



MidNite Solar charge controllers offer the benefit of engineering experience that goes far beyond the MidNite name. The minds behind the machine go back to the early days of Heart and Trace engineering as well as Outback. This experience has allowed our team to design some of the most reliable and feature rich power electronics available in the market today.

Our support team is comprised of people who use MidNite equipment daily to power their own homes. Their advanced ability to troubleshoot nearly any issue gives our customers the confidence that if they have a question or concern it will be addressed quickly and professionally.

MidNite Solar is proud to partner with KiloVault to provide proper charging parameters when pairing our equipment. Using proper set points will ensure maximum safety and battery service life and give you confidence that your system will provide reliable power for years to come.

Battery Overview:

The KiloVault™ HLX series of solar lithium batteries was specifically designed and tested for the beating that serious hybrid and off-grid inverters and solar charge controllers can throw at it. Compared to traditional deep cycle batteries, the HLX Series' lithium battery technology will more efficiently store and deliver the renewable energy you have generated, with no maintenance on your part.

Features include:

- Works in 12, 24 or 48V configurations
- You can use the full battery's capacity, discharging it 100%
- Even after discharging it completely 2000 times, 80% of the capacity remains
- No watering required, or cleaning of hazardous chemicals
- Giving you up to 12% more use-able stored energy
- Lower cost per watt-hour/cycle and longer lifespan than lead batteries
- No thermal run-away issues as with other lithium technologies
- Takes up to 150A of continuous charging/discharging current, meeting the tough demands of serious inverters and chargers
- 7.5 Year Warranty

Models: 1800 HLX, 3600 HLX



MidNite Solar & KiloVault



Voltages: 12V

Amp Hour Capacities: 150-300Ah

Temperature Range Operational: 32 – 113 Degrees F

Charge Current Limit: 150 Amps

Discharge Current Limit: 150 Amps on HLX 1800 and 200A on HLX 3600

For information regarding Series and or Parallel configuration options, please contact KiloVault.

Critical Settings:

Absorb Voltage - 14.10v / 28.20v / 56.4v

Absorb Time – 2 Minutes*

Float Voltage – 13.80v / 27.60v / 55.20v**

Equalize Voltage – EQ Disabled set to Absorb Voltage***

Equalize Time – Set to 0 minutes***

Temperature Compensation – 0.0v per degree C per cell- Disabled

Low Voltage Disconnect – 12.10v / 24.20v / 48.40v

Low Voltage Reconnect – 13.00v / 26.00v / 52.00v

Note: Many lithium batteries have internal BMS that can disconnect the battery from the loads/electronics. While this is an inconvenience and we want to eliminate this, no damage will be done to MidNite Solar equipment should such a disconnect happen.

* Note: The Classic can only go down to 3 minutes, All others will allow 2 minutes

** Note: The goal is to have the loads run from the solar, In float the current in or out of the battery should be about 0 and you will want to adjust the 13.8v up or down to get the current into the battery as close to 0 as possible while allowing the loads to power from the solar.

*** Note, Midnite recommends you set the EQ voltage and time to match Absorb voltage and time. This ensures if some one unknowingly starts a Manual EQ that no harm will be done and the BMS will not disconnect



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Current limit:

Battery Current limit per string is 150 amps recommended.

WBjr global current limit – 150 amps per string.

State of Charge:

Using the WBjr with your charge controller it is possible to have a fairly accurate SOC % displayed. We recommend setting the Amp Hours per KiloVaults capacity per string.

Amp Hour capacity, 150Ah per string of 1800 HLX and 300Ah per string of 3600 HLX

Battery Efficiency – 94.5%

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MidNite Solar Inc. makes no assumption of liability regarding the charging requirements for any type of battery or model.

Some of the material being presented may be based on information that has been provided by other parties such as battery specs and operational parameters.

