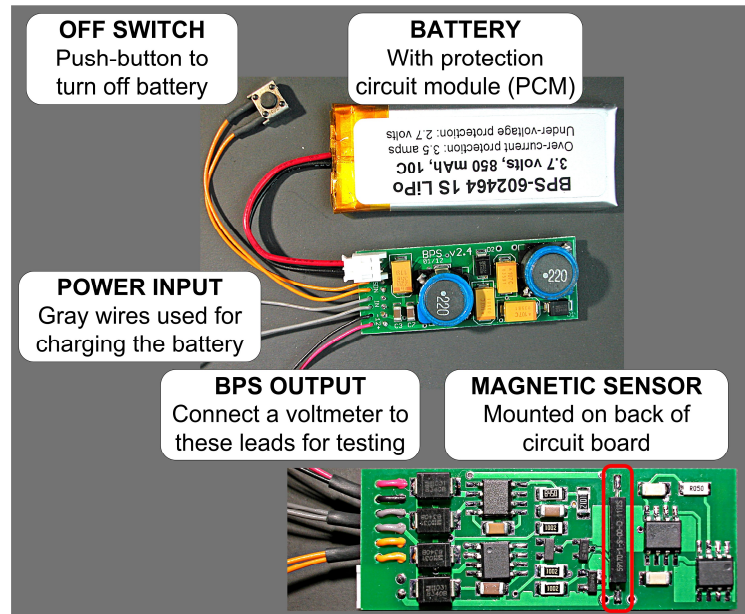


S-CAB Battery Power Supply Initial Testing

Your BPS package includes 3 items: a circuit board, a vendor-certified battery and a magnetic wand (actually a pencil with a magnet instead of an eraser).

The circuit board combines a battery charger, a battery isolating switch and a 12 volt step-up converter integrated as one electronic unit. The default battery choice is a LiPo cell (3.7 volt, lithium-polymer) with battery protection (PCM) included in the battery package. The magnetic pencil is used to turn on battery switch. When delivered, the battery will not be fully charged, but should be adequate to operate the BPS.



Step 1: BPS Test

Plug in battery and perform this mandatory BPS test before continuing installation.

This test proves BPS is working correctly.

Note: *Substituting non-certified batteries voids BPS warranty.*

Mandatory initial test:

1. Connect a voltmeter to BPS output (red and black wires).
2. Turn on BPS by moving magnetic pencil close to the magnetic sensor (within ½ inch). Voltmeter should indicate a voltage somewhere between 11.5 and 12.5 volts.
3. Press Off switch and BPS output voltage will drop to zero.

Optional load test: Leave voltmeter connected and connect a small 12 volt DC motor to BPS output. Turn on BPS and motor will run full speed. Increase motor load by gripping the motor shaft and notice that the voltage drops as motor load increases. For a more elaborate test, measure motor current as it is loaded. **Remember that BPS is designed for maximum output of 500 mA. Exceed this value at your own risk.**

Step 2: Check battery charging

Connect power input (gray wires) to begin charging battery. Any supply voltage between 6 and 16 volts is safe and it can be DC, AC or DCC. (Do not exceed 18 volts.)

Notice that the 12 volt BPS output turns on and cannot be turned off while input power is on. Allow battery to charge for 2 or 3 hours.

Fully charged, battery voltage will measure between 4.1 and 4.2 volts. If BPS is charging at maximum rate (450 mA), the circuit board may become warm (*not hot*). As battery reaches full charge, BPS will return to ambient temperature.

If these tests are not successful, do not continue installation and contact supplier for repair or replacement.