Catskull's Arduinoboy Assembly Instructions

Thanks for you purchase! Here's a few quick tips to help you build your kit. I assemble the kits from the lowest profile components to the highest profile components. These instructions follow that method. This is not intended to be a step-by-step guide but more of a tips and tricks I use when building my kits. Some experience and knowledge with electronics assembly will be very helpful.

Before you begin:

To make assembly as painless as possible have the following tools nearby:

- A hot soldering iron
- Leaded Solder
- Desoldering braid/pump
- Angle cutters (for component legs)

I highly recommend you do a quick check that you have all the needed components as well. Keep them safe during assembly, a stray resistor can be hard to locate on the floor.

Resistors:

There are a total of 6 resistors. Resistors are not polarized so you can install them either way. I like to solder all resistors at once, so I put each resistor through and them bend the legs parallel to the PCB so it holds them in place while I'm soldering them. I do one side of all the resistors, check the positioning to make sure they're flat, and then do the other side.

220 Ohm (3x)

270 Ohm (1x)

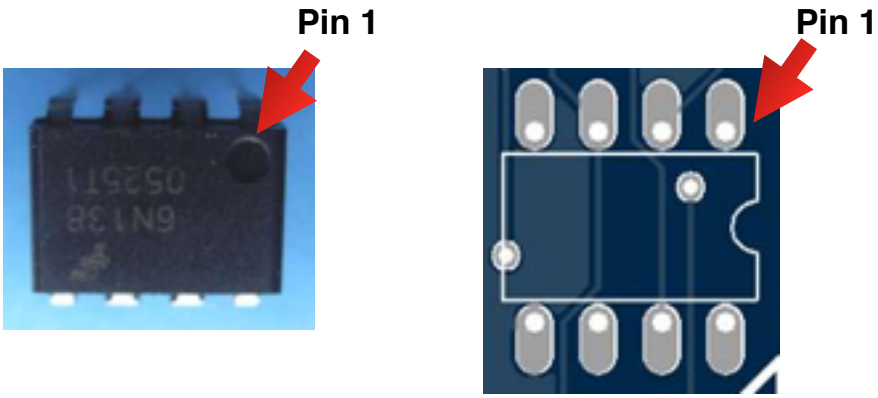
2.2k Ohm (1x)

4.7k Ohm (1x)

Diode:
Unlike resistors, diodes are polarized. Line up the line on the diode with the line on the PCB. Solder it just like you soldered the resistors, one leg at a time.

Button:
Pretty straight forward, it only goes in one way. Stick it in and solder it!

6n138 Opto-Isolator:
In order to orient the chip correctly, find pin one on both the PCB and the chip. It can be found by looking for either the notch or circle. For example:



Link Port:
Straightforward. Make sure the link port is facing away from the PCB so you can actually plug the link cable in.

LEDs:

There are a total of 6 LEDs in the kit. The status LED should be a different color than the other LEDs, but it doesn't have to be. You could put whatever color LEDs wherever you want! Like diodes, LEDs are polarized so mind that. The shorter leg is the cathode. If you look closely, you'll notice one pad for each LED is a square. That is the hole the cathode should go into.

MIDI Jacks:

Straightforward; put in place and solder them. I usually start with the middle pin just so it stays nice a flush with the PCB.

Headers:

Last, you need to solder the male headers that will allow the shield to be inserted into your Arduino. To do that, I insert all headers into the Arduino unsoldered. Then, I place the PCB on top so the headers go through the holes of the PCB. Now the headers will stay straight and in place while you solder them. I usually do every other pad on one side, then the other, and then repeat for the pads you skipped.

Congratulations!

You now have a working Arduinoboy! Once the code is loaded on your Arduino, attach the shield and power it on. You should see all LEDs flash in a pattern. Pressing the button should change the mode you're in.

Something went wrong!

If you fried a component while soldering it, you're pretty much on your own. Double check that the resistors are the correct values. Check the orientation of the LEDs, diode, and opto-isolator. Carefully examine your board for any bad solder joints or bridges.