Valley® INDUSTRIES

30450

Journey HD™
Electronic Brake Control

INSTALLATION INSTRUCTIONS

Tools Required:

- Drill with 1/8" Bit
- 1/4" Nut Driver
- Phillips Screwdriver
- Probe Style Test Light

Applications:

1994-1996	Ford Bronco
2000-2004	Ford Excursion
1997-Current	Ford Expedition
2002-Current	Ford Explorer (w/Factory Tow Package)
2002-Current	Mercury Mountaineer (w/Factory Tow Package)
1994-2004	Ford F-Series Pickups
2005-Current	Ford F-150 & F-250 LD
1992-Current	Ford Full Size Vans
1995-03	Ford Windstar (w/Factory Tow Package)

Journey HD™
Electronic Brake Control

Congratulations on your purchase of the Journey HD™ trailer brake control module. Solid state dependability and polarity protection are just a few features the Journey HD offers that are not found on many other brake controls.

FEATURES

• The Journey HD provides an easy to read digital display which communicates a full range of diagnostic information and allows for precise brake output adjustment.

• The Journey HD Electric Brake Control is polarity protected. If the positive (+) and negative (-) power leads are reversed, the unit isolates itself from the power input and protects itself from damage.

• Easy Precise Setup - Separate thumb wheel controls for output power and ramp (reaction) time provide full setup adjustability.

• Stop Lamp Activation - When applying the trailer brakes by utilizing the manual slider alone, the Journey HD will supply power to the trailer's brake lights.

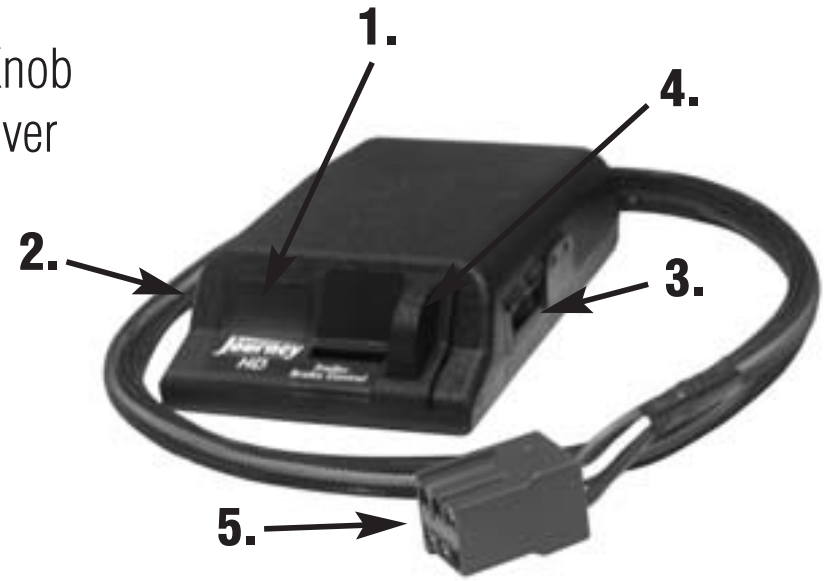
• Mounts Anywhere - Leveling of the Journey HD Electric Brake Control is not required. This electronic unit is designed to operate in a wide range of positions.

• The Journey HD Electric Brake Control supports 1 to 4 axle trailers (2 to 8 brakes) and is ideal for use on trailers with electronically activated hydraulic braking systems.

• Full Power Manual Over Ride - The Journey HD's Manual Activation Lever provides Full Available Power to the trailer brakes when applied.

CONTROLS / COMPONENTS

1. LED Display
2. Output Setting Knob
3. Ramp Time Setting Knob
4. Manual Activation Lever
5. Harness Mating Connector



MOUNTING

Note: Read all instructions thoroughly before beginning.

The Journey HD electric brake control can be mounted in a variety of positions, making it easily and comfortably accessible from the driver's position of most any tow vehicle. The unit is designed to be mounted horizontally or vertically, at any angle above or below the dash (fig. 1, 2 & 3)

1. Determine an appropriate mounting location that is easily accessible from a comfortable seated driving position within 36" from the vehicle's factory harness connector. **Note: The brake control unit must be securely mounted to a solid surface (i.e. onto or beneath the vehicles dash) within easy reach of the driver.**

Above Dash Mounting

fig. 1

2. Place the mounting bracket into the desired position on the vehicle and mark the location of the bracket mounting slots.

Below Dash Mounting

fig. 2

Below Dash Mounting

fig. 3

3. Using a ⅛" drill bit, drill the holes marked in step 2 into the mounting surface.

Caution: Ensure that the area directly behind the mounting surface is clear of obstructions that may be damaged while drilling.

4. Using a screwdriver or ¼" nut driver, secure the bracket to the vehicle with the two ¼" self tapping screws (provided). Take care not to strip the holes by over-tightening the screws.

fig. 4

5. Mount the Journey HD electric brake control into the bracket using two ¼" self tapping screws (provided) (fig. 4).

Caution: Do not use longer screws than those provided.

WIRING

Note: Read all instructions thoroughly before beginning.

Ensure the tow vehicles brake control power circuit (+) is capable of

delivering the required amount of current needed for the trailers braking system (Refer to the tow vehicle and trailer owners manuals). If the brake control power circuit (+) does not meet the demand, wire directly to the battery.

1. Locate the vehicles factory brake control connector under the dash in line with the brake pedal (Fig. 1). The connector will be similar to that found on the Brake Control Wiring Harness and designed to mate with it (Fig. 2). Refer to the vehicles owners manual for additional information in locating this connector.

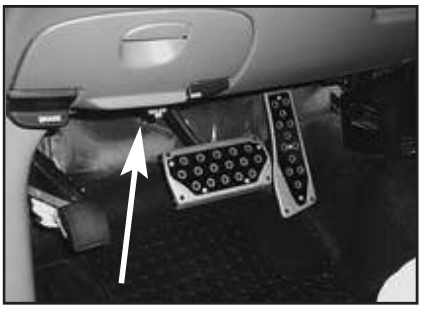


Fig. 1

2. Plug the Brake Control's harness mating connector into the vehicle harness connector, ensuring that the locking tabs engage.

3. Confirm correct operation with a load simulating tester or a properly equipped trailer.

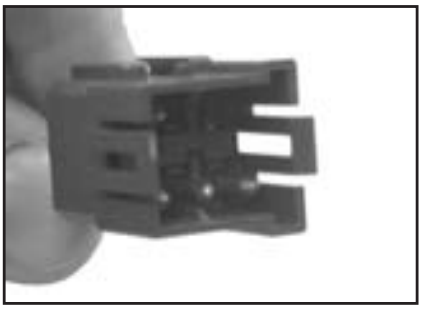


Fig. 2

LED DISPLAY

Once the wiring is complete, the LED display will indicate one the following, illustrating the brake controls activity:

- Power Conservation Mode - No Activity for 3½ Hrs. or Longer. The Journey HD will Become Instantly Active when the Brake Pedal is Depressed.

(Blank)

- No Trailer Connected - Journey HD is Receiving Power and is Active.

- Trailer is Connected - Journey HD is Receiving Power and is Active.

- Manual Lever Applied - No Trailer Connected (Applies to Manual Lever Only)

- Manual Activation Lever or Vehicle Brakes Applied - Trailer is Connected (Output Reading is Based on Output Intensity Setting and Position of Manual Lever, if Applied)

TROUBLESHOOTING

In addition to indicating output power and Load Range settings, the Journey HD is capable of communicating operating errors via its LED display.

- Trailer brake circuit may be lost or intermittent. Check the trailer connector for a secure dry connection. **Note:** It is normal for the Journey HD Brake Control to flash **OC** for a few moments after the circuit is disconnected.

(Flashing)

- Short Circuit Situation - The trailer brake circuit may be shorted to ground. Check for improper wiring. The unit will reset once the situation is corrected.

- Charging System Error - There may be a charging system problem or an inadequate connection to the tow vehicle's battery. The unit will reset once the situation is corrected.

OUTPUT & RAMP TIME SETTINGS

Prior to towing, the Output Power must be adjusted for the individual trailer being towed.

1. Connect the desired trailer to the tow vehicle.

2. Start the tow vehicle to ensure sufficient battery power is being supplied to the brake control. While parked, depress the brake pedal and rotate the Output Setting Knob located on the left side of the control until the LED display indicates **30**.

3. Continue to press on the brake pedal and rotate the Ramp Time Setting Knob located on the right side of the control until the LED display reads **-5**.

4. In an open and controlled area, release the brake pedal and drive forward on a dry level surface at approximately 20 mph. Ensure that ample distance is available for safe braking and slowly apply the brake control's Manual Activation Lever until the trailer brakes fully engage to stop the trailer. Note the output reading on the LED display.

Caution: Full activation of the manual lever will apply 100% Power to the trailer brakes.

5. Release the Manual Activation Lever and rotate the Output Setting Knob until the LED displays the same reading as that noted in step 4.

6. Once again drive forward at approximately 20 mph. Ensure that ample distance is available for safe braking and apply the brake pedal.

If Trailer Brakes Lock Up:

Reduce power to the trailer brakes by rotating the Output Setting Knob counter-clockwise. Reduced power is indicated by a decreasing readout (smaller number) on the LED display.

If Trailer Braking was Insufficient:

Increase power to the trailer brakes by rotating the Output Setting Knob clockwise. Increased power is indicated by an increasing readout (larger number) on the LED display.

7. Continue to repeat steps 5 and 6 until the desired power output

has been achieved. The brake control output should be just below the point where the trailer wheels lock up, yet there is sufficient force to allow for maximum brake force.

8. Once the initial output power level has been established, adjust the Ramp Time by performing additional low speed stops (20 mph) utilizing the tow vehicles brake pedal to ensure smooth combination braking between the tow vehicle and the trailer.

If Trailer Brakes are Lagging the Vehicle:
Rotate the Ramp Time Setting Knob clockwise to increase the speed of trailer brake application.

If Trailer Brakes are Overly Aggressive:
Rotate the Ramp Time Setting Knob counter-clockwise to decrease the rate of trailer brake application.

9. Once the desired Ramp Time has been established, it may be necessary to re-adjust the Power Output Setting (steps 4-5).

Caution: Increasing the power output setting or ramp time setting should NOT be utilized as an option to adjusting or repairing trailer brakes.

NOTE: In certain situations trailer brakes may not be capable of locking up. This situation can be associated with brake wear, overall trailer weight, trailer length and/or wire gauge. If the trailer brakes will not lock up during the setup procedures, it is recommended that all components of the braking system are checked to ensure safe towing.
Caution: On some vehicles, manual operation of trailer brakes will not override the tow vehicle's cruise control operation.

OPERATING TIPS

• Light pressure on the brake pedal will activate the trailer brakes without applying the tow vehicle brakes. This is useful when traversing grades, anticipating stops or correcting trailer sway.

• Periodic adjustment of the Ramp Time and Output Setting Knobs may be necessary to compensate for trailer loading, brake wear and varying road conditions.

• Application of the trailer brakes by utilizing either the brake pedal or Manual Activation Lever will illuminate the trailer's brake lights.

• On some vehicles, the use of hazard flashers may pulse the trailer brakes. To reduce this effect, adjust the Ramp Time to a lower setting, or install a pulse preventer.

BENCH TESTING

The Journey HD can be field tested should correct operation be suspect. Remove the unit from the tow vehicle and wire to a 12 volt automotive battery and #1156 automotive bulb as illustrated in figure 6.

Wiring

1. Attach the unit's Blue wire to one side of a standard #1156 12 volt automotive bulb by using a socket or by soldering the wire to the bulb.

2. Attach a length of 16 ga. or larger wire to the other side of the #1156 bulb.

3. Attach the White wire to the Negative (-) battery terminal.

4. Attach the Black wire to the Positive (+) battery terminal.

Note: Do not attach the unit's Red wire or the bulb to the battery at this time. **Caution: Do NOT touch the brake control's RED wire to Ground (-) as this will destroy the unit.**

Testing

1. Rotate the Output Setting Knob clockwise and the Ramp Time Setting Knob counter-clockwise (each toward the rear of the unit.

2. Move the Manual Activation Lever to the left. The unit's LED display should temporarily indicate .9 **(-.9)**.

3. Connect the light bulb to the Negative (-) battery terminal as illustrated in fig. 6. Move the Manual Activation Lever to the left. The LED display should increase from approximately **05** to **99** and the light bulb illumination should increase in intensity in conjunction with the LED reading.

4. Release the Manual Activation Lever. The LED display should now display only decimal points **(. .)**.

5. Attach the Red wire to the Positive (+) battery terminal. The unit's LED display will indicate an output reading beginning at **05** and slowly increase to **99**. The light bulb illumination should increase in intensity in conjunction with the LED reading.

6. Slowly rotate the Output Adjustment Knob counterclockwise toward the front. the LED display should smoothly decrease from **99** to **05**. Note: The lightbulb intensity should decrease in conjunction with the LED display.

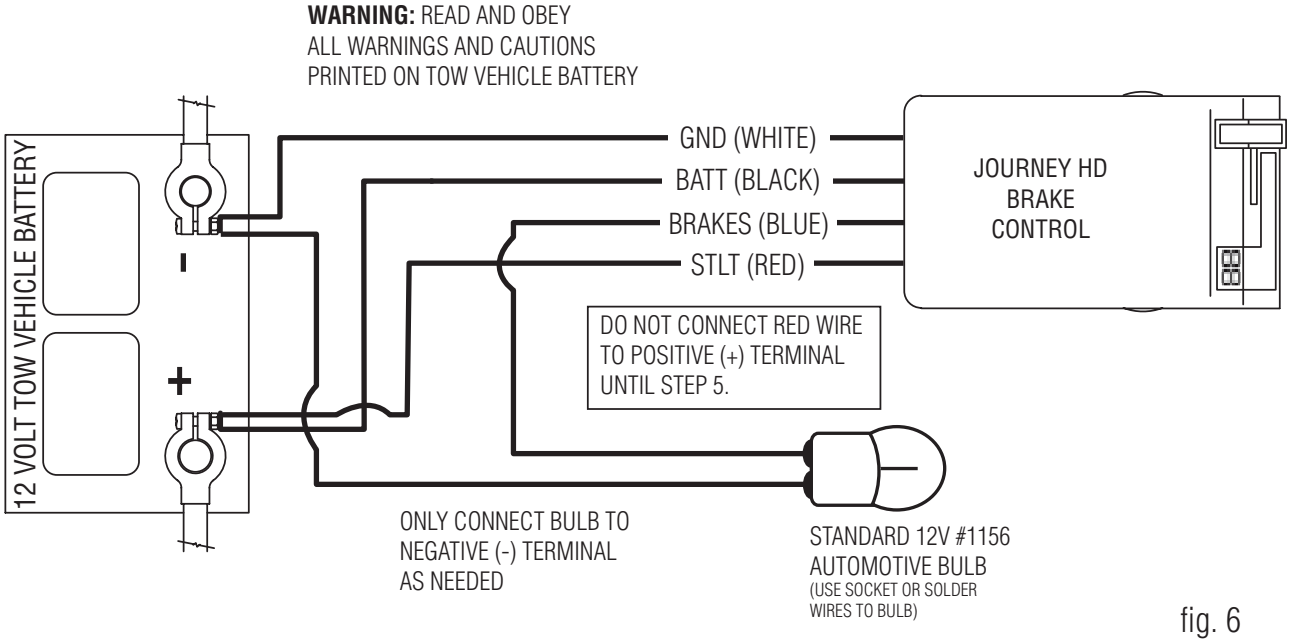


fig. 6

7. Rotate the Output Setting Knob to the rear of the control so that the display reads **99** and rotate the Ramp Time Setting Knob clockwise to the front of the control. the LED display should change mode to indicate ramp time, moving from **-0** to **-9** as the thumbwheel is rotated.

8. Disconnect and reconnect the red wire from the battery's positive (+) terminal. The light bulb should light brightly with a minimal delay.

9. If the Journey HD brake control does not function as described in the steps above, return the unit to an authorized distributor for service or replacement.

SERVICE & SUPPORT

- For questions regarding installation and usage, call (800) 423-6726.