OnSpeed Hardware test procedure (Gen2 v3)

1) Visually inspect the unit under test (UUT)
2) Start Arduino integrated development environment (IDE).
3) Load the test software into Arduino.
4) Connect the USB cable to the UUT Teensy USB connector.
5) Verify that Arduino is connected yo the UUT serial port.
6) Load the test software into the UUT,
7) Open a serial monitor window in the IDE.
8) Connect the 15 pin DSUB OnSpeed Gen2v3 test harness to a 12VDC Power supply
9) Connect the 15 pin DSUB OnSpeed Gen2v3 test harness to the UUT.
10) Energize the UUT.
11) Monitor the UUT message stream via the serial data window.
a) Verify that power sully current is less than 50mA@12VDC. (nominal is approximately 25mA).
b) Switch not pressed - "Switch: Not Pressed "
c) Press switch - "Switch: Pressed"
d) Panel LED - Changing states from On to Off (changing at approximately 5 second intervals)
e) Verity "PFWD: PASS" on serial data display.
f) Verity "P45: PASS" on serial data display.
g) Verity " PStatic: PASS" on serial data display.
h) Verity "IMU: PASS" on serial data display.
i) Verity "Efis Serial TX -> GPS Serial RX: PASS" on serial data display.
j) Verity " Efis Serial TX -> Efis Serial RX: PASS" on serial data display.
k) Verity "Display Serial TX -> BOOM Serial RX: PASS" on serial data display.
l) Panel LED - Changing states from On to Off (changing at approximately 5 second intervals)
m) Adjust Volume pot and observe " Volume pot analog value: value" changing..
n) Adjust Flap position pot and observe " Flap pot analog value: value" changing..
o) Monitor Left Audio signal and verify Left audio channel is functioning.

p) Monitor Right Audio signal and verify Right audio channel is functioning.

q) Verify "SD Card: PASS:" on serial data display.

Test cable schematic: