

ELECTRIC BRAKE CONTROLLER

INSTALLATION & OPERATING GUIDE



The LV1409 electric trailer brake controller provides smooth application of a connected electric braking system. Brake actuation is automatic, user-definable and overridable via a discrete, multi-positionable control. Designed to suit 12V tow vehicle electrical systems, the LV1409 can operate 1-2 axle 12V electric brake systems.

12V
COMPATIBLE

360°
MOUNTING

2YR
WARRANTY

SPECIFICATIONS

Minimum input voltage	9V	Maximum load	1-2 Axles / 12A Avg
Nominal input voltage	12V	Dimensions	40 x 79 x 81mm
Maximum input voltage	15V	Weight	200g
Suitable for 12V trailer systems	Yes	Warranty	2 Years
No current load	30mA		

INCLUDES

1x Remote brake controller
1x Retaining nut (on remote)
1x Washer (on remote)
1x Control knob
1x Dashboard sticker
2x Mounting screws

PLEASE NOTE: THE 12V MODEL ARE LOAD ACTIVATED AND CANNOT BE TESTED WITHOUT LOAD. AT NO LOAD, THE OUTPUT READING OF HIGH VOLTAGE WILL REGISTER. THE OUTPUT VOLTAGE IS PULSED, SO IT CANNOT BE MEASURED WITH A VOLTMETER OR TEST LIGHT.

INSTALLATION

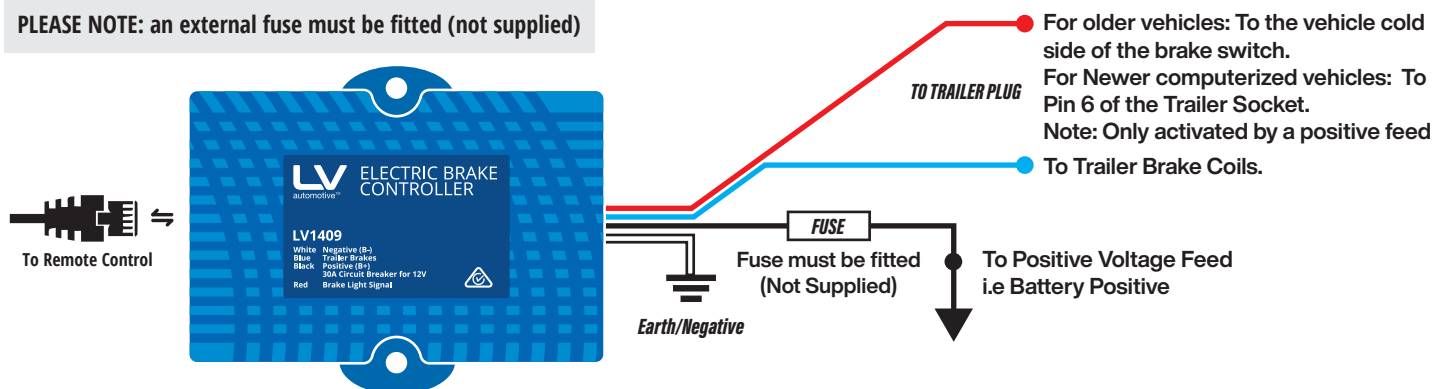
1. Disconnect the vehicle's NEGATIVE battery terminal.
2. Determine a suitable mounting location inside the cabin.
3. Hold the brake controller in the selected position and mark the hole location through the holes in the flanges of the unit.
4. Using a suitable drill bit, drill holes in the marked locations.
5. Secure the brake controller in position with self-tapping screws. Take care to not strip the holes by over-tightening the screws.
6. Drill a hole for the 8.5mm remote control shaft in a suitably sized mounting panel in the dash with a wall thickness of less than 4mm.
7. Affix decal, washer and retaining nut over shaft and tighten. Turn shaft fully counter-clockwise and affix the knob on the shaft with firm, even pressure with the indicator facing the minimum position.

WIRING

The Control Unit is Activated by A Positive Feed Brake Switch Only. Please check the polarity of your vehicles brake switch before connection PLEASE ENSURE THAT A FUSE IS FITTED ON THE BLACK WIRE (POSITIVE BATTERY). Optionally a 20A fuse may also be fitted to the BLUE brake wire

White wire	Negative Battery (B-)	Black wire	Positive Battery (B+). Fuse: 12V 20A
Blue wire	Trailer Brakes	Red wire	Brake Light Signal

PLEASE NOTE: an external fuse must be fitted (not supplied)



The Electric Brake Controller has four (4) coloured wires- BLACK, RED, BLUE and WHITE.

- The BLACK wire is the positive voltage power supply line. A fuse must be fitted.
- The RED wire must be connected to a point that receives a DC Voltage equal to that of the supply voltage when the brakes are on. Generally, for most vehicles we strongly recommend that you connect the RED wire to the cold side of the brake light switch. If this is not an option for your vehicle, then any point that receives a straight DC voltage should be applicable. For example- top rear tail light, brake light relay or the wire connecting to the stop lights on the trailer plug.

NOTE: Vehicles that use the same globe/supply for rear and tail lights cannot have the RED wire to the stop light/tail lights directly. Please use the alternatives listed above.

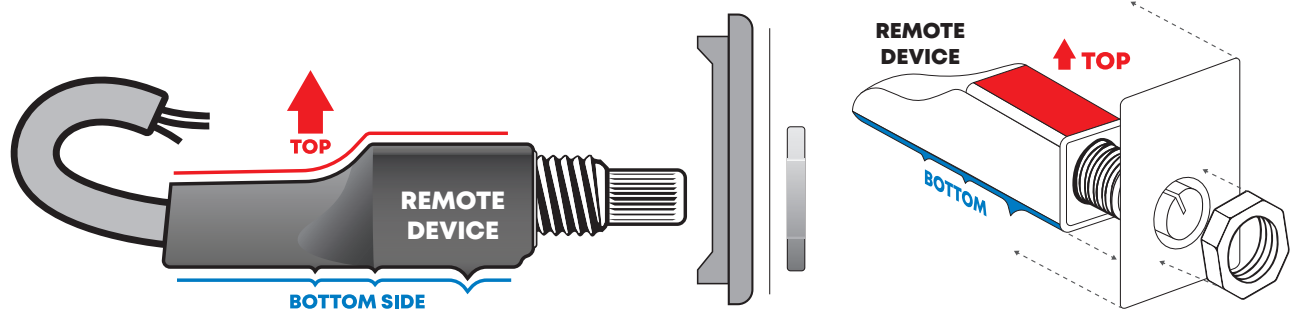
- The BLUE brake wire must be connected directly to the trailer brake wire.
- The WHITE ground wire must be connected to a grounded metal part of the dashboard, vehicle fire wall or directly to the negative battery terminal.

IMPORTANT

A brake control unit that is not properly grounded may operate intermittently or not at all.

- Make sure all connections are secure.
- Do not connect the Black "BATTERY" wire to the fuse panel or tie into any accessory wiring. Connecting to the existing wiring may damage the vehicles wiring and cause trailer brake failure.
- Do not reverse Black "BATTERY" wire and White "GROUND" connections. Even a momentary incorrect connection can damage the brake control unit.

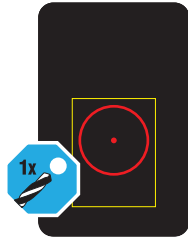
REMOTE INSTALLATION



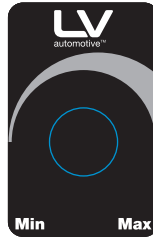
Position the smooth side (red in the picture) at the top, and the uneven side (green) at the bottom.



Installation on standard blank switch plate.



Drill 1 x 8.5 Hole



Apply dash Sticker



Insert shaft of dial and fasten with supplied nut until tight.



Press on knob with firm, even pressure



IN THE UNLIKELY EVENT OF RF INTERFERENCE, TRY THE FOLLOWING:

1. Refrain from using the vehicle chassis as an earth. Facilitate a separate ground wire. (See point 3 below)
2. Mount the brake controller and route all cables for the input and output of the brake controller away from antennas and RF equipment.
3. Use an as short as possible bifilar (or twisted) wire to feed the RBC and brake coils (both active and return).
4. Add a ferrite clamp over the RED, BLUE, BLACK and WHITE wires.

SET-UP AND OPERATION

SETTING THE BRAKING FORCE

To set the brake intensity simply rotate the knob until the required braking level is achieved. A clockwise knob rotation will increase the braking intensity and a counterclockwise rotation will decrease it.

SETTING THE OVER-RIDE FEATURE

To activate the Over-Ride function simply push on the adjustment knob, releasing the knob disables the function. The braking force when the Over-Ride is active is still determined by the knob position.

ADJUSTMENT KNOB LED INDICATION



LED green

- Trailer connected
- Brakes connected
- All systems OK



LED FLASHING

Either:

- Brake pedal pressed, controller actively braking

Note: Unit will flash 3-4 times after pressing the brake or using the override then return to solid



LED OFF:

No power or trailer disconnected from vehicle

NOTE: WHEN THE OVERRIDE IS ACTIVE, THE BRAKING FORCE IS STILL DETERMINED BY KNOB POSITION

The override function works to apply the trailer brakes without applying the vehicle brakes. This feature can be used when the tow vehicle begins to sway or enter a tail wag situation. Please consult towing professionals or towing training schools for advice on how to use this feature correctly. In the event of an emergency situation, do not rely on the override button for additional braking force. If additional braking force is required turn the knob clockwise and return your hand to the wheel in a quick and timely manner.