

Hack Anything Board v1.0 Assembly Instructions

Part Reference

Designator	Description	Manufacturer Part #
U1	Analog Switch	MAX4066CPD+
R1, R2, R3, R4	1K OHM 5% 1/4W	CFS1/4C102J
Switch Header	1×14p Header	
Arduino Header	2×4p Header	

Assembly Instructions

Step 1: Gather all parts and identify them with the PCB designator as shown below.

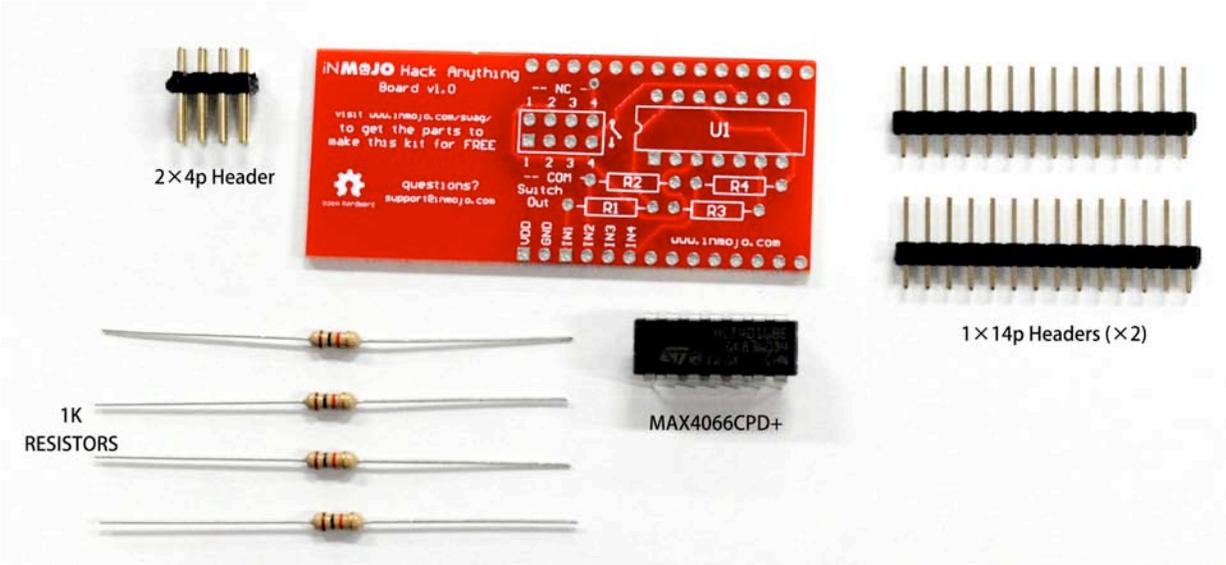


Figure 1: Parts list

Step 2: Bend the resistor leads.



Figure 2: After bending the resistor leads

Step 3: Insert the resistors first, then the U1, then the 2x4p header pins. Make sure to align the left side slot of U1 with the slot printed on PCB as shown here. (Advanced Users: Instead of soldering the 2x4p header pins to the switch control connectors, you can directly solder wires from the device you want to control. See Step 9 for details.)

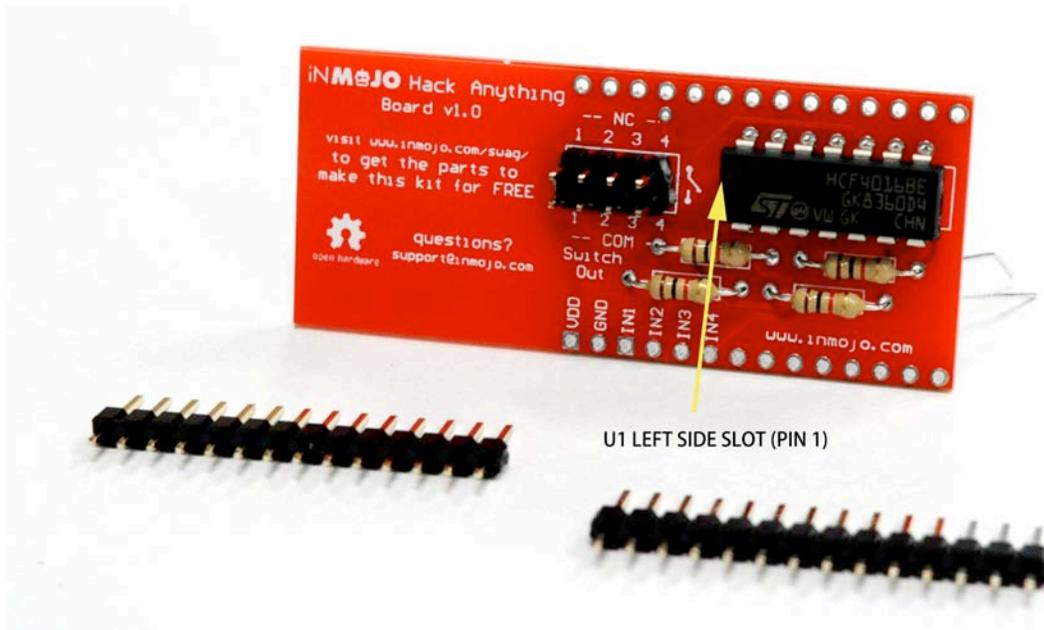


Figure 3: Inserting parts starting from Resistors

Step 4: Turn the board upside down gently making sure the parts not to fall. Solder the leads to the pads.

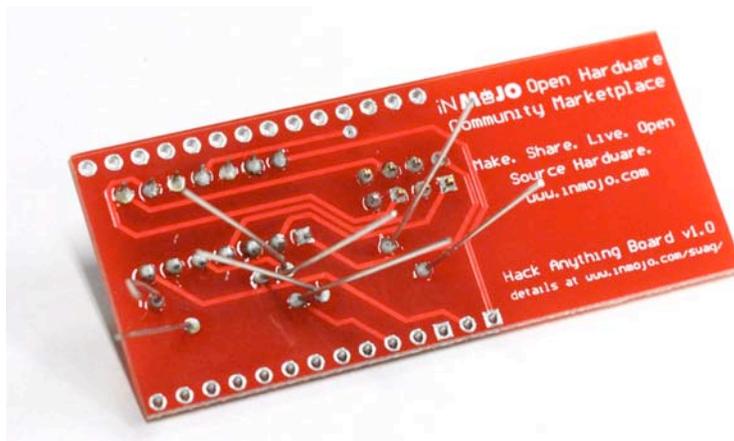


Figure 4: Soldering the parts

Step 5: Using a wire clipper, cut the excess leads.

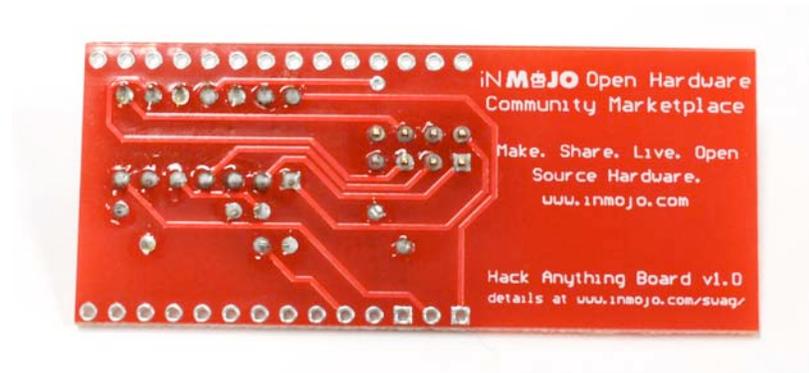


Figure 5: Cutting excess leads

Step 6: Solder the 1x14p header pins to both sides of the board. This will allow your board to fit in a breadboard or on top of an Arduino FIO. (Advanced Users: You can skip this step and solder wires directly to Vdd, GND, IN1, IN2, IN3, and IN4).

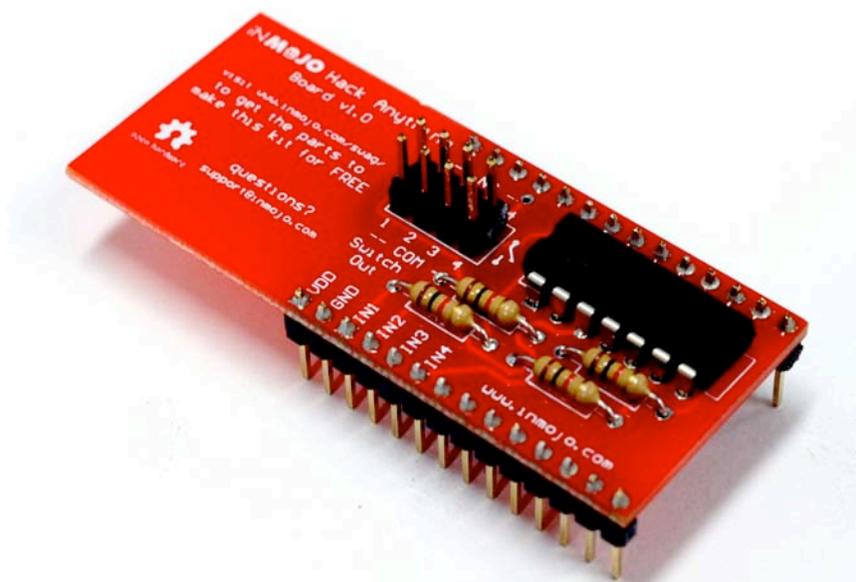


Figure 6: Soldering Headers

Step 7: If you are using an Arduino FIO, the board will fit on top just like a shield. If you are using any other arduino, use a breadboard and connect Vdd to 3V3, GND to GND, IN1 to D2, IN2 to D3, IN3 to D4, and IN4 to D5.

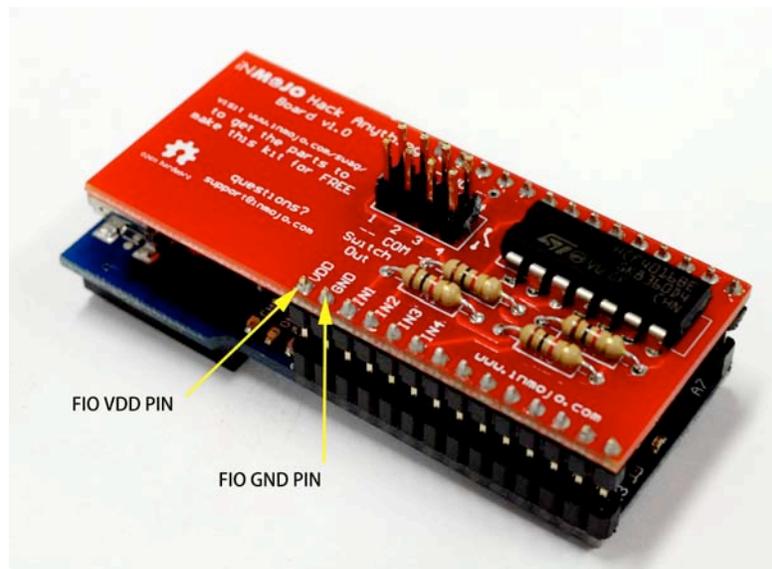


Figure 7: Connecting Arduino FIO with the Hack Anything Board.

Step 8: Connect the Battery to the FIO board and start programming the FIO with the provided sample code.

Step 9: Depending on Step 6, you have connected wires or the 2x4p header pins to the switch output connectors. Take the device to be hacked (Ex: Coffee Maker), remove the outer shell where you can see access to the controller board. Find the switch corresponds to the button you want to control (Ex: ON button) on the front panel. Take 2 wires and connect them to the 2 sides of the ON switch.

Step 10: Connect the other end of the wires to the top and bottom connectors one of the 4 switch control ports (COMS 1 – 4). So wires will be running from the top and bottom connectors of a COM port to either side of the button.

Step 11: Use the provided Arduino code to simulate a button press.

Notes:

1. You can connect up to 4 switches from this board. (i.e. you can control 4 individual button press events in any electronic appliance that you want to hack.)
2. Supply voltage Vdd should match the Logic voltage (3.3V or 5V). Do not exceed 5V on IN channels or Vdd.