LIVID

Building Guide: Fader Box

Warranty
Livid Instruments warrants this kit comes complete and is free of defects in materials and workmanship under normal conditions for 30 days from the purchase date, so long as the kit has not been soldered or built and is: owned by the original purchaser; the original purchaser has proof of purchase from Livid Instruments or an authorized dealer. Warranty does not include repairs needed due to misuse, abuse, or damage to any component or part. Livid Instruments only warrants the parts of this kit, not the build once complete.

Return Policy
All sales of Livid Instruments hardware are given a fifteen (15) day return policy. A kit may be returned within fifteen (15) days of purchase as long as it has not been used. We will refund the purchase price of the product, less shipping and a 15% restocking fee, upon receipt of the returned item. Refunds may take up to 10 business days to process. Any damage will be the responsibility of the customer. We will do our best to determine if damage happened during shipping and will help the customer by allowing carrier inspection of any damaged items.

Tech Support
Builder Boxes are ***only*** supported through our .pdf "Building Guide" and through our online forums at forum.lividinstruments.com. Phone, online chat, and helpdesk support are not available for this product.*

Livid Instruments makes no promises or guarantees that you will successfully complete your kit in a satisfactory fashion. Nor does Livid Instruments promise or guarantee that you will receive any technical support. Purchasing a product from Livid Instruments does not entitle you to any amount of technical support. Livid Instruments does not promise or guarantee that any technical support you may receive will be able to resolve any or all issues you may be experiencing.

Tools & Parts Checklist

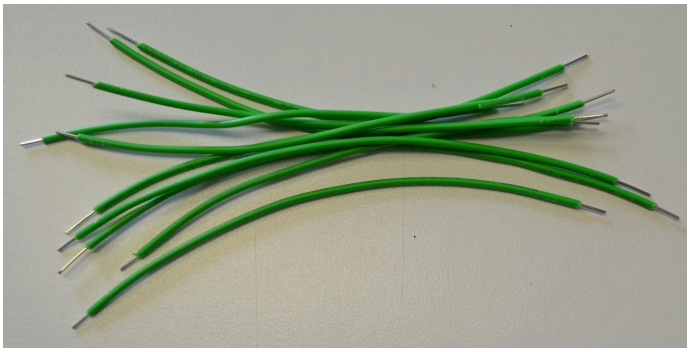
Tools Needed:

- ❑ Soldering iron
- ❑ Solder
- ❑ #1 Size Phillips head screwdriver
- ❑ Wirestrippers
- ❑ Small snips or wire cutters

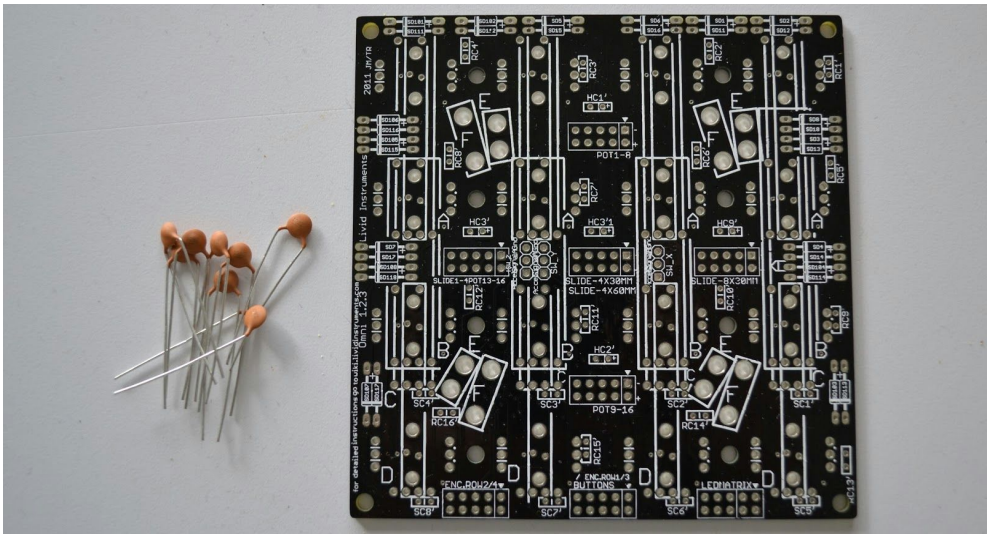
Parts List:

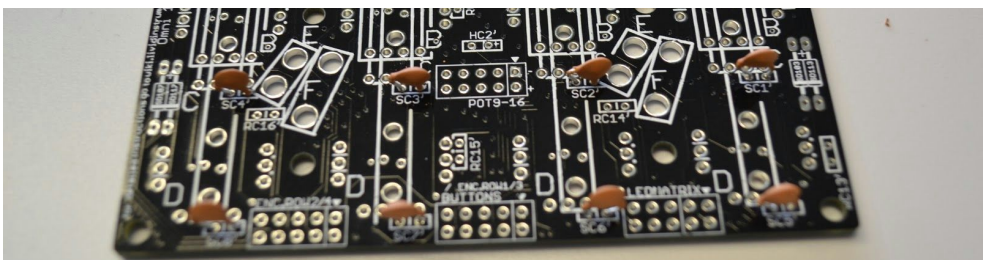
- ❑ 1 X 4" 22g solid core copper wire
- ❑ 4 X 4-40x1/4" machine screw
- ❑ 4 X 4-40x5/8" machine screw
- ❑ 4 X 4-40x1" machine screw
- ❑ 4 X 4-40x 1 6/8" machine screw
- ❑ 8 X 4-40 nylon lock nut
- ❑ 8 X .01uf Capacitor
- ❑ 1 X 10uf Capacitor
- ❑ 16 X 4-40x1/2" nylon hex spacers
- ❑ 8 X Adhesive rubber bumpers
- ❑ 8 X 30mm Fader
- ❑ 8 X 30mm Fader knobs
- ❑ 1 X Livid Brain Jr.
- ❑ 1 X Livid Omni Board
- ❑ 1 X Fader Box metal housing (Top)
- ❑ 1 X Fader Box metal housing (Bottom)

1) Prepare wires: Take the wire and cut it into 4" pieces. Strip the wire insulation approximately 1/8" from each end to expose the copper. Repeat this until you have 10 pieces.

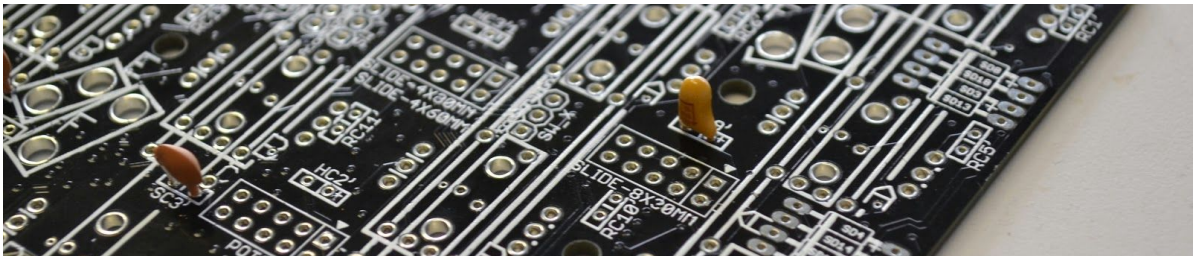


2) Populate Fader Capacitors (.01uf Capacitor): On the Omni Board locate SC1-4 & SC5-8 on the bottom of the board (SC denotes "single capacitor"). The capacitors are bidirectional, meaning you can place them without having to worry about a positive or negative side. Solder the single capacitors in positions SC1-4 & SC5-8. Clip off the excess capacitor leads from the top of the board. The single capacitors allow the faders to function, so if you have trouble with your faders later on it could mean a capacitor is incorrectly soldered.

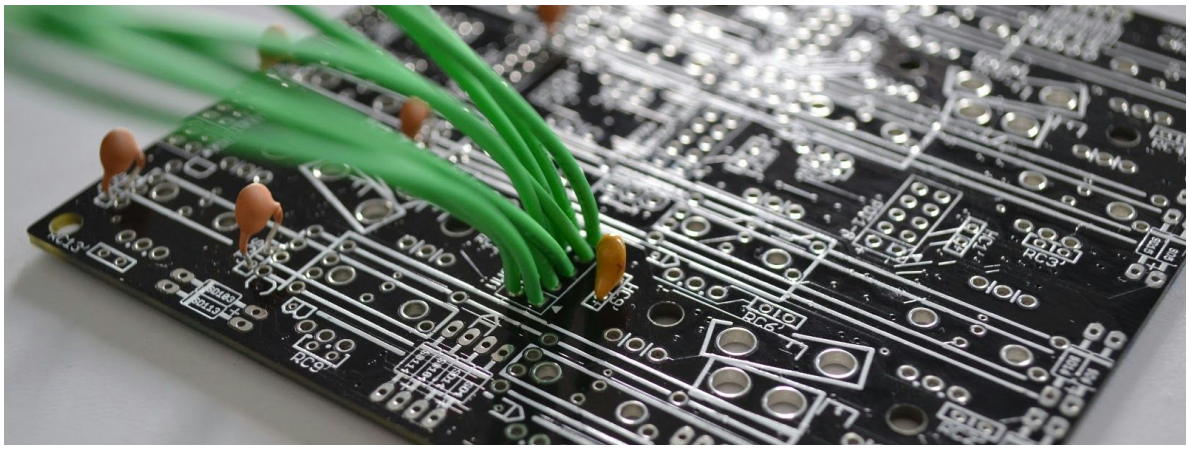


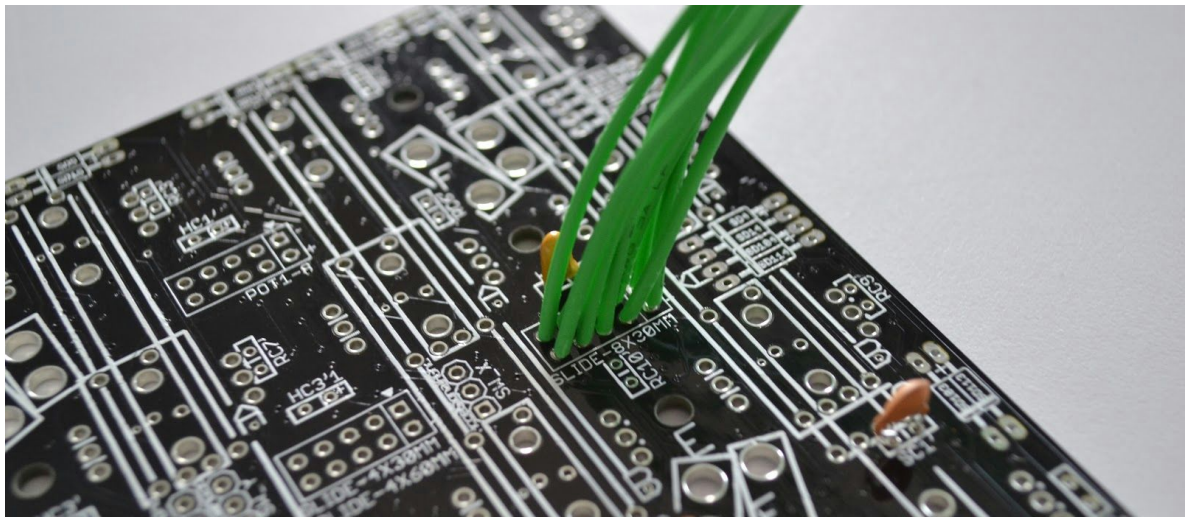


3) Populate Header Capacitor (10uf Capacitor): On the Omni Board, locate HC9 (HC denotes "header capacitor"), and populate with through hole 10uf capacitor. This capacitor is polarized so be sure the longer leg of the capacitor is in the through hole marked positive (+).

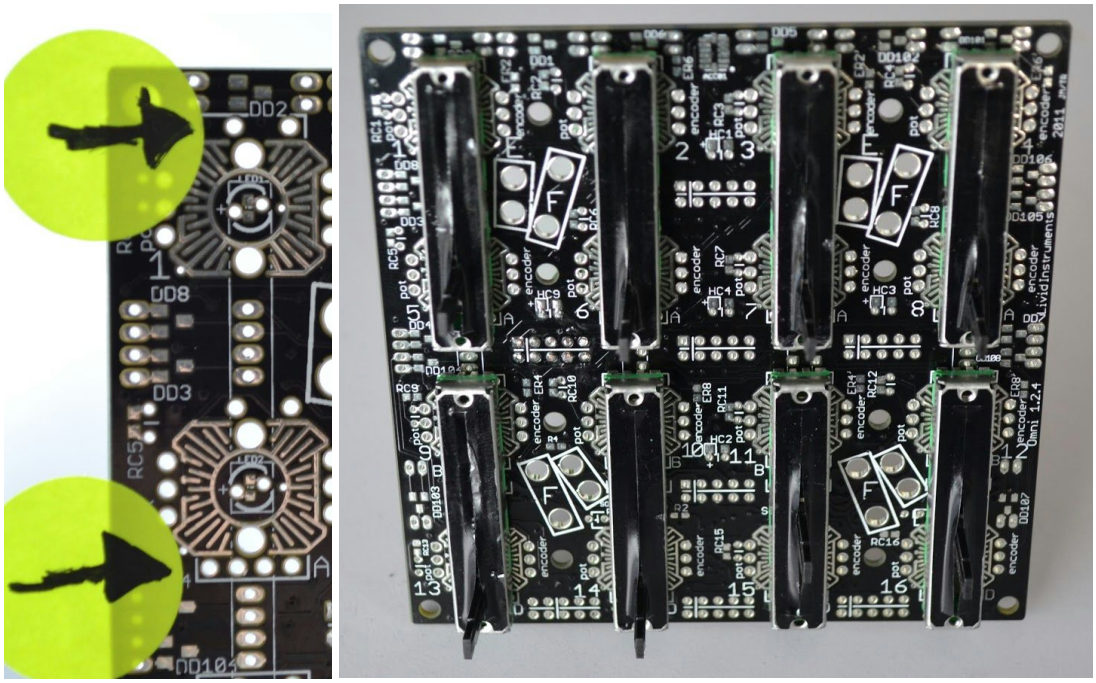


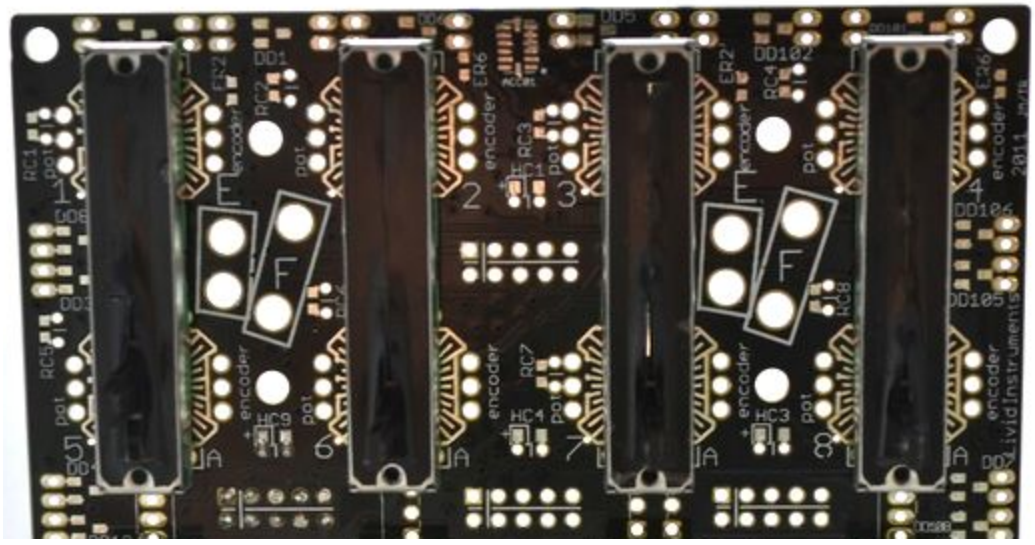
4) Populate Wires: On the Omni Board locate the white rectangle labeled "SLIDE-8X30MM" on the bottom of the board. Within this rectangle are 10 through holes. Take the 4" wires previously prepared and solder 1 wire into each hole. Make sure that the wires are coming out of the bottom of the board.





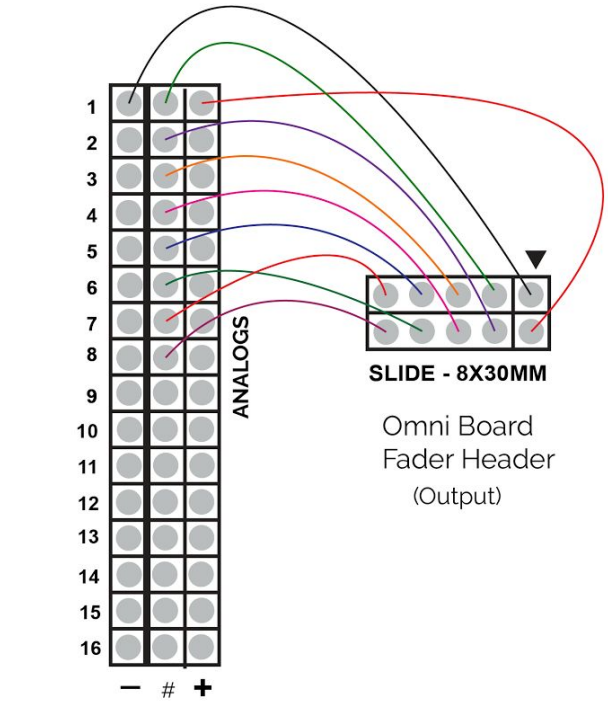
5) Populate Faders: Along the top of the Omni Board locate the four sets of two holes (above the button pads labeled 1,2,3,& 4). Populate the top row of faders here, placing the fader w/ the two top leads through these holes and the four bottom leads through the four corresponding holes (Below the the button pads labeled 5,6,7,& 8). Repeat this process for the next row of faders, locate the four sets of two holes (above the button pads labeled 9,10,11 & 12). Populate the bottom row of faders here, placing the fader w/ the two top leads through these holes and the four bottom leads through the four corresponding holes (Below the the button pads labeled 13,14,15, & 16).

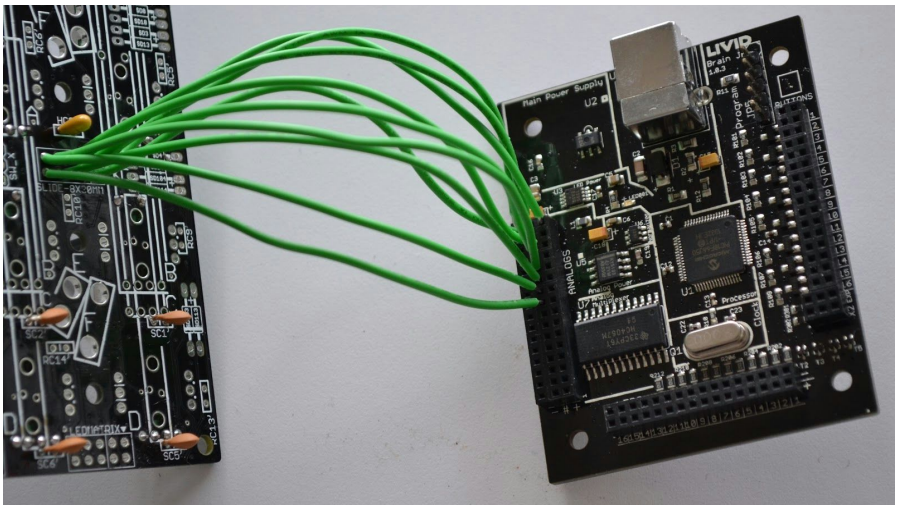




6) Connect wires to the Brain: Use the following diagram to connect the wires soldered to the Omni Board to the Brain Jr.

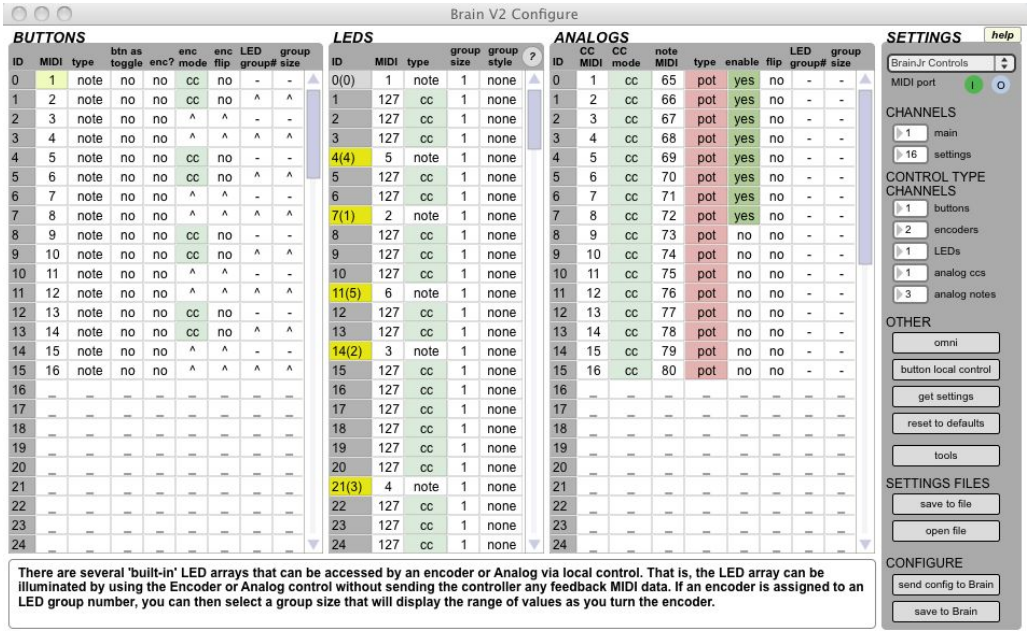
Fader Box Diagram: Analog wires from Omni Board to Brain Jr.



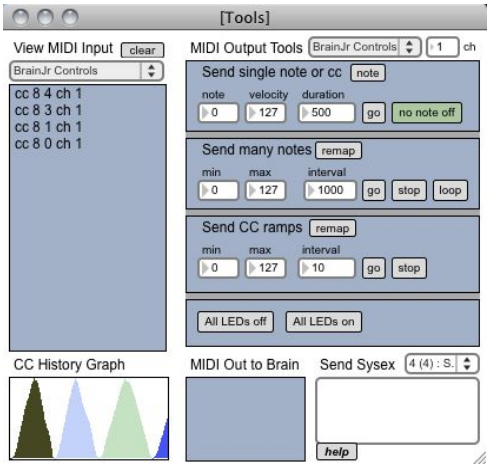


7) Test your work: Now that everything has been soldered, check that the Brain Jr. is functioning properly with Brain V2/Jr Configure.

- Brain Configure is a software that allows you to monitor the inputs from the Brain Jr. visually on your computer. It also allows you to customize the MIDI messages being sent to the computer from the Brain Jr. if needed for your workflow.
- Download Brain Configure here - Mac / PC
- Plug in the Brain Jr. to your computer via USB cable
- Open Brain Configure. Above MIDI port, Brain Jr Controls should be selected.

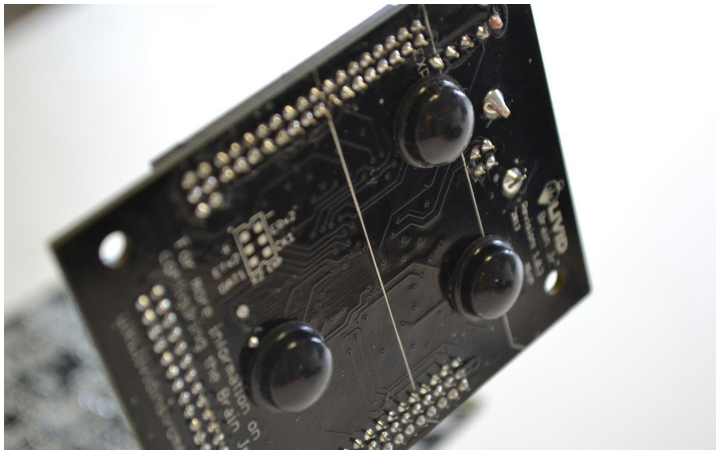


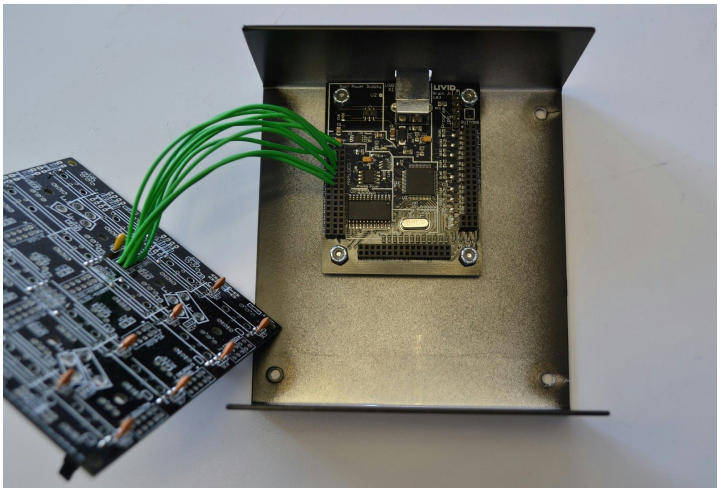
- Now click on "tools" and a window will pop up that shows feedback when the faders are moved.



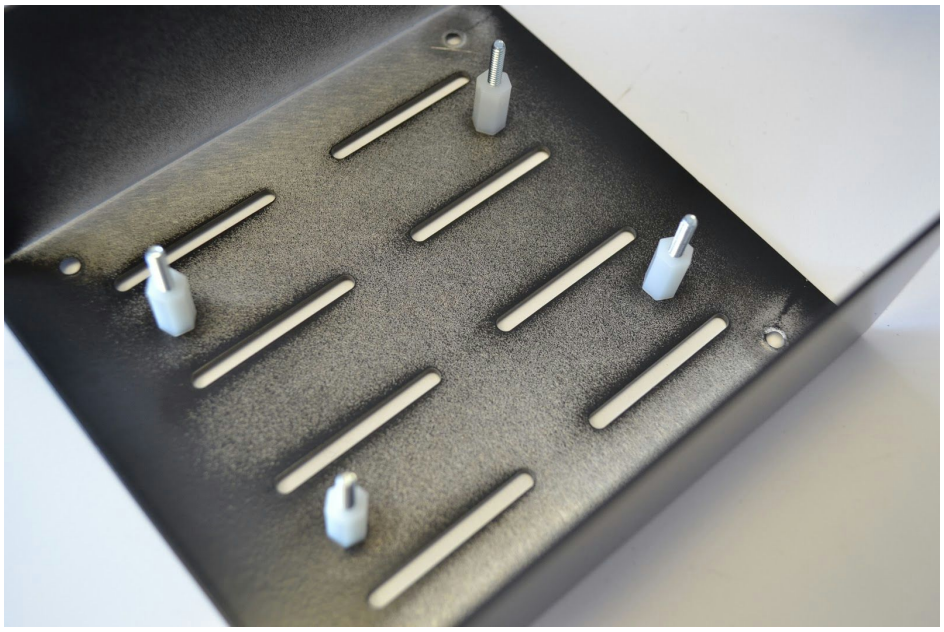
- Now move each fader from top to bottom (or vice versa) making sure each fader goes from 0 to 127.
- If you have streaming MIDI information or fader(s) that don't work properly, reload the "Fader_Box_1.0.lmd" file and double check your wiring, solder joints, components & connections.
    - NOTE: The Brain Jr. that shipped with your kit is already loaded with the editor settings, (.lmd file), that works for the Button Box. If you run into any issues, here's how to reload that file.
    - Download "Button_Box_1.0.lmd".
    - In Brain Configure, click "open file". Open "Button_Box_1.0.lmd" and then click "Save to Brain".

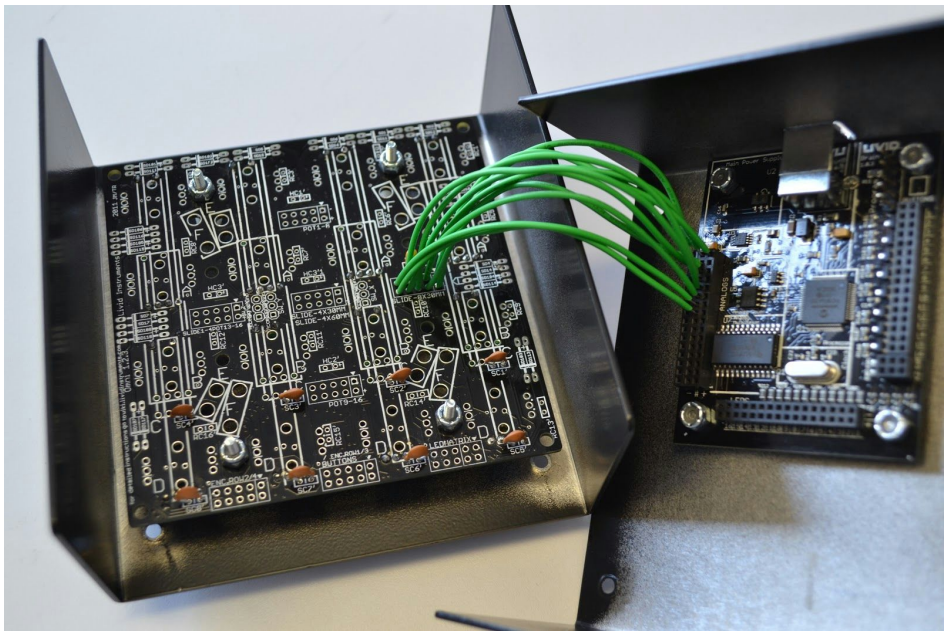
8) Mount the Brain Jr.: Place three of the adhesive rubber bumpers on the bottom of the Brain Jr. in a triangular shape to keep it from grounding out on the metal housing. Mount the Brain Jr. to the Button Box metal housing (Bottom) using the four 4-40x1/4" machine screw and four of the 4-40 nylon lock nuts. Do not over tighten the nuts as it can bend and damage the circuit board. Double check your wiring to the Brain Jr. in case any wires popped out.



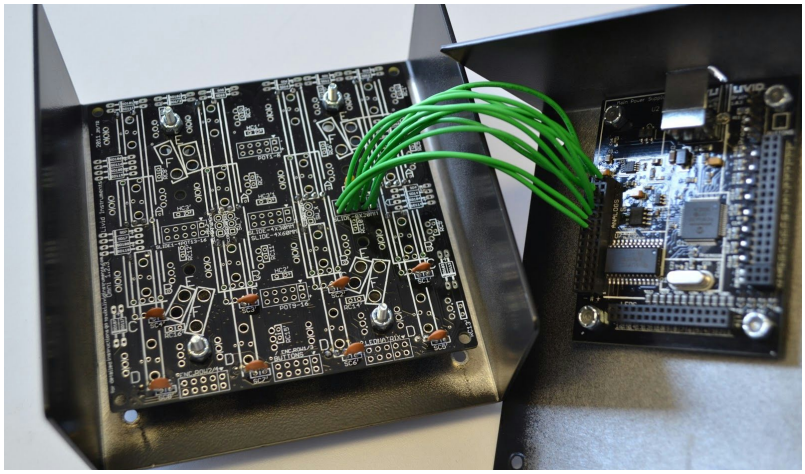


9) Mount the top housing to Omni Board: Take the Fader Box housing top and the four 4-40x1" machine screws. Run these screw these go through the four center holes through the top of the housing, secure them by threading 1 4-40x1/2" nylon hex spacers over each screw. Now verify that the Omni Board is in the correct direction to mount inside the housing. The top of the Omni board should be on the same side of the box as the USB port. Slide the Fader Box housing top over the Omni Board allowing the 4 screws to pass through the Omni Board, now all the faders should be passing through their respective slots. Secure the four screws on the bottom of the omni board with four of the 4-40 nylon lock nuts. Once again do not over tighten.



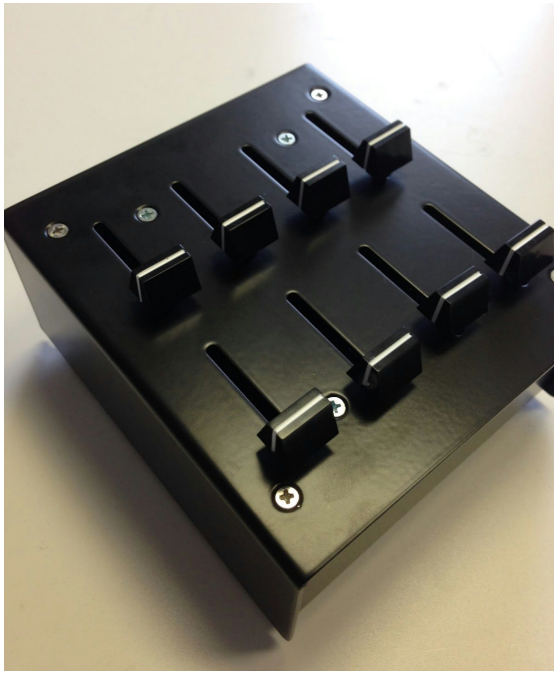


10) Prepare for final assembly: Take the four 4-40x1 6/8" machine screws and run them through the four holes on the outside of the Button Box metal housing (Top) and through the Omni Board. Thread a 4-40x1/2" nylon hex spacers over each of the 4-40x1 6/8" machine screws. Repeat this step 2 more times so that each screw has 3 hex spacers threaded on them.



11) Check your work: Verify all the wire leads from Omni Board to Brain Jr. are still attached and everything looks secure.

12) Final Assembly: Fit the two parts (top and bottom) of the housings in place making sure that the top of the Omni Board is aligned correctly with the USB jack. Take the four remaining 4-40x1/4" machine screws and thread them through the outside holes on the Button Box metal housing (Bottom). The remaining adhesive rubber bumpers now can be placed on the bottom of the housing to protect the bottom finish of the housing. Put the 8 X 30mm fader knobs on the faders.



13) Plug & Play!

Software Resources:
Within the "Project Resources - Fader Box.zip" file is a "Software Resources" folder. Here you will find free software templates to get you started.

Explanation of settings & customization:
The .lmd file that's loaded onto the Brain Jr.'s Fader Box is programmed to get you up and running right away with the software resources provided. If you are looking for further customization to get the Fader Box to work in specific ways for your particular software & hardware set up, you can use the Brain Configure software to edit the functionality. Please note that when you change the settings on the Brain Jr. it will no longer work with the remote scripts or templates provided. Check out the forums to connect with builders and users and see what they have done for inspiration, tips, & tricks.