Lithium Battery Storage Guide

(Battery manufacturer recommendations may differ. This guide is not meant to supersede manufacturer recommendations. For more information, please refer to your battery's manufacturer recommendations.)

General Information:

- We define "storage" as a period of time (typically 3-weeks or more) when there is no charge applied to the battery bank. Systems plugged into an outlet and being used daily are not considered to be in storage.
- The discharge rate of lithium batteries is much lower than other battery types and depends mostly on the Battery Management System (BMS) used for that particular battery.
- Lithium batteries can typically be stored for up to a year or more.
- Systems with a starter battery may require separate starter battery maintenance during storage because bi-directional charging from the lithium battery bank is most likely not occurring.
- It is important that draws on the lithium battery bank are reduced or eliminated to preserve charge during storage.

For regular storage follow these simple steps:

1. Check the system and log any issues found or fixed.
2. Ensure the battery charge levels are within the manufacturer's storage specifications. This is usually between 50% and 80% State of Charge. **Battleborn now recommends charging to full prior to storing their batteries.**
3. Turn OFF DC loads
4. Turn OFF the Inverter.
5. If stored under cover or in an environment where solar production would be limited, turn OFF the solar charging system between the charge controller and the battery bank. The charge controller can draw power from the battery bank.
6. If you have a Battery Master switch, turn it OFF. If the system does not have a Battery Master switch, remove the most negative cable from the battery.
7. Check up on the system after two weeks to ensure that nothing has changed.

To bring the system back online after being in storage, reverse these steps, then charge the battery bank up to 100% State of Charge. Check the system and log any issues found or fixed.

Lithium Batteries and Extreme Temperature Storage: Although we can't speak to all battery brands, the ones we know about have an upper and lower limit to what storage temperatures they can tolerate. The upper limit makes it prohibitive to install lithium batteries in the engine compartment, and the lower limit is usually at a point well below freezing where the battery's plastic shell would become dangerously brittle, and possibly fracture. The actual LiFePO4 energy storage material is not harmed by low temperatures. If lithium batteries are in an environment where they can be exposed to temperatures outside the recommended limits, they should be removed and stored in a temperature-controlled area.

Scan the QR code below to view the battery temperature range and manufacturer recommendations for your batteries.

LiFeBlue PO4

BATTLE BORN BATTERIES

victron energy BLUE POWER

For more information about how to properly store your rig during the off-season, please send an email to info@amsolar.com with details on your battery type, method of storage (covered or not) and other power equipment. We will happily give you tips specific to your situation.

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