Test Plan for the PBJ-Solo

S. Vance Greenface Labs

4/13/2019

The PBJ-Solo has various power options. You may only want to test the sections you plan to use.

1. Measure Eurorack power supply voltages and record their values.
2. Test Power Continuity
   1. Check ground with an ohm meter. (Establish meter zero by first shorting leads together and noting value).
      1. Connect one meter lead to a ground test point and the other lead to H2 pin 1. Measurement should be less than 1 ohm.
      2. Repeat the above moving the test lead from the H2 pin 1 to H2 pin 2. Measurement should be less than 1 ohm.
   2. Check for shorts. Leave the lead connected to the ground test point and use the other lead to probe connector H2. Every jack connection on H2 (pins 5 – 16) should measure as an open to ground.
3. If continuity tests pass, connect PBJ-SOLO to Eurorack with power OFF
4. Test Eurorack Power Voltages – Set the power switch to EU-ON position and switch meter to volt meter and connect the negative lead to a ground test point on the PBJ-SOLO. Turn ON the Eurorack power. Measurements should closely equal initial measurements made in step 1.
   1. Test +12V by measuring H2 pins 3 and 4.
   2. Test -12V by measuring H2 pins 17 and 18.
   3. Test +5V by measuring H2 pins 19 and 20. (note: some Eurorack systems do not provide +5V)
   4. Note that step c. may be measuring the Eurorack voltage or the 5V regulator output depending on the setting of the jumper on H3 and the presence of U1. (remember this is an exclusive setting, remove U1 if H3 is jumped)
5. Test Battery Power Voltages - Set the power switch to BATT-ON position and switch meter to volt meter and connect the negative lead to a ground test point on the PBJ-SOLO. Measurements should closely equal the measured battery voltage minus a diode drop (approx. .7V).
   1. Test +9V by measuring H2 pins 3 and 4.
   2. Test -9V by measuring H2 pins 17 and 18.
   3. Test +5V by measuring H2 pins 19 and 20.
6. Test Signal Continuity – Use an ohm meter to perform the following tests. Remember to adjust measurements to account for test lead resistance.
   1. Test the switches ON resistance. Resistance between pins on H2 should be less than 1 ohm. The jacks are marked next to H2. J1 goes to H2 pins 5 and 6, J2 goes to pins 7 and 8 and so on.
   2. Test the switches OFF resistance. Measurement should show as open when a plug is inserted into the jack.
   3. Test tip continuity. With the plug inserted, measure the resistance from the tip connection on H2 to the tip of the plug at the open end of the cable. Measurement should be less than 1 ohm (corrected for cable resistance)
   4. Test sleeve continuity. With the plug inserted, measure the resistance from the sleeve of the plug at the open end of the cable to a ground test point. Measurement should be less than 1 ohm (corrected for cable resistance)
   5. Note: it is faster to complete all above tests on a jack before moving on to the next jack.
7. If all above tests pass you can screw the PBJ-SOLO into place and you’re ready to go!