

# Thumper DC BATTERY BOX

Thank you for purchasing a **Thumper DC** battery box.

Your satisfaction is important to us, so please take the time to read and use the information enclosed to ensure the optimum performance of your battery box for many years to come.



## General Information

The Thumper battery box is hand built in Australia by Blue Apple Thumper.

Designed to allow the user to install up to a 130 AH AGM / GEL / WETCELL type battery, the Thumper DC Battery Box now incorporates the use of a sophisticated DC charger for both vehicle and solar charge (The Projecta IDC25). The characteristics of this charger may vary from chargers you have used in the past, therefore, we highly encourage you to read through the provided information carefully to ensure a complete understanding of the operation of this unit.

## Operating your Thumper DC Battery Box

Your Thumper DC battery box has been designed to include the most popular sockets on the market today. The box comprises of 2 x Marine grade cigarette sockets, 1 x Engel Fridge socket (unique 2 prong socket), 1 x Dual USB socket and 4 x 50 Amp Anderson connectors.

The two 50 Amp Anderson connectors positioned on the front and rear of your box are labelled "INPUT / OUTPUT" and will allow you to use these sockets as both inlet for charging or an outlet for running your appliances, such as a fridge or light. The two Anderson connectors positioned on the back left hand side of the battery box are wired directly to the IDC25 charger and are **clearly labelled "Alternator input" or "Unregulated solar input"**. Please see below information for more on these sockets.

The Thumper battery box is fitted with a digital volt meter, which will allow you to monitor the level of charge of your battery when ON. Pressing the push button located near the volt meter will illuminate the digital volt meter, which can then be cross-read with the voltage sticker on the top of your Thumper lid.

Please note: In order to obtain an accurate reading of your voltage, please remove any load (input charge or discharging appliances) from your Thumper before taking a voltage reading.



Image 1  
LED Volt meter

## Use of the USB socket:

It is important to note that the LED volt meter gauge must be illuminated in order to power the USB socket.

The USB sockets will have a minor discharge from a battery, even when not in use but when turned ON. It is therefore important to be able to switch off the use of the USB and Volt meter when your battery box is in storage. Simply press the push button to turn these on / off.

## Internal circuit breaker protection:

Your Thumper DC battery box is fitted with internal automatic reset circuit breaker protection.

The outlet sockets located on the front of your Thumper battery box are protected internally with a 30 Amp automatic reset circuit breaker. The Anderson connectors are protected by an independent 50Amp automatic reset circuit breaker.

## Using your outlet sockets:

All of the sockets within the Thumper are wired as bi-directional, allowing the user to charge or discharge from any outlet \*An exclusion to this is the USB socket, which is purely an **outlet** offering 5Volts – min of 2.5 Amp rating. In addition to this, the two 50 Amp Anderson connectors, labelled 'Alternator input' and 'Unregulated solar input', allow only for an INPUT charge – see information below for more details on these

## The Projecta IDC25 DC Battery Charger

Your Thumper DC battery box is fitted with the latest technology in DC charging; The Projecta IDC25. This particular DC charger is designed to allow for an optimal input charge to be harnessed from the use of both newer and older model vehicles as well as unregulated 12 volt solar panels. The Projecta IDC25 has been hardwired to the Thumper battery box with internal circuit breaker protection and heat sync protection. The IDC25 has a number of key functions, all of which contribute to the operation and charging of your Thumper battery pack. It is important to understand the features of this particular DC charger as sometimes such features can be mistaken for faults.

### In vehicle charging:

The IDC25 is designed to alter the initial voltage of your vehicle's alternator output (input voltage 9-32Volts) in order to produce the voltage selected via the mode setting on the IDC25 (for example: setting the mode to GEL setting will allow for the charging voltage of approx. 14.2 Volts when charging and a float voltage of 13.8 Volts). When charging the deep cycle or sealed battery is it recommended to **always have the IDC25 set to GEL**. If the charger has reached a 'float mode', then it is common for the voltage display on the Thumper to drop to as low as 13.2Volts under load before the charger will re-active. This can sometimes take several minutes to activate after the vehicle alternator has begun charging again. If you are unsure on what setting you should use, please contact our team on 08 8391 3121 before use.



Image 2  
IDC25 mode buttons

### Vehicle isolator:

The IDC25 will disconnect the DC battery box from the starter battery when your vehicle's charging voltage drops below 12.7 Volts, essentially working as the in-vehicle battery isolator. The vehicles starter battery must reach approx. 13.2Volts and hold this voltage for approx. 90seconds in order to engage the IDC25 and allow for charge to begin. If by chance, your vehicle's alternator voltage drops below 12.7Volts when travelling or does not hold > 13.2Volts when starting the vehicle for at least 60-90 seconds, then it would be recommended to install the ignition activated charge line (connection via the 2pin socket as seen in image 3). The Thumper battery box is fitted with a 2pin socket which is designed **solely** for the use of the ignition activated charge line. If wired to the vehicle, this connector will allow you to 'over-ride' the voltage activation on the IDC25 and instead will allow the DC charger to begin its charge when the ignition has been switched ON. The DC charger will then isolate the Thumper battery box from the main starter battery when the ignition has been switched OFF.

This 'ignition activated' connection is **NOT** required in 99% of vehicles (only vehicles with a voltage below 13.2Volts on start up or vehicles that the alternator voltage falls below 12.7Volt for a period of 60 seconds or more when running will need to install this 'over-ride ignition activated' line).

*Please contact our team for more information or to purchase this loom for your vehicle 08 8391 3121.*



Image 3  
2 pin Ignition activated feed

The Thumper DC battery box has been provided with a full wiring loom for your vehicle installation. The wiring loom provided is **8B&S twin** core automotive cable. The twin core cable will run direct from your main starter battery (or bolt supplied off main battery), through a circuit breaker, to the location of your Thumper unit. The vehicle charge line should always connect into the Thumper battery box via the Anderson labelled '**Alternator Input**'. Failure to connect the vehicle charge line to this particular Anderson will result in the Thumper being connected directly to the main starter battery (not isolated), which in turn will run the risk of flattening your starter battery).

### MPPT solar charging:

The IDC25 fitted to your Thumper DC battery box, offers a MPPT Solar Regulator rated to 25 Amps. The regulator has been hardwired into your Thumper battery box via an independent 50 Amp Anderson connector labelled '**Unregulated solar input**'. This outlet has been designed **solely** for the use of an unregulated solar panel (approx. input capacity 400-450 watts). The input voltage (VOC) of the solar panel must be a minimum of 9 Volts in order to activate the solar charger in the DC unit and must not exceed 24 Volts DC.

This connection should not be used for any other appliance and will NOT provide an output for running appliances.

### Installing a battery into your box:

When installing the battery within your Thumper battery box, it is recommended to have the terminals of the battery positioned at the REAR of the box. This will allow for the terminals of the battery to be positioned on the opposite side from the sockets when the battery box lid is on. See image 4

The connection to the battery is as simple as three cables; a positive cable, a negative cable and the heat- sync wire.

1. Connect the positive (red) cable of the battery box to the positive (red) connection of your battery
2. Connect BOTH the negative (black) cable from the battery box AND the black heat sync wire to the negative terminal of your battery. **NOTE:** Do not cut the heat-sync cable if you choose not to use it

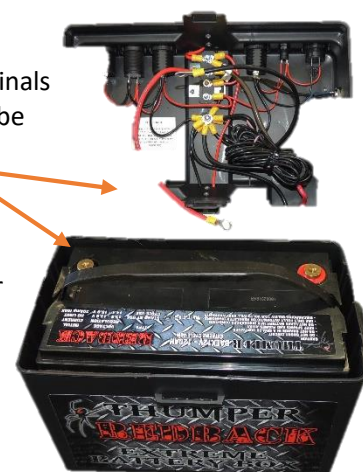


Image 4  
How to install the battery

For any additional information or questions you may have about your Thumper, please contact Blue Apple on 08 8391 3121.