

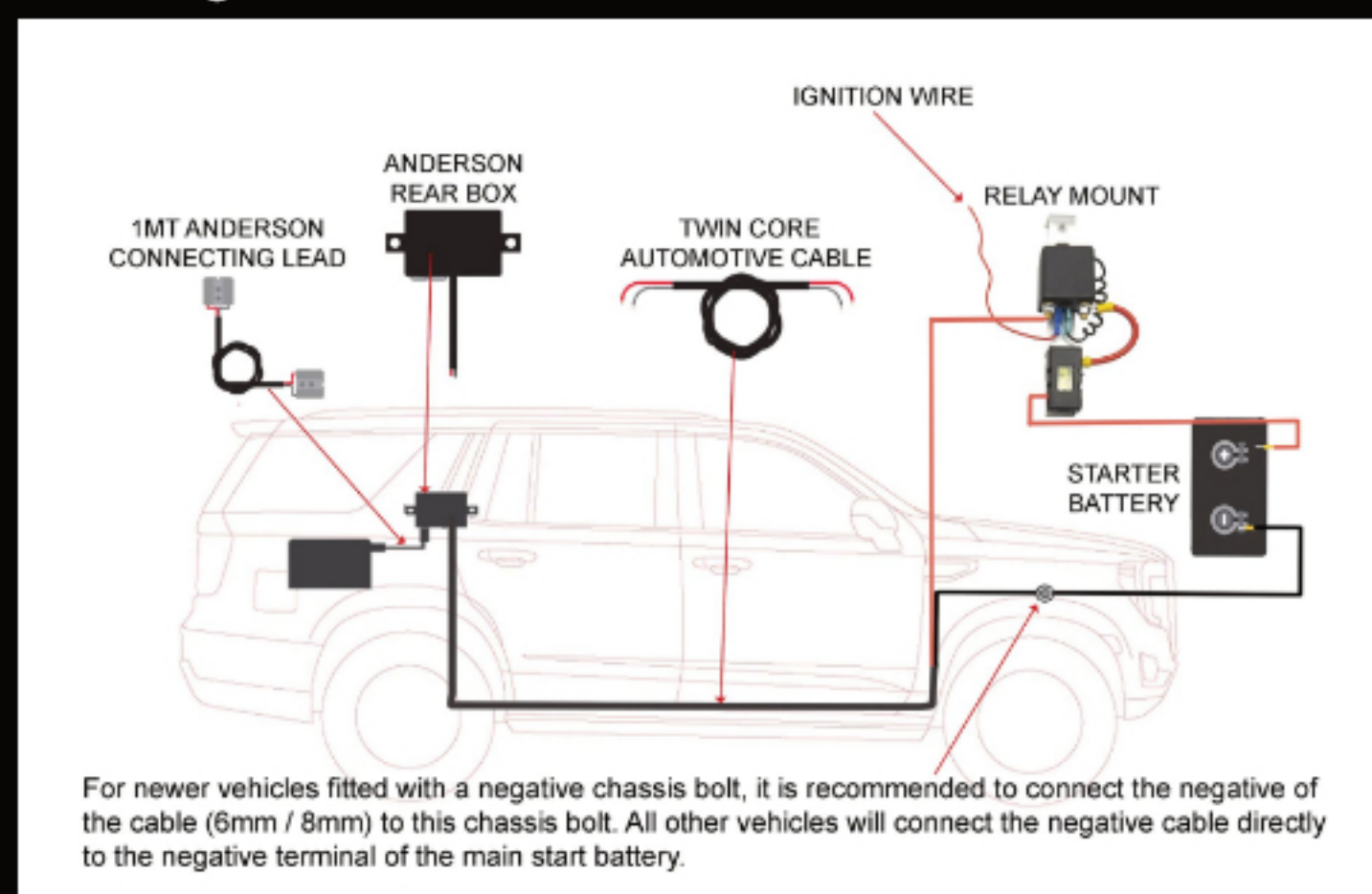
## VEHICLE CHARGING

The Thumper is provided with a complete vehicle wiring loom (TUR-L) on purchase. The TUR-L has been designed to suit any model vehicle, however, the voltage output will be determined on the vehicle's alternator. Some newer model vehicles (2017 and later) *may require* the use of a DC charger

- Check out the Thumper Outback or the Thumper Lithium series for models fitted with DC chargers.

The vehicle remains the best method of charge for any of the Thumper battery packs. If installed correctly; the TUR-L will provide a charge rate of up to 50 Amps to be harnessed from the vehicle whilst driving. Depending on the unit's requirements and the vehicle's alternator, the wiring loom has the ability to charge the battery pack within 2 – 4 hours of drive time.

The image below illustrates the TUR-L:



It is possible to use the Thumper Redback with a DC battery charger. In this case, it is still possible to install the TUR-L within the vehicle and use this kit in conjunction with a DC battery charger.

If a DC battery charger is used on the Thumper battery pack, then it would be recommended to set the charger to GEL. If no GEL setting is available, then set the charger to AGM.

The TUR-L is available to purchase as a separate item for installation into a second vehicle, making the Thumper easily transferrable from vehicle to vehicle.

## TROUBLE SHOOTING

- **Thumper fails to operate at front sockets – no 12 volt output**
  - Be sure to check the Thumper is in a charged condition
  - Contact Thumper if the above does not resolve the problem
- **Thumper fails to operate through jump leads**
  - Check the Thumper is in a charged condition
  - Check that output terminals are clean and that battery terminals are clean (make sure terminals are making good contact)
  - Be certain that the car's battery terminals are not plastic coated, resulting in no contact being made
  - Be sure that battery in car is fitted, even though battery is flat. Units are designed to download to an existing battery.
- **Thumper fails to recharge in the vehicle through charging kit**
  - Ensure that the charge lead is properly connected to the vehicle and to the Thumper unit
  - Ensure that you have a good earth for the wiring loom connection
  - Ensure all lugs within all Anderson connectors are fitted correctly
  - Ensure the fuse is not blown within the TUR-L
- **Thumper fails to recharge from a 240 volt charger**
  - Use only fully regulated or automatic chargers on all Thumper units. (Refer to the section Charging from a 240 volt source) Many 240 volt chargers are voltage activated and if the Thumper's voltage is less than 8-9 volts then the charger may not switch on. Charging is then only possible via the vehicle charging system.
- **Thumper fails to charge via 240 volt or vehicle charging**
  - Check the voltage of the Thumper, if it is below 8-9 volts then you may need to connect the jump leads to the unit and connect to the vehicle (as though you are jump starting). Bring the vehicle RPM above 1500 for 3 – 5 seconds and let the vehicle idle with the Thumper attached for approx. 10 - 20 minutes. When the Thumper has reached between 8 – 10 volts, re-attempt 240 volt charging or vehicle charging. **BE CAREFUL** not to overcharge and superheat the cells from 240 volt after excessive discharge has occurred – please contact for more information
- **Thumper performance decreases with each use**
  - The Thumper does not hold charge for subsequent use (Refer to Charging Methods)
  - If problem persists contact Thumper on 08 8398 5381
  - Possible repack of cells may be required (2 year warranty is renewed)

Please contact Thumper for any and all issues regarding the performance of the Thumper battery pack. Failure to inform Thumper of problems within a reasonable time frame may be considered neglect



## Information booklet

The Blue Apple THUMPER power pack has been designed and manufactured in Australia for Australian conditions. Designed to take the place of, or even work alongside of an existing dual battery system in the vehicle, the Thumper is the ultimate option for a portable dual battery system.

The Redback range is available in six different sizes, making this series the largest of the Thumper range.

The Thumper offers 12 volt power for the running of portable refrigerators and other 12 volt accessories. In addition to this, the pack is equipped for Jump Starting via the heavy duty 175 Amp Anderson connector. Completely 'Spike protected' when jump starting, the Thumper ensures protection of the vehicles computer chips, in built GPS systems, etc.

**Built in Australia by Blue Apple Thumper**

**Your Australian 12 Volt Specialist**

**Service Ph: 08 8398 5381**

## GENERAL INFORMATION

The Thumper pack consists of multiple 12 volt AGM (Absorbed Glass Matt) cells, linked in parallel. These cells are maintenance free and will not leak or gas when charging in the correct manner; perfect for use inside the vehicle or enclosed areas. The Thumper does not hold a 'memory,' which means that at any stage, regardless of the state of charge, the Thumper may be recharged or discharged, without damage occurring to the life of the battery.

**Constant discharging of the Thumper below 10.5 volts will result in warranty being voided.**

The Thumper Redback battery pack is completely charged prior to purchase. The condition of the Thumper can be monitored by the LED voltage display. Simply cross-reference the voltage display to the readings on the top of Thumper unit to help determine the remaining capacity of the battery pack.

The Thumper will operate at any angle, in temperatures ranging from -25 °C to +75 °C.

The Thumper is a 12 volt battery and is not designed for 24 volt vehicles. If you would like to charge the 12 volt Thumper through a 24 Volt vehicle, then a use of a DC charger or step down converter will be required.

## USING YOUR OUTLET SOCKETS

All sockets fitted 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 will act purely as an **outlet** offering 5 volts – min of 2.2 Amp rating.

The dual USB socket is wired with the use of the digital voltage display. In order to use the USB outlet, the voltage display must also be illuminated. All USB sockets have the ability to discharge a battery when not in use, therefore, it is good practice to ensure the display is not illuminated (no power to the USB) when in storage.

The approx capacity of each socket is listed below:

- Marine grade Cigarette socket - approx. 16 Amps
- Merit socket (also known as a Hella) - approx. 15 Amps
- Engel Fridge socket (2 prong) - approx. 15 Amps
- Dual USB socket (5 Volt output 2.2 Amp min)
- 50 Amp Anderson connector(s) - rated to 50 Amps
- 175 Amp Anderson connector - rated to 175 Amps

## INTERNAL CIRCUIT BREAKER PROTECTION

The Thumper Redback is fitted with internal automatic reset circuit breaker protection. The outlet sockets located on the front of the Thumper pack are protected internally with a 30 Amp automatic reset circuit breaker.

The 2 x 50 Amp Anderson connectors are protected internally via a 50 Amp circuit breaker.

The 175 Amp Anderson connector within the Thumper remains the **only** connection that is not fitted with a fuse or circuit breaker. This is due to the fact that this connection is used for jump starting. The 175 Amp Anderson is 'spike-protected' for jump starting purposes. If using the 175 Amp Anderson for running appliances, it would be recommended to install a fuse or circuit breaker within the line of the Thumper unit and the appliance.

## JUMP STARTING

The Thumper Redback range will allow for jump starting vehicles (note: The 15 AH Mini Mate is not designed for jump starting). The Thumper range is 'spike protected', making it completely safe to use with any 12 volt vehicle (**not suitable for use with 24 volt vehicles**). Each Thumper unit (excluding the Mini Mate) is provided with a set of high quality jump leads; fitted with a 175 Amp Anderson connector, which connects firmly into the unit.

Simply connect the jump leads to the Thumper via the 175 Amp Anderson connector and connect the alligator clamps directly to the car battery (positive to positive and negative to negative).

**\*\* If the vehicle does not start within 15 seconds, stop cranking and wait 30 seconds before repeating the process. Remove the jump leads when not in use to protect the terminals from shorting.**

## CHARGING FROM SOLAR

The Thumper is compatible to recharge from solar panels, providing the solar panels used are 'regulated.' Remember that 12 volt solar panels are capable of producing 19 – 21 volts. This high voltage is only reduced through the use of a regulator and without it, damage can occur to the cells of the Thumper. The panel may be connected to any outlet of the Thumper in order to recharge, excluding the USB socket as this is purely an output.

The recommended connection to use whilst charging via solar would be via the 50 Amp Anderson connector.

## CHARGING FROM 240VOLT

The Thumper contains a number of SLA (Sealed Lead Acid) AGM (Absorbed Glass Matt) cells. These cells allow for a maximum charge voltage of 14.5 volts. If the charger exceeds 14.5 volts then damage will occur to the Thumper and warranty will be void.

When charging via 240 volt, it is recommended to use a regulated or automatic battery charger. If the charger allows for an option to select the chemistry, please select GEL. The GEL setting allows for a lower charge voltage and will promote optimum life of the Thumper battery. If the battery charger does not contain a GEL setting, please set to AGM or NORMAL.

When recharging via 240 Volt, the charger should have the ability to fully recharge the battery pack within 24 hours. Longer periods of charging will not result in better performance and may result in damage to the cells, which will impact the warranty.

For an accurate reading of the Thumper's state of charge, wait for 30 minutes after disconnecting from the charger as this will allow time for any 'surface charge' to fade.

**To confirm the compatibility of any charger, please contact THUMPER directly on 08 8398 5381**

## CARE AND MAINTENANCE

The Thumper is basically maintenance free. However, there are things that can be done to help prolong its' life:

If the Thumper is not continuously charged through the vehicle (which is the best method of prolonging the life expectancy), then it is recommended to:

- ALWAYS store the Thumper 100% charged (12.7 volts +)
- Never store the Thumper directly on a concrete floor for prolonged periods (longer than 2-3 weeks)
- Turn OFF the digital voltage meter on the Thumper
- Recharge the Thumper every 6 – 12 weeks when in storage
- Before recharging, it is recommended to discharge the battery to approx. 11.5 volts in order to stimulate the full capacity of the battery.
- Ensure that NO inverter, volt meter or appliance is left on