# Thumper DC Battery Box Vehicle Wiring Loom

BBG-DC-LOOM

The BBG-DC-LOOM has been designed to suit the Thumper DC model battery boxes (BBG-DC / BBG-DC(L) + BBG-DC-RD) The loom has been provided with all the necessary cables and lugs to complete the vehicle installation. If installed, this loom will offer the ability to harness a bulk charge from the vehicle's alternator whilst driving.

The BBG-DC-LOOM has been provided with an ignition lead (optional to fit). The ignition lead will be required in newer model vehicles (2017 and later), or in vehicles with a low voltage output. *Please see rear of page for more information on the ignition lead.

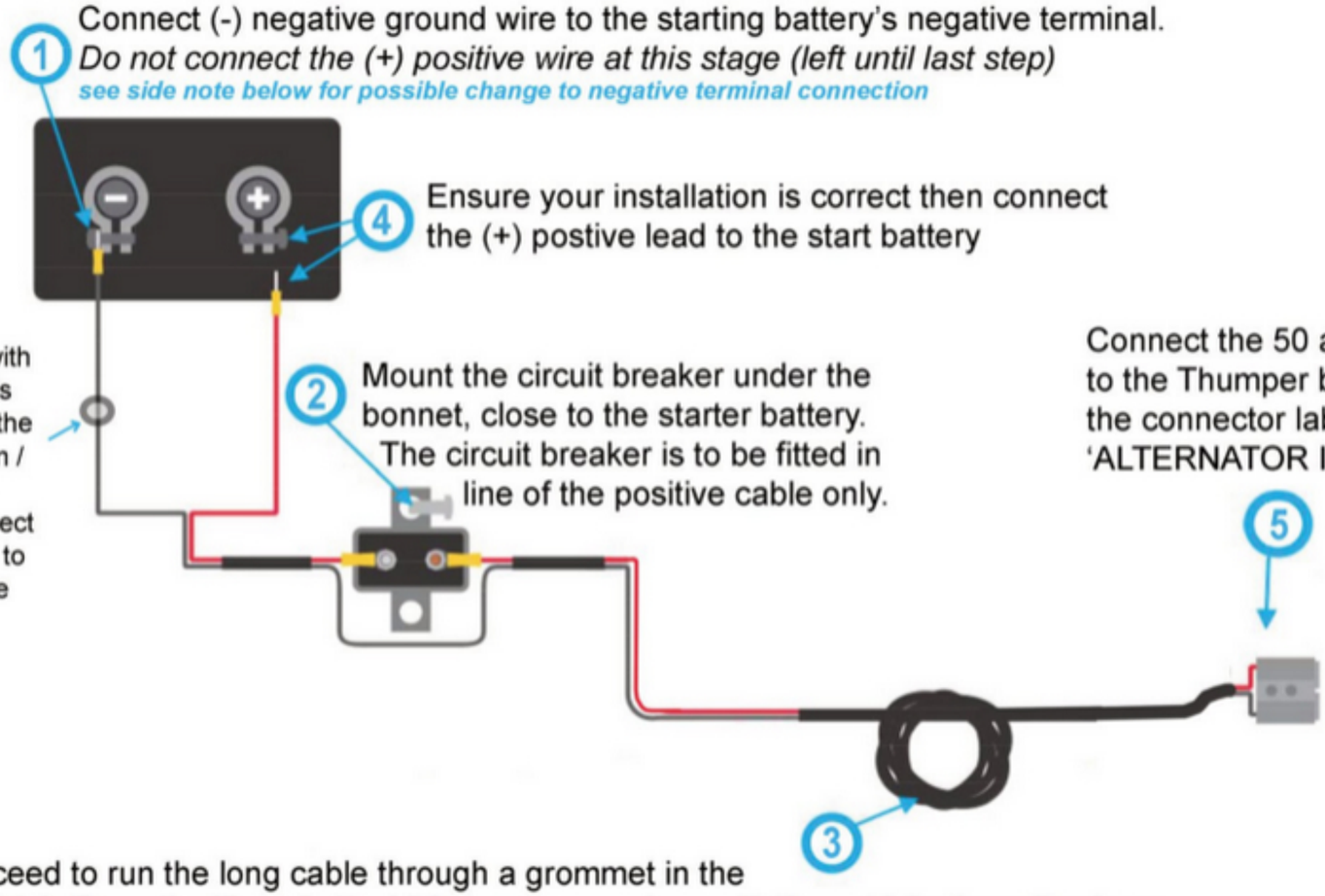
## COMPONENTS:

1. 6mt length 8B&S (8mm) with 50 amp Anderson fitted

2. 50 amp automatic reset circuit breaker

3. 50 amp Anderson connector (loose connector)

4. 6mt 3mm automotive cable with 2 Pin connector (ignition lead)



# Thumper BBG-DC-LOOM DC Battery Box Vehicle Wiring Loom

The 2 pin ignition lead has been provided with the wiring kit. This particular component of the kit is optional to install in some vehicles and is dependent on the voltage output of the vehicle. The ignition lead is also referred to as the 'over-ride' lead.

**Why would you need the ignition lead?**

In order to understand if you need the ignition lead, it is important to first understand how a DC charger operates. When no ignition lead / over-ride is used, the DC charger will act as 'voltage sensitive.' This method requires the vehicle starter battery to reach a voltage of approx. 13.2 volts to engage the DC charger and allow for charge to flow through to the secondary battery. When the vehicle's starter battery falls below 12.7 volts (indicating the ignition is off), then the DC charger will disconnect and will act to isolate the start battery from the secondary battery. This method is the perfect option for vehicles that maintain a higher voltage output (13.2 volts or more). In this case, the ignition wire will not be required and is optional to fit.

For vehicles that produce less than 13.2 volts, or, for vehicles that have a voltage output below 13.2 volts when running, they will require the ignition / over-ride lead to be installed. The ignition lead will act to 'over-ride' the voltage required to engage the DC charger. With the ignition lead installed, the DC charger will activate immediately when the vehicle's ignition has been switched ON and will disconnect immediately when the vehicle's ignition is OFF. This will occur regardless of the voltage of the vehicle's starter battery. The ignition lead acts to overcome the potential problem of the DC Charger disconnecting when used in low voltage vehicles. It will allow the DC charger to remain active in the vehicle until the ignition has been switched OFF.

**How to connect / where to connect the ignition lead?**

The ignition wire is required to be connected to any power source that holds power only when the ignition is ON. The power source must hold no power when the ignition is OFF. A common source of connection for the ignition wire can be:

- Rear of a power socket in the vehicle (that only holds power when the ignition is on)
- Splice into a wire within the windscreen wiper loom under the bonnet (common for vehicle up to 2015)
- For vehicles with rain sensing wipers, an easy connection is using a 'Fuse Tap' in the fuse box

Once the cable is installed into the vehicle, the 2 pin connector on the lead will connect directly to the battery box 2 pin.

The DC charger will still act to isolate the starter battery from the secondary battery with the ignition lead in use.