



HiveR Pro Audio FX Creation Station

Assembly Guide

About This Assembly Guide:

This assembly guide covers the components of many of HiveR's projects. It is intended to cover all of the components needed in various designs. If you come across a component that isn't covered please use the Contactus link on hiverbuzz.com and report it so this guide can be updated.

Every build is unique. The Assembly Steps shown on this page are intended to give the builder an overall view of a great approach to building HiveR projects. It is most certainly not the only way, and might not even be the best way. It is up to you, as a builder, to decide. "What is your best way?"

No HiveR build uses every one of the components in the Assembly Steps list. If your project doesn't use a component then just skip it. If you accidentally skip a component then it can always be added at a later stage, so don't worry much about it. HiveR is here to help, not stress you out.

If you are an expert at populating and soldering PCBs then you may choose to ignore this builder's guide, or skim the Assembly Steps and get to work. If this is your first time populating a PCB, or you've only done a few, I'd encourage you to read through this guide. There are some helpful tips that could make your life a bit easier.

It is highly recommended that you take advantage of the interactive BOM that is available for every HiveR kit and bare board.

Please check your parts and make sure you have everything listed on the BOM before beginning.

The PCBs shown in this Assembly guide may not match your project, but the build techniques presented here will, or that difference will be noted in individual Instructions for that project.

As you build, please trim all leads very short. It is very important to do this if you'll be using the rubber feet that fit onto some of the PCBs. The height of the rubber feet will only protect your desktop if the leads are short. This is especially easy to miss on potentiometers.

Happy building! I look forward to hearing your Audio FX Success story!

David Willbanks

Assembly Steps:

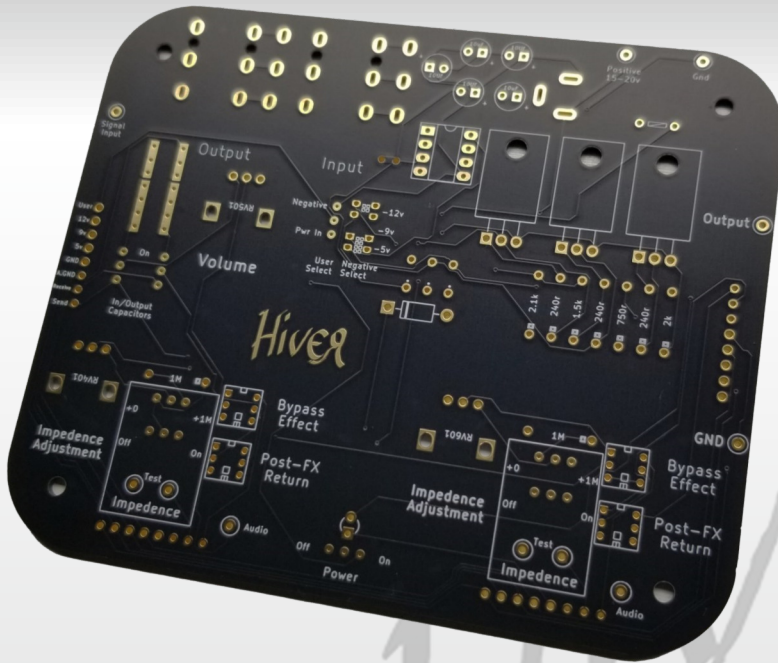
1. Resistors
2. Diodes
3. Ceramic Capacitors
4. Thermal Fuses
5. Flat ICs
6. Sockets
7. Test Hooks
8. LEDs
9. Header Connectors
10. Slide Switches
11. Push button Switches
12. Electrolytic Capacitors
13. DC Power Jack
14. Audio Jacks
15. Potentiometers
16. Rubber Feet





HiveR Pro Audio FX Creation Station

Assembly Guide



Builder's Notes:

You can access all build documents on hiver-buzz.com.

It is highly recommended to take advantage of the interactive BOM that is supplied when available.

Please check the BOM to make sure you have all parts before starting your project.

Add all resistors and diodes

If you slightly bend a leg of a resistor, diode, or ceramic capacitor it will help hold it in place when you flip the board over to solder the parts

Resistors can be oriented either direction but take care to orient **diodes** according to the markings on the PCB. Incorrectly oriented diodes can cause various problems, or render the circuit useless. This can cost you hours in troubleshooting time.

Ceramic capacitors can be oriented either direction (not all capacitors can), but the board looks much neater if you orient them all the same direction.

One way to approach soldering resistors, diodes, and ceramic capacitors is to tack in place the lead that is not bent.

Then you can push on the back of the part or pull on the leg with pliers while you reflow the tacked leg and get the resistor to sit flat against the PCB.

Once the part is flat against the PCB, and looks great, you can straighten the bent lead and solder it in place.

Trim all leads very short.

Keep in mind that the soldering iron is very hot and can burn you, so be careful.



HiveR Pro Audio FX Creation Station

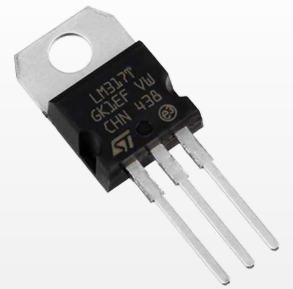
Assembly Guide



Add the power IC's and Thermal Fuse

Bend the legs of the ICs as shown with pliers (prior to inserting them) if you would like the IC's to lie flat on the PCB.

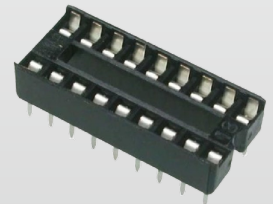
Solder the IC's and trim the leads short.



The IC socket can now be placed,

Bend two legs bent to hold it in place when you flip the board over for soldering.

Tack a leg on each side while positioning it and reflow as needed. Once you're happy with the positioning you can solder all other leads, reflow the tacked leads, and trim all leads short.



The test hooks can be inserted at this stage as well as the LED.

If you slightly bend a leg of each it will help hold them in place when you flop the board over to solder them.

One way to approach this is to tack in place the lead that is not bent. Then you can push on the back of the resistor or pull on the leg with pliers while you reflow the tacked leg and get the resistor to sit flat against the PCB.

Once it is flat on that side you can tack, adjust, and reflow the other leg.

Keep in mind that the soldering iron is very hot and can burn you, so be careful.





HiveR Pro Audio FX Creation Station

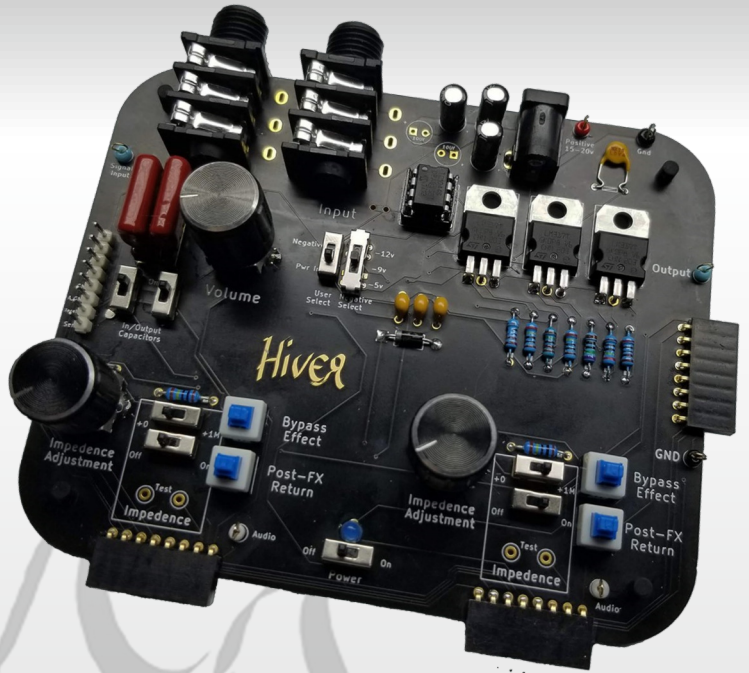
Assembly Guide

Add the header connectors.

If you are attaching the female right-angle connectors as shown, then getting them to line up flat with the PCB board is something you can easily achieve if you're diligent.

One helpful tip is to bend the leads before inserting them. They are not always bent at a right angle from the factory.

It is also helpful to tack two opposing leads and reflow them while holding the connector flat against the PCB. You can solder all remaining leads once you are happy with the positioning. Always reflow your tacked leads after all others are in place.



All slide switches can be pressed into place.

The three-lead switches take some pressure to put in place. Be careful to make sure the leads are lined up before applying pressure. The switches will stay in place while you solder them.

Add the blue and white DPDT push button switches.

There are markings on the PCB that show the orientation.

You can bend two opposing leads to hold them in place. Tack, reposition, and retack as needed to get the correct alignment.

Once it is aligned as you like you can solder the rest of the leads and reflow the tacked leads.





HiveR Pro Audio FX Creation Station

Assembly Guide

Add the electrolytic capacitors. Orientation is very important. Your circuit will not work correctly if these are not oriented the correct way.

The PCB has + markings on it to show which lead of the EC is the positive lead.

You can line up, position, solder, and trim just like we have the resistors.

Add the DC Power Jack. It stays in place nicely as you solder it.

The audio jacks press into place well. Keep in mind that the PCB footprint is designed to accept more than one style of jack. Make sure you're lining your part up with the correct holes. Tack, orient, solder, and reflow.

Add your choice of bypass capacitors. You could also socket this connection if you don't want to commit to input and output capacitor types. Or you can use the switches to bypass these components altogether.

Potentiometers are snapped into place and stay in place well while soldering, but you should tack a leg or two and re-position and re-tack as needed.

It is not required to solder the larger mounting tabs, but soldering will increase their structural integrity.

Insert the rubber feet. These fit snugly into the hole. Have patience. They will fit.

