

Kells,

Below is my report on the lithium battery, solar , monitoring and charging system aboard the S/V Proximity.

Observed an aftermarket installation of lithium batteries, solar charge controllers, a battery monitor and DC/DC chargers. The workmanship of the installation seemed to be very good and neat but lacked labeling. The system consists of Battle Born internally BMS type batteries for the House, solar panels and MPPT chargers, DC/DC chargers linking the Start batteries to the House and a Battery Monitor interfaced to the B&G MFD in the Salon. The inventory is listed below.

1 x Victron Energy BMV-712 Battery Monitor. SN HQ2039FIGSA

2 x Victron Energy Smart MPPT 100/50 solar chargers. Port and Stbd solar panels. SN HQ2110JVZNQ, HQ2110QL515

1 x Victron Energy Smart MPPT 100/30 soar charger FWD panel. SN HQ2129QNMCA

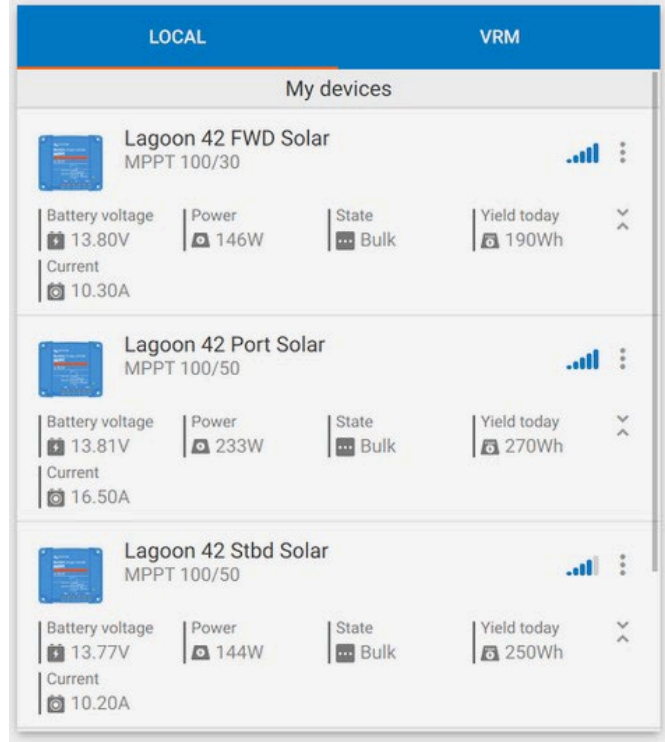
4 x Battleborn GC3 lithium batteries. 270Ah. 12vdc.

2 x Victron Energy 100Amp Buc/Boost DC/DC chargers. SN 2027, 2017.

Bluetooth access code is 123456.

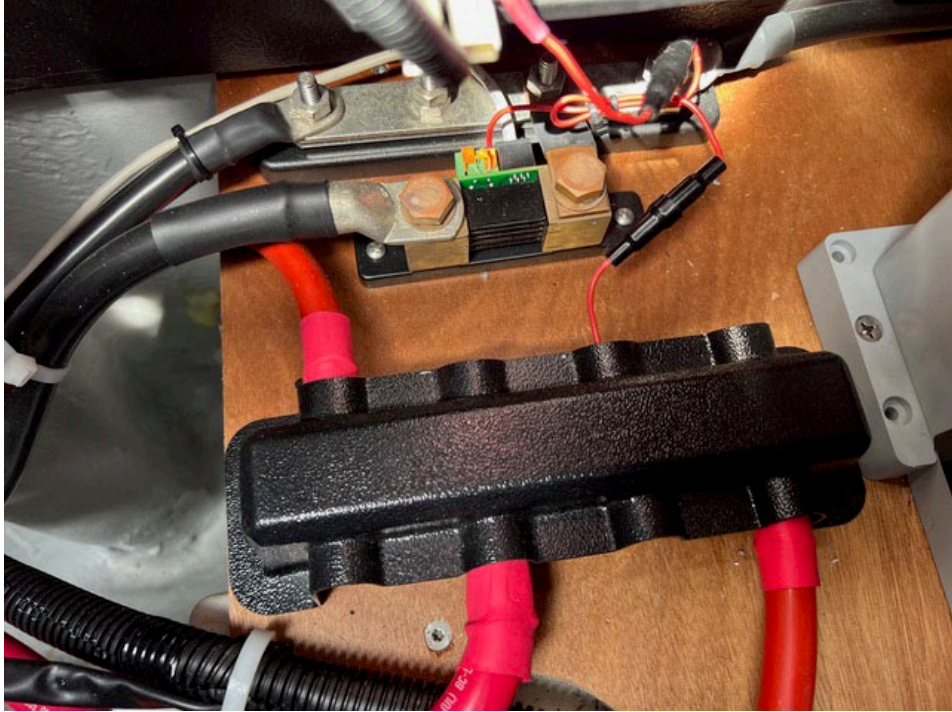
Solar chargers functioned properly and charged the batteries from the solar panels. See below.

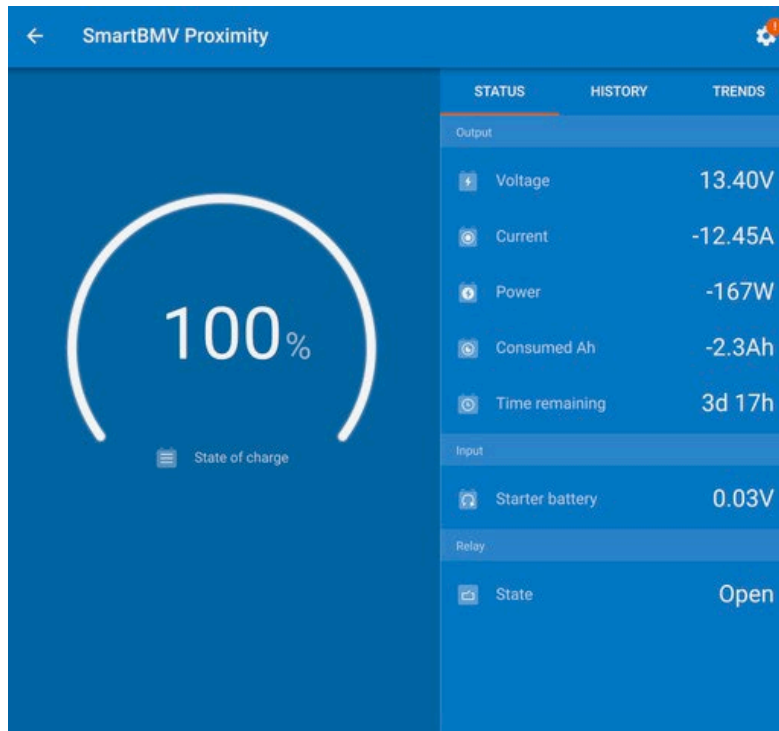
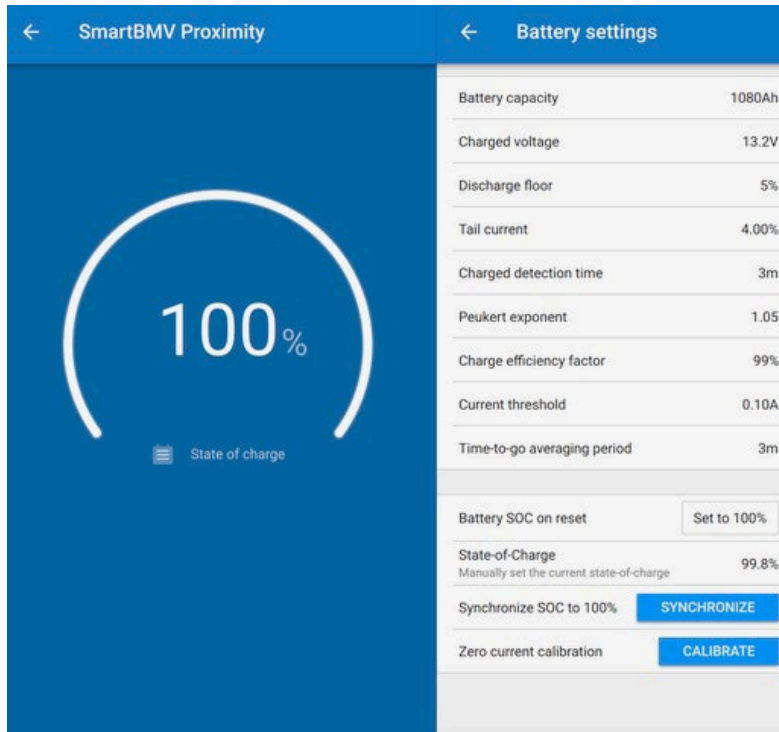




BMV-712 Battery Monitor control head mounted at nav station behind B&G MFD. Unit is interfaced to N2K backbone via Ve.Direct to N2K module. Data shows up on MFD.



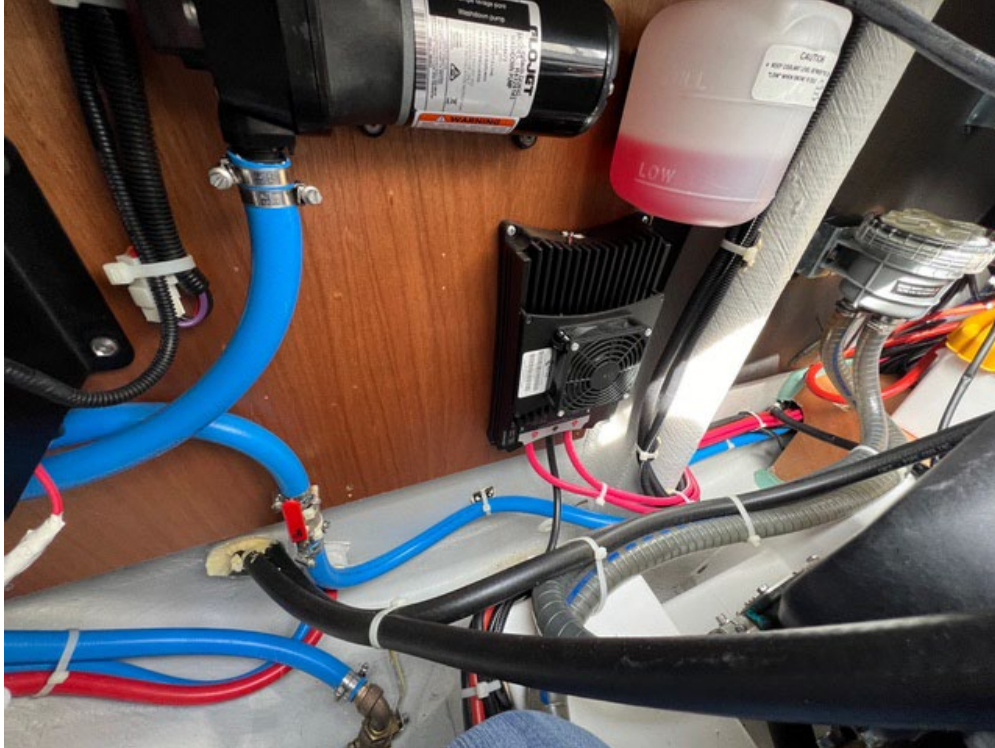




Battle Born batteries are mounted in ER compartment with two per side. Neatly mounted with covers on top of them.



Buc/Boost DC/DC Chargers are mounted one per engine compartment. They are wired to pull power from Start Battery and charge lithium House bank.



During testing the Buc/Boosts would not start up. They were alive and I could communicate with them via laptop but they would not charge. NOTE: Brian Perrin, the installer, visited the boat April 1st and tested the units. He observed proper function of the units. It is unknown why they did not work the day of survey.

Testing of the lithium battery health: The lithium battery bank was tested for health by draining the battery bank to 5% SOC. The expected Ah drawn of 1026Ah was almost identical to the listed 1017Ah calculated by the battery monitor. This demonstrates that the lithium pack is performing as new with 100% health and virtually no aging. The results are excellent.

Overall the system as found onboard was installed with proper workmanship and quality. There are no serious issues with the performance of the system as designed. I suggest firmware updates which is normal and labeling of the MPPTs for easy identification.

Regards,

Jim Dixon