

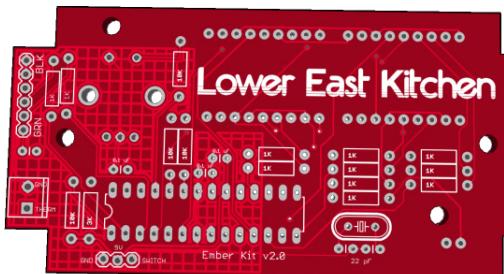
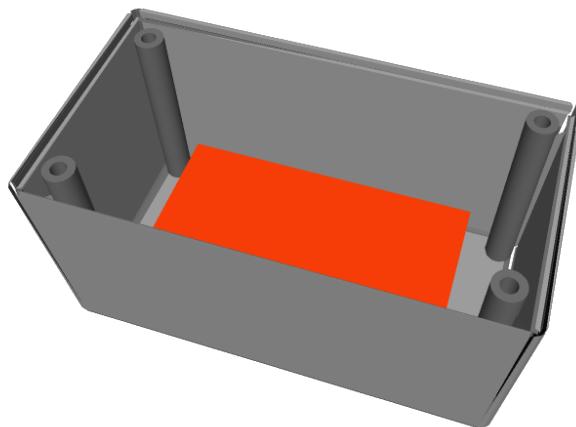
# Lower East Kitchen presents:

## Ember Kit v2.0

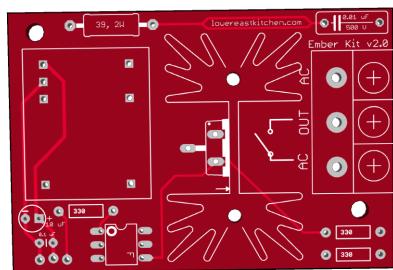
### **ATTENTION:**

The Ember Kit requires skilled assembly of electrical parts. You are responsible for your safety and the safety of others when assembling and using the kit. **Incorrect construction can result in high voltages being exposed, which may result in injury or death.** Please read through the entire instructions to be sure you are comfortable with completing the steps involved. If you will not be able to safely construct the kit, please return it for a full refund. Use the Ember Kit only with a GFCI socket.

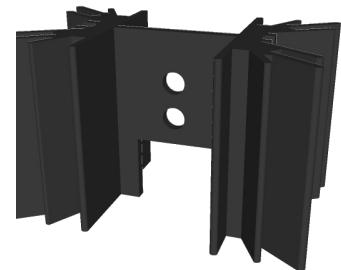
# In the kit:



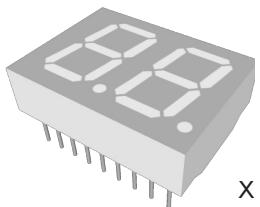
Logic board



Power board



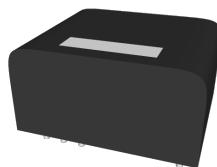
Heatsink



7-segment LEDs  
x 2



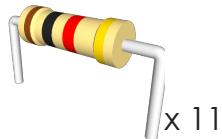
Rotary encoder



Power supply



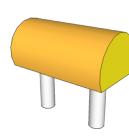
Screw terminal



1 kOhm resistor  
x 11



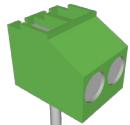
10 kOhm resistor  
x 4



0.1 uF capacitor  
x 4



22 pF capacitor  
x 2



Screw header



Female header



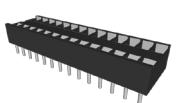
16 MHz crystal



Red LED



ATMega chip



28-pin socket



Opto-isolator



Triac



3 kOhm resistor



10  $\mu\text{F}$  capacitor



0.1  $\mu\text{F}$  capacitor



Male header



330 ohm resistor



39 ohm resistor



0.01  $\mu\text{F}$  capacitor



Knob



Thermistor



Thermal paste

**sugru** HACK THINGS BETTER

sugru packet



Standoff



x 5  
4-40, 1/4" screw



4-40 hex nut



1/16" hex key

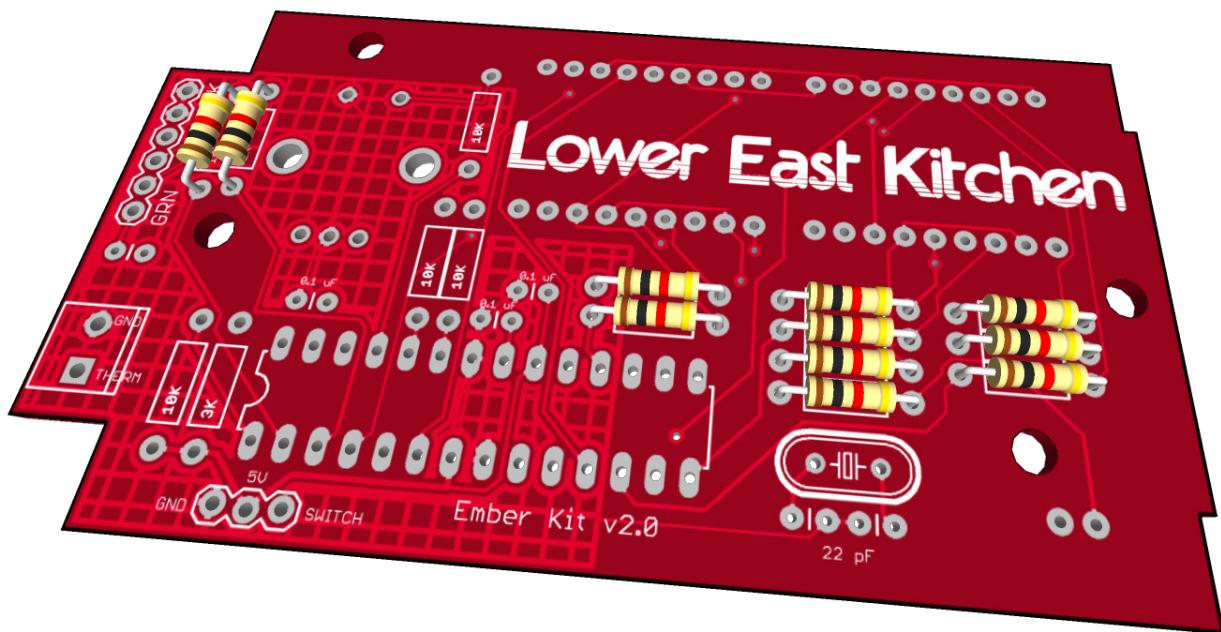
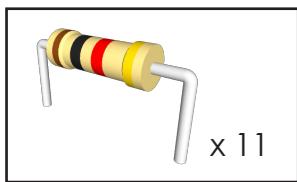


PCB mount screw

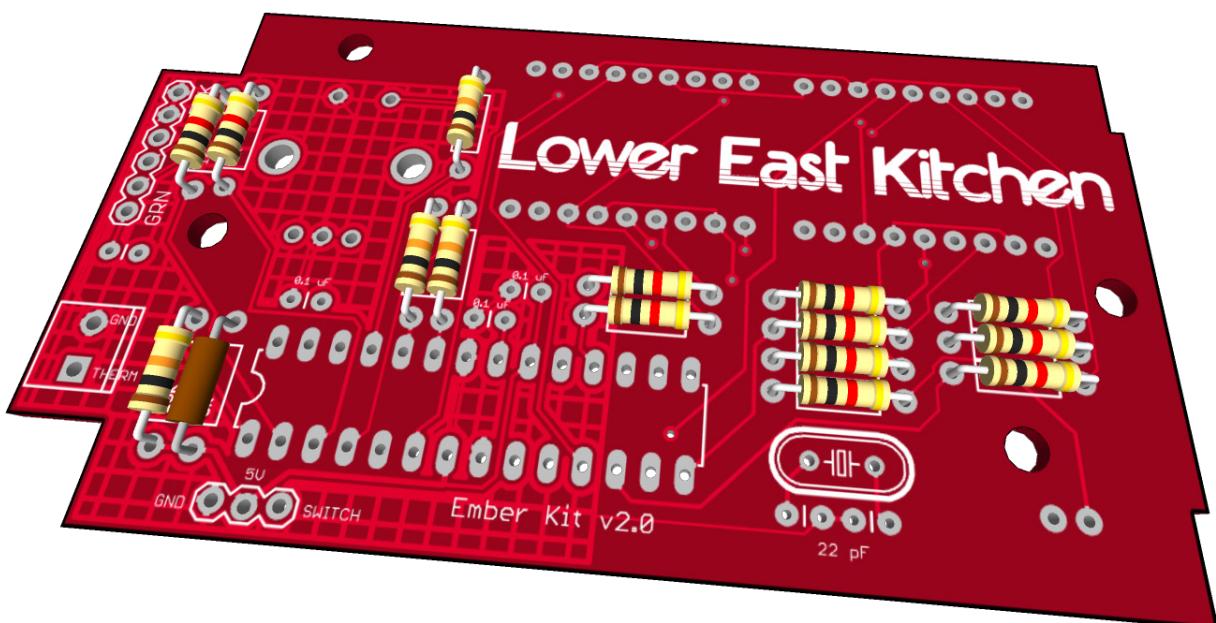
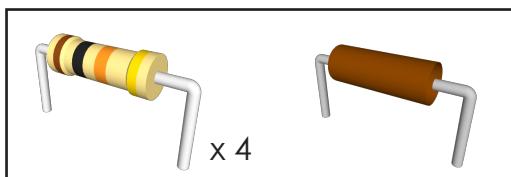
1x Black faceplate screws  
2x #6, 1/2" machine screws  
2x #6 lock nuts

3x red ring terminals  
3x red butt terminals

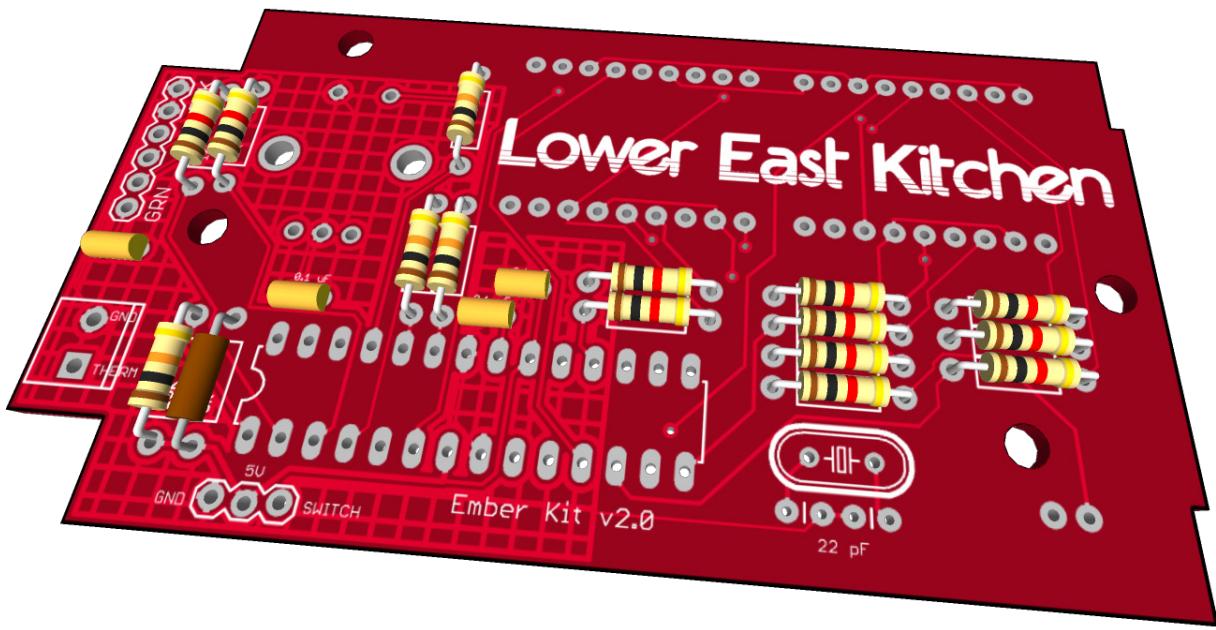
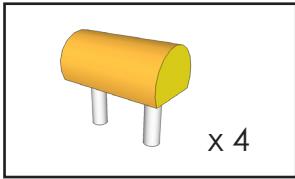
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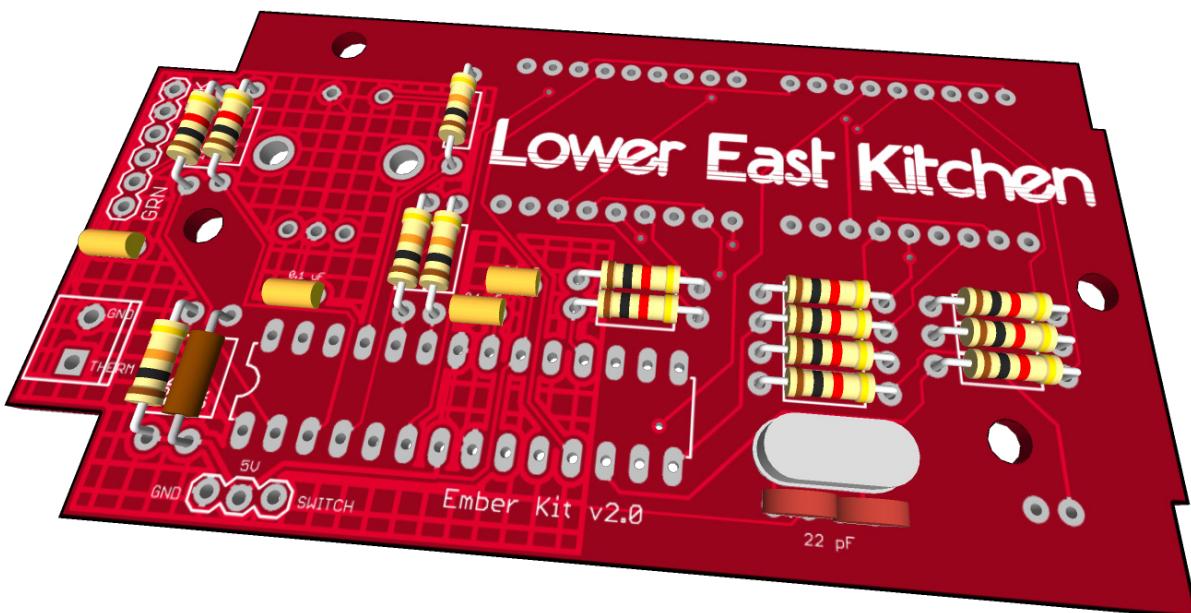
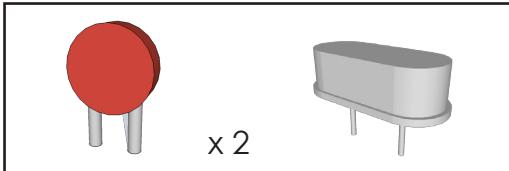
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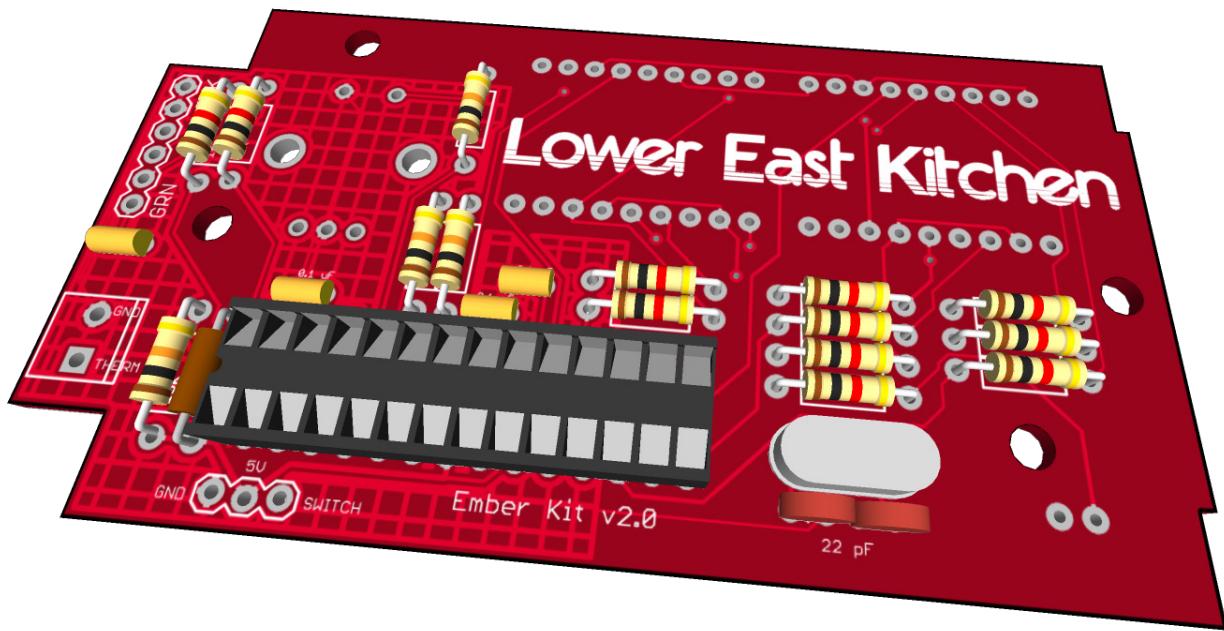
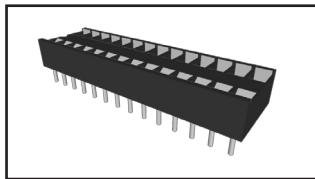
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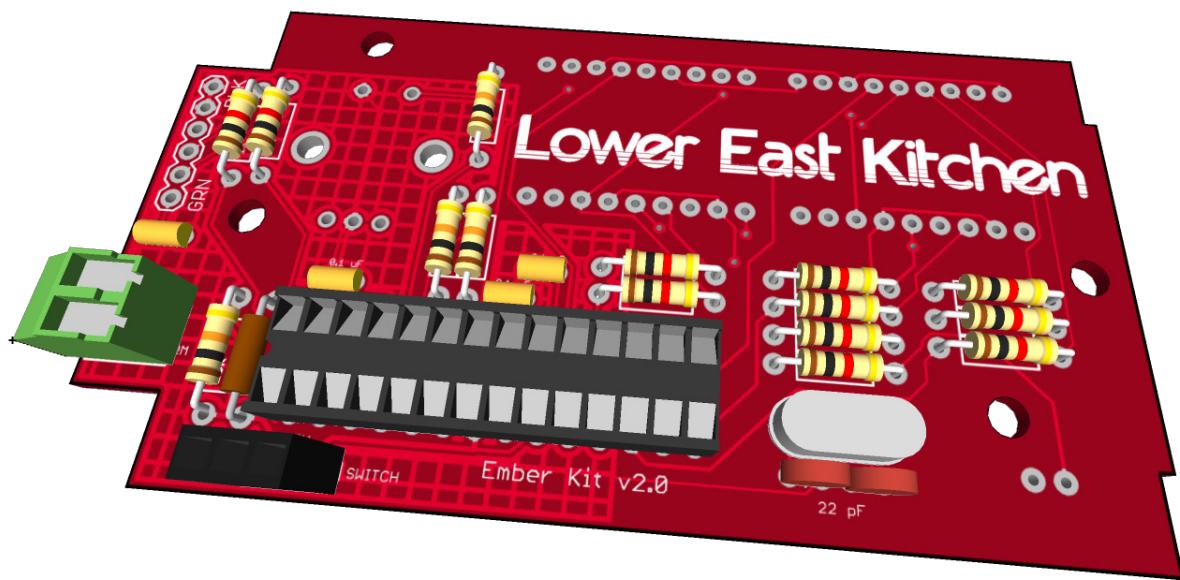
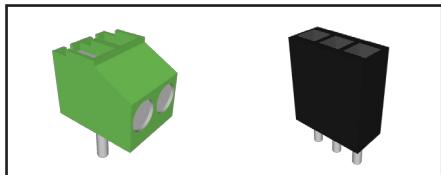
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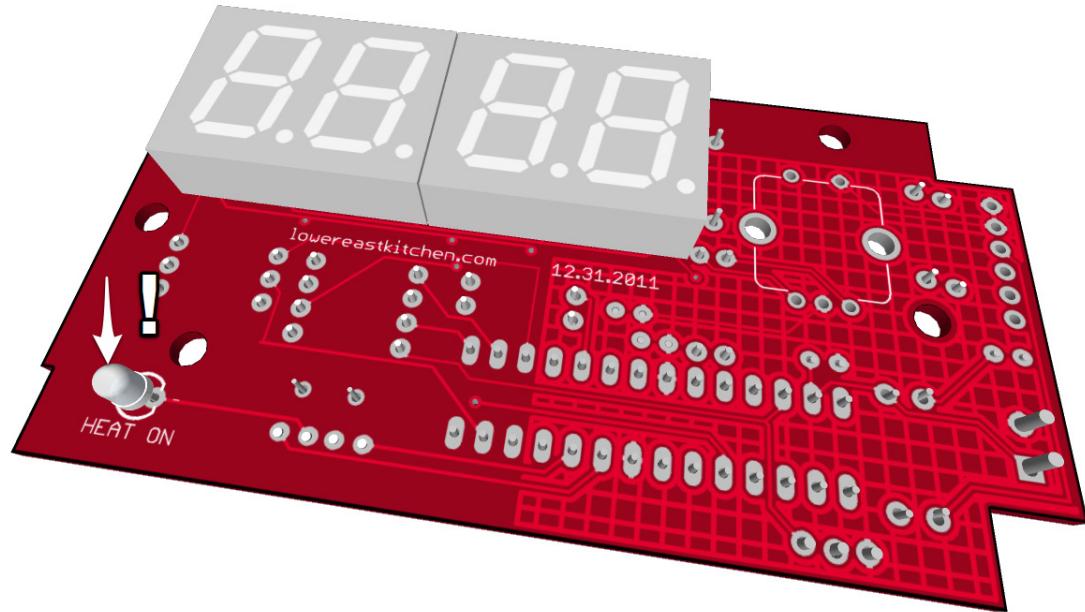
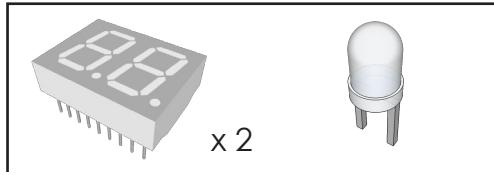
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6

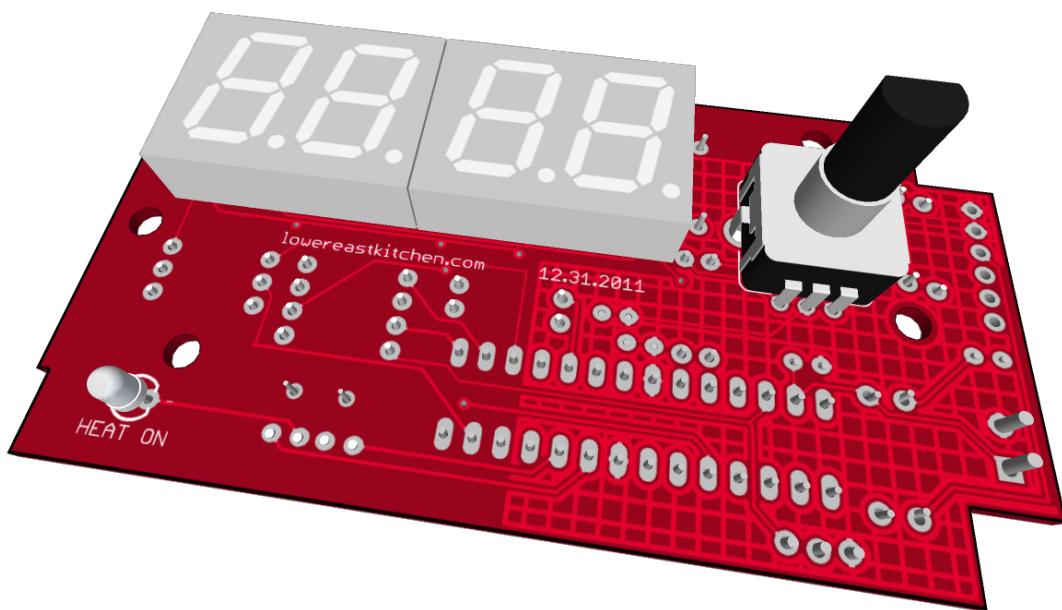
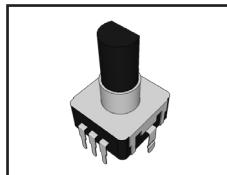


7

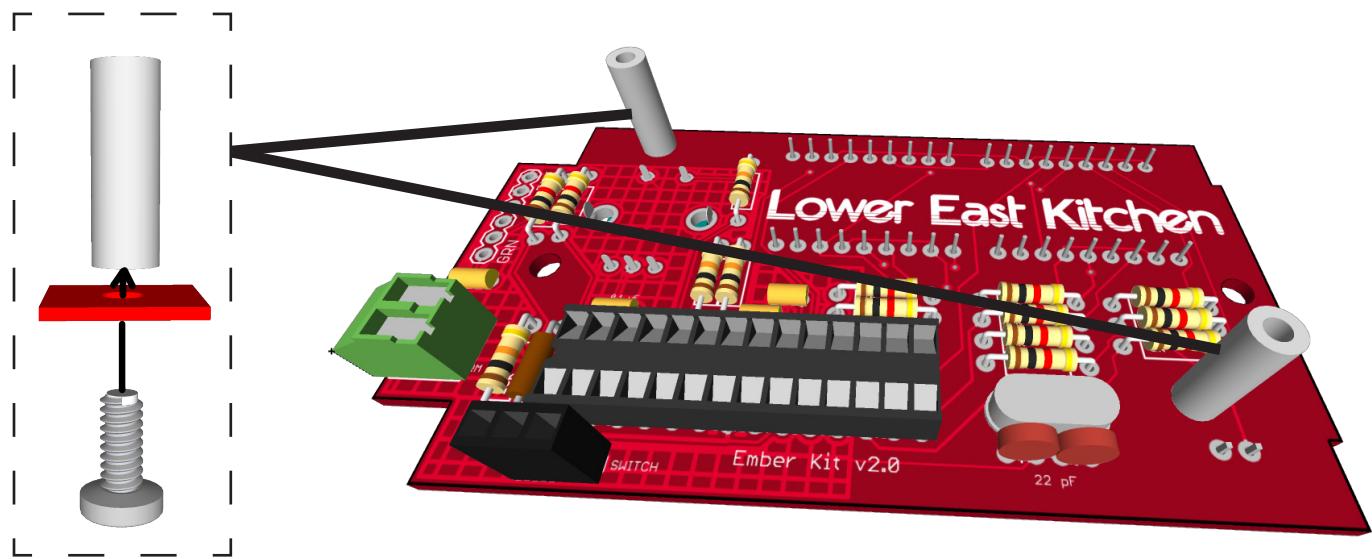
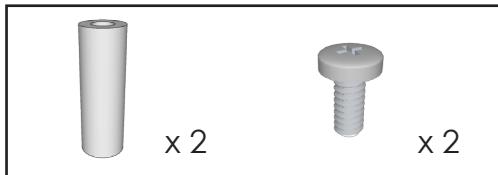


(!) Make sure the long lead on the small LED is on the "+" side

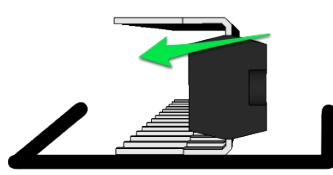
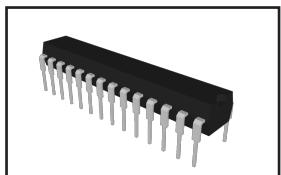
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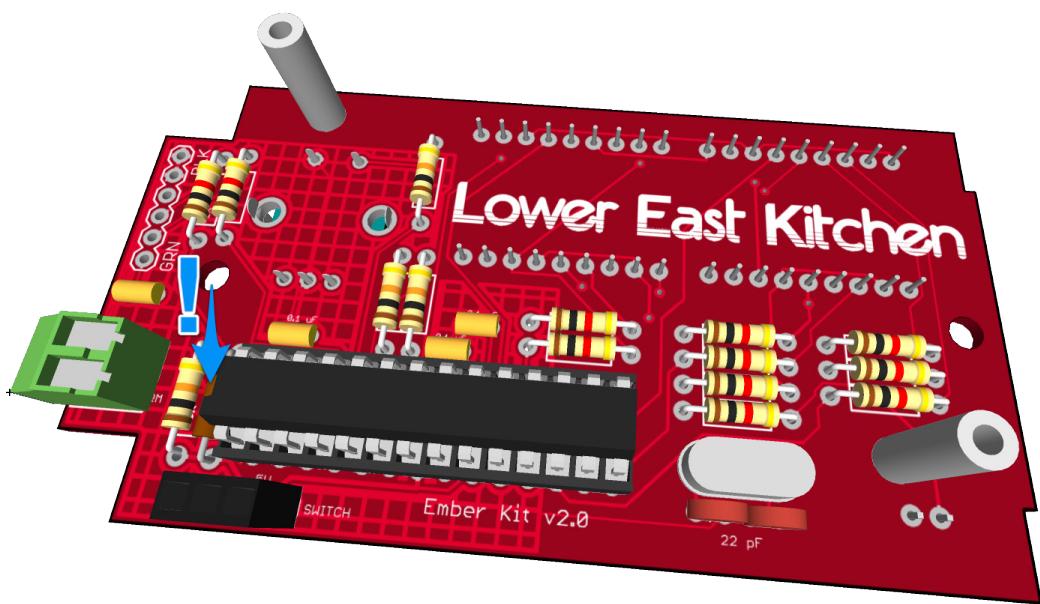
9



10

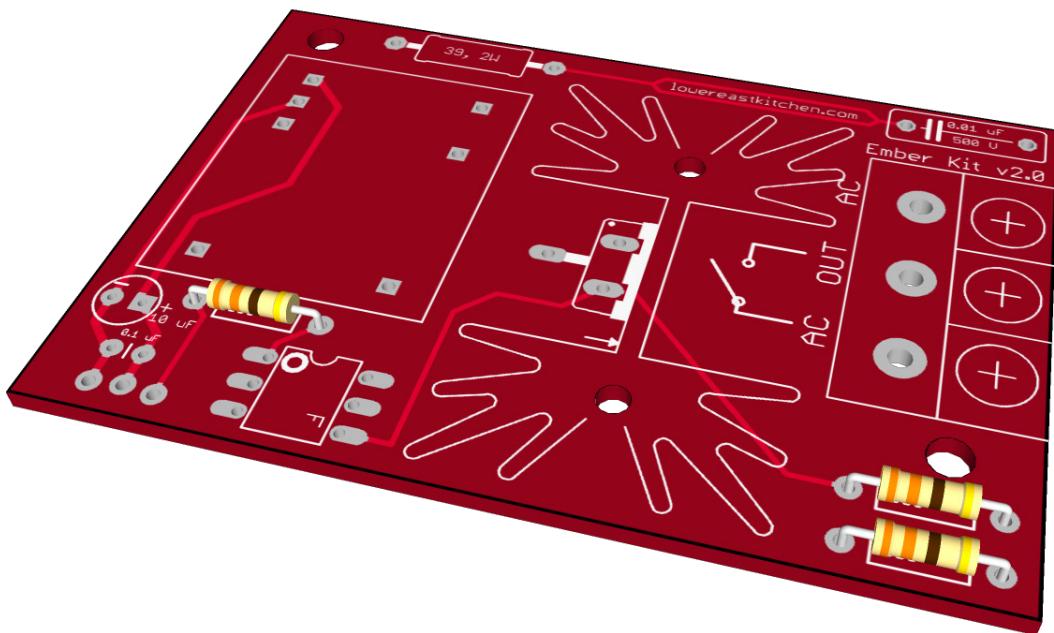
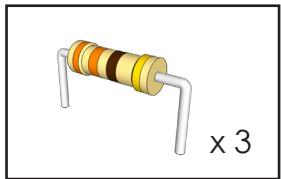


Bend the leads in by placing the chip sideways on a table and pushing on the outside.

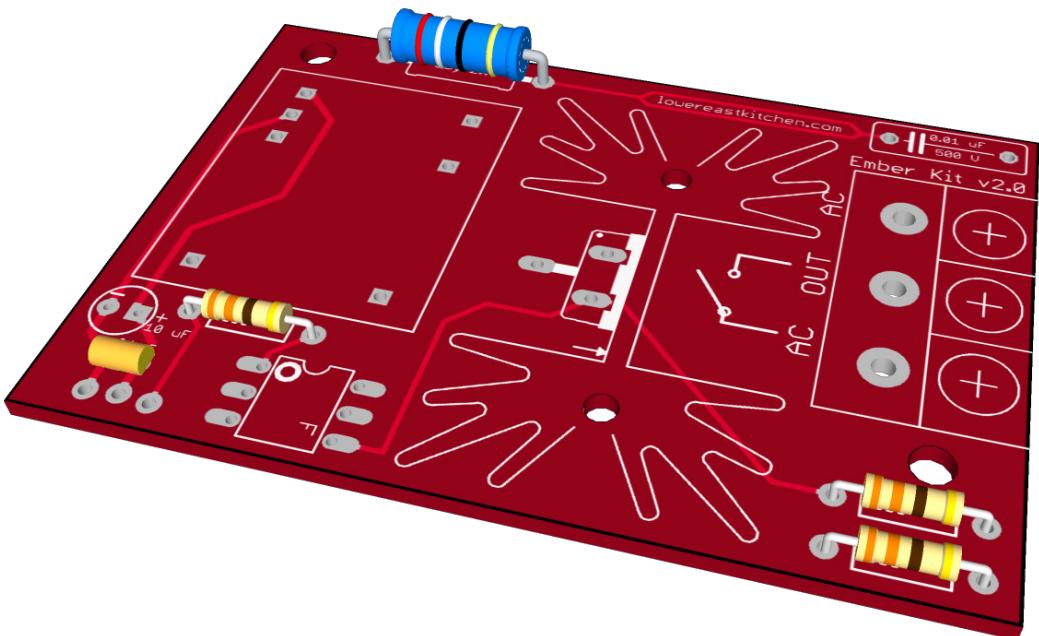
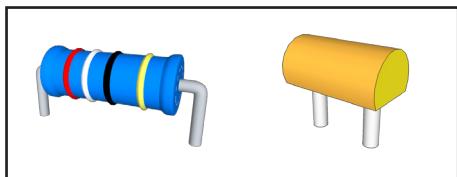


(!) Make sure the notch on the chip lines up with the silkscreen below

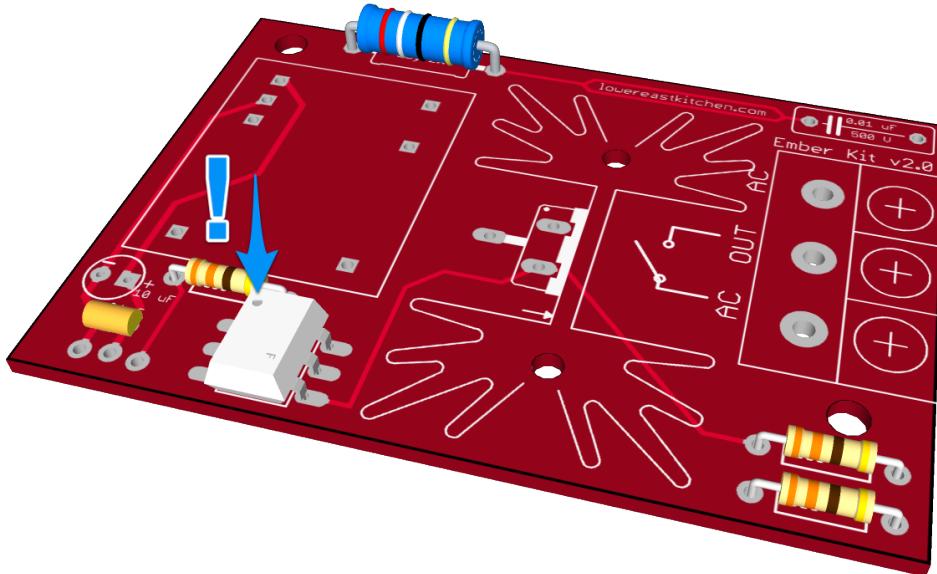
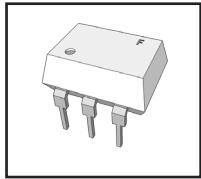
11



12

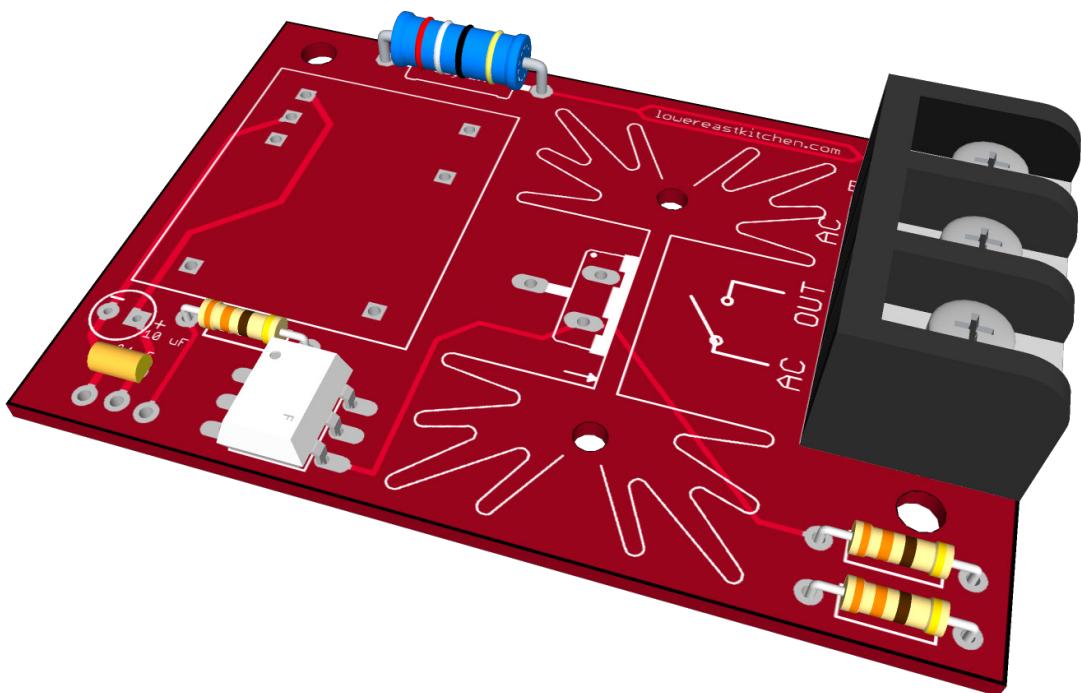


13

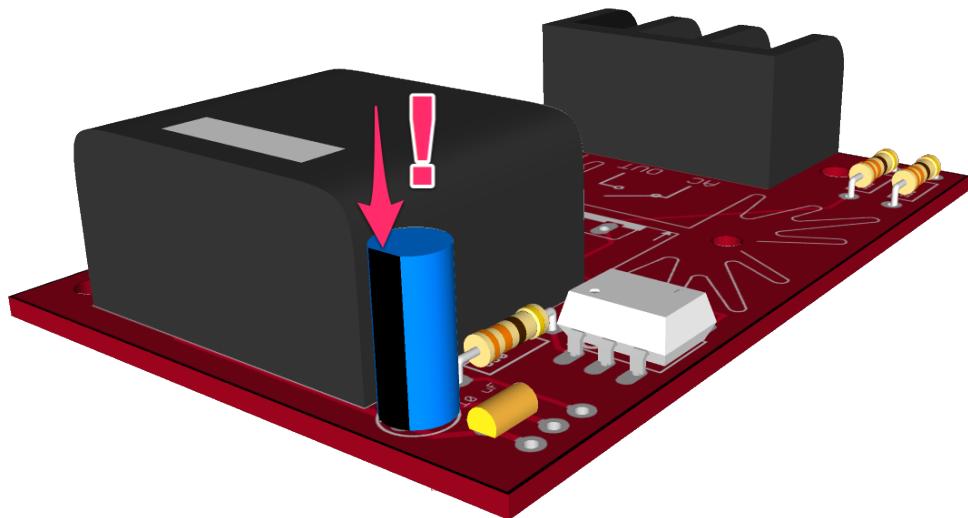
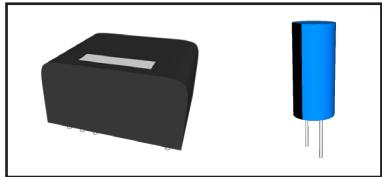


(!) Make sure the dot on the opto-isolator lines up with the silkscreen below.

14

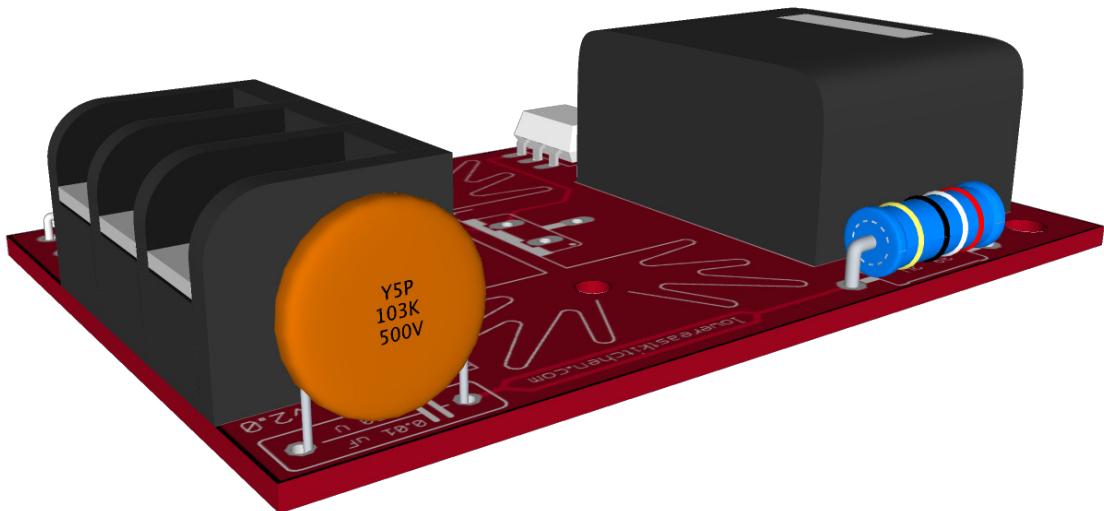
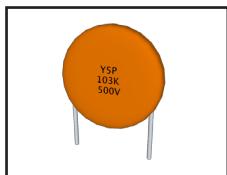


15

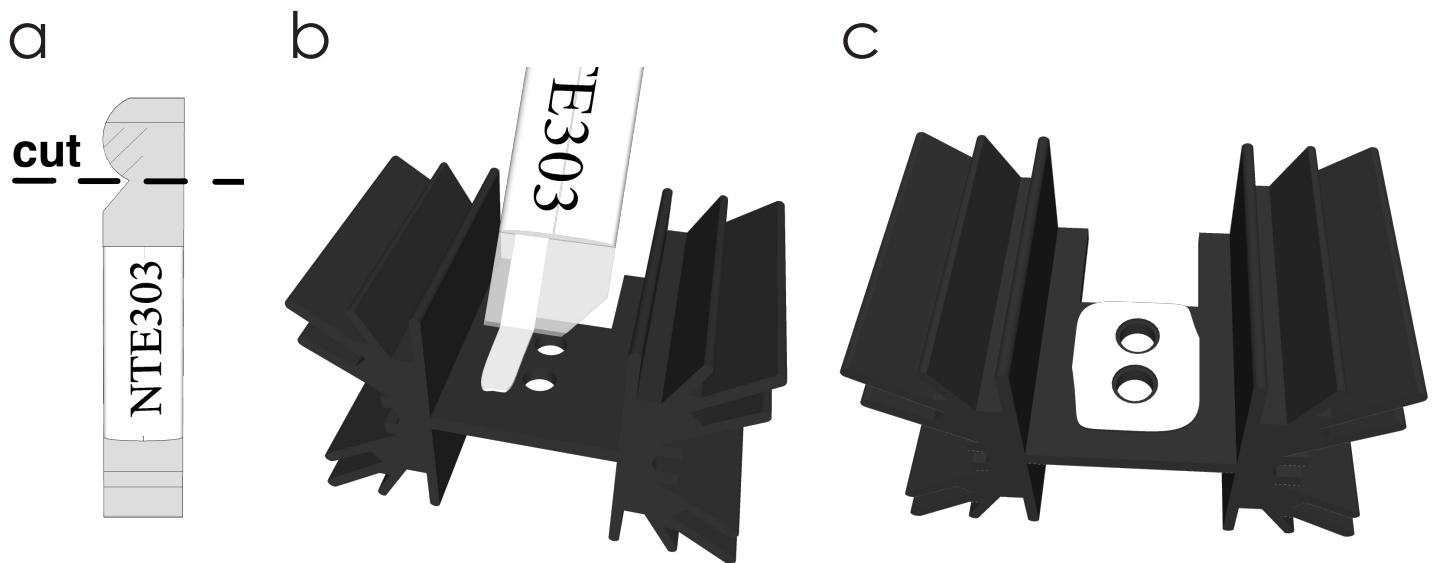
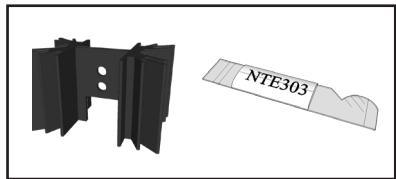


(!) Ensure the capacitor is facing the right direction, with the black line (negative) end toward the edge.

16

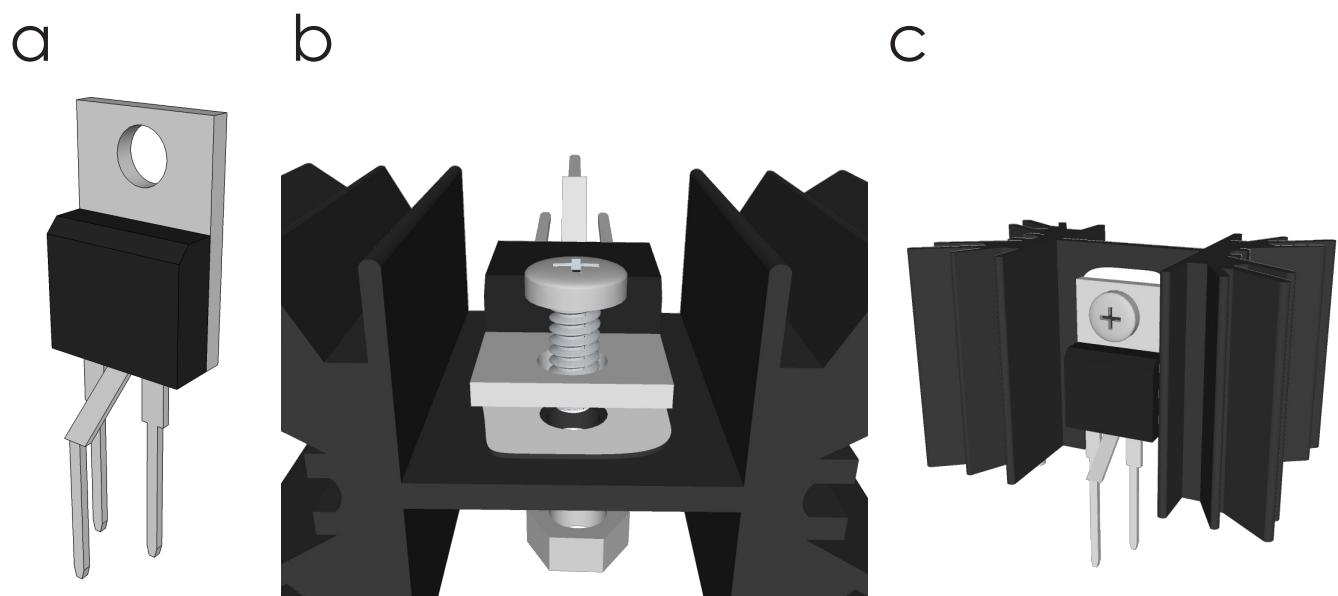
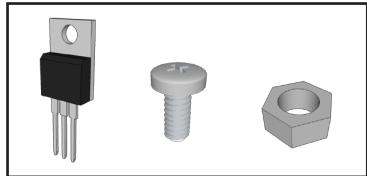


17



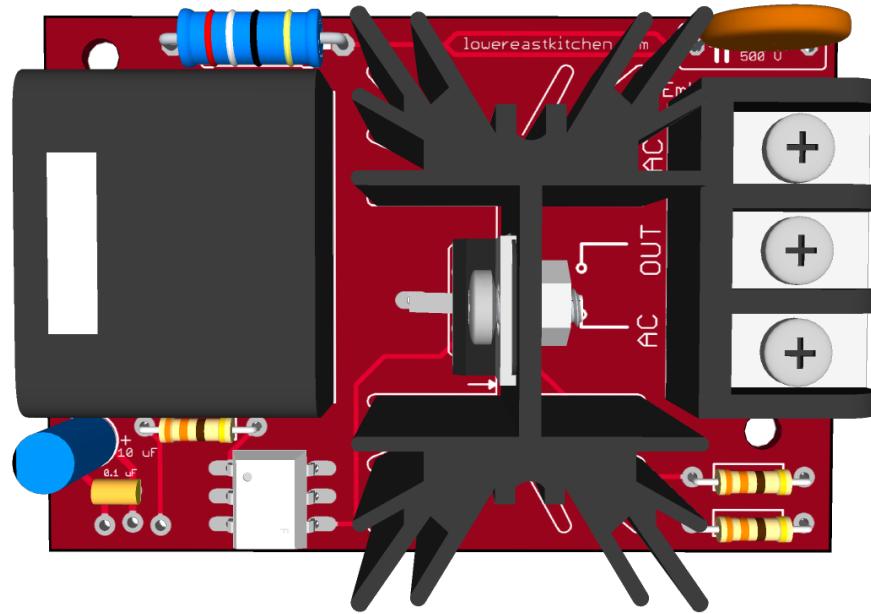
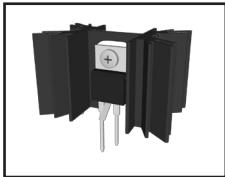
Cut packet. Apply a uniform, thin (<1 mm) layer of paste as shown.

18



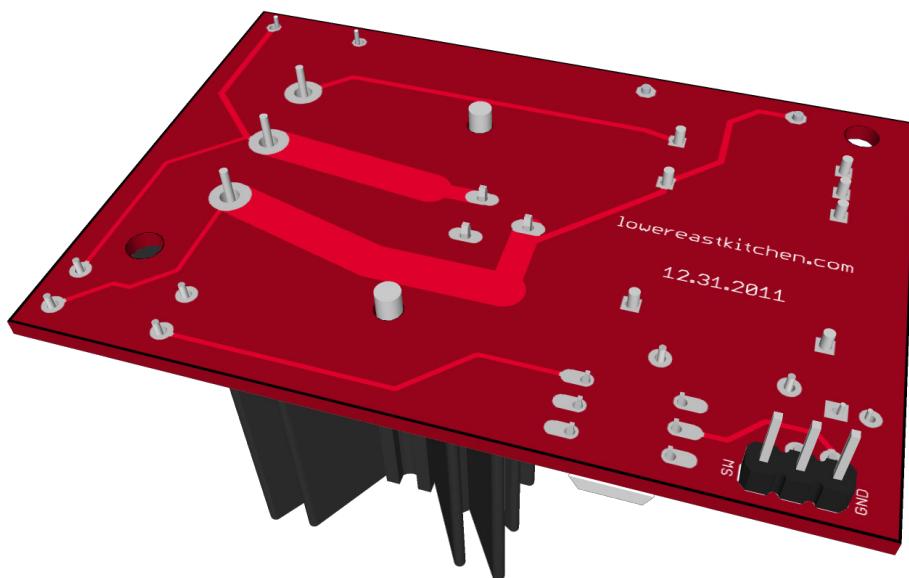
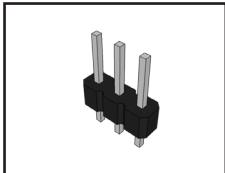
Bend the middle lead forward 5mm.

19



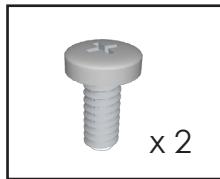
Make sure you snip the leads on the bottom.

20

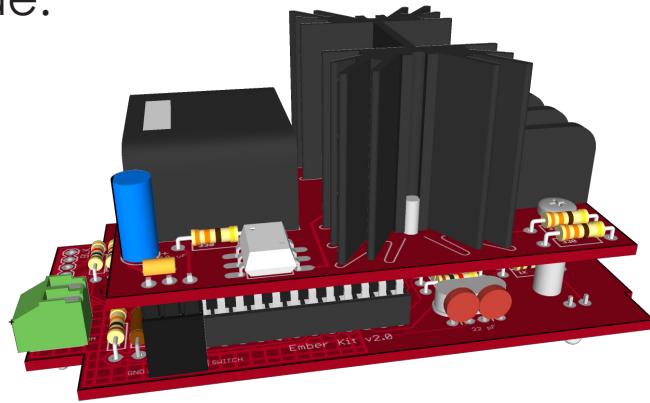


You may wait to solder the header in place in the next step.

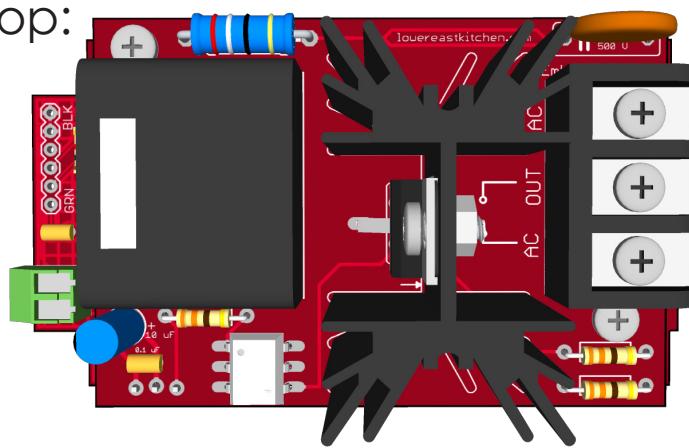
21



Side:



Top:



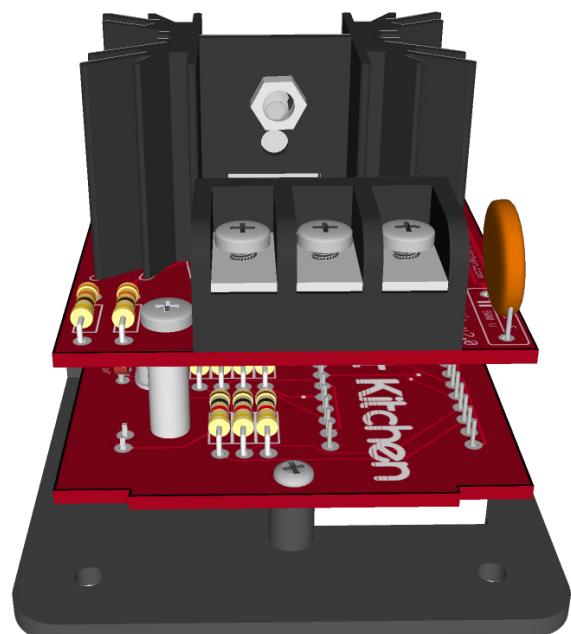
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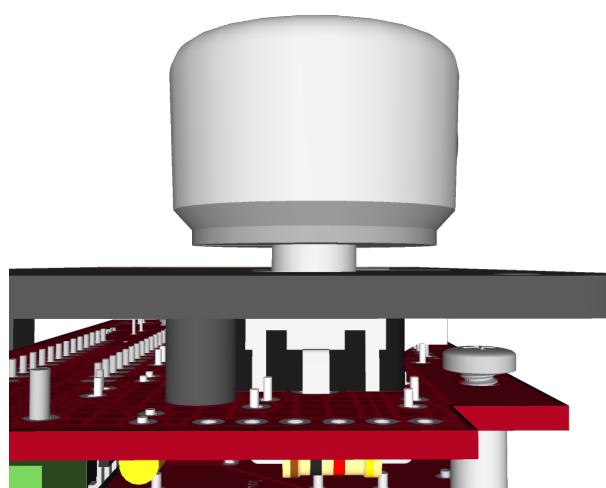
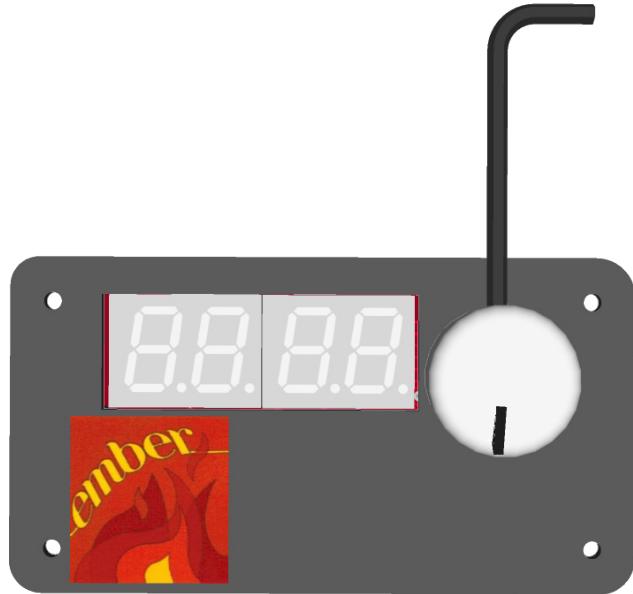
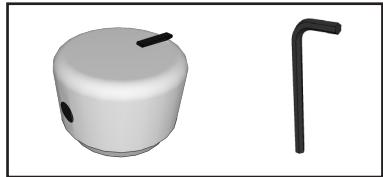
a



b



23



Attach the knob with 3 mm clearance so the knob can be pressed.

Congrats! You're done with the kit! Time to hack it onto your appliance.