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# **Caravan Electrics - Batteries Explained**

### Leisure batteries and car batteries - what's the difference?



A car battery is designed to give out a large amount of power in a short space of time (starting the car) and then being quickly recharged. A leisure battery on the other hand is designed to store power and release it over a much longer period of time. Undoubtedly you can use a car battery in your caravan but it is unlikely to work very well in the long term.

### How big?

Battery power is measured in amp hours. The higher this number is the better as this gives you an idea as to how long it will last. Generally, leisure batteries are available from 75amp hours to 110amp hours. A common question is how long will a leisure battery last for caravanning. The obvious answer, is unhelpfully, depends how you use it and what for. To give you an idea as to consumption of caravan equipment running on battery we have prepared a chart for you to add up how much power you need.

### How long will a battery last in reality?

If you followed this consumption pattern and ran a 110 amp hour battery to total discharge you would it would last just under two days. However, in reality you would not get this performance for the following reasons: If you run a leisure battery to total discharge it would not be as effective. Amp hour ratings given to batteries are based on new batteries and in ideal conditions

We would never recommend totally discharging a battery ever, ideally you would never let it go below 50%.

# **Calculating battery requirement**

| Caravan<br>Equipment | Wattage rating | Estimated hours you will use it without a re-charge | Total watt hours e.g.<br>Rating x hours |
|----------------------|----------------|---|---|
| Three 8w<br>lights   | 24w            | 10 hours  | 240 watt                                |
| One 10w spotlight    | 10w            | 12 hours  | 10 watt                                 |
| Water pump           | 50w            | 30 mins   | 25 watts                                |
| Colour TV            | 50w            | 10 hours  | 500 watts                               |

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If you add up the total watts used e.g. 240 + 10 + 25 + 500 = 775 watts To work out the total number of amp hours you divide by the voltage (12v) 775 watts /12 volts = 64.5 amp hours.

### Preserving the life of your battery.

There are a number of ways to keep your battery working longer. Switch off all appliances when they are not being used Avoid using high drain appliances such as televisions etc Keep your battery regularly topped up. Consider a battery charging device (see below)

### A guide to caravan voltage meters

If your caravan has a volt meter fitted, if not a simple volt meter will suffice, you can check your batteries condition using the following guide. Even though batteries are rates at 12v a fully charged battery will give out nearer 13v (see guide below)

| Voltage shown on voltmeter | Guestimate of battery condition |  |
|----------------------------|---------------------------------|--|
| 12.7v or higher            | Fully charged                   |  |
| 12.5v                      | Three quarters charged          |  |
| 12.4v                      | Half charged                    |  |
| 12.2v                      | A quarter charged               |  |
| 12v or lower               | Empty                           |  |

### **Battery Charging**

There are a number of devices on the market that will trickle charge your battery. The most environmentally friendly versions are solar powered or wind powered. Other alternatives are a generator or to use the power in your car battery. Although be careful not to drain your car battery - so it is only really advisable to do this while the car is being driven.

## Winter lay up

Our advice is to remove your battery from your caravan when you lay up your caravan. Make sure you keep it charged over the winter to ensure it is in good condition next time you want it.

When removing your battery always disconnect the positive first (red) and then negative. Connecting your battery you should connect the negative terminal first (black wire) and then positive. Always switch everything off first to prevent sparks etc.

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