

Important information.

Please read this before you unpack your new battery.

Lead-acid batteries are potentially dangerous and we have gone to great lengths to ensure that your battery arrives with you in good condition and that you can unpack it easily and safely. If possible, (unless you have an AGM battery) we advise leaving the battery for 24 hours after you have received it. When you do unpack it, please observe the following precautions.

- 1) When opening the box containing the battery, do not smoke and ensure that there are no naked flames nearby, nor anything that could cause sparks. Do not wear a watch or jewellery when handling batteries.
- 2) Open the box outside with it upright and on a level surface.
- 3) Always take great care when handling lead-acid batteries and use protective gloves and eyewear. Be aware that batteries contain sulphuric acid which can cause burns and irritation to skin and can damage clothing. If you should spill any of the battery acid or get it on your skin or clothing, dilute it with copious amounts of water and an alkali such as bicarbonate of soda. If you should get any in your eye, flush the eye continuously with water and seek medical advice immediately.
- 4) If your battery is a wet lead-acid type, we will have attached a vent pipe to the battery and you will see that the end furthest from the battery itself has been plugged with sealant. It is essential that you cut this end – including the sealant plug - off the vent pipe. Be careful when doing this as there may be a small amount of liquid in the tube. If there is, let it drip out onto the absorbent mat which is in the box with the battery.
- 5) You can leave the vent pipe attached if you wish although, in most cases, this is not necessary. (A vent pipe is usually used when the battery is installed in such a way that there is little or no natural ventilation which would enable gas from the battery to escape. AGM batteries do not require a vent.) If you don't need the vent pipe, remove it from the battery by gently pulling and twisting. A small amount of gas or liquid may escape when you do this, so take care.
- 6) When you fit the battery, be sure to connect the positive and negative cables to the correct terminals. Always connect and disconnect the positive cable first. Do not lay tools on the battery.
- 7) If you are changing a starter battery, bear in mind that interrupting the power supply may affect the radio, alarm, immobiliser or other components. You can avoid this by connecting jump leads to the vehicle's battery cables before disconnecting them from the battery. Take great care when doing this.

If you have any doubt about how to unpack your battery safely, please call us on 01327 312233.

Banner batteries warranty information

Read this if you want to get the best performance and longest life from your battery.

When used for leisure purposes, Banner “Energy Bull” batteries are guaranteed against manufacturing defects for a period of four years.

Lead-acid batteries are like tyres: good ones from reputable manufacturers are very unlikely to be faulty. They can last for years or be destroyed within weeks depending on how they are treated. It’s exactly the same with batteries. When used as intended and maintained correctly, it is very, very rare for a good quality battery to suffer mechanical failure.

Exactly how long a battery can be used for depends on how it is used and how it is maintained when it is not being used. If it is not used or maintained in the appropriate way, any lead-acid battery can be easily damaged, resulting in poor performance and / or premature failure. This warranty does not cover damage to a battery which has been caused as a result of inappropriate use including the following actions. Please note that this is not an exhaustive list.

- **Overcharging** – Charging at an excessively high voltage can result in “gassing”. The effect of this is to lower the level of the electrolyte, exposing the plates to air and damaging them.
- **Undercharging** – This will result in sulphation of the plates and only occurs when a battery is not kept fully charged, **even if only for a few days**. It’s possible to reverse the adverse effects of mild sulphation using an “intelligent” battery charger but, the longer it’s left in a discharged state, the harder it is to recover a battery. Sulphation will result in an inability of the battery to hold a charge and, in severe cases, short-circuiting of the plates.
Stratification is another result of undercharging and is often seen in batteries that are used infrequently. Because the acid in the battery has a lower specific gravity than water, it can, if the battery is not used, separate out from the water and sink to the bottom of the battery. This higher concentration of acid at the bottom of the battery causes additional build-up of lead sulphate (sulphation), which reduces battery storage capacity and battery life. In order to prevent battery stratification, an equalization charge (increasing charging voltage to 14.4 volts) must be applied periodically.
- **Excessive discharging** – A wet lead-acid battery should never be discharged below 50% of its stated Amp-hour capacity. If this is done on a regular basis, the battery’s performance will deteriorate and its life will be greatly shortened.
- **Excessive cycling** – Any lead-acid battery has a finite life which is often measured in cycles. Cycles are the number of times that a battery is charged and discharged. A Banner Energy Bull battery is a semi-traction type and has a cycle life of approximately 400 - 500 charging cycles when discharged to a maximum of 50% state of charge. If it’s discharged to 25% state of charge, the cycle life will be reduced and, if discharged to only 75% state of charge, it will be increased.
- **Damage caused by incorrect connection of a battery charger** – If a charger is connected incorrectly, positive to negative and vice versa, the result can be that the polarity of the battery is switched so that the negative pole becomes positive and the positive pole becomes negative.

The best way to ensure that your battery gives good performance is to use an “intelligent” battery charge such as those made by CTEK and Sterling Power. Please ask your dealer for more information on battery charging and see overleaf for information on battery chargers.

Please Note: In the event of a warranty claim, batteries must be returned to the dealer from whom you bought them or to Banner Batteries in Rugeley, Staffordshire for assessment.

Intelligent Battery Chargers: The Key to Battery Health

Simple battery chargers work by delivering a constant current and voltage to a battery, irrespective of the battery's physical condition or state of charge. This type of charger is cheap to buy but simply not able to charge batteries efficiently. This can seriously impair the performance and reduce the life of a battery.

An "intelligent" charger, on the other hand, monitors a battery and, according to the battery's condition and demands, will constantly adjust not only the voltage but also the current supplied to the battery. It will do this in various stages or steps and these types of charger are also referred to as multi-stage chargers.

The chargers shown here are all "intelligent" and can be used with all kinds of lead-acid battery: starter, leisure, AGM and gel. Use them regularly and your batteries will last longer, perform better and be more reliable. If you don't already have one, you really should get one!

STERLING POWER

When tested against battery chargers with similar specifications, Sterling models often come out on top with features, performance and reliability just as good, or even better than that of chargers which often cost much more.

There are two ranges with models which cater for most requirements and we highly recommend them!

STERLING "ULTRA" Battery Chargers

There are eight models in the ULTRA range and, with outputs from 10 - 60 Amps, they are ideal for applications when your vehicle or boat has several high-capacity batteries or banks of batteries. These chargers can be permanently installed if required.

- ▶ Power factor correction.
- ▶ Elegant yet functional design.
- ▶ Splash protection.
- ▶ 11 preset charging algorithms.
- ▶ Automatic desulphation / equalization.
- ▶ Performance monitoring LED bar.
- ▶ Variable fan speed.
- ▶ Programmable power reduction.
- ▶ Three isolated charge outputs.
- ▶ Small, lightweight and powerful.



See the complete range of Sterling chargers on our website

STERLING "Portable" Battery Chargers

The range includes chargers with maximum outputs of 3, 4, 5 and 6 Amps. All except the 4 Amp model can be used with both 6V and 12V batteries. All models are suitable for use with all types of lead-acid battery including AGM and gel as well as standard wet batteries.

- ▶ Micro-processor controlled for fully automatic operation.

- ▶ 5-stage charging regime for "intelligent" charging including pulse function for battery

rejuvenation and de-sulphation phase.

- ▶ Charge rate can be adjusted manually if required (not on 4 Amp model) for slow, medium and fast charging.
- ▶ Easy to understand control panel with LED display

showing charging status and error warning if there's a problem.

- ▶ Automatic switching to float / maintenance charge when battery is fully charged. Charger can be left connected indefinitely.
- ▶ All models are completely safe in operation with short-circuit protection, reverse-polarity protection and over and under voltage protection.
- ▶ Two-year warranty.

CTEK Battery Chargers

CTEK®

Designed and developed in Sweden by some of the world's leading experts on battery technology, CTEK chargers have become the best-selling chargers of their type in Europe. Whether you want to charge batteries in a boat, a car, a truck or bus, a caravan, motorhome, a motorbike or a golf cart, there's a CTEK charger available which will ensure that they always perform to the maximum of their capabilities.

CTEK's range of 12V battery chargers are recognised the world over as being amongst the best you can buy. In critical situations where people depend on their batteries, CTEK chargers ensure complete reliability and maximum performance.

- ▶ Compatibility with all types of lead-acid battery (wet, MF, VRLA, AGM & gel).
- ▶ Protection against short circuit and reverse-polarity. Neither charger nor battery will be damaged if charger is wrongly connected.
- ▶ Multi-stage charging ensures that batteries are charged to their maximum potential.
- ▶ Water-resistant housings.
- ▶ Can safely be left connected to batteries for months at a time.
- ▶ Cables and storage bag supplied (except C8608 & C8610 - bag not supplied).
- ▶ 5-year warranty (except C8608, C8610, C8614 & C8622 which have a 2-year warranty).

See our complete range of CTEK chargers on our website



ROADPRO
Practical Products on the Move

To place an order, or for more information, visit www.roadpro.co.uk send an e-mail to sales@roadpro.co.uk or phone us on 01327 312233