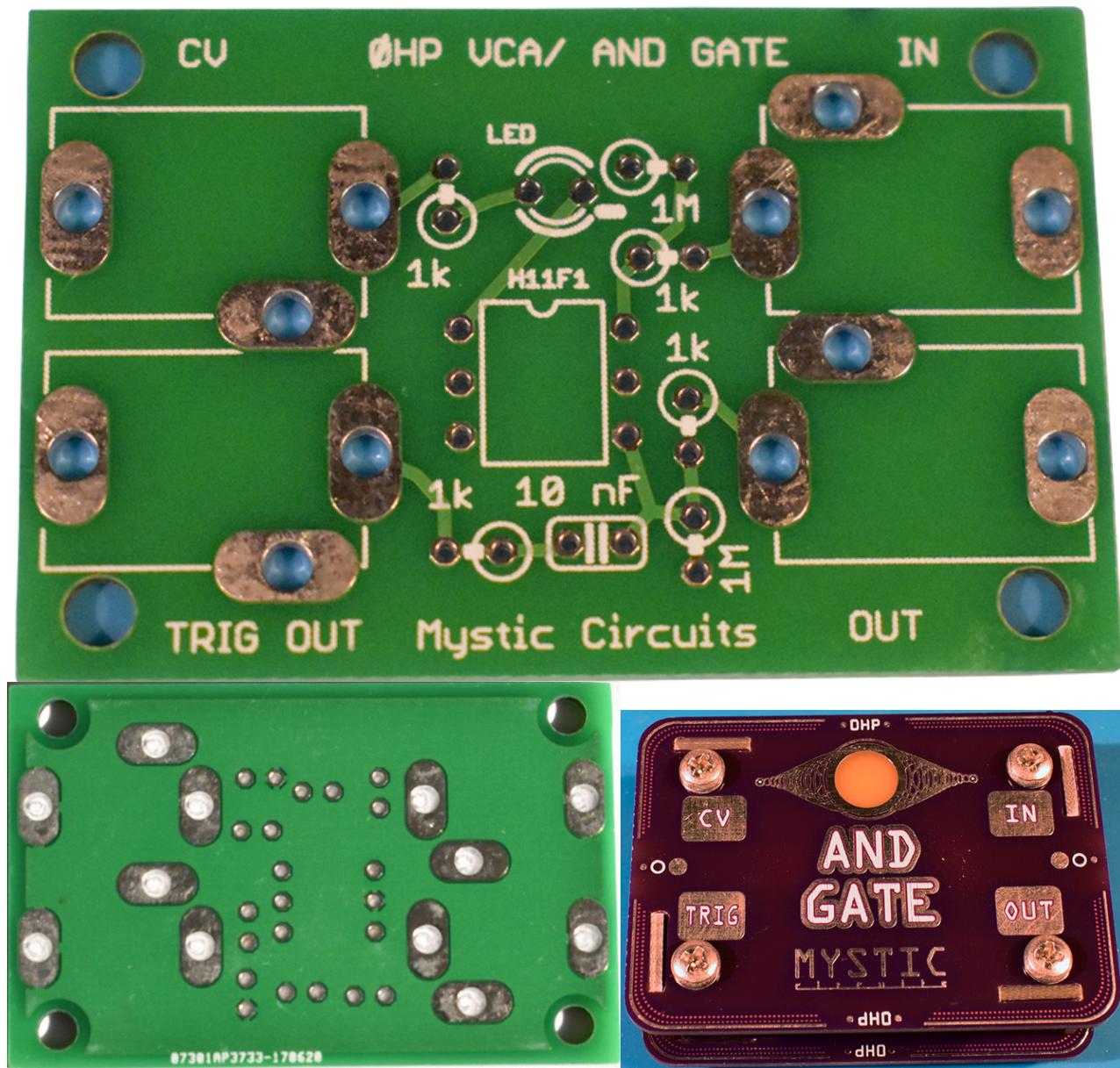


# Build Guide

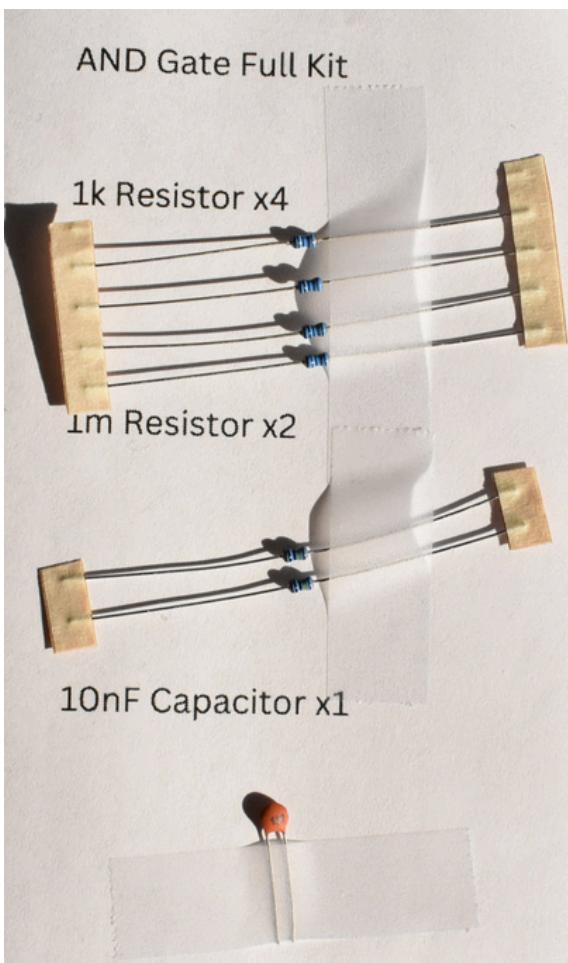
# AND GATE

Thank you for purchasing this OHP DIY kit from Mystic Circuits. This build guide is intended to help take you through the steps in order to make a full functional OHP module. You should have a soldering iron, solder, pliers, snippers, and a small screw driver in order to complete the build.

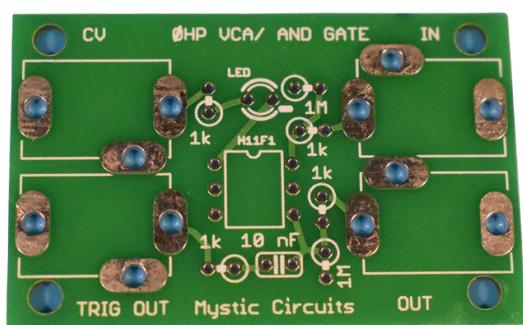
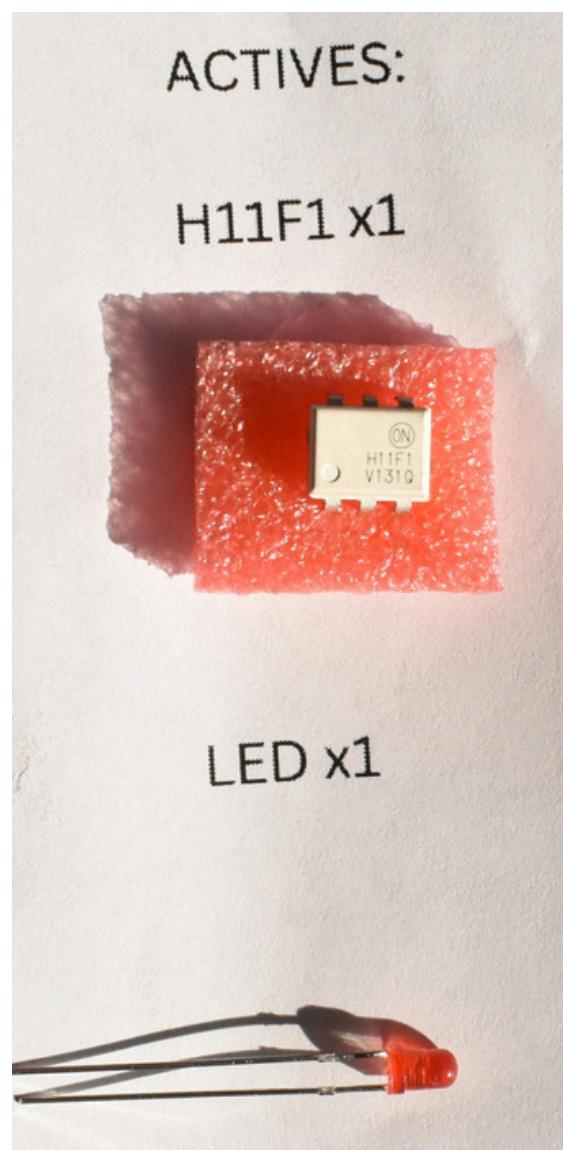


Start by verifying that you have all necessary parts for the kit. Packing kits is the kind of monotonous task that is very easy to make mistakes with, we have multiple methods to verify that the correct parts make it into kits but mistakes still happen. If you are missing any of the parts below please contact us through our contact page and we will remedy the situation. You will have to open all of the bags in your kit.

4x 1K resistors  
2x 1M resistors  
1x 10nF Capacitor



**Actives Bag:**  
1x LED  
1x H11F1



1x Main PCB

4x Rubber Feet  
4x M3 Hex Nuts  
4x M3 23mm Bolts

4x 3.5mm Mono Jacks

2x Short PCB Case Sides

2x Long PCB Case Sides

1x Generic PCB Case Bottom

1x AND Gate PCB Case Lid

(Case lids are dual side so you might have to flip the lid over to see the correct design)

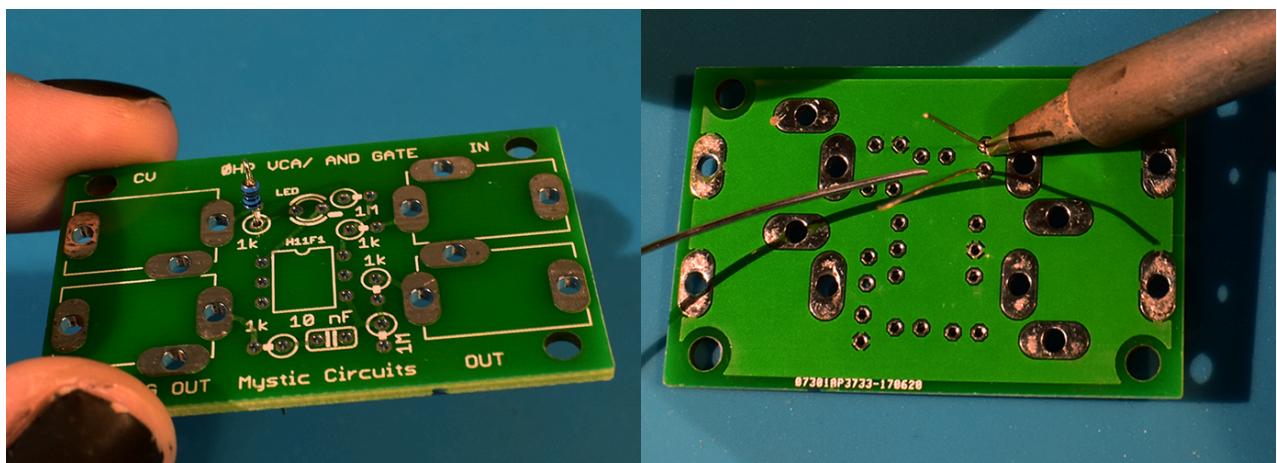


**Resistors:** Bend each resistor in half into a “U” shape in order to install it in the PCB.

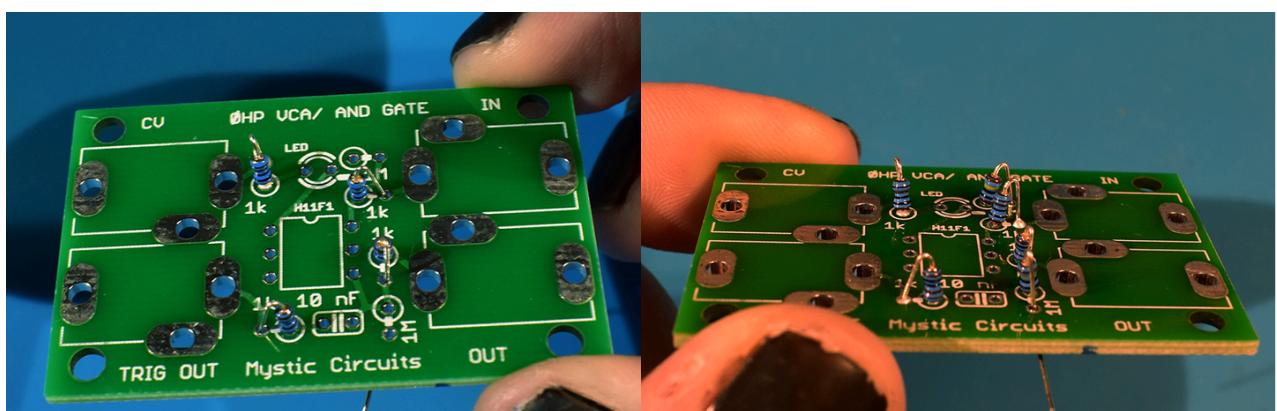
Bend the legs away from each other underneath the board in order to secure the part to the board.

Flip the board over and solder each resistor leg into the board, if the joint is done correctly the solder blob on the board will not move around at all after the leg has cooled down. Ideally the solder blob will be shaped like a silver “hersheys kiss”. Solder all resistor legs in the same fashion.

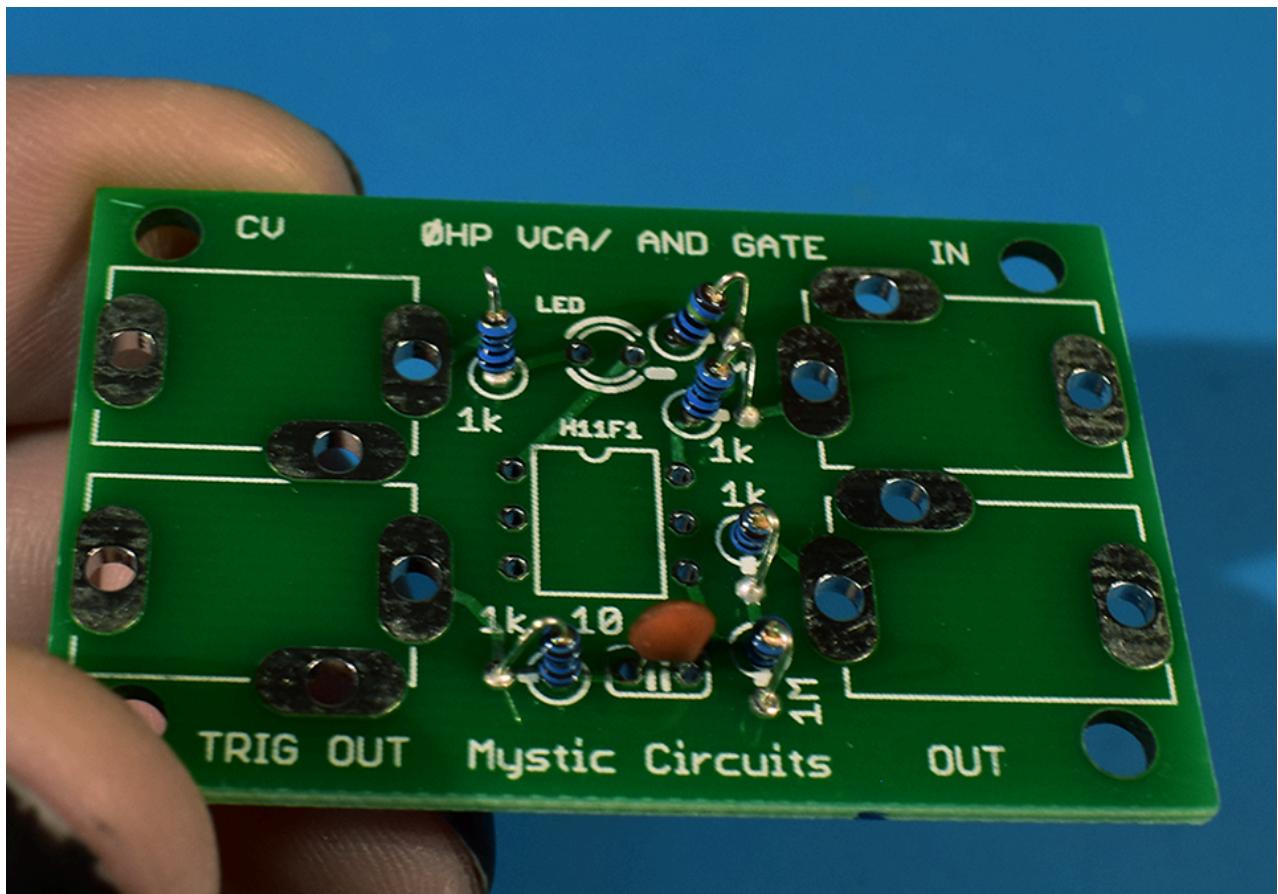
Once you have verified that all of the solder joints are good use your snippers to gently remove all of the resistor legs sticking through the bottom of the board.



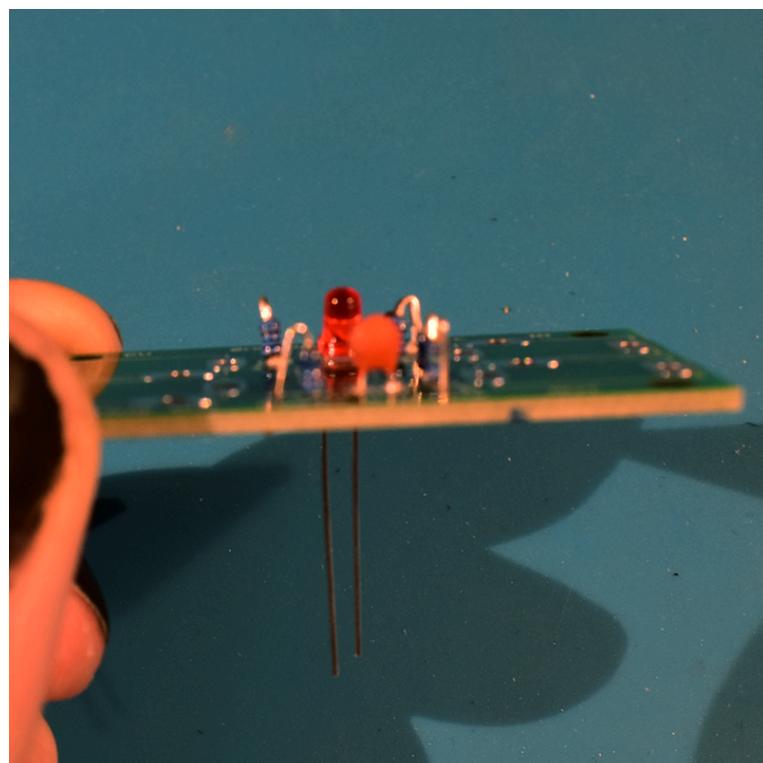
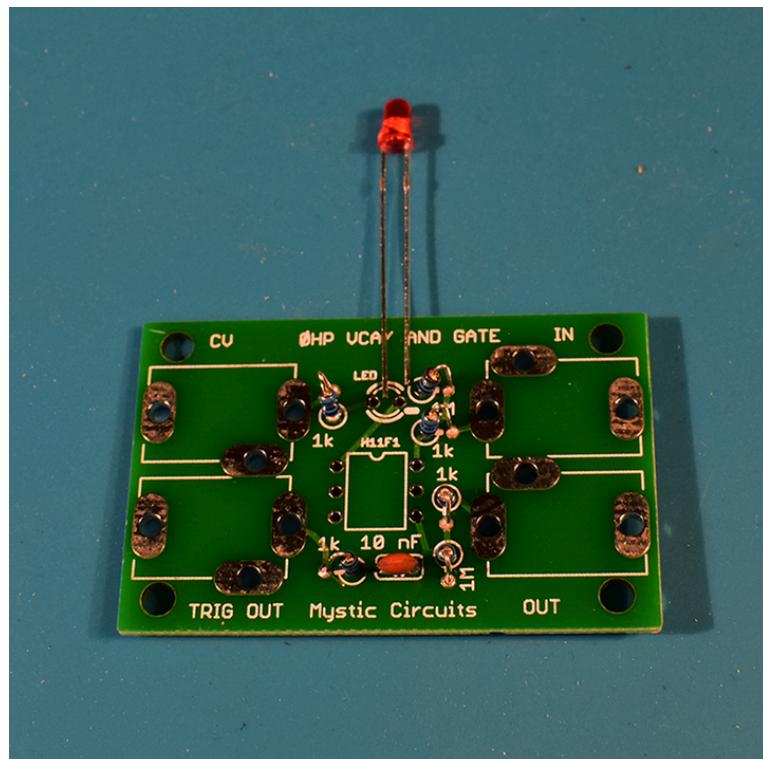
Install the 4x 1K resistors, then the 2x 1M resistors



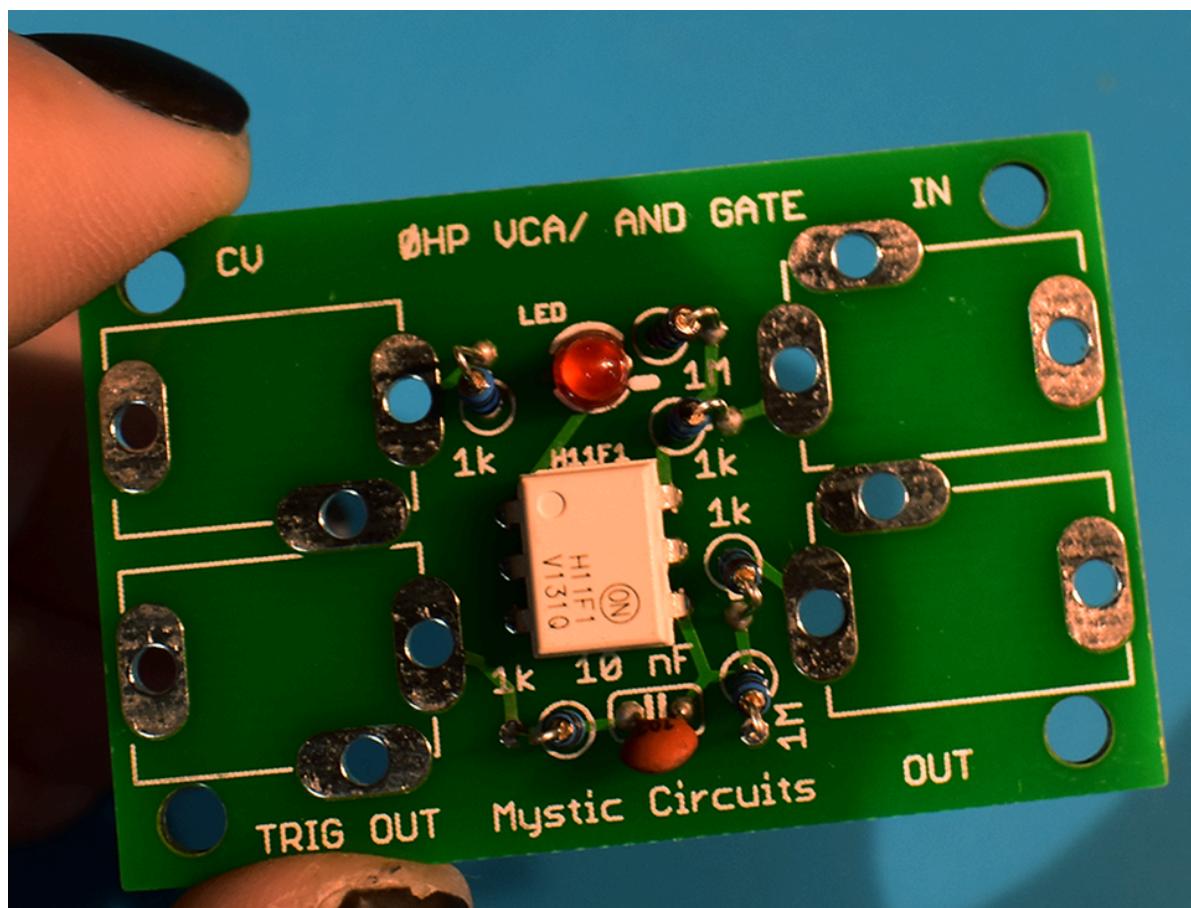
**Capacitor:** the legs of the capacitors should already line up with the holes in the PCB with minimal adjustment. Put the legs of the capacitor through the holes and then bend to secure to the PCB. Solder and snip.



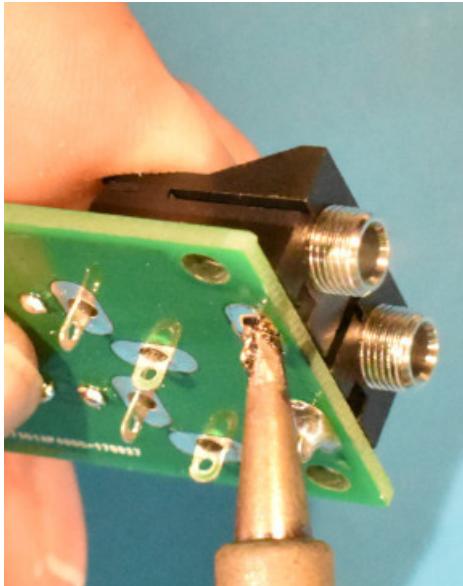
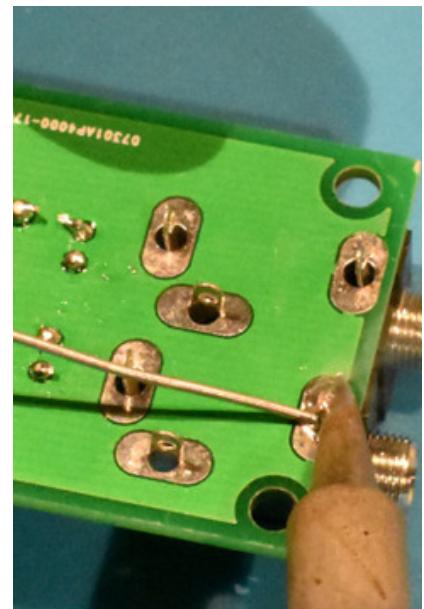
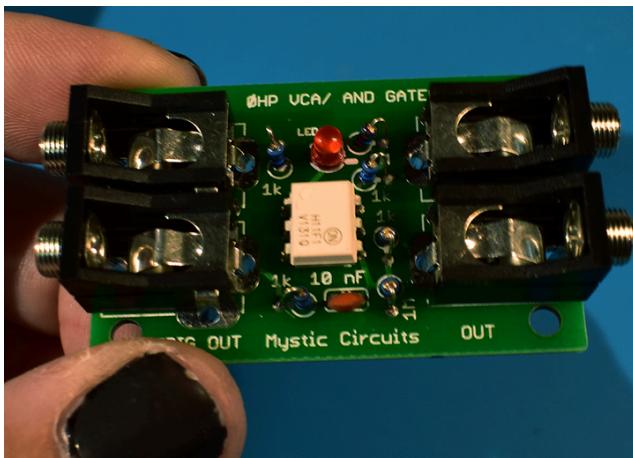
**LED:** LEDs, or light emitting diodes have two different sized legs, the longer leg is the positive anode (+) and the shorter leg is the negative cathode (-). The PCB silkscreen indicates the direction of the LED with the white notch indicating the shorter negative cathode, facing to the right. Install the LED, solder, and snip legs.



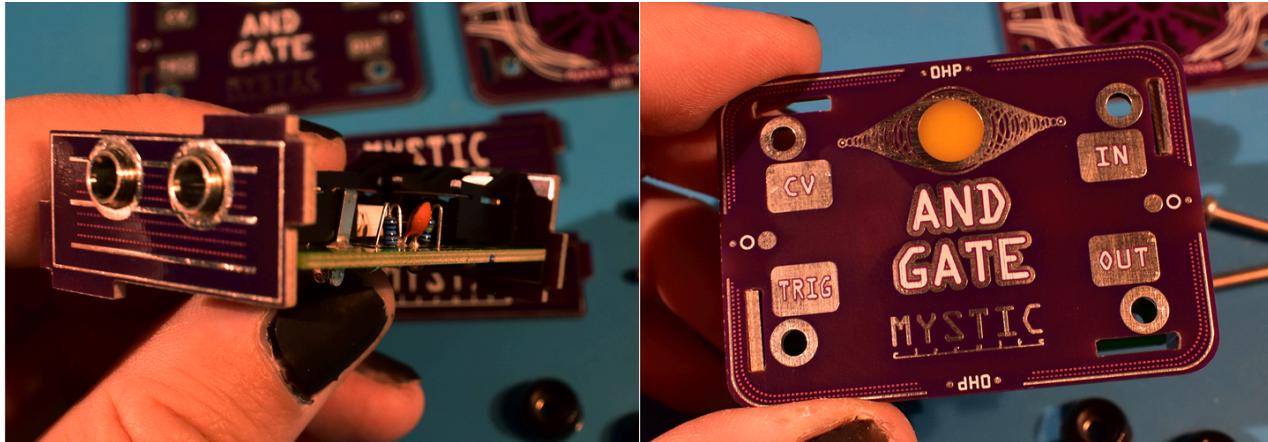
**IC:** This OHP module includes an IC or integrated circuit. Like polarized components like LEDs and diodes, you must pay attention to the orientation of the IC. The notch on the silkscreen should match with the top of the IC. Pin 1 on the IC is indicated by a small dot and should be on the top left of the IC. You may have to bend the legs of the IC slightly in order for it to go through the PCB holes. Be gentle with the legs as they may become overly bent or break with too much force. When the legs of the IC lineup with the PCB, place it and then bend two of the corner legs in order to secure it in place. Now solder those corner legs, then verify that the chip is still nice and flat against the board before soldering the other pins. You do not need to cut the legs of the IC after soldering it.



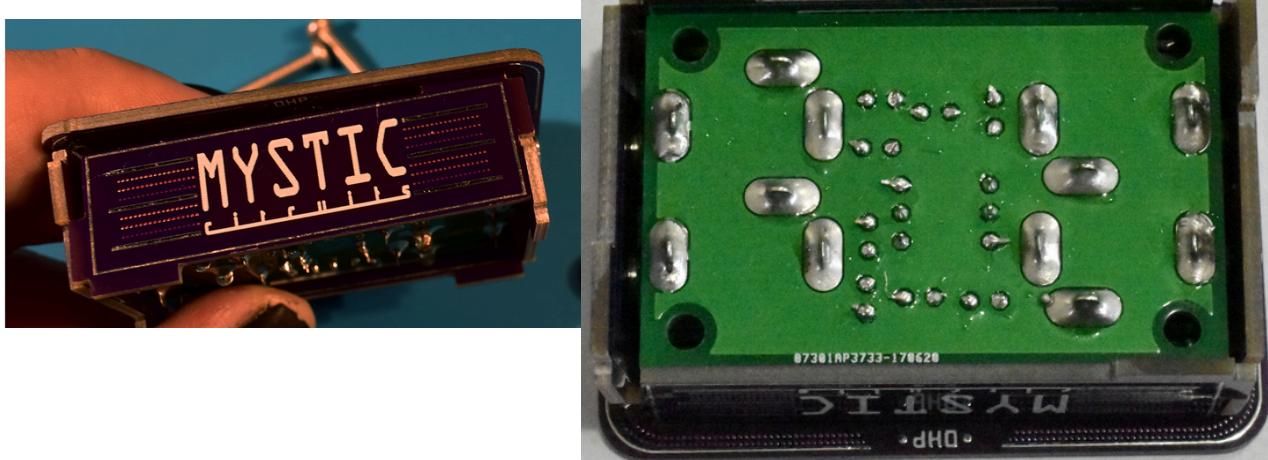
**Jacks:** Place jacks through the holes, push them flat into the board and then flip the board over. You may have to press on the top of the jacks for them to sit flush with the PCB. Solder each of the four jack lugs closest to the PCB edge, you may have to increase your soldering iron's heat slightly for this joint. Flip over to check the jacks are still flat against the board, if a jack is not flat then reheat the solder while pressing the top of the jack in order to readjust it. Be careful to not touch the metal part of the jack as it can get pretty hot while soldering. Once all jacks are secure and flat on the board solder all of the other jack pins.



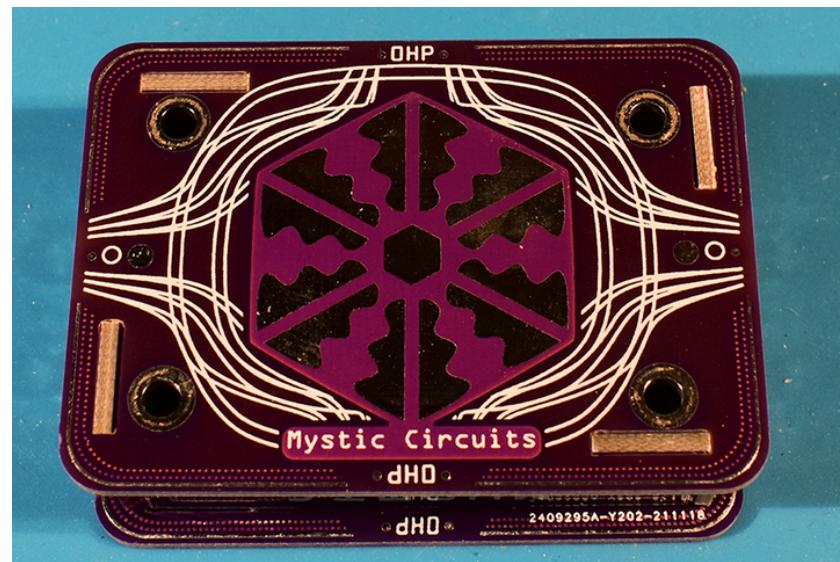
**CASE ASSEMBLY:** First place the jack sides onto the jacks, making sure they line up correctly. Then place the top of the case onto the sides, lining up the slots.



Next, slot the longer sides so they line up with the top and jack sides. Once all the sides are secured to the top, flip the case over.



Line the bottom of the case up with the side slots and push to install. Make sure the slots on the top and bottom of the case line up correctly and there are no gaps.



**SCREWS:** Place one screw in one of the corner holes, but don't push all the way through. Place the nut in the rubber feet and place that over the hole. Place your index finger over the rubber foot so it keeps the nut from moving. Push and rotate the screw so it lines up with the nut and attaches securely. You may have to remove the screw and try again if it is not lined up with the nut correctly. Repeat this step for each of the feet.



You are done! Go make some tunes!

