



Tech Bulletin:

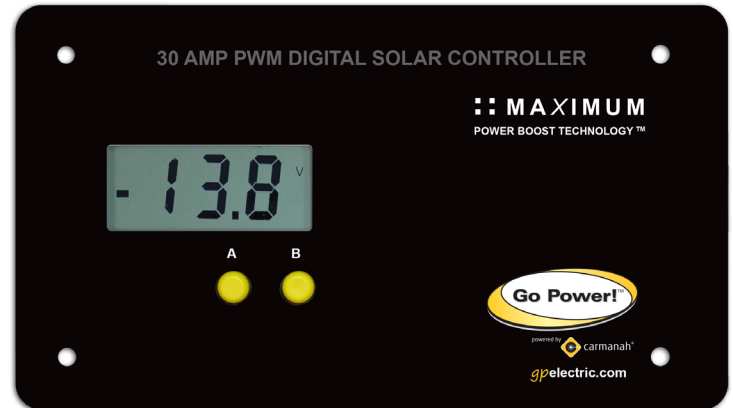
Solar Controller Improvements

May 22, 2013

MAXIMUM

POWER BOOST TECHNOLOGY™

Our New Go Power! 30 Amp Digital Solar Controller now includes Maximum Power Boost Technology™ (MPBT). This new feature on the GP-PWM-30 allows you to override the normal charging algorithm of the solar controller. The MPBT will make the GP-PWM-30 go into a boost mode, bringing the voltage up to 14.4 VDC for 30 minutes, regardless of the batteries state of charge.

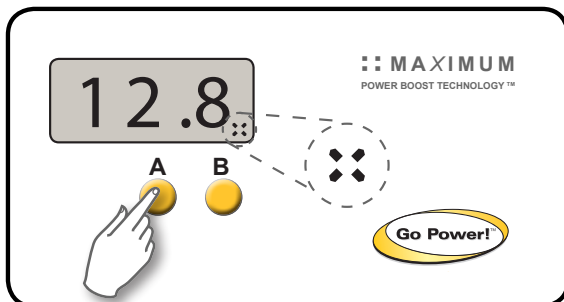


MPBT is designed to be used before the end of the day when you know you will require heavy DC loads through the night. The MPBT feature can also be used when you have just installed the solar controller, to immediately boost the charge level to 14.4 VDC. Performance of the solar controller will not be affected if MPBT function is not utilized.

IMPORTANT:

The GP-PWM-30 controller defaults to Charging Profile 2 (AGM Batteries). MPBT mode only works for flooded batteries and must be changed to Charging Profile 1. This feature should not be used more than twice a day as it may cause your batteries to require more distilled water top-ups due to increased gassing of the batteries.

Max. Power Boost



To activate the Maximum Power Boost Technology™, hold the **A Button** for 5 seconds. As long as full sunlight present, your batteries (flooded only) will be boosted to 14.4V for 30 minutes

Icons Displayed:

4 dots at bottom right of display

Battery Type	Flooded	AGM	GEL
Charging Profile #	1	2	3
Float Charge @ 25°C:	13.7V (+/- 0.1V)		
Bulk/Absorption Charge @ 25°C: Applied for 1h each morning	14.4V (+/- 0.1V)		14.1V (+/- 0.1V)
Boost Charge: Applied for 2 hours if the battery voltage drops below 12.3 volts	14.4V (+/- 0.1V)		14.1V (+/- 0.1V)
Equalization Charge: Applied for 2 hours every 28 days and if the battery voltage drops below 12.1 volts	14.8V (+/-0.1V)	N/A	N/A

The Boost Charge will occur in addition to the Bulk Charge. The Equalization Charge will occur in addition to the Boost Charge.

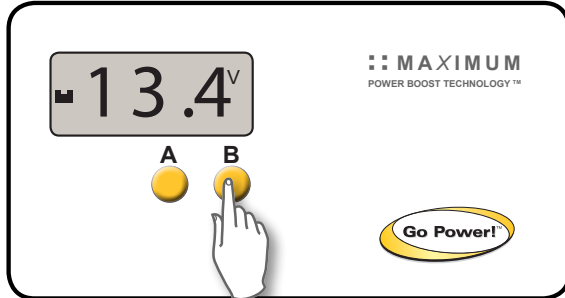
If a charging cycle is unable to complete in a single day, it will continue the following day.

The terms FLOODED, AGM and GEL are generic battery designations. Choose the charging profile that works best with your battery manufacturer's recommendations.

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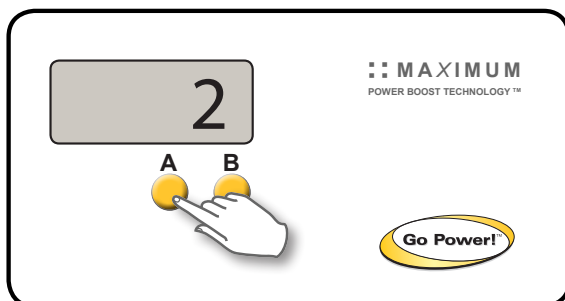
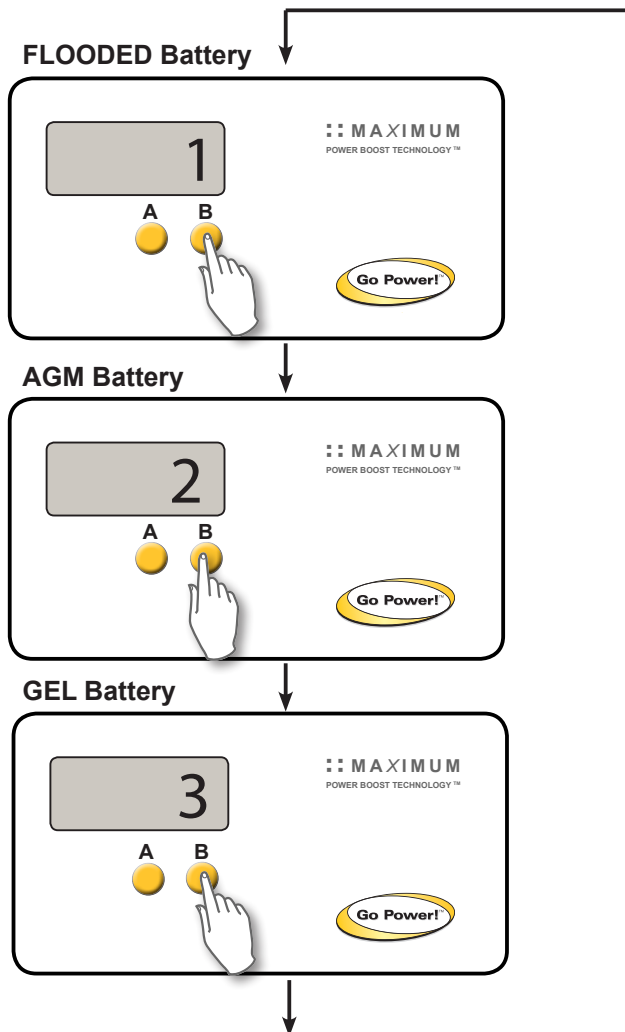
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Setting the Battery Type / Charging Profile



Set the Battery Type / Charging Profile by holding down the **B Button** for 5 seconds. When the display shows a single digit number, release the **B Button**. Set the Battery Type by toggling through the Charging Profile numbers 1, 2 or 3 by pressing the **B Button**.

NOTE: Non-volatile memory - Any settings made on the GP-PWM-30 will be saved even when the power has been disconnected from the controller.



Confirm the Battery Type / Charging Profile selection by pressing the **A Button**. Depending on the battery voltage when the GP-PWM-30 Power Up occurs, the GP-PWM-30 may do a Boost Charge or quickly go into Float Charge. The Charging Profile selected will commence the following day after a Power Up.