Spankulator Test/Calibration Instructions

These instructions assume that the Spankulator program has already been loaded onto the Arduino. The Exp connector is tested when the Du Dad is installed.

You will need the following equipment:

1. DVM: .1% accuracy
2. Power supply: +/-12V connected to Eurorack power cable
3. Pulse generator: 5V pulses (could just be a push button)
4. Micro-USB cable
5. Terminal program (PuTTY is recommended)
6. DC voltage source: 1mV resolution for calibration
7. Pot tweaker (or small flat blade screwdriver) for calibration

Test procedure:

1. Set power supply for 25mA max current on +/-12 Volt rails
2. Connect power to unit under test
3. Check display to see normal boot sequence
4. Measure 3.3V +/- .05V at TP3
5. Test all buttons. Confirm that Yellow LED works.
6. Go to Up function, then connect USB
7. Test Rotary Encoder by adjusting a parameter. Encoder type may need to be set in Settings.
8. Test Activate button by pressing Rotary Encoder. Red LED goes ON indicating trigger is active.
9. Send 5V pulses into Trig In to confirm external trigger functions properly
10. Using Terminal program, send G0↲ to unit
11. Measure Low (<.5V) at Trig Out, Green LED is OFF
12. Send G1↲ to unit
13. Measure High (>4.5V) at Trig Out, Green LED is ON
14. Using Terminal program, send T0↲ to unit
15. Measure Low (<.5V) at Tog Out, Blue LED is OFF
16. Send T1↲ to unit
17. Measure High (>4.5V) at Tog Out, Blue LED is ON
18. Using Terminal program, send c0↲ to unit
19. Measure <-5V at CV Out
20. Send c1023↲ to unit
21. Measure >5V at CV Out
22. Send P3↲ to unit
23. Test CV Pot by measuring voltage at CV Out. Voltage range: approx. -5.3V to +5.3V
24. Remove current limit from supply
25. Go to Settings and calibrate the ADC and DAC
26. Confirm that WiFi works
27. That’s all! You’re ready to rock and roll.