



Solar Stik®

Technical Bulletin 8

Effective Date: 20150926

Power Hub, Power Pak and Li Expedition Pak Quiescent loads Resetting the shunt current reading to zero.

Overview:

A quiescent load, sometimes referred to as quiescent current, is the current that is drawn by a circuit when there is no “load” on the circuit.

Quiescent loads exist in some Solar Stik components, such as the Li Expedition Pak, Power Pak and Power Hub when there is no load connected to an external port. The sensitive nature of the shunt signal measurement circuits can produce a slight drift or offset in the zero reading (0.0A) due to several factors including normal electronic component aging. Generally, the quiescent load is due to management or monitoring devices within the component that require small amounts of current to do their function. The components contain internal circuits which consume power when the master breaker switch is in the “ON” position. If a Universal Control Module (UCM) is connected, it will also draw a small amount of current.

A reasonable quiescent current reading on the IPN-PROremote should be 0.0 A, \pm 0.1 A. If the reading from the IPN-PROremote exceeds this value it may be necessary to reset the shunt current reading to zero.

A Reset Current Shunt Zero function is provided in the IPN-PROremote to compensate for a “zero offset” (meaning a number greater or less than 0.0 A on the meter) and provide an accurate zero reading. It is critically important that a Reset Current Shunt Zero function not be performed without first providing a true zero-current signal to the IPN-PROremote. This is accomplished by temporarily placing both shunt sensing wires at the current shunt on the same side of the shunt. Failure to provide a true zero signal in this manner before executing the Reset Current Shunt Zero function using the IPN-PROremote could result in inaccurate battery current readings and amp-hour counting.

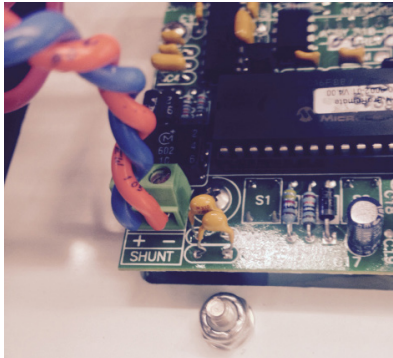


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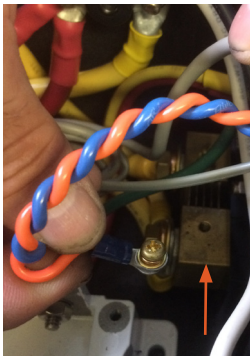
To reset the current shunt “zero” and remove offset error follow steps 1-8 in the order presented while referring to the illustrations below and the INP-PROremote navigation instructions on the following page.

1. Remove the FacePlate of the component (Power Pak, Power Hub, Expedition Pak)
2. Locate the blue and orange twisted pair of wires. One end will be connected to the interior side of the IPN-PROremote (A) which is integrated into the Faceplate, the other end is connected to the shunt block (B).
3. Remove the #10 screws that hold the blue and the orange shunt-sense wires to the shunt (C).
4. Place the orange shunt signal wire AND the blue shunt signal wire on the “blue-wire side” and secure with the screw (D).
5. Perform the Reset Current Shunt Zero function from the Setup Menu. The instructions for navigating to the Reset Current Shunt Zero menu item are on the following page.
6. After the zeroing function has been completed on the IPN-PROremote, press BACK twice to return to the Battery Volt/Amp screen to examine the new zero reading. If zero is not within $\pm 0.1A$ or better repeat the Reset Current Shunt Zero function and check again.
7. Zero offset correction data are now stored in memory and retained if power is lost.
8. Return current shunt-sense wires to their original locations and fasten properly.

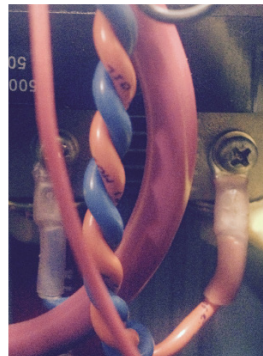
A. Interior back-side view of the INP-PROremote. The orange and blue twisted pair is connected as shown.



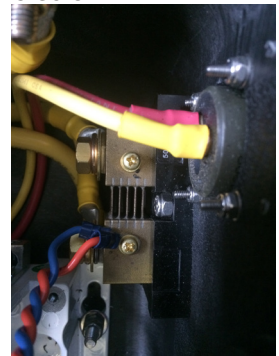
B. Trace the wires to the shunt block (arrow) on the interior wall of the component



C. Remove both of the screws that hold the wires to the shunt block.



D. Place both wires on the “blue-wire side” and fasten with a screw.



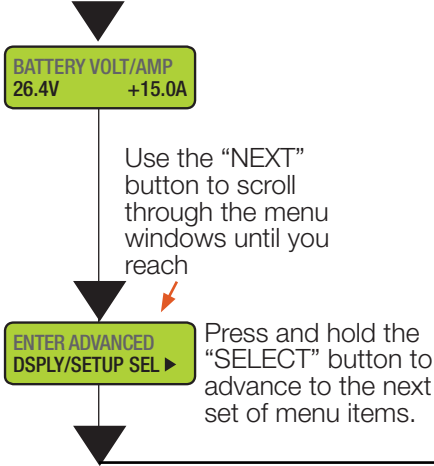


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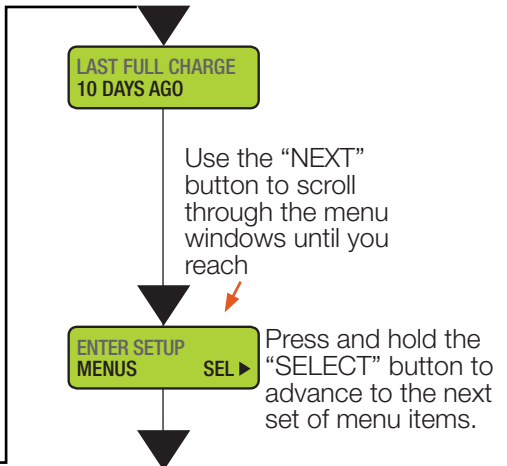
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General Information Menu Windows



Advanced Information Menu Windows



Operation and Setup Menu Windows

