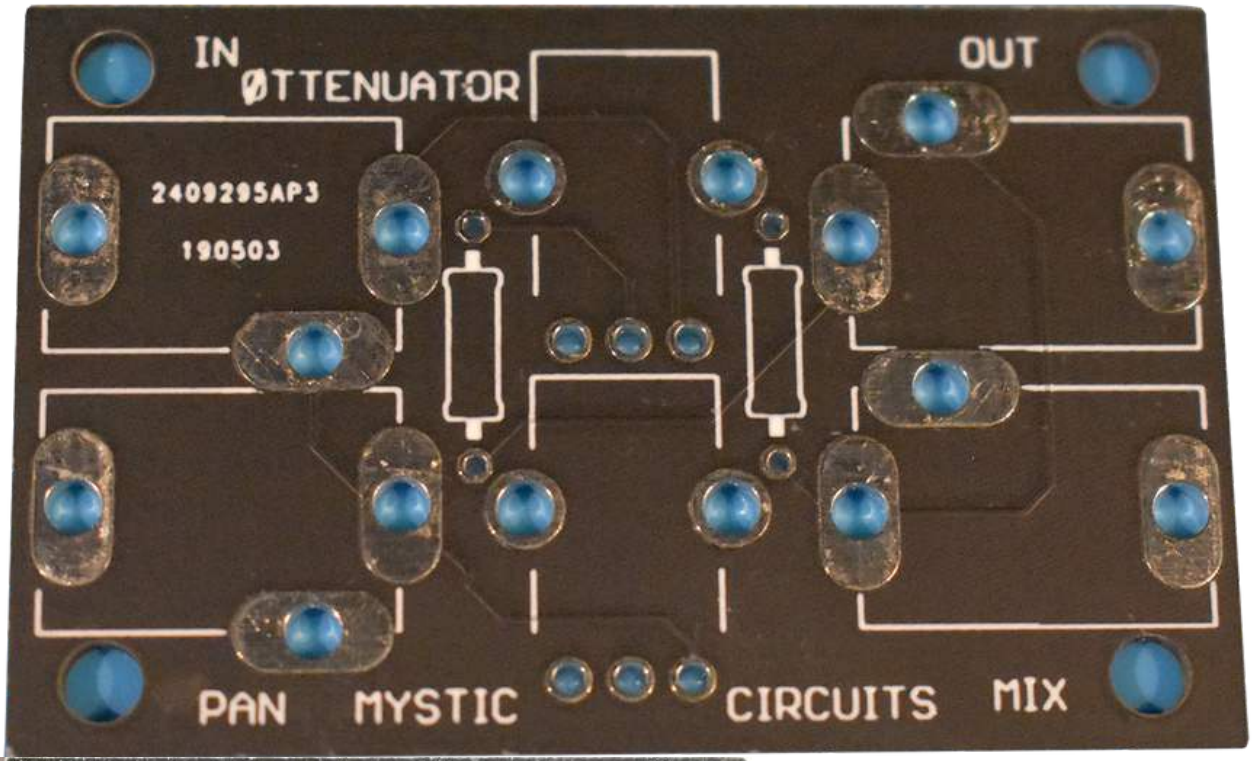
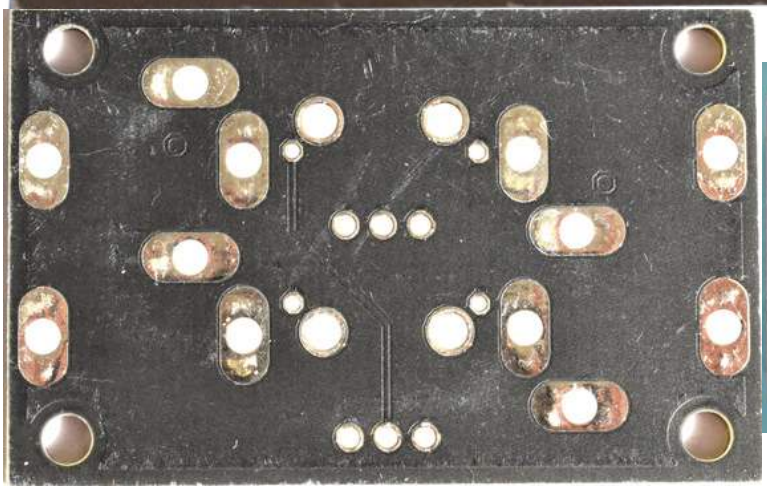
Build Guide

OTTENUATOR

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.



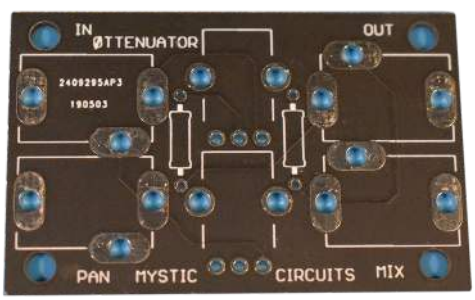


Start by verifying that you have all necessary parts for the kit. Packing kits is the kind of monotonous task that is very easy to make mistakes with, we have multiple methods to verify that the correct parts make it into kits but mistakes still happen. If you are missing any of the parts below please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

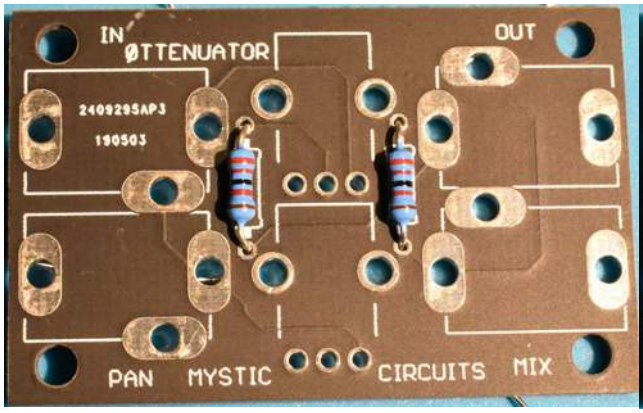
2x 22K resistors
2x 100k Plastic Shaft Pots

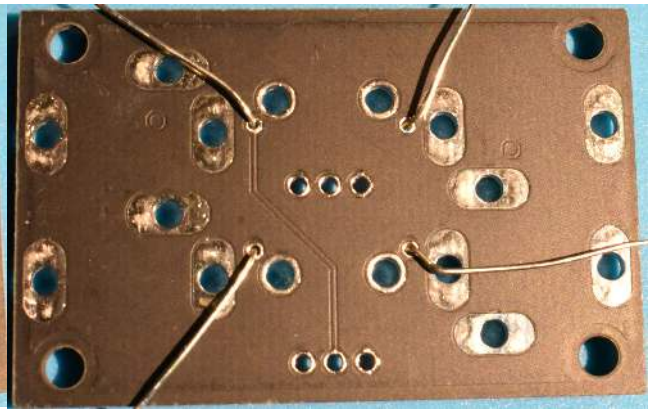
4x Rubber Feet
4x M3 Hex Nuts
4x M3 23mm Bolts
4x 3.5mm Mono Jacks
2x Short PCB Case Sides
2x Long PCB Case Sides
1x Generic PCB Case Bottom
1x Ottenuator PCB Case Lid
(Case lids are dual side so you might have to flip the lid over to see the correct design)

1x Main PCB

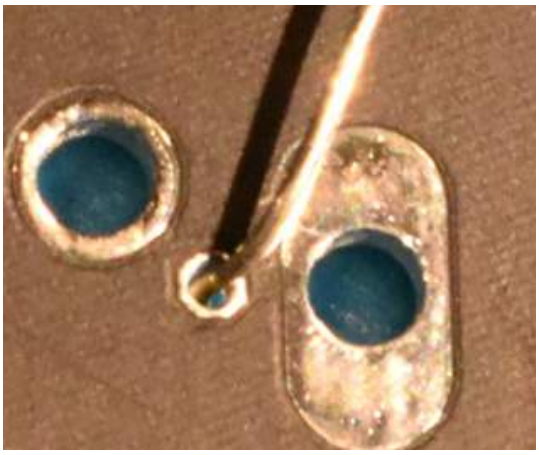
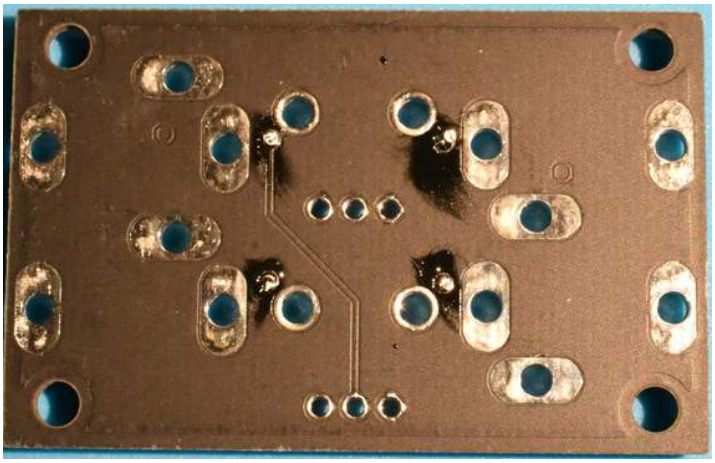


Resistors: Bend each resistor in half into a “U” shape in order to install it in the PCB.
Bend the legs away from each other underneath the board in order to secure the part to the board.
There are a few board points that are a little too close to eachother so before soldering I suggest bending the resistors in a sort of diagonal pattern. Be careful when soldering not to bridge the resistor joints to the surrounding solder pads.

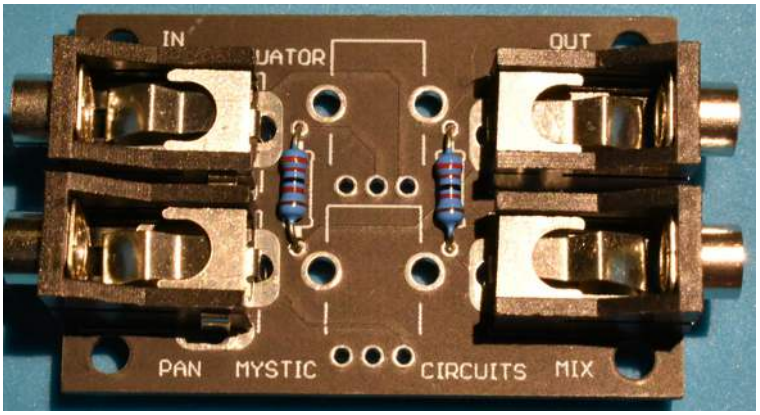


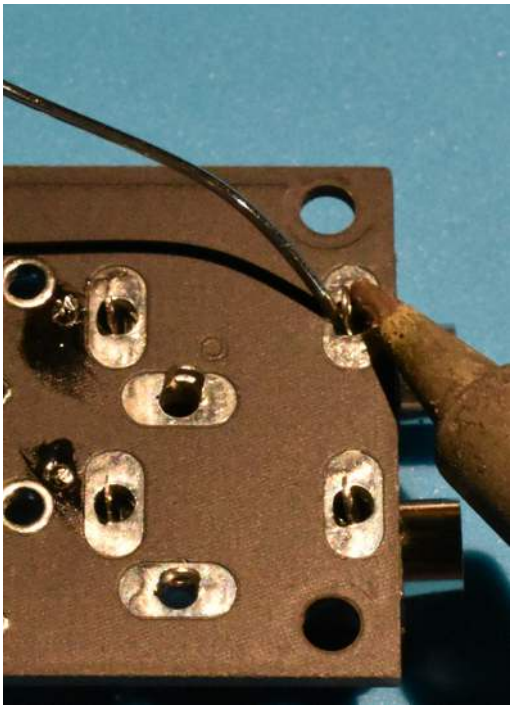


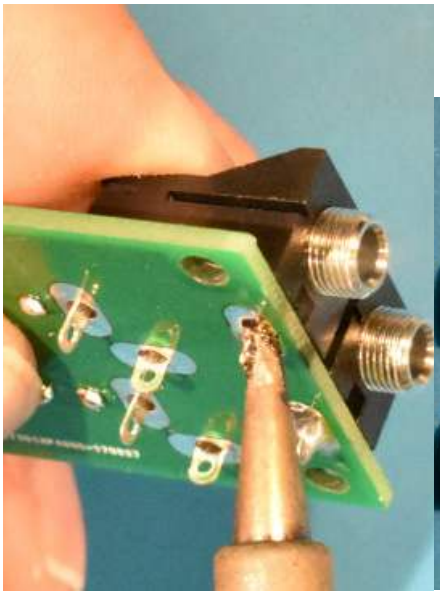
Flip the board over and solder each resistor leg into the board, if the joint is done correctly the solder blob on the board will not move around at all after the leg has cooled down. Ideally the solder blob will be shaped like a silver “hersheys kiss”. Solder all resistor legs in the same fashion. Once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

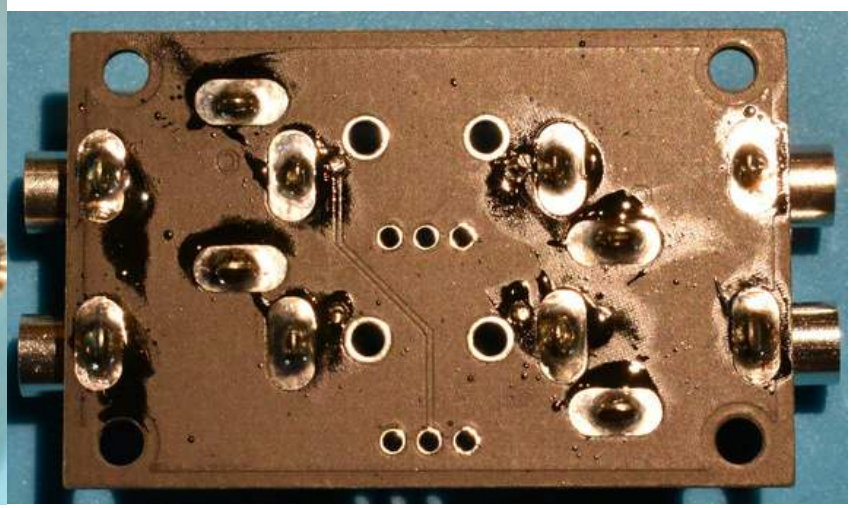



Jacks: Place jacks through the holes, push them flat into the board and then flip the board over. You may have to press on the top of the jacks for them to sit flush with the PCB. Solder each of the four jack lugs closest to the PCB edge, you may have to increase your soldering iron's heat slightly for 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.

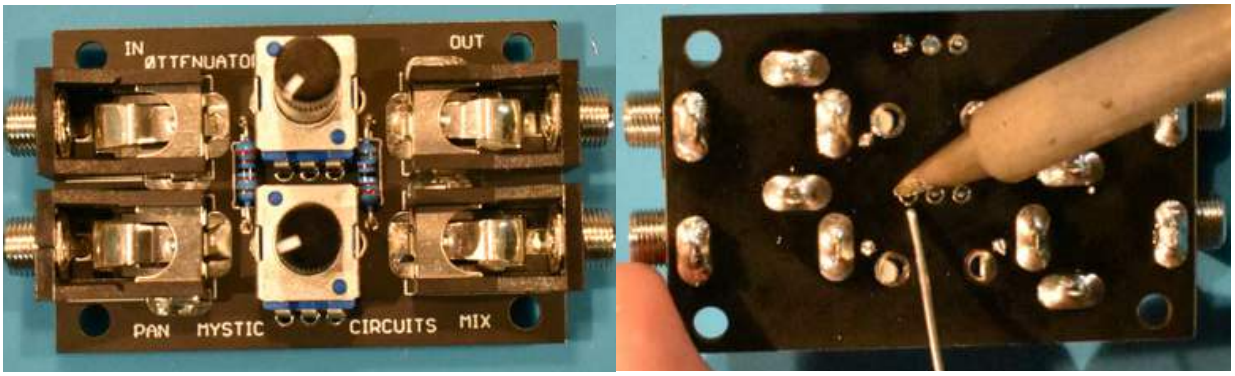






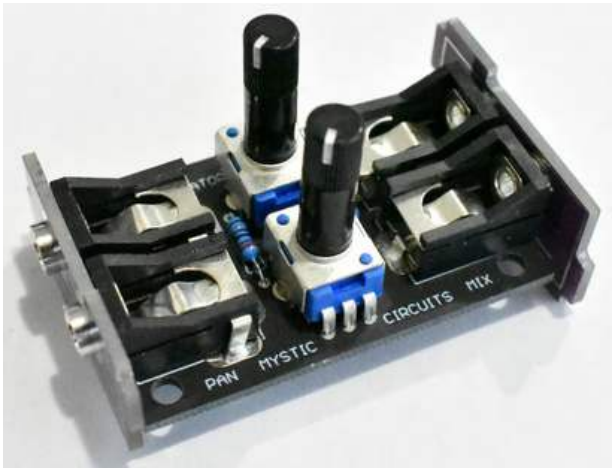


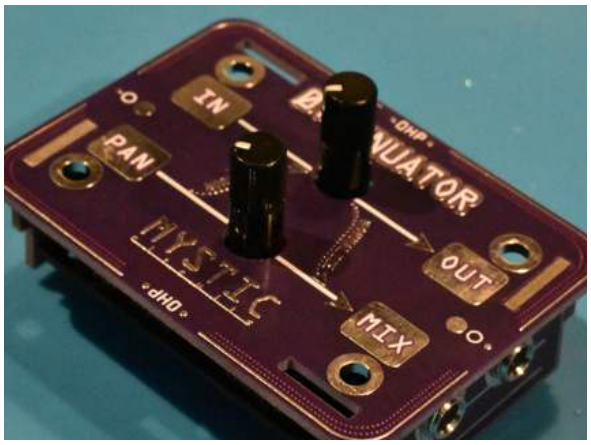
Pots: The Ottenuator pots are easiest to solder last because we need to make sure that the pots are soldered in at the right angle. If the pots are not flat again the circuit board there is a chance that they will brush up against the case lid and the pots will not turn easily.
First place the pots in their respective footprints. You may need to push together the side pins or flatten the front pins to make them all fit in the right footprint holes.



Next we will solder one pin of the three pins in front of each pot and one of the larger side legs on the opposite side of those pots. This is to keep the pot stationary as we double check the fit with the case. Do not solder any other pins until we have double checked everything!

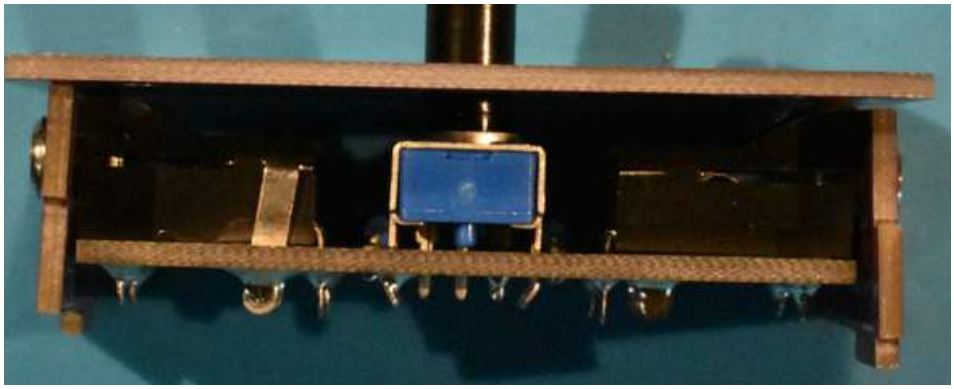
Now we are going to partially assemble the case to check the pot positions before we finish soldering. First put the short case sides on both sides - these are the ones that the jacks go through. You will need to orient them correctly so that the tabs on top will go through their corresponding holes in the lid - check the images below for reference. Next put on the top lid for the case making sure that the text from the case matches the orientation for the text on the circuit board.



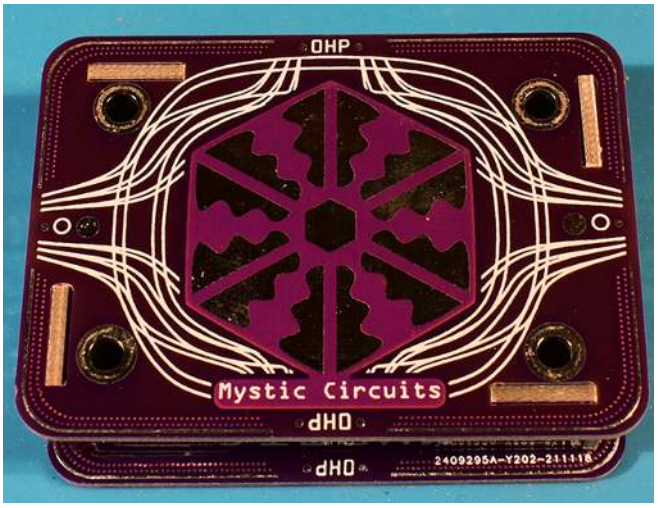


Once you have the assembled as described above give each knob a full rotation - if there is some friction between the pot and the PCB lid of the device we will need to readjust the pot. We can do this by heating up the already soldered pins and press the top of the pot into the board to help flatten it. Once you have verified that both pots are in the right position solder the rest of the pins.

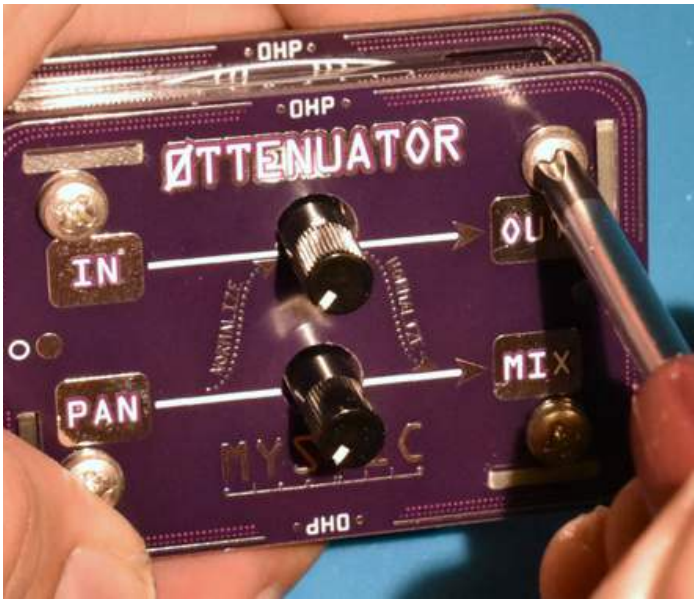
CASE ASSEMBLY: Now we will finish building the case - stick the long sides on the two empty sides making sure that the logo is facing the top of the case. All of the side pieces should fit together like a puzzle.



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!