

# TRAILSAFE+ INSTALL GUIDE

This guide is used if you are installing a TrailSafe+ when also using a SwayControl.

If there is no SwayControl, use the standard TrailSafe install guide.



## 1. CONSIDERATIONS

The TrailSafe+ should only be installed by a trained auto electrician.

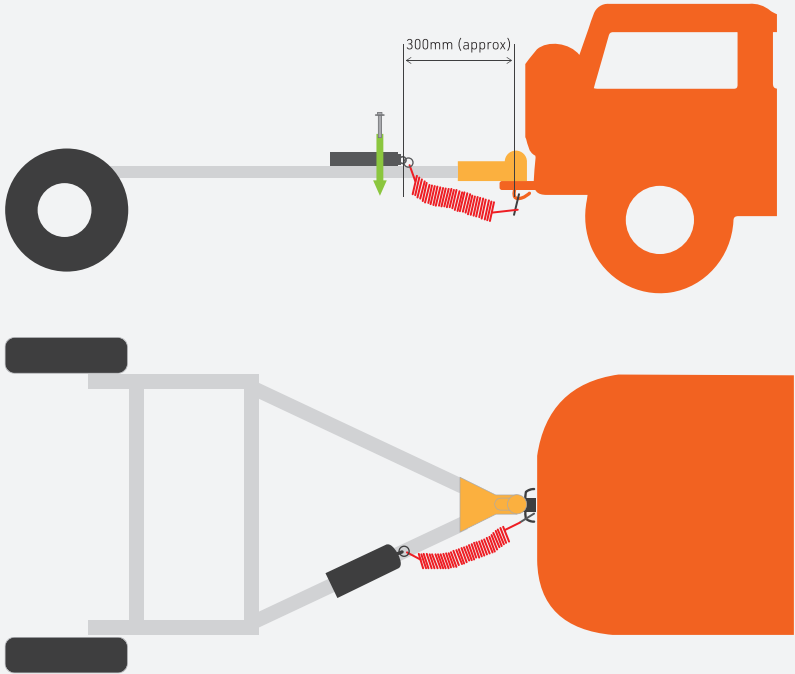
## 2. LOCATION

The TrailSafe+ must be installed on the right-hand side of the trailer's drawbar, about 300mm from the tow ball hitch.

## 3. MOUNTING

Mount the TrailSafe horizontally on top or the side of the drawbar. The wires must point towards the rear of the trailer (away from the tow vehicle). The pull pin must face the tow vehicle. Secure tightly to prevent it from vibrating loose.

**Do not tighten the mounting screw to a torque higher than 30Nm.** Attach the other end of the pull pin cord to the towing vehicle using a D-shackle or similar.



## 4. WIRING

A 30A fuse must be placed near the trailer battery on the black/red wire. Failure to install the fuse may cause serious damage.

If a BatteryPlus35-II/J35 is installed, all negatives must pass through the BatteryPlus35-II/J35 before connecting to the house battery. If a BC300 installed, all negatives must pass through the Battery-Plus35-II/J35, and then the BC300 before connecting to the house battery.

The negative wires of the brakes and brake lights from the trailer must be wired directly to either a negative output connection of a Battery-Plus35-II/J35, a non-battery side of a negative side shunt, or directly to the battery negative.

The house battery must have a charging source.

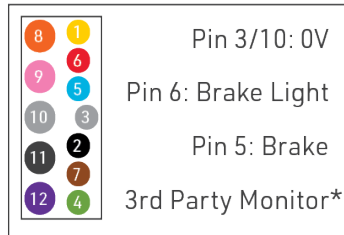
WIRE	CONNECTION
RED (14AWG / 2.5mm <sup>2</sup> )	Connect to the positive of the brake lights.
BLUE (12 AWG/ 4 mm <sup>2</sup> )	Connect to the positive of the brakes.
PURPLE (14 AWG/ 2.5 mm <sup>2</sup> )	Connect to a remote voltage monitor.
WHITE (14 AWG/ 2.5 mm <sup>2</sup> )	Connect to the negative of the house battery.
BLACK/RED (12AWG / 4mm <sup>2</sup> )	Connect to the positive of the house battery (30A fuse required).
GREEN (20AWG / 0.5mm <sup>2</sup> )	If using LiFePO4 Unconnected: connect to the positive terminal of the house battery. If using lead-acid: connect to the negative terminal of the house battery.
YELLOW (20AWG / 0.5mm <sup>2</sup> )	If SwayControl is being used, connect to the YELLOW cable of SwayControl via connector. If SwayControl is not being used, leave unconnected.
THIN RED (20AWG / 0.5mm <sup>2</sup> )	If SwayControl is being used, to the RED cable of SwayControl via connector. If SwayControl is not being used, leave unconnected.



## 5. WIRING DIAGRAM



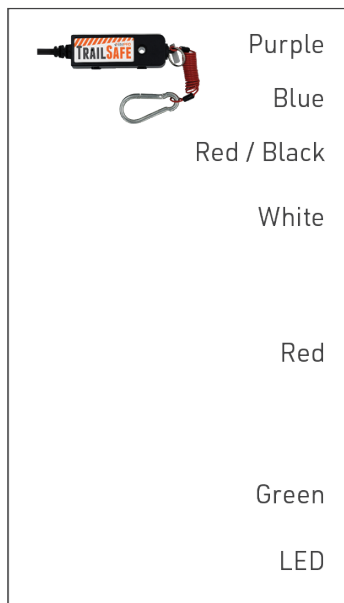
Tow Vehicle



### LEGEND

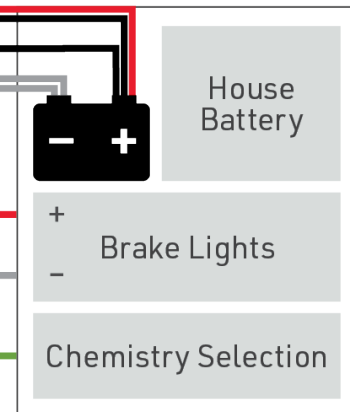
- 30A Fuse
- TrailSafe+ LED Connector
- SwayControl LED Connector

TrailSafe+



Trailer

SwayControl



## 6. CALIBRATION









To calibrate the TrailSafe:






1. Ensure the TrailSafe pull pin is in place.
2. Power up the TrailSafe. The LED will be a continuous flashing PURPLE for up to 5 minutes.
3. Once the LED is a solid PURPLE, pull the safety pin out. The LED will change to a continuous flashing PURPLE for up to 1 minutes.
4. Once the LED is a solid PURPLE again, put the pull pin back in. The LED will display a status indicator.





## 7. LED STATUS INDICATORS

### LED STATUS KEY

	Continuous Flash		Solid Colour
	Blink Once Every 10 Secs		No Light
	Blink Once Every Few Secs		Blink Twice Every Few Secs
	Blink 3 Times Every Few Secs		Blink 4 Times Every Few Secs

STATE	STATUS	CONDITION	SOLUTION
Battery flat		The battery is flat. <b>⚠ Warning:</b> This state will override other LED indicators. Refer to the <b>Battery Flat</b> section for more information.	Charge or replace the house battery.
Normal operation, battery sufficient			
Sway event active			
Standby mode		The TrailSafe is in standby as no brake activity has been detected for 1 minute, and the SwayControl is in "sleep" mode	
Battery insufficient		The house battery may have insufficient capacity for 15 minutes of emergency braking operation.	Check the battery to ensure at least 10Ah of house battery capacity is available.
SwayControl not detected		The SwayControl is not detected by the TrailSafe+.	Check if the SwayControl is connected.
No power		No power to SwayControl after a "wake-up" signal from the brake controller.	Check the quality of power, ground and brake controller wire connections. Check for any blown fuses on the tow vehicle and trailer.
Battery over-voltage / under-voltage		There is a house battery overvoltage (> 20V) or undervoltage (< 3V) on the SwayControl.	Check the power source voltage. The required voltage is 12-15V.

STATE	STATUS	CONDITION	SOLUTION
Off-road mode		The SwayControl is disabled momentarily. The unit will return to normal operation when not on rough terrain. The LED will flash both green and red.	
Other		The three following conditions are met:  The SwayControl is in "sleep" mode.  The TrailSafe+ is in standby.  The house battery capacity is sufficient for 15 minutes of emergency braking operation. There is no power.	If necessary, check the TrailSafe by depressing the brake.

STATE	STATUS	CONDITION	SOLUTION
System malfunction		The SwayControl has suffered a system malfunction.	A service centre repair is required.
		The SwayControl has no control of the trailer.	A service centre repair is required.
Left brake short		There is a wiring short in the left-side brake.	Repair the wiring short.
Right brake short		There is a wiring short in the right-side brake.	Repair the wiring short.