

Caravan Electrics (or how to make your battery last)

Talking to caravan owners who do not rally, it would appear that the most common reason for not trying rallying is the fact that they would not be on mains electricity for the duration of the rally and are worried about the caravan battery not lasting. It is true that modern caravans are designed for connection to the mains supply but it is also true that it is quite possible to last for a five day rally on a fully charged battery - providing care is taken with the use of electrical items.

Some of the biggest culprits when it comes to drawing current from the battery (and therefore discharging it faster) are

- The halogen (filament) lights fitted to modern caravans that take far more current than do the fluorescent lights that were standard until a few years ago, so only use those lights that are necessary and get into the habit of switching off unnecessary lights
- The blower fan fitted to the heater
- A colour television - only have it on when you are watching it.

Don't be afraid to use any of these items but only use them for as long as is necessary.

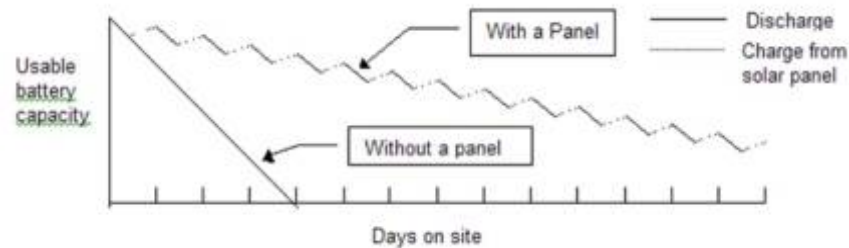
Always leave home with a fully charged battery, I always take mine out of the caravan and charge it in the garage rather than rely on the charger built into the caravan. Remember that the battery condition meter in the caravan only gives an indication of the charge of a battery; the fact that it is 'in the green' doesn't mean that it is fully charged. Always fit the largest battery possible, modern caravans will accept a 110 Ah battery in the battery compartment but be warned these are a lot heavier than an 85 Ah battery and need a fair amount of strength to get them in and out safely. Dropping a 110 Ah battery onto your toes will not do the battery any good at all - but it will do a lot more damage to your toes!

Just to be on the safe side, for rallies that last longer than a weekend, I take an extra fully charged battery, this battery became my reserve when it became obvious that it was not holding its full charge. For extended holiday rallies the marshals are often on mains and will often have a battery charger available, however this varies so check with the marshal.

Solar panels

Many rally visitors these days use a solar panel that gives a useful battery charge during daylight hours. Solar panel technology has advanced a lot in recent years and they can give a useful charge even on overcast days. I have taken some measurements from my 50 Watt (W) panel and on a bright grey day last Easter the panel was providing a 1A charging current and on a sunny day in May it was giving 2.5A, both readings were taken at midday. Although this is unlikely to fully replace all of the charge taken from the battery during the day, the graph below illustrates how a battery

that would normally last for around 4 days can be made to last for 14 days. This diagram is only to show the theory, the actual extra time gained depends on many different factors, e.g. how much current is drawn from the battery, the capacity and health of the battery, the weather, etc.



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Panels vary in power from around 18W up to 50W, which is about the largest panel that is physically manageable (size not weight), panels can be stood on the ground or, with a bit of modification, they can be placed on the roof of the caravan which gets them out of the way.

My choice of panel was a 50 panel supplied by [Solar Solutions of Poole](#). Although there are a lot cheaper panels available that are well liked by other members I was impressed by the CaraSolar's build quality, its built-in regulator (a vital component, which, with most other makes of panel, has to be wired into the caravan), and its security cable which allows it to be securely locked to the caravan. Towards the end of the Moddershall rally this year our heater blower was left on (by mistake) from 7pm until around midnight after which the meter was in the yellow zone but by the following evening it had returned to the green, the battery was nowhere near fully charged of course but it was an impressive demonstration of the usefulness of a solar panel.

Caring for your battery

A battery must always be stored in a fully charged state, so make a point of charging it as soon as you return home from a rally, failure to do this can result in the battery plates 'sulphating up' which can drastically reduce the life of your battery. Check the acid level at regular intervals and top it up to the correct level using only distilled water, never let it drop below the top of the plates, but don't overfill it either, and never be tempted to put in extra acid to try to rejuvenate a tired battery, it has no effect and is a dangerous practice.

Store your battery when not in use in a dry, frost free place and give it an occasional charge. Never stand a battery directly onto a concrete floor as this can damage it.

Hopefully this will encourage members who have yet to try a rally for the above reasons to give it a try.

I hope that you find this article helpful. David W