trucks and sport utility vehicles have 2 or more stop lamp switch wires. For proper operation, use the light green wire. The other wire is red with a green stripe. This wire goes directly to ground when not in use. Splicing into this wire will short circuit your brake control and possibly damage the unit.
- For Chevrolet vehicles 1999-06, if your vehicle does not have a towing package, only the ground and stop lamp switch will be active in the function wires under the dash. The electric brake wire and 12-volt power lead will be terminated outside the firewall. These will have to be routed to the trailer connector and battery on the vehicle.
- For Chevrolet vehicles 2007 New Body Style-13, only the ground and stop lamp switch will be active in the function wires under the dash. The electric brake wire and 12-volt power lead will be terminated outside the firewall. These will have to be routed to the fuse block on the vehicle. 20-amp fuses will need to be installed to power these functions.
- For Dodge 2005-06, to find the cold side of the stop lamp switch, you must have the key in the "on" position.
- Ford and Dodge tow packages come with a 20-amp battery feed wire system that will accommodate 2 and 4 brake trailer magnets. An upgrade to a 30-amp (12 gauge) battery wire system will be needed for 6 brake systems.

OPERATING AND SETTING YOUR CONTROLLER



1. RED DOT

A red dot on bottom-right hand corner of the digital display indicates trailer is connected.



(blank)

2. BLANK

A blank display (no dot) indicates trailer is not connected.



3. POWER

Power adjustment buttons (+/-) on top of the control adjust power sent to the trailer brakes. Pressing the (-) button decreases power. Pressing (+) increases power. Power will be displayed as a percentage on the digital display from 5 to 99 in increments of 5%.



4. SENSITIVITY

This feature makes your trailer braking response more or less sensitive. A setting of 1 indicates least sensitive. A setting of 7 indicates most sensitive. Adjust the sensitivity by pressing the button labeled "S" on the side of the unit.



5. SHORT CIRCUIT

SC indicates that a short circuit has occurred

TESTING / ADJUSTING THE BRAKING RESPONSE:

Connect to your trailer and test drive on a dry open area at low speed (20 to 25 mph). Apply vehicle brakes aggressively.

1. If trailer brakes lock-up, adjust down the power setting to just below brake lock-up by pressing the (-) power button.
2. If the braking performance from the trailer feels as if it is pushing the tow vehicle, adjust the power setting higher by pressing the (+) power button. Repeat process until smooth braking is obtained.



HUSKY
TOWING PRODUCTS

LIMITED LIFETIME WARRANTY

Hopkins Manufacturing Corporation warrants Ascend™, Quest™, Escort™ and Escort Digital™ brake control products to be free from defects in material and workmanship, under normal use and service, for the original buyer's lifetime from the date of original purchase.

This warranty does not cover, and Hopkins Manufacturing Corporation is not liable for, the cost of repair or replacement of parts which have been subjected to misuse, negligence, accident, improper installation, modification, or normal deterioration due to wear and exposure, or defects caused by unauthorized repairs. THE ORIGINAL BUYER'S EXCLUSIVE REMEDIES UNDER THIS LIMITED WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT (AT THE OPTION OF HOPKINS MANUFACTURING CORPORATION) OF THE DEFECTIVE PRODUCT OR PART. The repair or replacement of the product or part under warranty will be made by Hopkins Manufacturing Corporation without charge for parts or labor.

UNDER NO CIRCUMSTANCES WILL HOPKINS MANUFACTURING CORPORATION BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGE TO OR LOSS OF OTHER PROPERTY OR EQUIPMENT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. In order to obtain performance under this warranty, return the defective product, postage prepaid, along with dated proof of purchase, to Hopkins Manufacturing Corporation, 428 Peyton, Emporia, Kansas 66801-1157. This warranty does not cover shipping and delivery charges to or from Hopkins Manufacturing Corporation.