

# TIPS & TRICKS



## USING SOLAR POWER

### General order of installation –

1. Position your solar panel/s preferably facing north at 35 degrees and secure.
2. Connect the solar panel/s to the regulator (if used) and the battery/s using a low voltage cable run no longer than 10 metres.
3. Allow 48 hours of good sunny charge before connecting to any load.
4. Disconnect the solar panel/s from the battery/s – wait half an hour and test the battery voltage. Each battery should read around 13.5 volts or 27 volts connected in series if well charged.
5. Connect your battery cables to your load.

- **TIP** – Do the maths. Solar systems require some mathematics before installation to ensure that the amount of energy you collect is sufficient for your needs and that your fuel tank/s (battery/s) are large enough to get you through any long stints without top ups. Your Automatic Solutions people will help you if required.
- **TIP** – Once your requirements are calculated you cannot add further loads or change significantly usage patterns without returning to the maths and upgrading your system to suit.
- **TIP** – Use low voltage cable only for all cable runs. This cable can be purchased from Automatic Solutions or motoring stores also stock this. 3mm or 5mm are fine.
- **TIP** – Solar panels in general will not work in ANY shade. One small corner of shade on a solar panel means no charge. Oh! – And by the way those trees or pots thirty metres away can throw very long shadows. Your solar panel size is selected based on area averages. If trees and shade will interfere you need to calculate using lower averages and collect you energy over a shorter period of time.
- **TIP** – We prefer to use good quality SLA (Sealed Lead Acid) batteries and plan to use (and replace) in normal daily activity no more than ten percent of capacity. We do not advise using “deep cycle batteries” in our circumstances and usage patterns.
- **TIP** – If using a regulator which you should do with all solar panels greater than 10 watts do not use any “load” terminals on the regulator. Connect only solar power in and battery charge out. Connect the load direct to the battery/s.
- **TIP** – The Aussie “she’ll be right” attitude will have you crying in your beer with solar power. The smallest shortcut will have you scratching your head and wondering why your control board which relies on perfect power doing all weird and strange things. No shortcuts!