Setec’s BMPRO J35 (Model B, C and D) is a complete battery management system with an internal Solar Regulator. The team at Setec has undertaken rigorous solar testing to determine the performance of our J35 against standard solar regulators regularly used in the Caravan Industry. The solar panel used for testing was a typical, single 150W solar panel, mounted horizontally as is normal for fixed caravan installations. Our research shows that for a typical, mixed-weather Melbourne summer’s day (mostly sunny with no significant breeze but patchy clouds around midday and in the mid-afternoon), the J35 solar regulator delivers superior performance over the standard solar regulators.

The J35 system outperforms the PWM regulator by 15% to 20% in virtually all conditions and even outperforms the MPPT during the hottest conditions of the day.

Even allowing for high solar panel temperatures, angle of incidence and other factors, the J35 provided up to 120W of power. Close to optimal for the given horizontal mounting of the solar panel. Under the same conditions, the MPPT provided 110W of power while the PWM regulator typically supplied a maximum of 90W with a brief 110W peak.

Over the course of the day J35 accumulated 70Ah of charge. This is comparable to the MPPT and 15% more than the 60Ah accumulated by the PWM regulator.
Getting The Most Out Of Your Solar Setup

There are some things that can prevent your solar panels from giving their max - here are some tips to ensure you’re getting the most out of your solar setup:

Make sure your solar panels are clean – just like it’s difficult to see out of a dirty window, your solar panel cells have difficulty seeing the sun through dirty glass. For optimal performance, we recommend you regularly clean your solar panels (when cool), with warm, soapy water.

Consider the location of your caravan/RV when using solar – a shadow (from trees, buildings, other caravans, and even other accessories on the roof of your van such as air-conditioners and antennas) across any part of the solar panel can reduce the panel performance by up to 80%.

The time of day and time of year is important – for some parts of the year (especially in southern parts of Australia) the sun will never be directly overhead, so your solar output will be reduced – sometimes at up to 50%.

JHub — Understanding Your Solar

J35C is supplied with an RV control panel JHub, which allows monitoring of the solar input. Your solar panels will charge your battery once they are charged enough to support battery charging. Reducing loads will increase how much solar power is available for charging the battery.

If your battery is close to fully charged, the system will back off to protect the batteries. As a result, you may see less output on your solar display. This isn’t a problem – the solar regulator system is designed to protect your batteries from over charging.

Remember that if you are connected to either mains power or a generator, these power sources take precedence over solar and your solar system will not be in use.

BMPRO — A Setec Brand

BMPRO, a Setec brand is a world leading range of power management and battery charging solutions designed and manufactured by Setec - an Australian company that has been developing innovative power solutions since 1968. With 50 years’ experience in delivering quality Australian designed and made solutions to customers, we understand the importance of effective power management.