



BLUE APPLE MANUFACTURING

Ph: 08 8391 3121

Thank you for purchasing a **BLUE APPLE THUMPER FRIDGE POWER** battery pack.

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

General Information

Blue Apple power packs are designed and manufactured in **Australia** for the harsh Australian environment. The Thumper range is designed to take the place of, or even work alongside of a dual battery system in the vehicle.

Your Thumper Fridge power unit is designed to offer 12 volt power for the running of portable refrigerators and other 12 volt accessories.

Your Thumper Fridge power unit 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; perfect for use inside the vehicle or enclosed areas.

Your Thumper does not hold a "memory", which means that at any stage, regardless of the state of charge, your Thumper may be recharged or discharged, without damage occurring to the life of the battery.

Operating your Blue Apple Thumper

Your **Blue Apple** Thumper unit is completely recharged before purchase. The condition of the cells can be checked by pressing the push button on the front of the unit to illuminate the blue LCD display gauge. Cross-reference the gauge against the voltage readings on the sticker above to determine the remaining voltage available. This gauge is extremely low draw and can be left on if required to monitor the Thumper's condition. If left illuminated the gauge will draw approx 1 Amp over a 14 day period.

Your Thumper will operate at any angle, in temperatures ranging from -25°C to +75°C. The unit is internally marinated to aid in the protection against salty air and high humidity; perfect for the marine environment.

The outlets on the front of your Thumper are marine grade and are protected via a 15 Amp circuit breaker. If the circuit breaker trips, simply push it back in to reset.

All connections on the Thumper may be used for recharging or discharging.

Charging Methods

Your Thumper is provided with a **20 or 50 Amp Vehicle Charging System**, which remains the best method of recharge. The charging kit is designed to be hard wired to the vehicle, if installed correctly; this kit will provide a charge rate of up to 20 or 50 Amps.

Depending on the unit's requirements and the vehicle's alternator, the charge kit has the ability to recharge the unit within 2 – 4 hours of driving.

Your Blue Apple Thumper can be continuously connected to the vehicle charging kit without risk whilst simultaneously providing power for on-board accessories (for example – car fridge) if desired.

Charging from a 240 Volt source

Your Thumper can be charged from 240 Volt; however, the charger **MUST** be regulated or automatic to ensure that the cells are not damaged if accidentally left for extended periods.

Your Thumper fridge power is supplied with a Hella plug (male), which is provided so you can attach this to your 240 Volt charger. The top centre pin of the Hella plug is the positive (red) and the side pin on the Hella is the negative (black).

Please note:

The 240 Volt charger used should not exceed more than a third of the battery's capacity ..

EG The Thumper fridge power 48 AH = max charger of **16 Amps**.

EG The Thumper fridge power 75 AH = max charger of **25 Amps**.

If you choose to use a charger that is 15 Amp – 25 Amp rating then you will need to upgrade the provided Hella plug to a 50 Amp Anderson plug.

Chargers should not exceed 14.8 volts as this will result is damaged to the cells and will void the warranty of your Thumper unit.

* A 240 Volt – 12 Volt power supply to run your fridge is not a suitable device for charging.

Blue Apple power packs are considered flat at a voltage of 10.5 Volts.

When recharging via 240 Volt, the charger should have the ability to fully recharge the unit within 25 – 30 hours. **Longer periods of charging will not result in better performance and may result in damage to the cells, which will affect your warranty.**

For an accurate reading of your 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.

Charging from SOLAR Panels

Your Thumper is compatible to recharge from solar panels, providing they are "regulated". Remember that solar panels are capable of producing 19 – 21 Volts and will damage the cells of the Thumper if directly connected to the unit without the use of a regulator. The panel may be connected to any outlet of the Thumper in order to recharge.

** Please feel free to contact **BLUE APPLE** for further information about solar.

Blue Apple now offers a full range of fixed mount and portable solar panels.

Fitting and using INVERTERS

Although your Thumper unit is 12 Volt, it is compatible with the use of inverters. Inverters convert 12volt DC to 240 Volt AC for the running of 240volt appliances when away from power.

Blue Apple now offer a complete range of 240 Volt Inverters – please contact us for further information.

Remember to treat you inverter with the same respect as 240 volt household outlets. The use of inverters should be monitored, and used in an environment that is out of reach from young children. * **To avoid electric shock, do not operate inverters in the rain or snow.**

Overloading inverters will cause damage and will void warranty. Never attempt to use an inverter beyond the maximum output capacity, E.G a 300 watt Inverter has a maximum load of 300 watts ONLY. ***Check the rating of all appliances before using on your inverter.**

The inverter may be operated when charging the unit from 12 Volt (vehicle charging); however, it is recommended to not exceed a 500 watt draw when doing so. (This rating should only ever be reached when using a Thumper Fridge power 75 AH – and connected via the 50 Amp Anderson).

Do not operate the Inverter when charging from 240 Volts as the increased voltage may result in damage to the inverter.

Any Inverter 150 watts or less may be connected via the Thumper's Cigarette/Hella outlet. (If a 300watt Inverter is connected to the Cig/Hella outlet then it is recommended to only utilise up to 150 watt draw as an increase draw may result in damage to the outlet).

Inverters exceeding 300 watts should be connected via the 50 Amp Anderson connection. The largest Inverter recommended to connect via the 50 Amp Anderson is a 600 watt. *Please feel free to contact Blue Apple for more information regarding the connections and use of inverters with the Thumper Fridge power.

The inverter will use power from the unit if left turned on even if an appliance is not in use. The draw is approx 0.5 Amp per every hour left on. It is considered good practice to always switch the inverter off when not in use to ensure both safety and minimise power consumption.

The inverter may have a warm up time delay of approx 3 – 5 seconds when starting up. Always switch the inverter on first then the appliance.

Care and Maintenance

The Thumper Fridge power is basically maintenance free. However, there are things that can be done to help prolong the life of your Thumper.

If the unit 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 in a fully charged condition (12.7Volts or above)
- Never store the Thumper directly on a concrete floor for prolonged periods

Care and Maintenance (continued...)

- Recharge the Thumper unit approx every 6 – 12 weeks when in storage
- Ensure that no inverter or appliance is left on when storing the unit
- Do not leave the voltage display on as this will eventually discharge the unit

Cleaning of your Thumper may be done with a damp cloth and with the use of a mild detergent.

Trouble Shooting

- **Thumper fails to operate at front sockets – no 12 volt output**
 - Be sure to check the unit is in a charged condition
 - Check if the circuit breaker has tripped, simply push to reset
 - Contact Blue Apple if the above does not resolve the problem
- **Thumper fails to recharge in the vehicle through charging kit**
 - Ensure that the charge lead is properly connected to the vehicle and the unit
 - Ensure that you have a good earth for the charging kit connection
- **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 8-9Volts then the charger may not switch on. Charging is then only possible via the vehicle charging system.
- **Thumper fails to charge via 240Volt or Vehicle charging**
 - Check the Voltage of the Thumper – if it is below 8 Volts then you will need to link the Thumper with another fully charged battery and wait until the charge of each battery equals out between the two. You may then attach a 240 Volt battery charger to the Thumper (still joined with the other battery) and proceed with charging.
- **Thumper performance decreases with each use**
 - The Thumper is not fully charged for subsequent use (Refer to **Charging Methods**)
 - If problem persists contact Blue Apple on 08 8391 3121
 - Possible repack of cells may be required (2 year warranty is renewed)

Constant discharging of your Thumper below **10.5Volts** may result in warranty being voided.