

# CRY BABY

## TRUE BYPASS MOD

### INSTRUCTIONS

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 StewMac<sup>®</sup>





# DON'T LET YOUR CRY BABY KILL YOUR TONE.

Nothing is worse

than the dreaded "tone suck". This is when your pedals muffle and change your tone when they are OFF! Cry Baby wahs are notorious for this—plug yours in and you'll instantly lose highs, dynamics, and clarity.

This mod replaces the "buffer" that causes this tone change with a true-bypass switch, leaving your guitar tone unaffected when the pedal is not engaged.

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If you run into issues with this modification, a StewMac tech advisor is a click or call away:  
**[stewmac.com/contactus](http://stewmac.com/contactus) or 1.800.848.2273**

Cry Baby is a registered trademark of Dunlop Manufacturing Inc.

## PARTS LIST

- [1] Yellow, white, and black pushback wire



- [1] 3PDT stomp switch



- [1] Cry Baby True Bypass Mod Instructions



## TOOLS YOU'LL NEED

- Fine-gauge Wire Stripper

#1606



- Wire Cutter

#1607



- Guitar Tech Screwdriver and Wrench Set

#3693



- Kester Pocket-Pak Solder

#0505

- Solder Sucker

#0503

- Solder Wick

#0504



- Solomon SL-30 Soldering Station

#0501

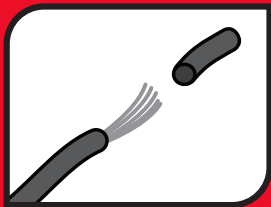


## CONNECTING THE NEW SWITCH

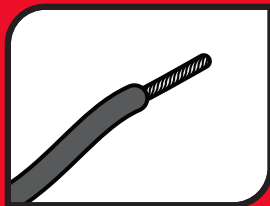
For your new switch to be connected properly, an understanding of tinning and soldering is necessary.

### TINNING

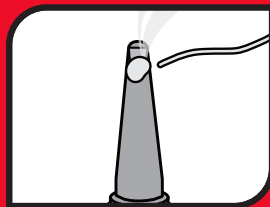
Tinning is an important part of the soldering process as it helps to make stronger solder joints. Tinning a wire is done by heating the wire with a soldering iron and then melting a layer of solder on it. If the wire you plan to tin is made up of many strands of wire, follow all of the steps below.



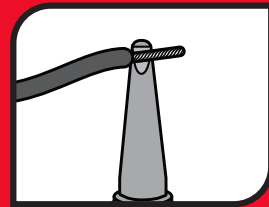
**1.** Strip roughly 1/4" of the wire sheathing from the end of the wire you intend to solder.



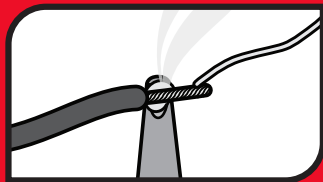
**2.** Twist the wire strands of the exposed wire firmly. ***Don't twist solid core wires.***



**3.** Dab a tiny amount of solder onto the end of your soldering iron.

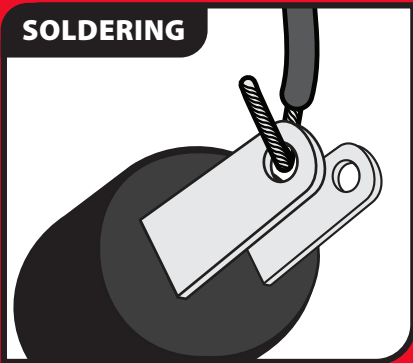


**4.** Touch the soldering iron with its dab of solder to the exposed wire closest to the sheathing. This will help to hold the iron in place as it heats the exposed wire. Wire will heat within a few seconds.

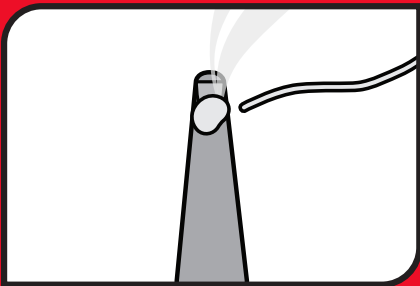


**5.** With the iron still touching the wire, take a length of solder and touch it on the exposed end of the wire and slide it along the wire slightly towards the sheathing and iron. The solder will find its way into the braids of the exposed wire.

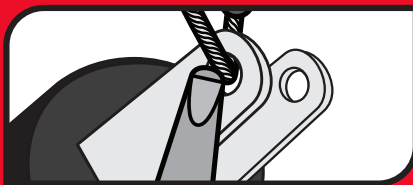
## SOLDERING



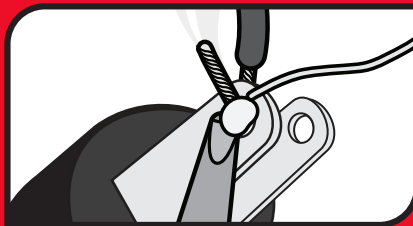
**1.** Insert tinned wire through lug hole before soldering and bend to secure.



**2.** Melt a small amount of solder onto the tip of the iron ("tinning" the iron).



**3.** Hold the tip against the connection until the connection reaches soldering temperature. This should take just a few seconds.



**4.** Feed solder to the connection, not to the iron. Stop feeding solder once the lug hole is filled. Keep the iron on the connection for a second longer; this pause gives time for all of the flux to cook out of the joint. After the joint has cooled, trim away the excess wires.

## MORE HELPFUL SOLDERING TIPS AND TRICKS

- *Keep your soldering tip clean by wiping it often on a damp sponge.*
- *Also keep it tinned by occasionally melting a little solder onto it.*
- *Don't blow on the hot solder or touch anything until the joint has cooled completely. A good solder joint is shiny – a sign that it was left to cool undisturbed.*
- *Plan so each joint is only soldered once. Resoldered joints are messy and more likely to fail.*

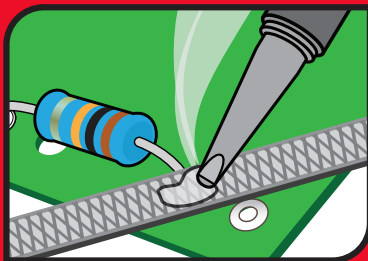
## DESOLDERING

Much like soldering, you run the risk of damaging the circuit board while desoldering. If too much heat is applied to a circuit board the solder pad can pull away from the board, breaking its electrical connection. A solder sucker and solder wick are your best friends when desoldering. Here are a few tips on how to use them:



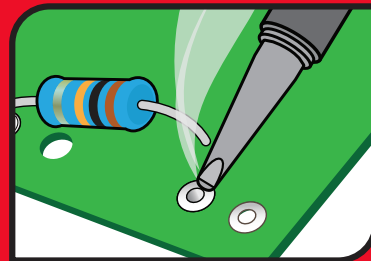
### 1. USE A SOLDER SUCKER

Depress the plunger on the solder sucker to prepare it. Tin your soldering iron, apply it to the solder joint, and hold the solder sucker a fraction of an inch away. Within a few seconds, the joint will liquefy. As soon as it does, push the button on the side of the solder sucker and remove the soldering iron from the joint. Inspect the solder joint and repeat the process until all of the solder is removed.



### 2. USING SOLDER WICK

Solder wick is a flat, braided wire that can be used to remove solder from a joint. Simply place the wick on the solder joint and press your soldering iron against the wick, heating the joint through the wick. The solder will liquefy and absorb into the wick. Keep inching the wick down as it absorbs solder so it does not become saturated.



### 3. LIFT THE LEAD

Once the solder is removed from the joint, use a pair of pliers to lift the lead from the circuit board contact. If the lead doesn't want to come up, heat the solder joint up to liquefy the residual solder which will free the lead. Once the lead is lifted, use the solder sucker or solder wick to remove any leftover solder.

## DISASSEMBLE THE PEDAL

Remove the four screws that secure the back of the pedal housing.

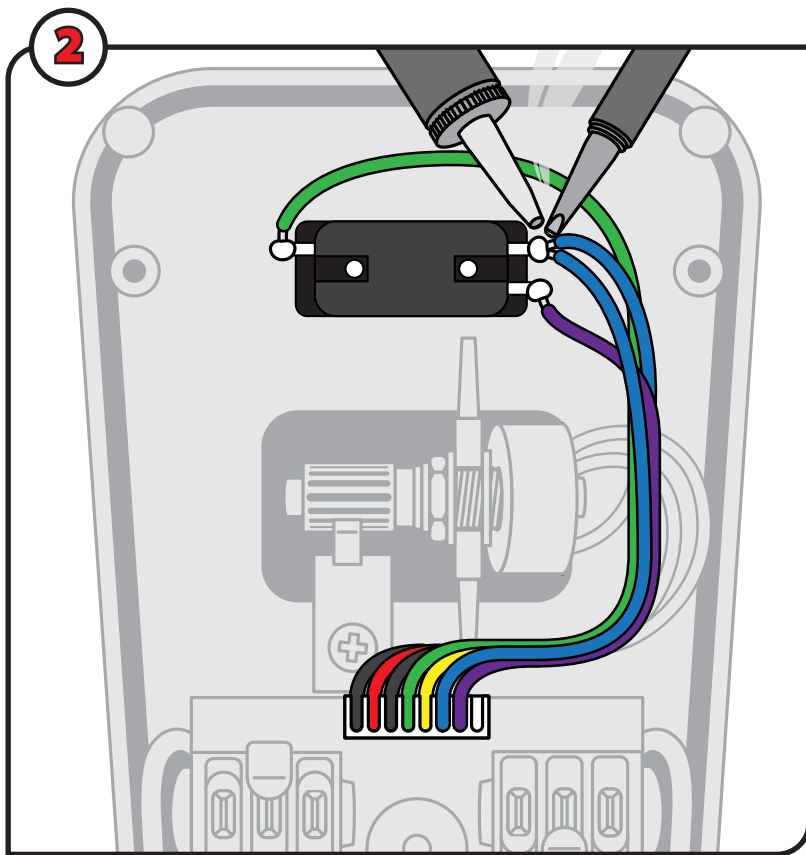
Also unscrew the mounting nuts for the instrument jacks on the side panels. Lift the back panel away from the enclosure.



## REMOVE ORIGINAL SWITCH

There are four leads going to the foot switch – one green wire, two blue wires, and a purple wire.

Desolder these leads from their lugs and remove the switch from the enclosure.



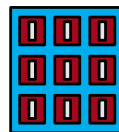
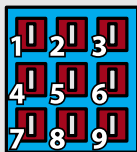


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## INSTALL NEW SWITCH

Remove one nut and one washer from the 3PDT switch included with the kit and set the second nut at the bottom of the shaft.

Install this 3PDT switch in the enclosure with switch lugs arranged vertically, securing the switch with the washer and the nut on the outside of the enclosure.



**Correct  
switch  
orientation**

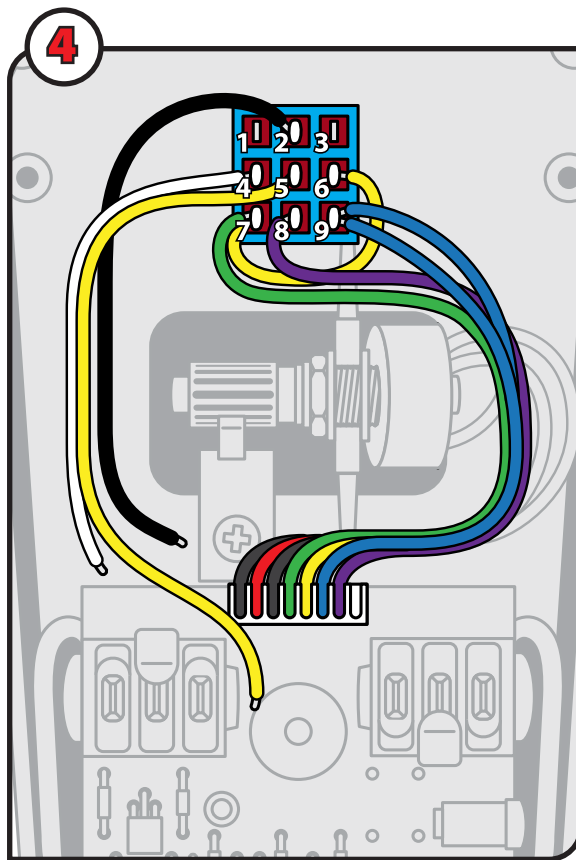


**Incorrect  
switch  
orientation**

The switch lugs will be referred to by number, as shown in the diagram.

## INSTALL JUMPERS ON THE NEW SWITCH

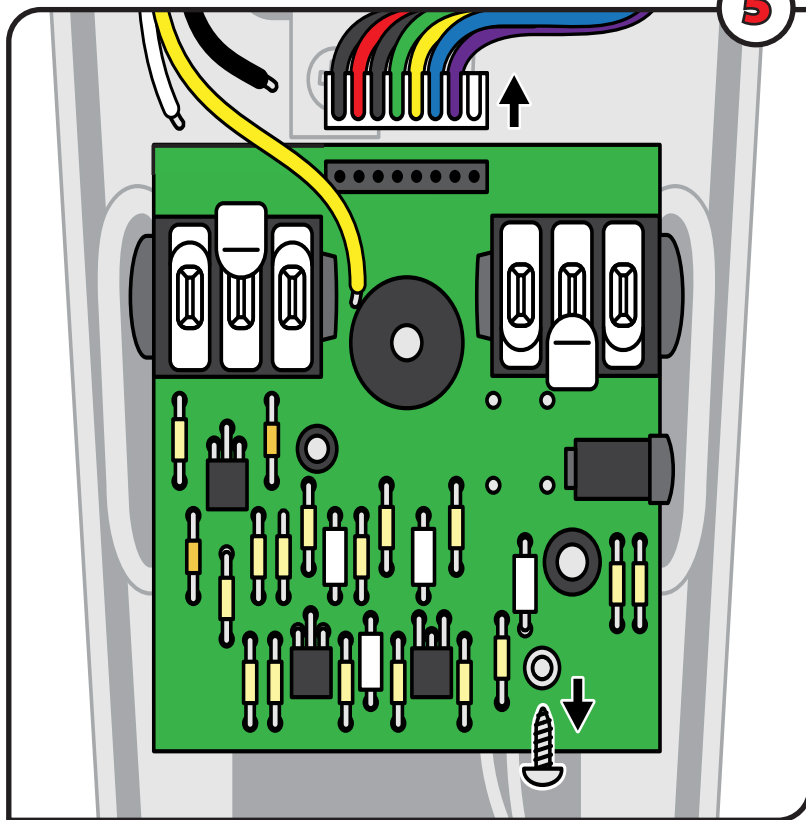
- Blue Wires** – Solder the two blue leads from the previous switch to lug 9 on the new switch.
  - Purple Wire** – Solder the purple lead from the previous switch to lug 8 on the new switch.
  - Yellow and Green Wires** – Cut a 2" piece from the included yellow wire and solder one end to lug 6 on the new switch.
- Take the other end of the yellow wire and the green lead from the previous switch and solder both to lug 7.
- White Wire** – Solder one end of the included white wire to lug 4.
  - Yellow Wire** – Solder one end of the included yellow wire to lug 5.
  - Black Wire** – Solder one end of the included black wire to lug 2.



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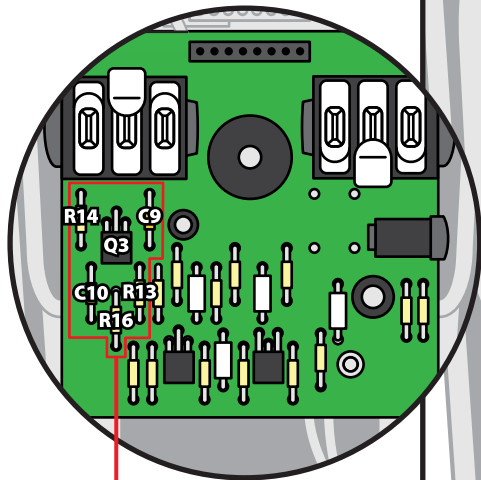
## REMOVING THE BUFFER

Disconnect the white ribbon clip at the top of the circuit board and remove the screw in the bottom right of the board. The board should come out of the enclosure easily.

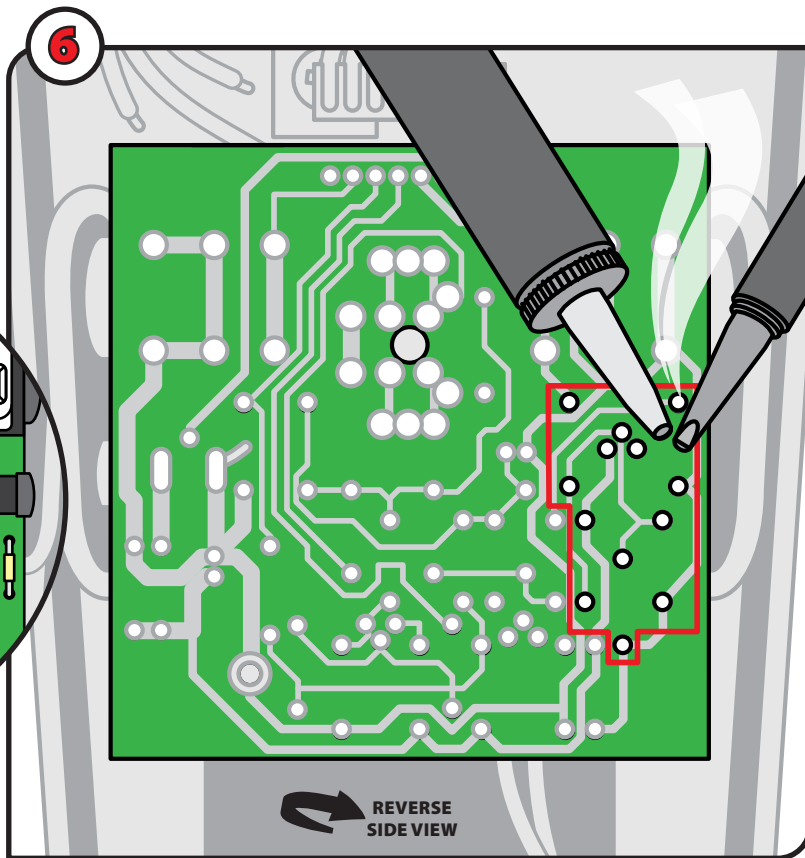


## REMOVING THE BUFFER

Flip the board over to reveal the solder joints and PCB traces. Use a solder sucker or solder wick to desolder and remove the highlighted components.



**NOTE:** You'll be removing components R14, R13, R16, Q3, C9 and C10.

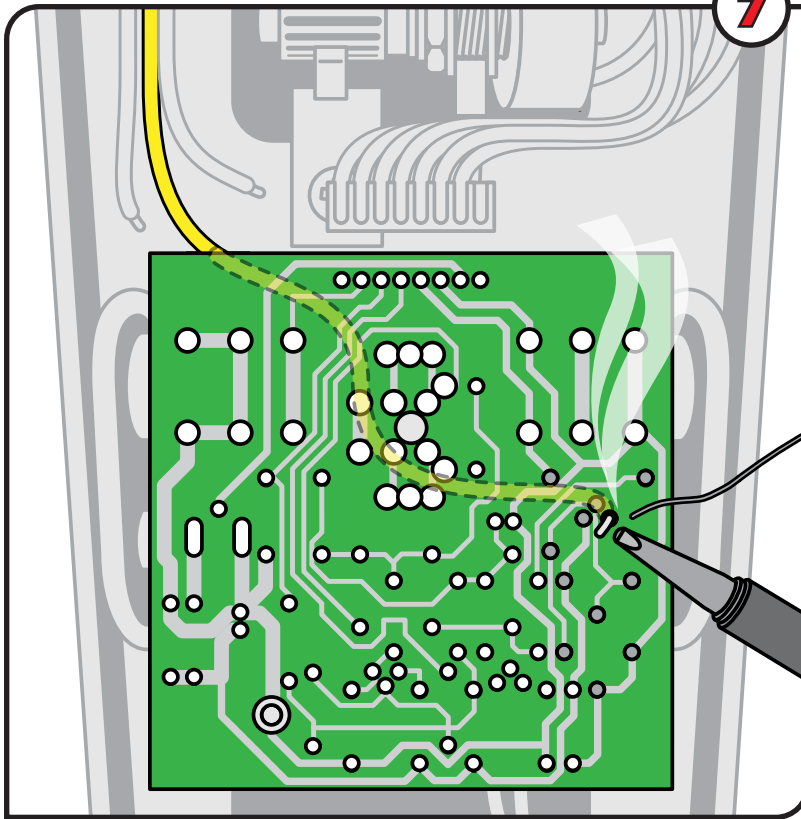


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## INSTALL THE YELLOW WIRE

With all of the buffer components removed, find the yellow wire soldered to lug 5 of the switch.

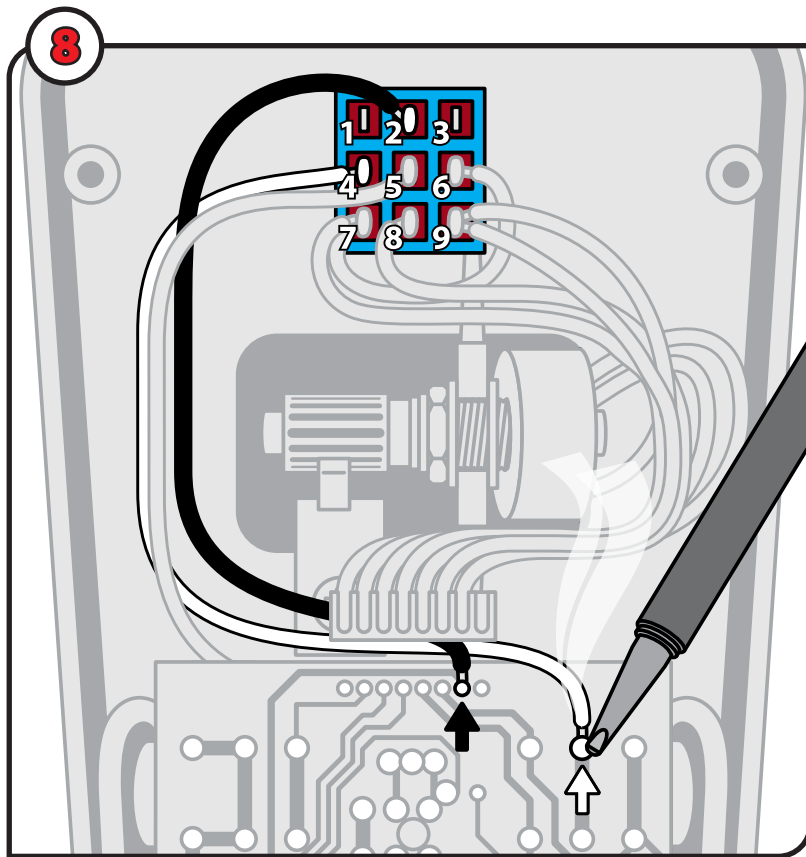
Slide the wire through the PCB pad shown in the diagram and solder it to back of the board where you just desoldered the other component leads.



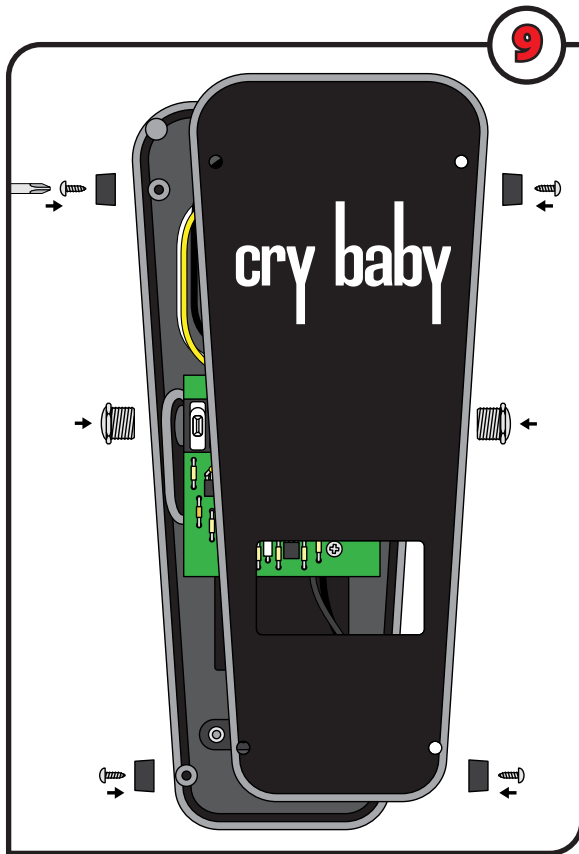
## INSTALL THE BLACK AND WHITE WIRES

Find the black wire soldered to lug 2 of the switch and solder it to the solder joint indicated by the black arrow.

Find the white wire soldered to lug 4 of the switch and solder it to the solder joint indicated by the white arrow.



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## FINAL ASSEMBLY

After all of your solder joints cool, place the PCB back in the enclosure and fasten it down with the screw before reattaching the white ribbon clip at the top of the pedal.

Screw the mounting nuts for the instrument cables back in and reattach the back panel with the four mounting screws.

## TESTING

The best way to test your work is to plug a guitar in to the Cry Baby, and then connect the pedal to an amp, but don't give it a power source yet. Without a power source the pedal should pass clean signal when the switch is disengaged and it should not pass any signal when the switch is engaged. If this is the case, go ahead and plug a power source in to your Cry Baby and make sure it passes modulated signal when the switch is engaged. If you experience intermittent signal or other irregularities, pull the back panel off the pedal again and inspect your solder joints.

## TECHNICAL SUPPORT:

If you have any questions before, during, or after attempting these modifications, please don't hesitate to reach out to our Tech Support Team. They are available by email at [service@stewmac.com](mailto:service@stewmac.com), and by phone M-F 9:00AM-5:00PM ET at 1-800-848-2273.

**MAKE  
MOD  
FIX** IT  
IT  
IT

**DISCLAIMER:** Performing the modifications outlined in these instructions will void any warranty on your pedal. StewMac is not responsible for any damage caused by attempting these modifications.



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800-848-2273 [stewmac.com](http://stewmac.com)

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