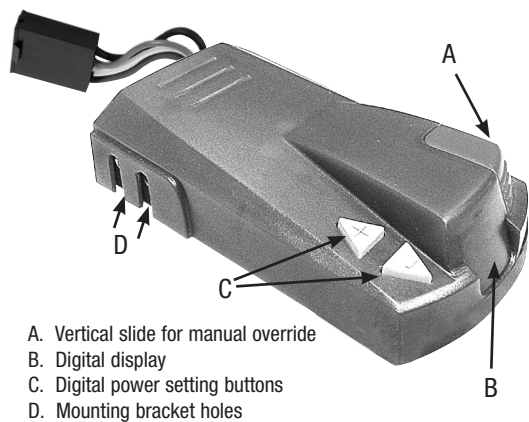


IMPULSE™

Electronic Brake Control

IMPORTANT:
Read the following instructions carefully before installing and/or operating the brake control. If you have any concerns with this product or the installation process, our technical support team can assist you. Call 1-800-835-0129.



- A. Vertical slide for manual override
- B. Digital display
- C. Digital power setting buttons
- D. Mounting bracket holes

INSTALLATION PRECAUTIONS:

- Braking capacity is for 2 and 4 or 6 trailer brake applications.
- This brake control will apply the trailer brakes while in reverse.
- 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 with electric trailer brakes and electric-hydraulic brake systems.

WIRING GUIDE:

The IMPULSE™ came equipped with a quick connector plug wired to the back of the controller.

OPTION: If your vehicle came equipped with a factory tow package, brake control function wires may exist under the vehicle dash (usually found under the driver side dash). Consult vehicle manual or call for location. Purchase a vehicle specific Plug-in Simple!® brake control quick connector and simply plug into the factory tow package plug, or remove the quick connector plug on the brake control and splice the wires to the function wires under the dash.

Plug-In Simple!® Connector Instructions

1. Plug the Hopkins® Plug-In Simple!® connector into the vehicle connector located under dash.
2. Test all Functions.

QUICK INSTALL OPTION

See store personnel to purchase Plug-In Simple!® brake control connector

LIMITED LIFETIME WARRANTY

Hopkins Manufacturing Corporation warrants Agility™, Reliance™, Brake-Force™ and Impulse™ 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.

UNIVERSAL INSTALLATION

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

CAUTION: Wire colors vary by manufacturer. Be sure to wire by function only.

VEHICLE MANUFACTURER WIRING CODES:

VEHICLE	BRAKE CONTROL WIRE	BLUE	BLACK	RED	WHITE
FORD 94-07		BLUE	RED	GREEN	WHITE
CHEV/GM 99-06		DK BLUE	RED	LT BLUE	BLACK
CHEV/GM 07-08		DK BLUE	RED w/BLK	LT BLUE w/WHT	WHITE
DODGE 97-02		BLUE	RED	WHITE	BLACK
DODGE 03-07		BLUE	WHITE w/RED	BLUE w/WHT	GRN w/BLK
NISSAN		BRN w/WHT	RED	RED w/GRN	BLACK
TOYOTA		RED	BLACK w/RED	GRN w/WHT	BROWN

1. Be sure to use proper wire gauge when installing your control (12 gauge for electric brakes, power and ground / 16 gauge for the stoplight switch).
2. Connect white wire to negative post on the vehicle battery. Grounding to any other location may cause intermittent brake control operation or failure.
3. Attach 30 amp circuit breaker 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 red wire into cold side of vehicle's stoplight switch located by the brake pedal. Find the wire by using a circuit tester and probing for the wire that powers the vehicle stoplights when the brake pedal is pressed.
5. Route blue wire from brake control to vehicle side trailer connector.
6. Plug harness into the plug wired to the back of the controller.

IMPORTANT: Please see "vehicle specific instructions" and "special notes" before every installation.

IMPORTANT INSTALLATION TIPS

- Wire color codes vary by manufacturer. Be sure to wire by function only.
- Some late model Ford / Mercury trucks and sport utility vehicles have two or more stoplight 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 destroy the unit.

VEHICLE SPECIFIC INSTRUCTIONS

YEAR	MAKE	MODEL
1989 – 91	Ford	E & F-Series
1992 – 93	Ford	F-Series
1992 – 93	Ford	E-Series
1994 – 99	Ford	E & F-Series
1997 – 02	Ford	Expedition & Navigator
1988 – 93	GM	Pickups
1994	GM	Pickups
1995 – 96	GM	Pickups & SUV's
1988 – 93	Chrysler	Pickups
1994 – 95	Chrysler	Pickups
1996 – 02	Chrysler	Pickups & SUV's
1988 – 90	Jeep	All
1991 – 93	Jeep	All
1994 – Present	Jeep	All

- For Chevrolet 1999 and up vehicles: If your vehicle does not have the towing package, only the ground and stoplight switch will be active in the Plug-in Simple!™ connector. 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.
- Be sure your brake control is grounded properly. The ground wire should be connected to the negative post on the battery. Grounding in any other location may cause the control to operate intermittently.
- Ford and Dodge tow packages come with a 20 amp battery feed wire system which will accommodate 2 and 4 brake magnets. An upgrade to a 30 amp (12 gauge) battery wire system will be needed for 6 and 8 braking systems.

MOUNTING YOUR BRAKE CONTROL

1. Your Hopkins® brake control can be mounted in any direction, including upside down.
2. Mount the bracket to a secure location with Phillips screws provided (E) where you will be able to view the display and easily access the vertical slide.
3. Once you have chosen a location, check behind the dash to be sure there are no damageable components in the chosen location. Using the bracket as a template, drill holes in the dash.
4. Attach bracket with 2 provided screws and attach control to bracket with 2 remaining screws (F).
5. Plug wiring to controller.

CAUTION: Using large/longer screws may damage the unit.

OPERATING AND SETTING YOUR CONTROL

1. Once installed, your control will show " ." on the digital display when trailer is connected. Once your trailer is connected, power will be shown in increments of 5% on the display. Five represents the lowest power, 99 the highest.

TROUBLE SHOOTING GUIDE

CONDITION	PROBABLE CAUSE
" ." [dot]	Trailer is connected
"SC" [flashing]	Trailer electric brake wire (blue) short or defective magnet
No power to trailer	Check vehicle and trailer connector pin outs
Trailer brakes on all the time	Check vehicle and trailer connector pin outs

VEHICLE STOP LIGHT SWITCH WIRE

COLOR	WIRE LOCATION
Light Green	Located in C-shaped connector on steering column; 2nd pin on the top row of 7.
Light Green	4-pin connector in center of vehicle under dash.
Light Green with Red Stripe	4-pin connector next to brake pedal.
Light Green	Under dash to the right of the steering column.
Light Green	Under dash to the right of the steering column.
White	Under dash near top of brake pedal.
Yellow	Under dash near top of brake pedal.
White	Connector on left of steering column. There are several white wires in this connector. The correct wire is located in position "F".
White	Under dash near top of brake pedal.
White with Brown Stripe	Under dash near top of brake pedal.
White with Brown Stripe	Under dash to the left of the steering column.
Light Blue with Black Stripe	Under dash near top of brake pedal.
White with Brown Stripe	Under dash near top of brake pedal.
CONTACT YOUR JEEP DEALER.	

2. The (+) and (-) buttons adjusts power sent to the trailer. Pressing the brake pedal and pressing the (+) and (-) buttons changes the intensity of power.
3. Connect your trailer and test drive in an open area to set the level of power.
4. Drive forward at approximately 20 miles per hour and apply the brakes. If brakes appear too weak, press the (+) button for additional power. If brakes lock up, press the (-) button to reduce power. Continue this step until smooth braking is reached.

IMPORTANT NOTES ABOUT YOUR HOPKINS® BRAKE CONTROL

- Brake lights on the vehicle and trailer activate when the manual slide button is pushed.
- Unit is short-proof protected from electric trailer brake and brake light wiring shorts.
- Brake control adjustments may need to be made for different road conditions and trailer loads.
- Always test your brake power levels at low speed before every trip. Weather conditions and varying trailer loads may require adjustments to the brake control power.
- Limited lifetime warranty.

Questions? Contact us at:
1-800-835-0129

www.hopkinstowingsolutions.com

HOPKINS MANUFACTURING CORPORATION

