



(Standard installation)



The IRBC range is a new generation of brake controllers that can operate in both Inertial controlled and Preset brake force utilising microprocessor and Tri-axis Accelerometer technologies. It is a compact, rugged, electronic brake controller and is easily installed with the connection of four wires and the easy plug in remote control. Easily adjustable via the remote control which can be located up to 1m from the controller. Both models also incorporate an over-ride function for manual control. Designed for both single and dual axle trailers using negative earth (ground) systems only. Available in 12V & the new 24V version eliminating the need for a separate reducer on 24V systems.

**Features :**

- LED remote indication for brake connected and brake on.
- Small, easy fit single hole dash board mounting Knob with LED built in on 1M of cable fitted with a plug to mate main unit.
- Easy adjustment via knob rotation in remote
- Inertial or PWM selection Via Knob
- Convenient Over-Ride via knob push in remote
- Can Be mounted at Any Angle.
- Compatible with single filament /Brake bulb systems

**Product comes with:**  
1x Retaining Nut ( On Unit )  
1x Washer ( On Unit )  
1x Control Knob  
1x Remote Decal  
2x Mounting Screws

Specifications	IRBC-12	IRBC-24
Minimum Input Voltage	9 VDC	18 VDC
Nominal Input Voltage	12 VDC	24 VDC
Maximum Input Voltage	15 VDC	30 VDC
Suitable For 12V Trailer Brakes	Yes	Yes
No Current Load	30 mA	
Maximum Load	2 Axle / 12A Avg	
Dimensions	30mm x 57mm x 90mm	
Weight	200g	

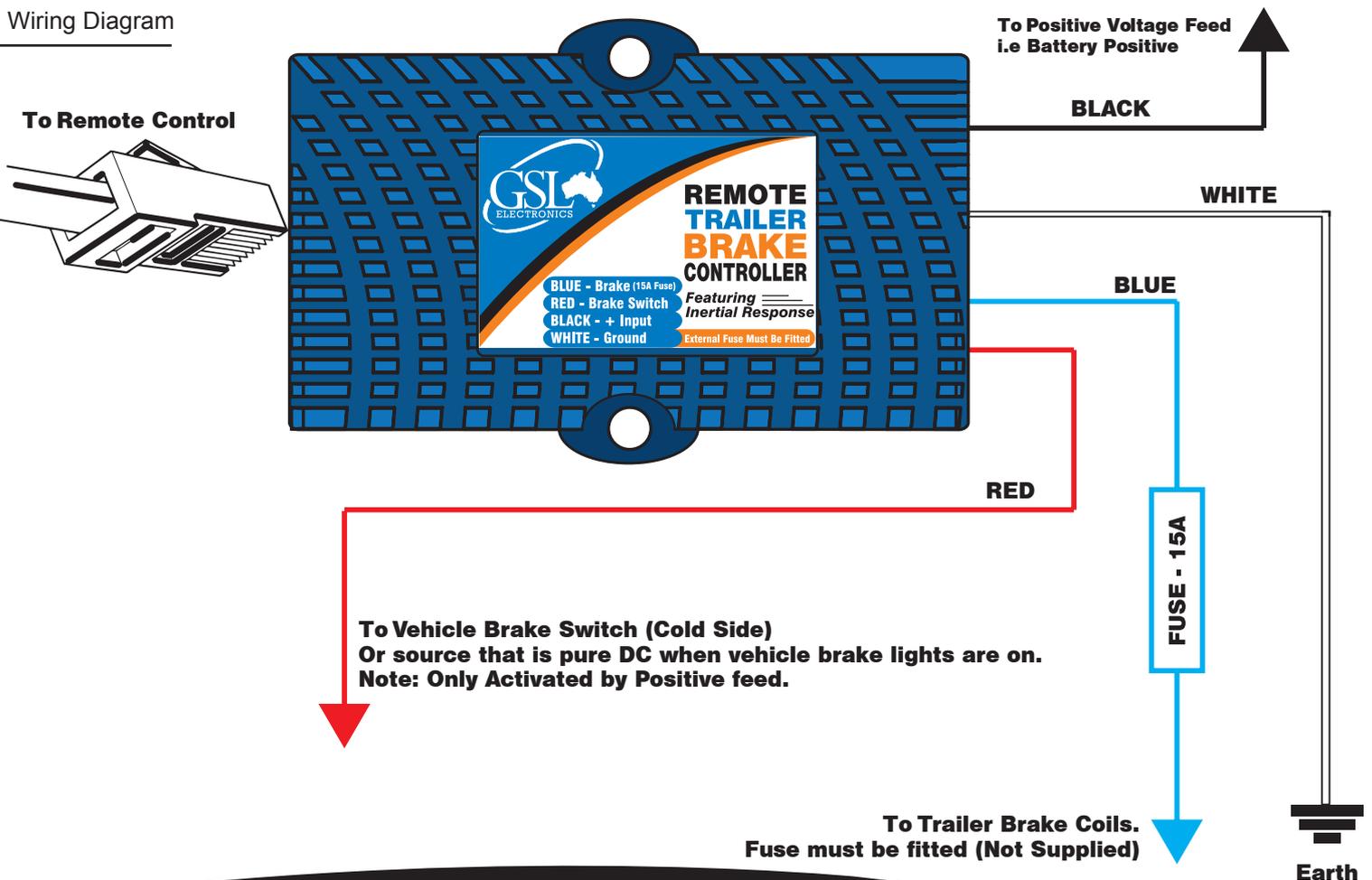


**Note :** The IRBC-12 and IRBC-24 are load activated and can not be tested without load. At no load, output reading of high voltage will register. Also the output voltage is PULSED, so it cannot be measured with a volt meter or test light.

**Installation :**

1. Disconnect the vehicle's NEGATIVE battery terminal.
2. Determine a suitable mounting location inside the cabin. The unit must be mounted securely to a solid and rigid surface.
3. Hold the main unit 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 Main unit in position with self tapping screws being careful not to strip the holes by over-tightening.
6. Drill a hole for the 8.5mm Shaft in a suitably sized mounting panel in the dash with a wall thickness of less than 4mm.
7. Affix decal and locking 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.
8. Plug the RJ45 connector on remote cable into main unit.
9. Connect brake wiring as per wiring instructions and follow Set-up and Operation procedures.

**Wiring Diagram**





Wire Guide	
White Wire	Negative Battery
Blue Wire	Brake 15A Fuse*
Black Wire	Positive Battery
Red Wire	Brake Switch

\* Please Note: An External Fuse Must Be Fitted (Not Supplied).

\* The Control Unit is Activated by A Positive Feed Brake Switch Only.  
(Please check the polarity of your vehicles brake switch before connection)

**Wiring: Please ensure that a fuse is fitted in the Blue Wire (Brake).**

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

The BLACK wire is the positive voltage power supply line.

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 on most vehicles we recommend strongly to connect the RED wire to the cold side of the brake light switch. If that is not the case on the vehicle then any point that receives a straight DC voltage, i.e. 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 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 is connected to a grounded metal part of the dash, 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.

**In the unlikely event of RF Interference try any of the following tips :**

- 1) Refrain from using the vehicle chassis as a conduit for the earth return for the brake coils. Facilitate a separate ground wire. (See point 3 below)
- 2) Mount the brake controller 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 & WHITE wires.



**Set-up & Operation :**

**Mode Setting:**

The unit can be set to operate on a Preset mode (Green LED on) or Inertia Mode (Blue LED On).

To change mode simply set the knob to minimum (completely counter clockwise) then push and hold the over-ride button (pushing the knob in) for about 3 seconds until the LED changes colour.

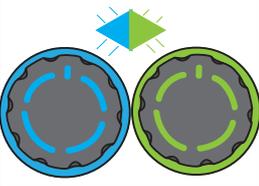
**Note:** Changing between Preset Mode and Inertial mode - Braking force on Preset Mode may be slightly different from the Inertial mode and vice versa. Please adjust the braking force as required by the knob as described below.

**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 and a counterclockwise will decrease it.

**Using 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.

LED Status	Foot Off Brake or Override not Pressed	Foot On Brake or Override Pressed
	<b>GREEN LED</b> <b>PWM/Digital Mode - OK</b>	<b>Trailer Brake Disconnected</b>
	<b>BLUE LED</b> <b>Inertia Mode - OK</b>	<b>Trailer Brake Disconnected</b>
	<b>Flashing Blue Green</b> <b>Check Brake Circuit</b>	<b>Trailer Connected</b> <b>Unit Active and OK</b>
<b>Note: Unit will flash 3-4 times after pressing the brake or using the override then return to solid.</b>		
	<b>No Power or Controller Disconnected</b>	

**Warranty Conditions:** Our products come with guarantees that cannot be excluded under the Australian Consumer Law.

The customer is entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. The customer is also entitled to have the products repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure.

GSL Electronics (GSL) warrants that its products will, under normal use and service, be free of defects in material and workmanship for a period of two (2) years from the date of the original purchase by the customer as marked on the customer's original invoice.

Please refer to our website for full warranty and return information which can be found at <http://www.gsl.com.au/faq.html>

