

**This page will be under continuous construction for 6 months. It will contain Lead Acid batteries**

**We will offer postal rebuilds for batteries and chargers. As many bikes as possible (and mobility**

**Electroped Electric Bike Batteries**

**Electroped Leader = 3 x 12volt 12amp SLA @ £35 each = £105**

**Electroped No1 = 3 x 12volt 12amp SLA @ £35 each = £105**

**Electroped Roadstar = 3 x 12volt 12amp SLA @ £35 each = £105**

**Powabyke Electric Bike Batteries**

**3 x 12volt 12amp SLA @ £35 each = £105 for all lead acid based Powabyke's**

**Currie Electric Bike Batteries**

2 x 12volt 12amp SLA @ £35 each = £70 for all lead acid based Currie bikes.

**Currie Electric Bike Kit Batteries**

2 x 12volt 12amp SLA @ £35 each = £70 for all lead acid based Currie bikes.

**Currie Tricruiser Tricycle**

3 x 12volt 12amp SLA @ £35 each = £105

**Europed Electric Bike Batteries**

3 x 12volt 12amp SLA @ £35 each = £105 for all 36volt electric bikes.

**4 x 12volt 12amp SLA @ £35 each = £140 for all 48volt scooter based electric bikes.**

### Solartrack Electric Bike Batteries

**3 x 12volt 12amp SLA @ £35 each = £105 for all 36volt electric bikes.**

Batteries are electrochemical and they have their own personalities, few battery packs are identical

We have studied the theory behind batteries (this can keep you busy for a long long time) but the m  
The electric bike industry has been waiting for your interest to become significant enough to allow n

#### Sealed Lead Acid (SLA)

Pros: medium energy density, maintenance free, tried and tested on electric bikes, cheap.

Cons: heavy, battery cells can age quickly and die, no fast charge option, no storage option.

#### Nickel (NiMh & NiCd)

Pros: medium energy density, fast charge the norm, medium weight, serviceable.

Cons: Need interval discharges and servicing, suffer from memory effect, performance radically rec

Lithium-ion (Li-ion) If any store tells you that their ebike battery 'is the latest technology' ask them w

You need to discuss which Lithium chemistry suits your requirements the best, otherwise you may

This is where it gets really interesting from now and into the future and some basic knowledge is required.  
Geek bit:

Energy is released when the ions (in this case lithium-ions Li<sup>+</sup>) move from the positive anode to the negative cathode.  
The exception to the above is Lithium Sulphur LiS which uses a lithium anode and a sulphur solvent.  
Talk to us about which lithium chemistry is the best fit for your requirements.

### General

Pros: Very lightweight, very high energy density, durable, no maintenance, fast charge, can be stored for long periods.  
Cons: Expensive, can be unstable, cells charge and discharge at different rates.

### Lithium-Polymer (Li-Po)

Pros: Lightest battery available, highest energy density, no maintenance, fast charge, proven high performance.  
Cons: Most expensive, will suffer if incorrectly stored for a short time, can suffer thermal runaway if overcharged.

### HOW TO GET THE BEST FROM YOUR BATTERY

SLA: Like a car battery your lead acid battery takes a few cycles to get to peak performance, once it's there it's there.  
Nickel: NiCd and NiMh batteries are tremendously robust; they can deliver high amounts of current.  
Lithium: No matter which type of exotic lithium chemistry is used the battery maintenance follows a similar pattern.

If the battery will not be used for more than 4 weeks it should be stored at a storage voltage of approximately 50%.

### THE FUTURE BATTERY

Lithium batteries are the main focus for battery R&D; there are very good reasons for this such as:

High Energy Density/Low Weight: The honey pot of honey pots! A number of companies and universities are working on this.  
Fast Charging: Many companies have now demonstrated technology for rapidly charging batteries, especially for electric vehicles.  
Long Life: a bonus of low internal resistance is that an increase in longevity occurs. Battery life span is a function of internal resistance.  
What exactly is an electric vehicle (EV) battery?

An electric vehicle battery is a high current battery. This is very different from most consumer electronics batteries.

Keep in mind that good EV batteries have enough energy to carry a 90 kg man over hill and dale for 100 miles.

A battery is not just one solid piece, but a collection of "cells". The cells are one complete unit of anode and cathode.  
Each cell type (also called a cell's "metallurgy") has a nominal voltage. For example, NiMH (Nickel Metal Hydride) has a nominal voltage of 1.2V.  
How do you measure a battery's capability?

Usually, when people ask about a battery's capability, they want to know two big things:  
The amount of energy stored in the battery's cells. (How far can I go?)  
At what rate the cells discharge electricity. (How much power and speed?)

Amp Hours are the most common way to describe the amount of electricity in the cells – and all that it can do.  
To put this another way: More Amp Hours means you can go farther, at higher speeds and up bigger hills.

Max current means essentially "How fast can the cell discharge energy?" Think of it as a can full of gas.

You could also think of the max current as "how big the fuel line is".

Some people will describe max current in terms of max amperage that the cell can endure and for how long.  
What are some problems with battery construction?

Most consumer electronics battery applications use a tiny handful of cells. For example, a cell phone battery.  
Large packages of cells also create heat problems. A cell buried inside of several layers of other cells.

What are the solutions?

Each battery type has different capabilities, needs, and limitations. So, very careful engineering tailors the battery to the application.  
There is a trade off in terms of cost, weight, capacity, system complexity, and safety involved in all battery designs.

A big part of preventing catastrophic failures (like the kind that burn down houses) is a “battery management system” (BMS).