# Operating Instructions


TRAILparts™
INNOVATIVE TRAILER SOLUTIONS

**Multi Vehicle**
## SE Brake Controller
*For use with Electric Drum Brakes*

**3500KG GVM**

# Operating Instructions

The SE Braking system meets ADR 38 braking regulations and is legal for trailers up to 3500kg GVM when used according to these instructions.

## Operation

- The in cab controller must be connected at all times and located within easy reach of the Driver.
- The Vehicle park, or head-lights must be switched on when towing the trailer. This energises the trailer side of the system and also will allow the trailer batteries to charge.
- Check the plug and socket of the trailer and tow vehicle are securely connected and that the trailer lighting functions all work correctly. A faulty or intermittent lighting connection could mean the brakes do not operate correctly.
- Ensure the break away cable is securely fastened to the vehicle.

  Test the emergency brake is working. First adjust the gain control setting to read 75%. Depress emergency stop button fully, and begin to pull forwards while still holding the button down. The trailer brakes should lock the wheels.
- Do not use the emergency stop feature or breakaway function as a parking brake.


See page 2 reference

# Cab Controls

1. **Emergency Brake** – When activated, this will apply the trailer brakes at 75% of the current gain setting. This can be used to control trailer sway situations and stop the vehicle combination in an emergency.

2. **Gain Setting** – The plus button will increase the maximum brake percentage, and the minus button will decrease it. This should be set so the vehicle will brake to a halt without the trailer wheels locking up. An effective benchmark is to perform a brisk stop on a straight flat stretch of road from 30 kph. The vehicle trailer combination should halt without the trailer wheels locking. Increase or decrease the gain setting until the trailer is braking at just under the lock up level. Ensure conditions are safe around you before carrying out this procedure.

3. **Sensitivity** – This will control how quickly and aggressively the brakes will activate, with 1 being the least and 5 the most aggressive. Pressing this will advance the setting from 1 up to 5 and then back to 1.

4. **Screen** – This will provide feedback about the operation of the controller and warn of any faults that might occur.

A **Normal operation** – Head lamps on, no brake applied.

B **Brake Applied** – When sitting still this will show a braking level around 0% - 5%. When travelling this will show a percentage from 0% up to 99% depending on the level of braking and the current gain setting.

C **Ec Error** – If this shows with a slow steady beep it indicates your headlamps are not on or if they are that there is a loss off communication between the trailer and cab modules. In the event of communication loss, providing the headlamps are on and the lighting connection between the tow vehicle and the trailer is not faulty the brakes will continue to operate at the last setting. This should however be investigated as soon as it is safe to stop.

D **Eb error** – The unit will beep 4 times and flash Eb in the event of the battery charge dropping below an unsafe level, meaning that the brakes may not operate correctly.

A

B


C


D


**Note:** Both the trailer and the cab modules of the brake controller are compatible with 12 and 24 volt vehicles.

# Installation Instructions

Mount the Brake controller according to the mounting orientation instructions on page 4.

Wire the brake controller according to the instructions below.

It is important that trailers fitted with the SE braking system are also fitted with 12/24 volt LED lights, not voltage specific incandescent or LED lights.

The controller is capable of running trailers with up to 6 wheels braked with electric drum brakes.

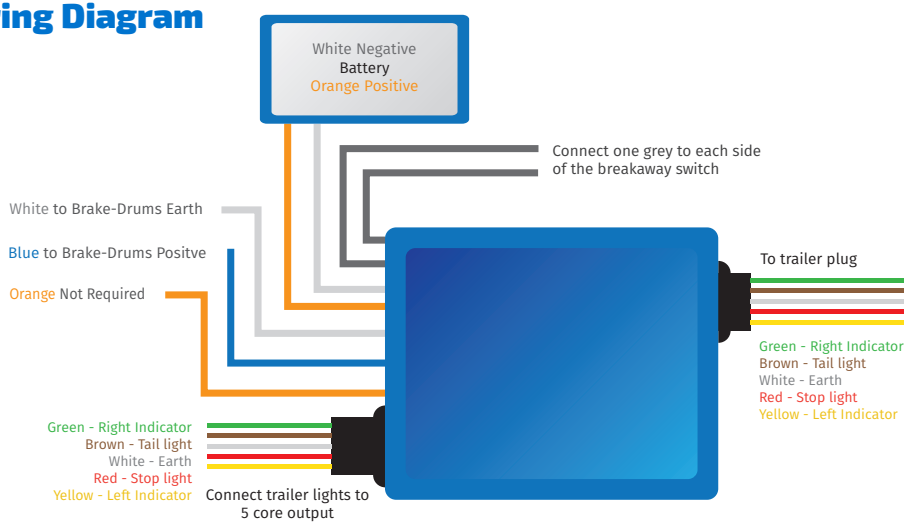
The earth from the trailer brakes and the trailer battery must only connect to the brake controller output earths as shown in the diagram. They cannot be connected to a common chassis earth.

Cable gauge should be of sufficient size to avoid voltage drop. For electric drum brakes a minimum of 15 amp cable should be used and a separate feed should be run per two wheels that are fitted with brakes.

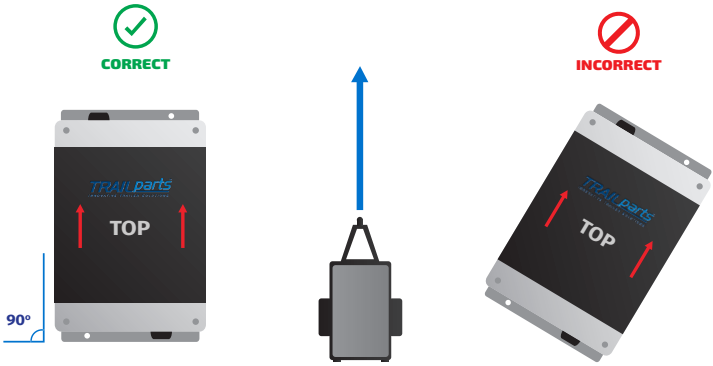
The trailer lights must only be connected to the 5 core lighting output from the controller and cannot bypass this directly to the trailer plug.

There is a spare orange wire that is not used when installing on a trailer fitted with electric drum brakes. This can be cut short if desired.

## Wiring Diagram



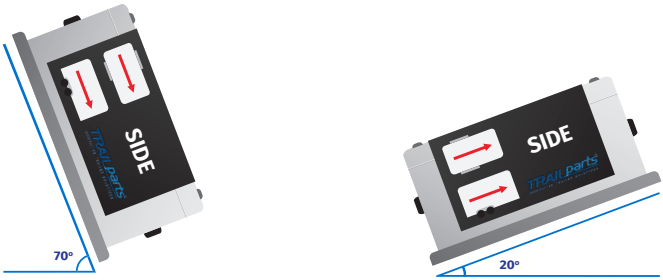
# Mounting Orientation




**Direction of Travel**

**Must be mounted straight longitudinally, i.e. parallel to direction of travel**


**Unit Must Be Level Laterally**




**Direction of Travel**

Back can be up to **70 Degrees Up**

OR

Back can be up to **20 Degrees Down**

# Periodic Maintenance and Checks

Check battery is keeping well charged. A well charged battery should be at or above 13 volts. This is particularly important if the trailer is left parked for extended periods of time. If the trailer is not used for extended periods the battery should be removed every 2 months and charged to ensure it does not become damaged. This can happen if the battery charge drops below 10.5 volts.

Check the trailer plug and vehicle socket to ensure they are not damaged and they give a sound electrical connection. An intermittent or faulty connection could mean the brakes do not function correctly.

If fitted with a hydraulic actuator make sure the fluid level remains sufficient. The fluid should be changed in line with general trailer service intervals.

If fitted with electric drums make sure they are kept properly adjusted and that the magnets and linings are not excessively worn and are replaced in line with general trailer service intervals.