

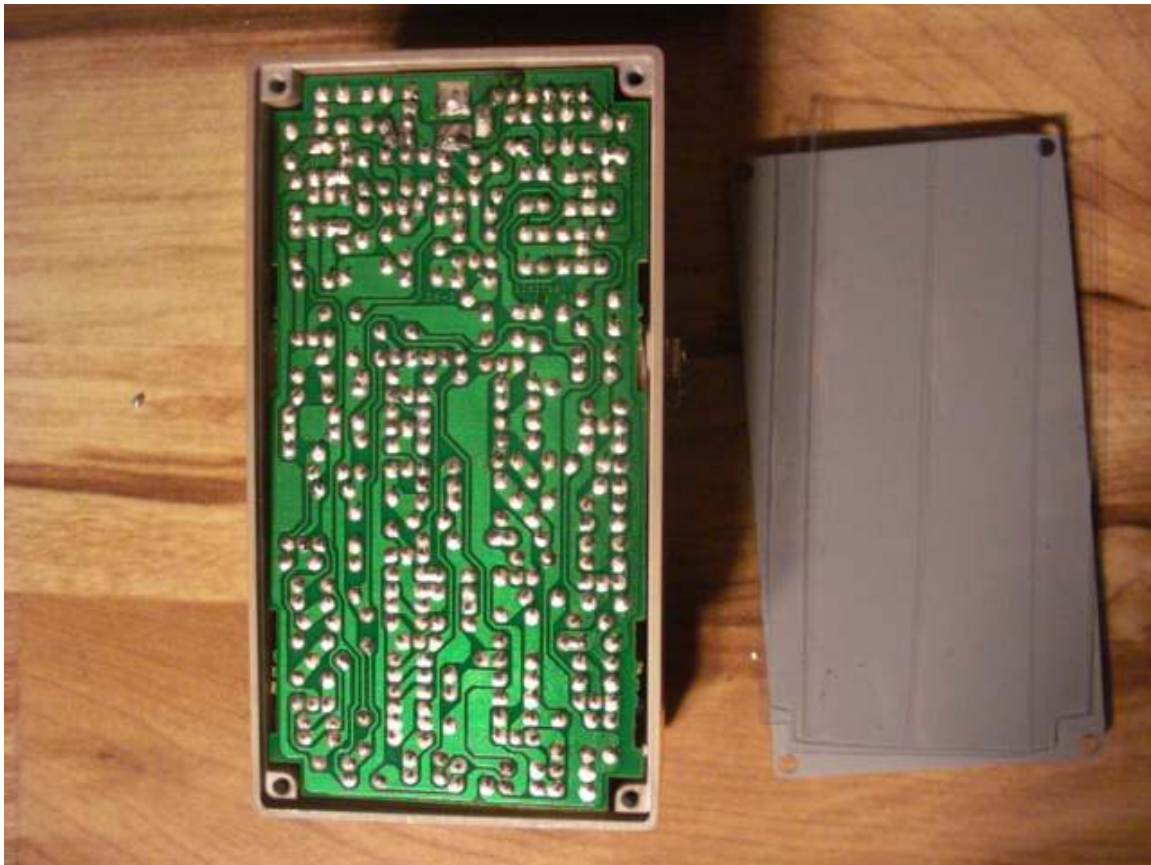
Boss DS-2 Diablo Mod

note - At the end of these instructions is a section on how to solder and desolder as well as a troubleshooting guide. Be sure to refer to these as often as needed.

note - A good rule of thumb is to check the pedal after every few changes you make. This may seem tedious and time consuming but if something goes wrong it will make troubleshooting much easier.

Step 1 - Opening up the pedal

1. Remove the four screws on the back of the pedal
2. Now that the 4 screws are removed. Lift off the base plate and plastic insulator to get to the circuit board.



3. Gently lift the circuit board up and back to get to the LED circuit board at the top of the pedal.



5. Remove the screw that holds the LED circuit board to the top of the pedal

Step 2 – Changing the components

This graph will show what parts to go what location on the board

Location	Mod Value
R57	3.3K Resistor
R62	1K Resistor
C12, C18, C39, C40, C43	0.047uf Capacitor
D12	1n34a Diode
D8	Remove
D11, D15	1n4002 Diode
D14	Clipping LED

1) R57, R62

For these two parts this is very simple. Just find the location on the board, desolder the stock part and put in the new one. Check the table above to see what parts go where. Resistors are not polarized so there is no wrong or backwards way to put them in. R57 will be in the center of the board toward the bottom. R62 will be midway up the board and on the right side. The colored stripes on the 3.3K resistor will be orange, orange, black, brown, brown. The stripes on the 1K resistor will be brown, black, black, brown, brown.

2) C12, C18, C39, C40, C43

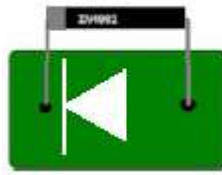
The stock capacitors will be silver. These are also non-polarized so there is no wrong way to put them in. These capacitors will have the numbers 473 printed on them.

3) D11, D15

Unlike all the parts you've installed up to this part, these two are polarized and can be put in wrong. Notice that these diodes have a silver band or stripe around one end of the part. When you remove the stock diodes, you will see an

arrow symbol printed on the board. See figure 1. The arrow points to the same side where the stripe of the diode should be soldered.

Figure 1



4) D14

In this spot you will be replacing the stock silicon diode with an LED (Light Emitting Diode). As with all diodes, LED's are polarized. With LED's the longer leg is the positive side and the shorter leg is the negative side. So when putting in the LED, the shorter(negative) leg will go on the side that the arrow points to. Do not test LED's with a 9 volt battery. It will ruin the LED.

5) D8

Just simply remove this diode. Don't put anything in it's place.

6) D12

Same rules apply with this Diode. Put the side with the stripe on the same side that the arrow points to.

6) On/Off Indicator LED

Remove the stock, red LED. Keep the white spacer as you will use it when installing the new LED. For this you will be installing the clear bright blue LED. Remember that LED's are polarized. You will want to solder the longer leg (positive) onto the same side as the RED/ORANGE wire.

Step 3 – Reassemble

That's It! Just put it all back together. Flip back to the disassembly step if you need to. Be sure to not forget the plastic insulator. ENJOY!!!.

Troubleshooting

There are several common problems that can occur. When you get no sound or there is something wrong with the sound the most common issues are:

- A missed solder joint
- A poorly soldered joint
- A crossover soldered joint
- The battery is bad
- The battery plug is loose
- One of the wires broke
- Polarized component put on backwards

Any of these problems are easily solvable. The case of a problem solder joint requires that you carefully re-examine the rear of the circuit board. A missed joint is easy to spot and the repair is obvious. A poorly soldered joint requires a little closer examination, but is just as simple to remedy once you have located the bad joint. A crossover joint means that you have inadvertently linked one solder joint with another. Important note: some joints are supposed to be linked, so use these photos as a guide in order to be certain. If that's the case, desolder the joint and resolder it correctly.

A power problem is easier still. Simply remove the battery and test it in anything you know is good. As for the battery terminal being loose, just squeeze together it using either your fingers or a pair of pliers.

If one of the wires breaks anywhere on the pedal it won't work until it is re-soldered. This is a simple matter of examining the pedal, gently pulling on the wires until the broken one is found, and then de-soldering the place where it was and re-soldering it again. Also check the wires to the input and output jacks.

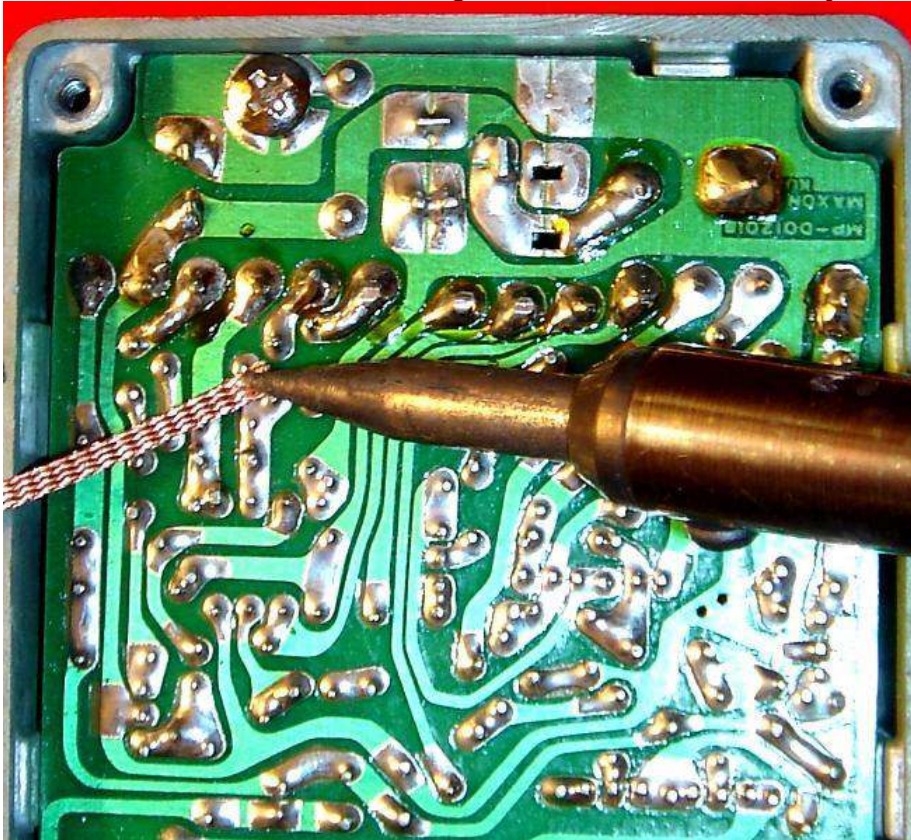
How to De-solder

Tools Required:

Soldering Iron – 30 to 40 watts is just right.

De-soldering Braid – This is many thin strands of copper that absorb the solder like a sponge.

To Begin: Place the braid against the solder joint and apply the soldering iron to the braid, sandwiching the braid between the joint and the iron.



Hold it there until you see the braid absorb the solder, and when it does pull back the iron. If there is still more solder on the joint repeat the process until you are reasonably sure you can remove the old part. Also, as the braid fill with solder you'll need to trim the used piece with scissors or wire cutters as needed so you'll have fresh piece for each joint.

How to Solder

First thing is that after you insert a new part through the holes in the board, be sure to bend the legs over on the back of the board to hold it in place. Check the picture to see what I mean. Now place the iron against the solder joint and the part being soldered on. It's important to allow several seconds before applying the solder so that the parts heat up. This will ensure that the solder will stick. Apply the solder where the iron and the board meet. When the solder melts it will fill the joint, and when it does pull back the iron & solder. Make sure the joint is completely covered like the joints around it. Periodically wipe the soldering iron tip on a damp cloth to remove excess flux.

