SOLAR BOOST™ 2000E

MAXIMUM POWER POINT TRACKING PHOTOVOLTAIC CHARGE CONTROLLER

• The Ultimate Photovoltaic Charge Controller... Increases Charge Current Up To 30% Or More!

Patented Maximum Power Point Tracking (MPPT) technology allows Solar Boost 2000E to increase charge current up to 30% or more compared to conventional charge controllers. Don't waste money by throwing PV power away! Get the power you paid for with a Solar Boost charge controller.

The Solar Boost 2000E provides a precision Multi-stage Pulse Width Modulation (PWM) charge control system to ensure the battery is properly and fully charged, resulting in enhanced battery performance with less battery maintenance. An equalize function is also included to periodically condition liquid electrolyte lead-acid batteries.

A built in LCD digital display monitors solar charge performance. The display shows battery voltage, solar panel current and output charge current. You can actually see current boost working by knowing the difference between solar panel current and output charge current. A charge status LED indicates the present charge mode, and shows when the battery has become fully charged.

For more information contact:

Home and Mobile Energy
1013 Elroy Drive
Middlebury, IN 46540
(574)825-4800
www.homeandmobileenergy.com

Get Improved Performance From Your Solar Modules and Batteries

- **Patented MPPT technology increases charge current up to 30% or more!**
- **12 Volt / 25 Amp rating supports wide range of applications**
- **Multi-stage stage PWM charge control improves battery performance & life**
- **Electronic current limit prevents overload or nuisance fuse blow**
- **LCD digital display monitors PV charge performance**
- **Durable powder coat finish & conformal coated electronics resist corrosion**
- **Available temperature compensation further improves battery performance & life**
- **Fully protected against excess current, temperature, transient voltage & polarity**
- **Full 36 month limited warranty, optional extended coverage available**

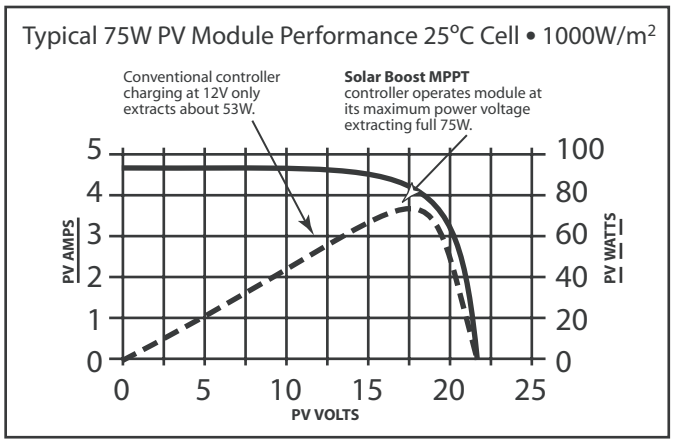
Manufactured by Blue Sky Energy Inc. and offered by a large network of quality distributors and dealers. Call us today for information or a dealer near you

Covered under US Patent 6,111,391

How Do Solar Boost™ Controllers Increase Charge Current?

Solar Boost controllers increase charge current by operating the PV module in a manner that allows the module to produce all the power it is capable of. A conventional charge controller simply connects the module to the battery when the battery is discharged. When the 75W module in this example is connected directly to a battery charging at 12 volts its power production is artificially limited to about 53 watts. This wastes a whopping 22 watts or nearly 30% of the available power!

Patented MPPT technology used in Solar Boost controllers operates in a very different fashion. The Solar Boost controller continually calculates the module's maximum power voltage, in this case 17 volts. It then operates the module at its maximum power voltage to extract maximum power. The higher power extracted from the module is then provided to the battery in the form of increased charge current. In conditions where extra PV power is not available, Solar Boost controllers will operate as a conventional controller with very low voltage drop.



The actual charge current increase you will see varies primarily with module temperature and battery voltage. In comfortable temperatures, current increase typically varies between 10 to 25%, with 30% or more easily achieved with a discharged battery and cooler temperatures. What you can be sure of is that Solar Boost charge controllers will deliver the highest charge current possible for a given set of operating conditions.

SPECIFICATIONS	Solar Boost 2000E
Output Current Rating	25 Amp Maximum
Nominal System Voltage	12 VDC
PV Open Circuit Voltage	30 VDC Maximum
Standby Power Consumption	17mA Typical
Charge On Power Consumption	70mA Typical
Charge Algorithm	Fully automatic two stage charge, Bulk & Constant Voltage. A third manually actuated Equalize charge function is included to periodically condition lead-acid batteries.
Charge Voltage Setpoint Range	13–16VDC (14.0VDC initial factory setting)
Equalization Voltage	Charge voltage setting +1.2VDC
Temperature Compensation	Optional temperature sensor adjusts charge voltage setpoint based on measured battery temperature. Field selectable slope, –5.0mV/°C/cell (lead-acid), or –2.0mV/°C/cell (NiCd)
Power Conversion Efficiency	95% @ 15 Amp Output
Panel Dimensions	4 5/8"H x 6 3/8"W x 1 7/8"D (11.75cm x 16.19cm x 4.76cm)
Construction	Open frame construction with conformal coated electronics visible from rear. Designed to mount into a rectangular surface cutout. Optional conduit ready surface mount box available.
Front Panel Displays	LCD digital display shows PV module input current, output charge current and battery voltage. Charge status LED shows present charge mode and battery state of charge.
Digital Display Range/Accuracy	Voltmeter, 19.99VDC / ±0.10% F.S. Ammeter, 26.0A / ±0.75% F.S.
Specified Temperature Range	0 to +40°C (Extended range –40 to +50°C, will operate but may not meet/spec.)

• Available From

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• Part Numbers & Shipping Weight

Solar Boost 2000E.....SB2000E.....2 lbs.....0.91kg
SB2000E wall mount box.....720-0011-01....2 lbs.....0.91kg
Battery Temp. sensor, 20' cable.....930-0022-20.....1 lbs.....0.46kg