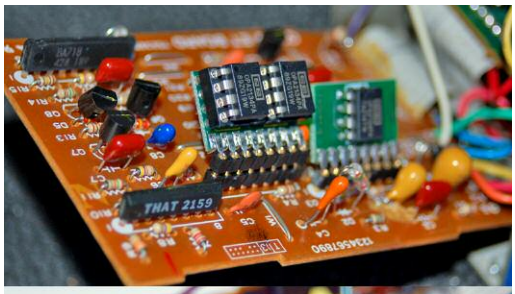
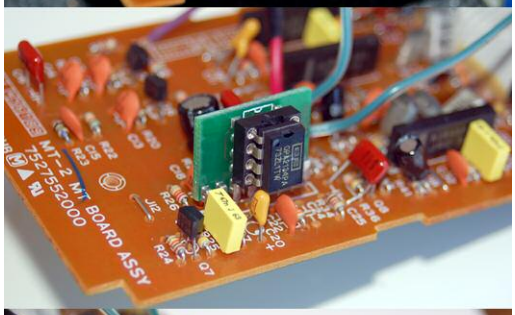
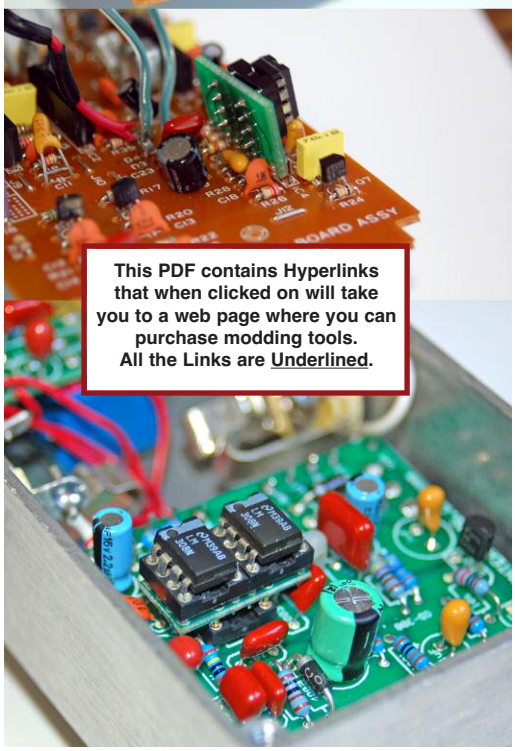
Chip Adapter Mods —

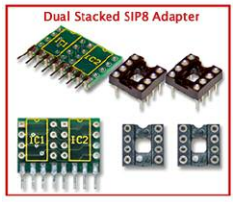
How often have you wished you could swap out those crappy stock inline chips for a Burr Brown OPA2134PA, JRC4558D, RC4558P or one of the other popular Dual Opamp Chips or maybe just experiment with stacking opamps? Well, now you can with these adapters and 8 Pin Chip Sockets. Simply remove the stock chips, pop in the adapters, sockets, and your favorite opamps and start experiencing the variety of tones swapping opamps will give you. These are a very cool mods and I have personally had a blast swapping out chips in a variety of pedals.

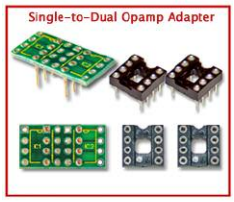






This PDF contains Hyperlinks that when clicked on will take you to a web page where you can purchase modding tools. All the Links are Underlined.

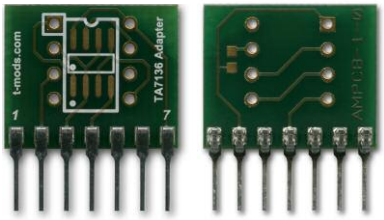




IMPORTANT: These adapters requires a bit of clearance because of how tall they are. Make sure the chip you are removing has enough room above it to allow the pedal to be closed once the adapter has been installed. The adapter also requires a bit of room on the sides. In some instances components will need to be moved out of the way to allow room for the adapter.

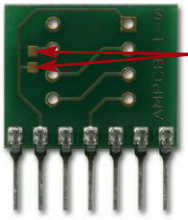
NOTE: The chip sockets are to be soldered to the chip adapters. In the pics to the left I used two socket extenders to raise the adapter up so it could be bent over to the left. The socket extenders are needed in some pedals to raise the adapter assembly up over the existing components on the PCB. I sell these socket extenders here:

http://www.monteallums.com/pedal_mods.html#CA



About the TA7136 Adapter — The TA7136 Opamp is used in a lot of the vintage circuits such as the earlier Japan DS-1s. It is a Single Opamp. My TA7136 Adapter will allow you to replace a TA7136 with your choice of any Dual Opamp such as a Burr Brown OPA2134PA, JRC4558D, RC4558P or one of the other popular Dual Opamp Chips. But here's the really cool thing about the TA7136 Adapter. You have the choice to activate just one or both sides (opamp) of the Dual Opamp you choose.

Remember, the TA7136 is a 'SINGLE' Opamp and the OPA2134PA, JRC4558D and RC4558P are 'DUAL' Opamps. You'll notice on the back side of the TA7136 Adapter there are two small pads (see pic). By connecting or bridging these two pads together you will activate both sides of the DUAL opamp (OPA2134PA, JRC4558D, RC4558P). If you leave them as is (not connected or bridged) only one side of the Dual Opamp will be used.



Connecting the Pads — I recommend applying a tiny bit of solder to each pad and then using small piece of resistor, diode or capacitor leg to connect the pads. The trick in doing this is applying a small amount of solder to each pad first. Then bridging a small piece of a component legs across them and applying a hot iron to complete the connection.

IMPORTANT - In the pictures here I have replaced some of the stock inline chips of a MT-2 and CS-3 with Adapters and Socketed Burr Brown OPA2134PA Chips. It's important to note that the original stock single inline chip's writing was facing forward in the middle pic and to the right in the bottom pic and to the right in the CS-3 in the top pic. Notice also the orientation of the writing on the Burr Brown chips. The writing on the stock chips I removed were facing forward in the middle pic and to the right in the bottom pic and to the right in the top pic of the CS-3 as do the Burr Browns I replaced them with. Any other chip you use will have it's writing just like the one you see above. The adapter assembly will always be installed like the ones above. And the writing on the socketed replacement opamp will always be oriented just like in the pics above. So remember, the stock chip's writing and the chip you replace it with will both face in the same direction and the orientation of the writing on the replacement chip will be exactly the same as the one you see pictured above. I have also replaced a LM308N in my OD-308 with two LM308Ns. You'll notice that some of the components had to be moved to allow the adapter to fit. You will need to make room for this adapter in some pedals by removing components and extending the legs of the components out away from the adapter so the adapter will fit securely in the socket.

Dual Stack Adapters — The Dual Stacked Opamps require quite a bit more current than a single opamp. I recommend using a power adapter instead of a battery. If you must use a battery make sure it is a new fresh battery running a full 9 volts. A weak battery will make the LED dim and pulsate when playing through the pedal. A weak battery will also cause noise and crackling in the signal. You can pull one of the opamps from the dual adapters. The adapter will run with only one opamp. It doesn't matter which one you pull. This will allow you to use the pedal with a weaker battery.

Modding Tips and Recommended Tools

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THIS PDF IS FREE (YOU MAY SHARE THIS WITH YOUR FRIENDS) - My instructions are all normally Password Protected. But my (Chip Adapter Mod Instructions), I have decided to distribute **FREE**! So please feel free to share this with your friends and on any and all forums. Just my way of giving a little back to the guitar community that has been so faithful and good to us over the years.

IMPORTANT, READ BEFORE YOU START: **DO NOT COMPLETELY DISASSEMBLE YOUR PEDAL**. When you disassemble the pedal it lifts the ground and renders the pedal useless. All you have to do is remove the screws from the bottom of the pedal and pull the PCB board down. This will give you full access to the components. **You must check the pedal after each component you change.** You do not have to fully reassemble the pedal, just plug in the power source (or install battery) and the input and output jacks while the underside of the pedal is still removed. Plug in a guitar and amp and make sure the pedal is functioning properly. **Do not call or e-mail me if you perform all the component changes without checking after each component change, I will not be able to help you.** If you check the pedal after each component change and there is a problem, you'll know exactly which component is causing the problem. If you perform component changes without checking the pedal after each component change, and you discover a problem, there is no way you or I can tell which component is causing the problem. **SO, PLEASE CHECK THE PEDAL AFTER EACH COMPONENT CHANGE** to make sure it is functioning properly!

OKAY, LET'S GET STARTED

Here are some tools I recommend. **Extra Fine Point Sharpie** - I use this for marking the solder pads on the underside of the PCB board that will be modded. **Needle Nose Pliers** - for getting to those tight places that are hard to reach and for removing the old components and also for removing opamps from their sockets. **Small Jewelers Screwdriver** - I use this for prying up the old components I am removing. **Soldering Iron** - pretty obvious I'd say, but also make sure you use a wet sponge and clean the tip of the iron often and after every component you solder. **Keep the tip clean from debris**. **Digital Multi-Meter** - great for checking resistor values and checking continuity on switches or components. If you plan on doing a lot of DIY then you will need one eventually. Radio Shack sells them for cheap. **Small Wire Cutters** - you'll need these to trim the extra off component legs and for trimming wire when working on switches. **Scissors or Wire Strippers** - Nice to have when trimming back the insulation around wire. **UniBit Drill Bit** - you'll need this if you have to install switches or pots with your mod. I supply everything else you'll need (Solder, Braid, Components, etc.) Oh almost forgot, **PATIENCE** - take you're time. Make sure you remove **all** the old solder and that the old components come out easily. **Never force a component out**. If it doesn't fall out then you have not removed all the old solder. PCBs are damaged when you try to pull components out without removing all the old solder. Pulling traces off the PCB will never occur if you have removed all the old solder. One last thought. Sometimes you'll find the manufacturer used a type of glue on some components to secure them. Remove this with needle nose pliers by pulling small pieces off the components until all is removed. **400+ reading glasses** will also come in handy when soldering and working in tight places.

LED Replacement

LEDs have a positive and negative side. If you look closely at the LED you will see what I like to call a Flag. When removing the old LED make a note of the Flag's orientation and install the replacement LED in the same direction as the old LED. If you install a LED and it doesn't work, simply turn the LED around and it will start working. All of the LEDs I sell are of the clear variety and it is impossible to tell what color it is. I suggest using a 3 Volt Watch Battery to test your LEDs. You can buy them on Amazon by clicking here. **DO NOT TEST THE LED WITH A NEW 9-VOLT BATTERY, IT WILL FRY THE LED RENDERING IT USELESS!** I test all LEDs before I ship to see if they are faulty, so I'll know if you blew it or not. So please don't e-mail me asking for a Free replacement if you fry it.

DISCLAIMER - My Mods are intended to be used by individuals that are 18 years of age or older unless accompanied by a supervising parent or guardian. Soldering Guns can cause serious injury if not used properly. Always take the proper precautions when soldering. Always unplug power from the pedal when performing these modifications