BMPRO HELP GUIDE

USING DC-DC CHARGERS WITH POWER MANAGEMENT SYSTEMS

The MiniBoost is a 20A DC-DC charger designed for the caravan market for use with BMPRO power management systems.

The MiniBoostPRO is a 30A DC-DC charger with a solar regulator designed for both the caravan market for use with BMPRO power management systems, and the 4x4 market for use with 4x4 battery setups.

USING THE MINIBOOST

The MiniBoost can be used standalone with lithium batteries, but it may not fully charge the battery in all scenarios.

When the MiniBoost is used with the BatteryPlus35, it can be effectively used with lithium batteries as the solar and auxiliary charging is blended, which allows solar to make up the voltage difference.

The MiniBoost operates in two modes: boost mode (up to 20A) and bypass mode (up to 30A). It will operate in bypass mode when the input voltage is equal to or higher than the secondary battery voltage.

If the BatteryPlus35 detects current under 1A or over 27A, the auxilliary input will shut down for up to 15 minutes.

USING THE MINIBOOSTPRO

The MiniBoostPRO has a lithium charging profile and can be used as a either a standalone product or with the BatteryPlus35.

When connected to the BatteryPlus35, power from the MiniBoostPRO shows as coming from the Aux input, regardless of whether the power is from the auxiliary or the solar regulator in the MiniBoostPRO. Only solar panels connected to the solar input on the BatteryPlus35 will show as solar input.

The MiniBoostPRO operates in boost mode when the input voltage is lower than the secondary battery voltage, outputting between 22A to 25A from the alternator source. Solar can make up the difference if available and required.

The MiniBoostPRO will operate in bypass mode when the input voltage is equal to or higher than the secondary battery voltage, outputting between 25A to 30A from the alternator source. Solar can make up the difference if available and required. If the voltage exceeds the required voltage for the charging algorithm, output will be shut off to protect the battery. The MiniBoostPRO cannot reduce voltage.

If the secondary battery voltage is between 14V and 15V, the MiniBoostPRO will only start to charge after a 15-minute delay.

When connected to the BatteryPlus35, if current is under 1A or over 27A, the auxiliary input will shut down for up to 15 minutes.

Solar charging will occur if the solar voltage is 1V greater than the battery voltage and the target voltage for the charging profile or mode is not exceeded.

Note: When integrated with the BatteryPlus35, the solar regulator in the MiniBoostPro will only be activated when there is input from the tow vehicle auxilary.

COMPARING THE MINIBOOSTPRO AND THE MINIBOOST

Pros of the MiniBoostPRO

Up to 5A extra charge current available when boosting voltage from the alternator.

Solar blending to produce a total charging output up to 30A.

Ability to use portable solar panels when stationary and connected directly to the secondary battery.

Full lithium battery charging without the need for multiple sources.

Cons of the MiniBoostPRO

Possible 15-minute output delay based on secondary battery voltage.

Shared Features of Both the MiniBoost and MiniBoostPRO

Up to 15-minute charging delay based on under/over current.

Maximum 30A output when in bypass mode.

FEATURE	MINIBOOST	MINIBOOSTPRO
Output	**Boost**: 20A **Bypass**: 30A	30A
Maximum battery charge capacity	400Ah	600Ah
Charge stages	3 stages	3 stages
LiFePO4 (lithium) battery charging	When used with a lithium-compatible BMPRO power management system	Yes
AGM/Gel/Calcium/Wet battery charging	Yes	Yes
Solar charging	No	Yes
Blended DC and solar charging	No	Yes
Solar regulator	None	PWM
Smart alternator compatibility	Yes	Yes
Fully tested in Australian conditions	Yes	Yes
IP Rating	IP20	IP20
Operating temperature	0°C to 50°C	-20°C to 80°C

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