

S-Board Testing Instructions

Updated: August 24, 2016

Before you start, **read these instructions first** to understand what you need to do to test this product. Perform this test *after* you have assembled the S-Board product.

REQUIRED TOOLS

You need the following tools to test your assembled S-Board.

- Wire cutters / Wire strippers
- Small straight slot screwdriver
- Ohmmeter with alligator clips on probe tips to measure continuity

Note: When you are using an ohmmeter, the following definitions apply.
open-circuit = no electrical continuity
close-circuit = electrical continuity (typically 0.7 ohms or less)

PREAMBLE

This document contains the functional test procedure to confirm that the assembled S-Board works the way it is supposed to. You need to confirm that the S-Board functions correctly *before* you install it into your instrument.

To perform this test you will use a standard ohmmeter that measures resistance/continuity and also use several small jumper wires. Use 22 gauge insulated stranded wire that is cut into five 1.5" pieces.

Strip 3/8" insulation from each end of all wires and twist the wire strands at each end so that they are tightly bundled.

HOW TO ATTACH WIRES TO THE PCB TERMINAL STRIP

Here is how to attach wires to the **green** 8-position Terminal Strip. Using a small screwdriver or writing pen tip, press down on each square *release button* located above the corresponding wire hole. While holding the button down, insert the stripped wire completely into the wire connection hole and then release the button. Lightly tug on the wire to confirm it is firmly gripped by the Terminal Strip.

A legend is printed on the circuit board and names each of the terminal strip wire holes from left to right.

[GND] [VOL] [+] NECK [-] [+] MIDDLE [-] [+] BRIDGE [-]

Warning: Do not insert hard implements into any of the wire connection holes – especially if the *release button* is not pressed down. Doing so will deform and weaken the gripping spring and decrease reliable electrical connection. We do not warranty Terminal Strip damage caused by this behavior.

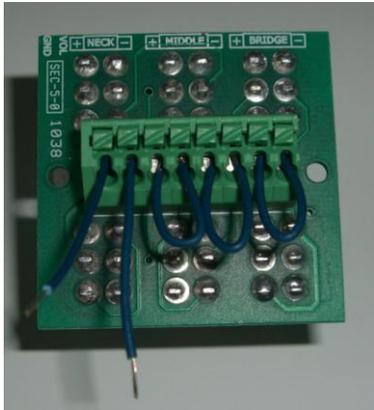
This document describes two separate test procedures; one test is for a *2-pickup board version*, the other test is for a *3-pickup board version*. Go to the applicable test procedure for your board version.

2-PICKUP BOARD TEST

Use this test procedure to validate correct operation of your assembled 2-pickup control S-Board product.

Insert each of two 1.5" blue wires to jumper between the "+" to "-" hole locations on the green Terminal Strip for the "+Neck-" and "+Bridge-" pickups. Confirm that the ends of the wire are firmly gripped by the terminal strip by gently pulling on each. These jumpers are used to "simulate" pickups being connected to the S-Board.

Insert each of two 1.5" blue wires, one wire into the "GND" hole location, and the other wire into the "VOL" hole location on the green Terminal Strip. Confirm that they are firmly gripped by the terminal strip by gently pulling on each. Connect the ohmmeter leads to the (GND) and (VOL) wires that are connected to the Terminal Strip.



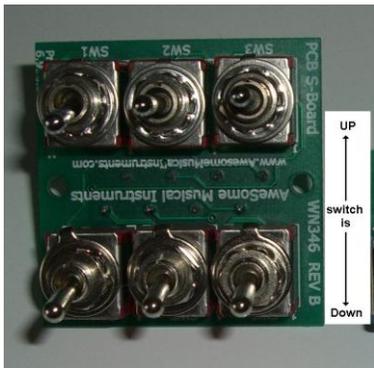
Here is what your S-Board product will look like with the wires attached.

For this test, the positions of the following switches are referred to as the **Start Position**.

Set switches SW1 and SW3 to off (center) position

Set switches SW5 to parallel (down) position

Note: open-circuit = no electrical connection, close-circuit = electrical continuity (typically 0.7 ohms or less).



Shows which way is UP/DOWN with reference to mounting/installing the board

Place all switches into **Start Position**. Meter reads open-circuit.

Move switch SW1 up. Meter reads close-circuit. Move SW1 down. Meter reads close-circuit. Move SW1 to center.

Move switch SW3 up. Meter reads close-circuit. Move SW3 down. Meter reads close-circuit. Move SW3 to center.

Place all switches into **Start Position**. Meter reads open-circuit.

Move switch SW4 up. Meter reads open-circuit.

Move switch SW1 and SW2 up. Meter reads close-circuit.

This completes the 2-pickup S-Board version test. If you received the stated meter results, remove the test wires from the green Terminal Strip by pressing down on the *release button* for each wire and proceed to the **S-Board Installation Instructions**.

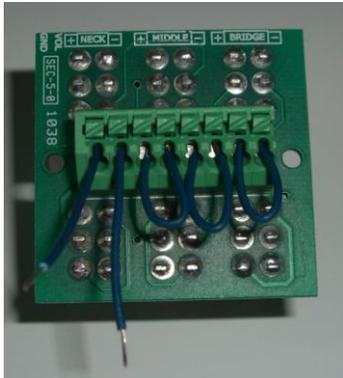
Note: If you did not get the stated meter results, inspect your wiring and identify any incorrect connections to the Terminal Strip. Confirm that the test jumper wires are actually connected (being firmly gripped) inside the Terminal Strip. Also inspect the printed circuit board solder connections to verify there are no "cold" or unsoldered connections. If everything appears to be correct, a switch is defective. Replace the switch with another. Checking switches prior to assembly is required prior to assembly and is specified in the assembly instructions.

3-PICKUP BOARD TEST

Use this test procedure to validate correct operation of your assembled 3-pickup control S-Board product.

Insert each of three 1.5” blue wires to jumper the “+” to “-” hole locations on the green Terminal Strip for the “+**Bridge**-”, “+**Middle**-” and “+**Neck**-” pickups. Confirm that the ends of the wire are firmly gripped by the terminal strip by gently pulling on each. These jumpers are used to “simulate” pickups being connected to the S-Board.

Insert each of two 1.5” blue wires, one wire into the “GND” hole location, and the other wire into the “VOL” hole location on the green Terminal Strip. Confirm that they are firmly gripped by the terminal strip by gently pulling on each. Connect the ohmmeter leads to the (GND) and (VOL) wires that are connected to the Terminal Strip.



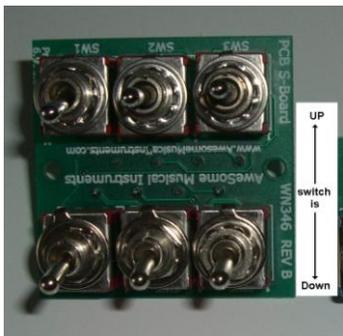
Here is what your S-Board product will look like with the wires attached.

For this test, the positions of the following switches are referred to as the **Start Position**.

Set switches SW1, SW2 and SW3 to off (center) position

Set switches SW4, SW5 and SW6 to parallel (down) position

Note: open-circuit = no electrical connection, close-circuit = electrical continuity (typically 0.7 ohms or less).



Shows which way is UP/DOWN with reference to the board.

Place all switches into **Start Position**. Meter reads open-circuit.

Move switch SW1 up. Meter reads close-circuit. Move SW1 down. Meter reads close-circuit. Move SW1 to center.

Move switch SW2 up. Meter reads close-circuit. Move SW2 down. Meter reads close-circuit. Move SW2 to center.

Move switch SW3 up. Meter reads close-circuit. Move SW3 down. Meter reads close-circuit. Move SW3 to center.

Place all switches into **Start Position**. Meter reads open-circuit.

Move switch SW4 up. Meter reads open-circuit.

Move switch SW1 and SW2 up. Meter reads close-circuit.

Place all switches into **Start Position**. Meter reads open-circuit.

Move switch SW5 up. Meter reads open-circuit.

Move switch SW1 and SW3 up. Meter reads close-circuit.

Place all switches into **Start Position**. Meter reads open-circuit.

Move switch SW6 up. Meter reads open-circuit.

Move switch SW2 and SW3 up. Meter reads close-circuit.

Place all switches into **Start Position**. Meter reads open-circuit.

Move switch SW4 and SW6 up. Meter reads open-circuit.

Move switch SW1, SW2 and SW3 up. Meter reads close-circuit.

This completes the 3-pickup S-Board version test. If you received the stated meter results, remove the test wires from the green Terminal Strip by pressing down on the *release button* for each wire and proceed to the **S-Board Installation Instructions**.

Note: If you did not get the stated meter results, inspect your wiring and identify any incorrect connections to the Terminal Strip. Confirm that the test jumper wires are actually connected (being firmly gripped) inside the Terminal Strip. Also inspect the printed circuit board solder connections to verify there are no “cold” or unsoldered connections. If everything appears to be correct, a switch is defective. Replace the switch with another. Checking switches prior to assembly is required prior to assembly and is specified in the assembly instructions.