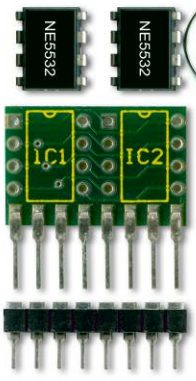
This Monte Allums Boss BD2 Monte Mod Plus is FREE to Distribute!

THIS PDF IS FREE (YOU MAY SHARE THIS WITH YOUR FRIENDS) - My instructions are all normally Password Protected. But with the (**BD-2 Monte Mod Plus**) 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. This BD-2 Mod was created to fill a particular need in my personal guitar rig. You'll find that it stacks extremely well with other ODs. Especially my **OD-308!**

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.



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.

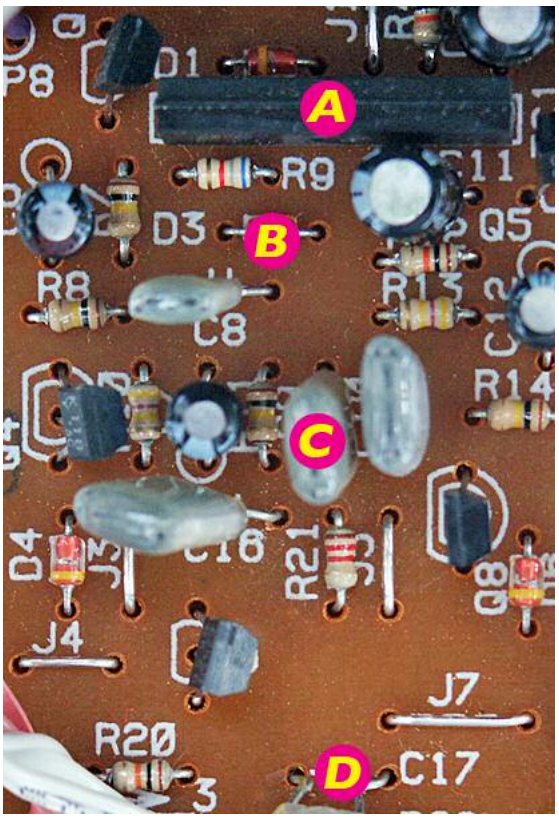
CHECK LIST

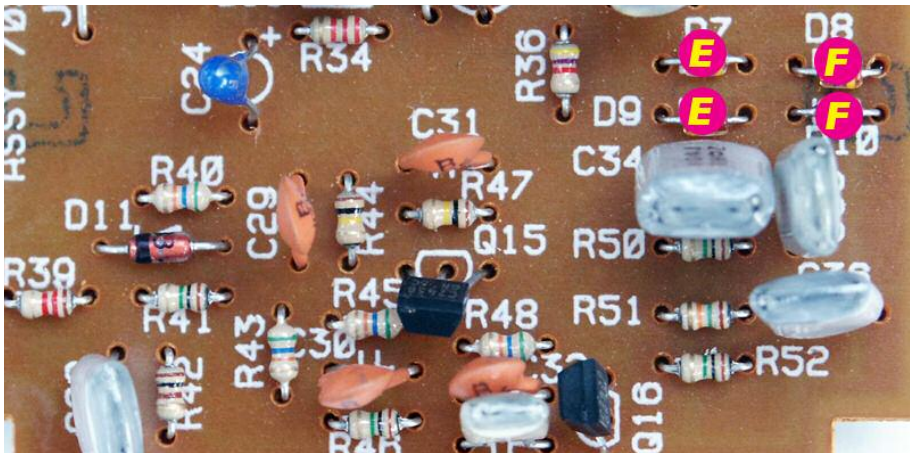
If you've checked and you find a component missing, go back and check the envelope the mod came in. The baggy sometimes opens up and components fall out. Make sure you check there first before shooting me an e-mail or calling.

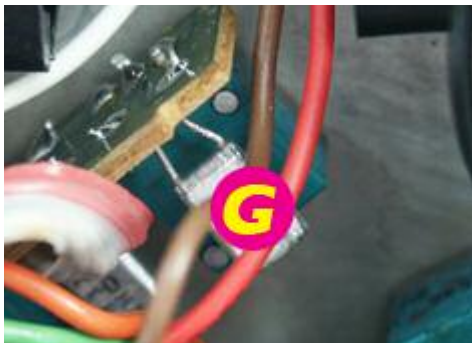
BEFORE YOU START READ ALL OF THE INSTRUCTIONS THOROUGHLY!

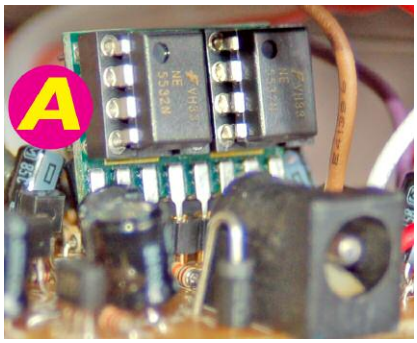
ALL YOUR QUESTIONS ARE ANSWERED HERE — SO, READ ALL THE INSTRUCTIONS BEFORE STARTING THE MOD!

NOTE - The Blues Driver PCB Board is labeled with a letter followed by one, two or three numbers. The Letter stands for either (**C**) Capacitor, (**R**) Resistor or (**D**) Diode. Use the pics below along with the chart below to locate and identify the item to Mod. All items to be Modded are identified by a red circle with a yellow letter. Locate the circle with the letter on the PCB Board and install the Mod in the chart that is associated with that letter. Remember to remove all the old solder before removing the old components or you will pull traces up on the PCB Board and that is not a good thing.









MOD LOCATION / ORIGINAL	MOD	MOD's AFFECT
(A) - IC1 - NJM4558LD	(A) - Opamp Adapter	(A) - Unbelievably Great Tone
(B) - D3 - 1SS133 Diode	(B) - 1N34A Germanium Diode	(B) - Gain Saturation
(C) - C9 - .056uF Capacitor	(C) - .047uF Film Cap (473)	(C) - Flatter Mids
(D) - C17 - .0068uF Capacitor	(D) - .1uF Film Cap (104)	(D) - Sweeter Highs
(E) - D7, D9 1SS133 Diodes	(E) - 1N4002 Rectifier Diodes	(E) - Smoother Gain
(F) - D8, D10 1SS133 Diodes	(F) - 1N34A Germanium Diodes	(F) - More Harmonic Gain
(G) - C100 - .018uF Capacitor	(G) - .22uF Metal Cap (224)	(G) - Better Bass

MOD EXPLANATIONS

(A) Remove the stock opamp and replace it with the Adapter Assembly. Install the Chip Adapter and the two NE5532 opamps exactly as shown in the pic above. Note the orientation of the adapter and NE5532 opamps. Use the socket extender (socket extender will be soldered to the PCB) to raise the adapter assembly above the components on the PCB. When closing the case you will gently bend the adapter assembly forward toward the AC input jack. It's a tight fit but the PCB will fit back into the casing. You may have to bend a few of the components on the PCB back out of the way of the adapter assembly allowing the adapter to lay flatter on the PCB. Be careful not to short the metal parts of the adapter with components on the PCB. **TIP:** When closing the case I use a long screwdriver to push the adapter assembly forward toward the AC jack to clear the PCB assembly that is directly above the adapter. **WARNING**: The orientation of the adapter and opamps is critical. Make sure they are installed exactly like you see in the pic, with the writing on the opamps oriented the same as the pic above. In the pic I used sockets to install the opamps into. I decided not to use them on my personal mod because the 5532s are the best opamp combination for this pedal I have found. You, of course, are free to use sockets so you can experiment. I do not include sockets with the mod I sell at my website. I recommend wrapping the adapter assembly with electrical tape to insulate it from shorting on another component.

(B) Take the stock diode out of D3 and replace with the supplied 1N34A Diode. The 1N34A Diode has a positive and negative side. The 1N34A that replaces D3 will have the stripe on the right when installed.

(C) Decreasing the value of C9 to .047uF will give the pedal slightly flatter upper mids. This capacitor has the number 473 written on it.

(D) Increasing the value of C17 to .1uF will give the pedal sweeter highs. This capacitor has the number 104 written on it.

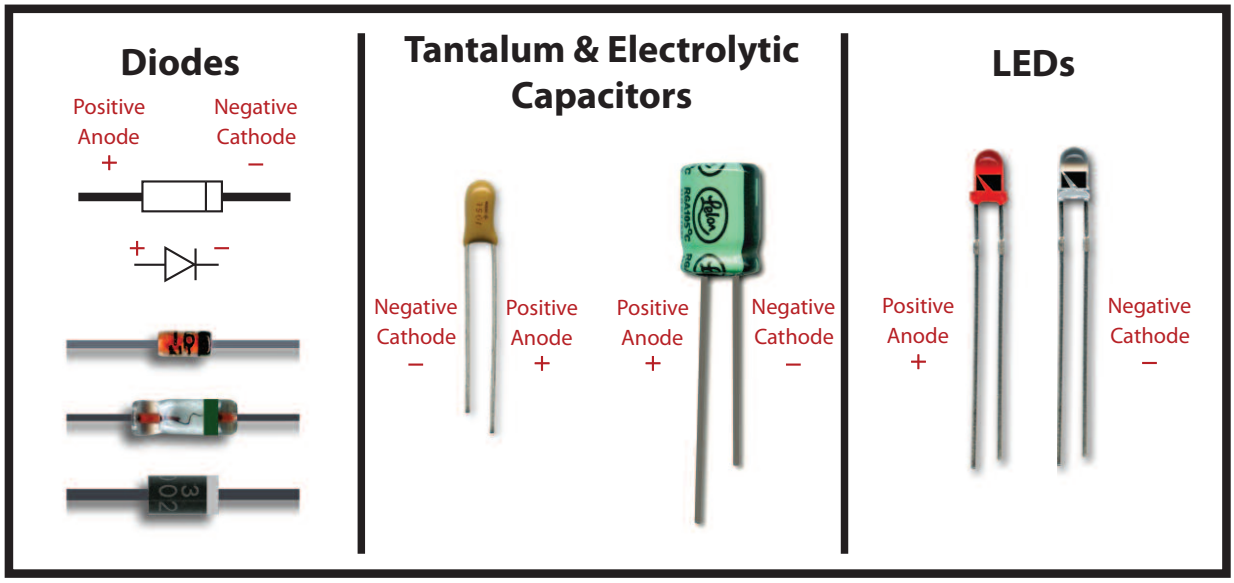
(E) You will remove the diodes in D7 & D9. You will replace them with two 1N4002 Rectifier Diodes. The two 1N4002 Diodes have a positive and negative side. The 1N4002 that replaces D7 will have the stripe on the right when installed. On D9 the stripe on the 1N4002 diode will face to the left. This helps take the fuzziness out of the BD-2 when the gain knob is maxxed.

(F) You will remove the diodes in D8 & D10. You will replace them with two 1N34A Germanium Diodes. The two 1N34A Germanium diodes have a positive and negative side. The 1N34A that replaces D8 will have the stripe on the right when installed. On D10 the stripe on the 1N34A diode will face to the left. This helps add more harmonics to the gain.

(G) This capacitor is located right under the tone control pot on a small pcb. There's no need to remove the tone pot. The stock capacitor can easily be removed with a little maneuvering. Needle nose pliers are handy to have with this mod. Replace the stock capacitor with a .22uF capacitor. This capacitor has the number 224 written on it. This will give the BD-2 more bass.

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

TROUBLE-SHOOTING - I know it's frustrating when you've invested time and money on something and it doesn't work as expected. I've had the same thing happen to me personally. The most important thing is to try and take your time and be thorough.

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 adapter. 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. Also, I use a Boss PSA power adapter and have no issues with the Stacked Opamps but other power adapters may introduce noise or other issues. If you have an issue using a power adapter try a fresh battery or another power adapter and see if the issue goes away.

It becomes especially difficult to diagnose if you've completed the mod and an issue arises. That's why it is so important to check the pedal after each component you change. If you have an issue right after changing a component then you'll know that the component you just changed is where the issue is. If the issue isn't found until after you've completed all the changes then the problem could literally be anywhere. At this point finding the issue becomes a process of elimination.

The first thing I would do is double and triple-check that you've installed the correct components in the right places. Also double and triple-check the wiring. Sometimes a wire can work loose or become frayed while working on the PCB. Here's a listing of where some of the wiring goes in a BD-2. Use this to help you find where a wire that's come loose needs to go:

TP1 - Top Connection of switch.

TP2 - Input Lug, connection on left closest to you.

TP3 - Input Lug, hot to the left side lug closest to top of pedal. Ground connects to the right lug.

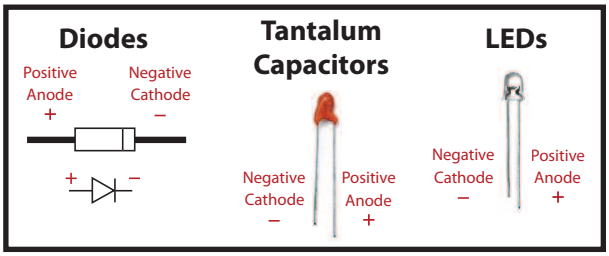
TP4 - Input lug, one on the right nearest casing.

TP5 - Output lug, connection to right nearest top of pedal.

TP6 - Connects to LED.

TP7 - Connects to LED.

TP8 - Bottom of switch, connection on right.



Check and make sure the components with a positive and negative side are installed correctly. Check the instructions if you're unsure about the correct orientation of these parts. Orientation is covered in the instructions. Also, if it's a "Plus Mod" with an adapter assembly, make sure the chip sockets (cradles that holds opamps) are soldered to the adapter pcb and that the orientation of the opamps are correct.

A solder connection can look okay but still be bad. Reheating the solder will sometimes fix a bad solder joint. Also make sure the solder joints are not bleeding over into adjacent pads and causing a short. Try reseating the opamp chip(s). On the adapters that hold two chips try taking one out. The adapter will work with just one opamp. Try swapping them out. One could be damaged or bad.

Final Thoughts - I hope you enjoy the BD-2 Monte Mod Plus Mod. It truly is an amazing mod. If you've performed a few of my mods before you'll notice that with this particular mod I didn't upgrade capacitors like I usually do. The reason is I felt the pedal actually sounded better without upgrading certain capacitors. It's my opinion that some mods can sound too Hi-Fi and this is one of those mods.

You are certainly welcome to upgrade caps if you like. But, please do not e-mail me asking for suggestions. I have designed the Monte Mod Plus to sound a certain way and have experimented with numerous combinations until I got just the tone I was looking for. But that's the beauty of DIY. You are in control. So, please feel free to experiment by all means.

Monte Allums
monteallums.com, LLC