

# MidNite Solar & KiloVault® HAB™



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® HAB™ Series wall-mount energy storage system provides a 7.5 Kilowatt-hour battery in a single package. Up to 14 units can be used together for additional capacity. The HAB Series has been designed for trouble-free mounting and is easy to connect with other system components.

Features include:

- High safety LiFePO4 battery
- Wall mounted all-in-one design
- Integrated WiFi communications
- Long cycle life (up to 6000 cycles)
- Advanced High/Low temperature cycle performance
- Intelligent LED & LCD display
- Supports up to 14 HAB battery modules in parallel
- 10 Year Limited Warranty



# MidNite Solar & KiloVault®

## HAB™



**Voltages: 48V**

**Amp Hour Capacities: 150Ah**

**Temperature Range Operational: 32 – 113 Degrees F**

### Manufacturer operating parameters by charging profile

	<i>10 Year extended life warranty</i>	<i>7.5 year extended charge rate warranty</i>
Low Voltage Cut-Off		48.2 Volts
High Voltage Cut-Off		57.0 Volts
Discharge Rate	60 Amps	150 Amps
Charge Rate	50 Amps	120 Amps
Cycle Life	6000 Cycles (80% DoD)	4000 Cycles (80% DoD)

#### **Critical Settings:**

Absorb Voltage - 56.2v

Absorb Time – See Below 2-6 Minutes\*

Float Voltage – 52.8v\*\*

Equalize Voltage – Auto 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 – 48.2v

Low Voltage Reconnect – 52.0v

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.

\* 40 amps or less would be 6 minutes of absorb

40-60 amps would be 4 minutes of absorb

60-150 amps would be 2 minutes of absorb (Classic MPPT's allow 3 minutes as minimum)

\*\* 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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### **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 HAB

Battery Efficiency – 94.5%

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Neither Midnite Solar Inc. nor KiloVault make any warranties explicit or implied with this product information.

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.

