

# Build Your Own Clone Silver Pony Kit Instructions Rev2.1



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BYOC, Inc. guarantees that your kit will be complete and that all parts and components will arrive as described, functioning and free of defect. Soldering, clipping, cutting, stripping, or using any of the components in any way voids this guarantee. BYOC, INC guarantees that the instructions for your kit will be free of any major errors that would cause you to permanently damage any components in your kit, but does not guarantee that the instructions will be free of typos or minor errors. BYOC, INC does not warranty the completed pedal as a whole functioning unit, nor do we warranty any of the individual parts once they have been used. If you have a component that is used, but feel it was defective prior to you using it, we reserve the right to determine whether or not the component was faulty upon arrival. Please direct all warranty issues to:

[sales@buildyourownclone.com](mailto:sales@buildyourownclone.com) This would include any missing parts issues.

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That being said, we will do our best to help you as much as we can. Our philosophy at BYOC is that we will help you only as much as you are willing to help yourself. We have a wonderful and friendly DIY discussion forum with an entire section devoted to the technical support and modifications of BYOC kits.

[www.byoelectronics.com/board](http://www.byoelectronics.com/board)

When posting a tech support thread on the BYOC forum, please post it in the correct lounge, and please title your thread appropriately. If everyone titles their threads "HELP!" then it makes it impossible for the people who are helping you to keep track of your progress. A very brief description of your specific problem will do. It will also make it easier to see if someone else is having or has had the same problem as you. The question you are about to ask may already be answered. Here is a list of things that you should include in the body of your tech support thread:

1. A detailed explanation of what the problem is. (more than, "It doesn't work, help")
2. Pic of the topside of your PCB.
3. Pic of the underside of your PCB.
4. Pic that clearly shows your footswitch/jack wiring and the wires going to the PCB

5. A pic that clearly shows your wiring going from the PCB to the pots and any other switches (only if your kit has non-PC mounted pots and switches)
6. Is bypass working?
7. Does the LED come on?
8. If you answered yes to 6 and 7, what does the pedal do when it is in the "on" position?
9. Battery or adapter (if battery, is it good? If adapter, what type?)

Also, please only post photos that are in focus.

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## Parts Checklist for Silver Pony Kit

### Resistors:

1 - 560R	(Green/Blue/Black/Black/Brown)
2 - 1k	(Brown/Black/Black/Brown/Brown)
2 - 1k5	(Brown/Green/Black/Brown/Brown)
1 - 1k8	(Brown/Gray/Black/Brown/Brown)
1 - 2k	(Red/Black/Black/Brown/Brown)
2 - 4k7	(Yellow/Purple/Black/Brown/Brown)
1 - 5k1	(Green/Brown/Black/Brown/Brown)
2 - 10k	(Brown/Black/Black/Red/Brown)
1 - 12k	(Brown/Red/Black/Red/Brown)
2 - 15k	(Brown/Green/Black/Red/Brown)
1 - 22k	(Red/Red/Black/Red/Brown)
3 - 27k	(Red/Purple/Black/Red/Brown)
1 - 47k	(Yellow/Purple/Black/Red/Brown)
2 - 100k	(Brown/Black/Black/Orange/Brown)
1 - 392k	(Orange/White/Red/Orange/Brown)
1 - 422k	(Yellow/Red/Red/Orange/Brown)
1 - 1M	(Brown/Black/Black/Yellow/Brown)

Visit [www.byocelectronics.com/resistorcodes.pdf](http://www.byocelectronics.com/resistorcodes.pdf) for more information on how to differentiate resistors.

### Capacitors:

1 - 390pf Ceramic Disc (may say "391" on the body)
1 - 820pf Ceramic Disc (may say "821" on the body)
1 - 2n2/.0022u film cap (may say "222" on the body)
1 - 2n7/.0027u film cap (may say "272" on the body)
1 - 3n9/.0039u film cap (may say "392" on the body)
2 - 68n/.068u film cap (may say "683" on the body)
1 - 82n/.082u film cap (may say "823" on the body)
2 - 100n/.1u film cap (may say "104" on the body)
1 - 390n/.39 film cap (may say "394" on the body)
7 - 1uf Aluminum Electrolytic
1 - 4u7 Aluminum Electrolytic
1 - 47uf Aluminum Electrolytic
1 - 100uf Aluminum Electrolytic

Visit [www.byoelectronics.com/capcodes.pdf](http://www.byoelectronics.com/capcodes.pdf) for more info on how to differentiate capacitors.

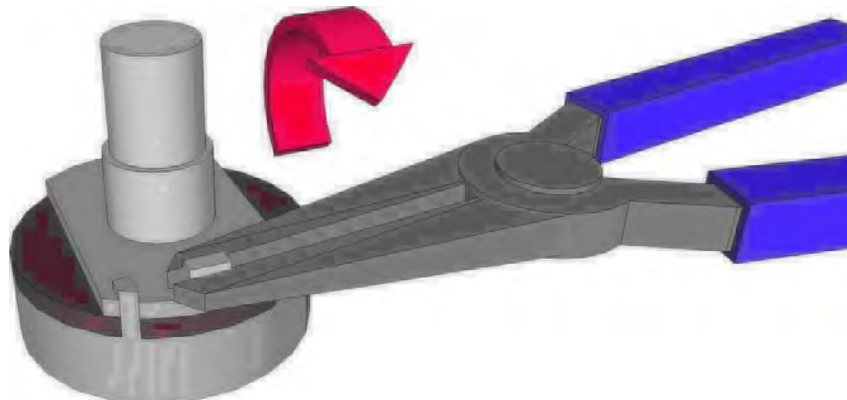
**Diodes:**

- 3 - 1N4001 diodes (black body with silver stripe)
- 2 - Germanium Diodes (1N34A, 1N60, D9D, Etc.)

**IC's:**

- 3 - DIP 8 sockets
- 2 - TL072
- 1 - 7660SCPA or similar charge pump (LT1054, MAX1044, etc.)

**Potentiometers: SNAP OFF THE SMALL TABS ON THE TOP OF THE POTS OFF WITH A PAIR OF NEEDLE NOSE PLIERS**



- 2 – B10k (TONE, VOLUME)
- 1 – B100k Dual Gang (DRIVE)

**Hardware:**

- 1 - predrilled enclosure w/ 4 screws (optional)
- 1 – Silver Pony Overdrive circuit board
- 1 - 3pdt footswitch
- 3 - knobs (optional)
- 1 - AC adaptor jack
- 1 - ¼” stereo jack
- 1 - ¼” mono jack
- 1 - battery snap
- 1 - red LED
- 4 – rubber bumpers
- 2 – lock washers (for in and out jacks)
- hook-up wire

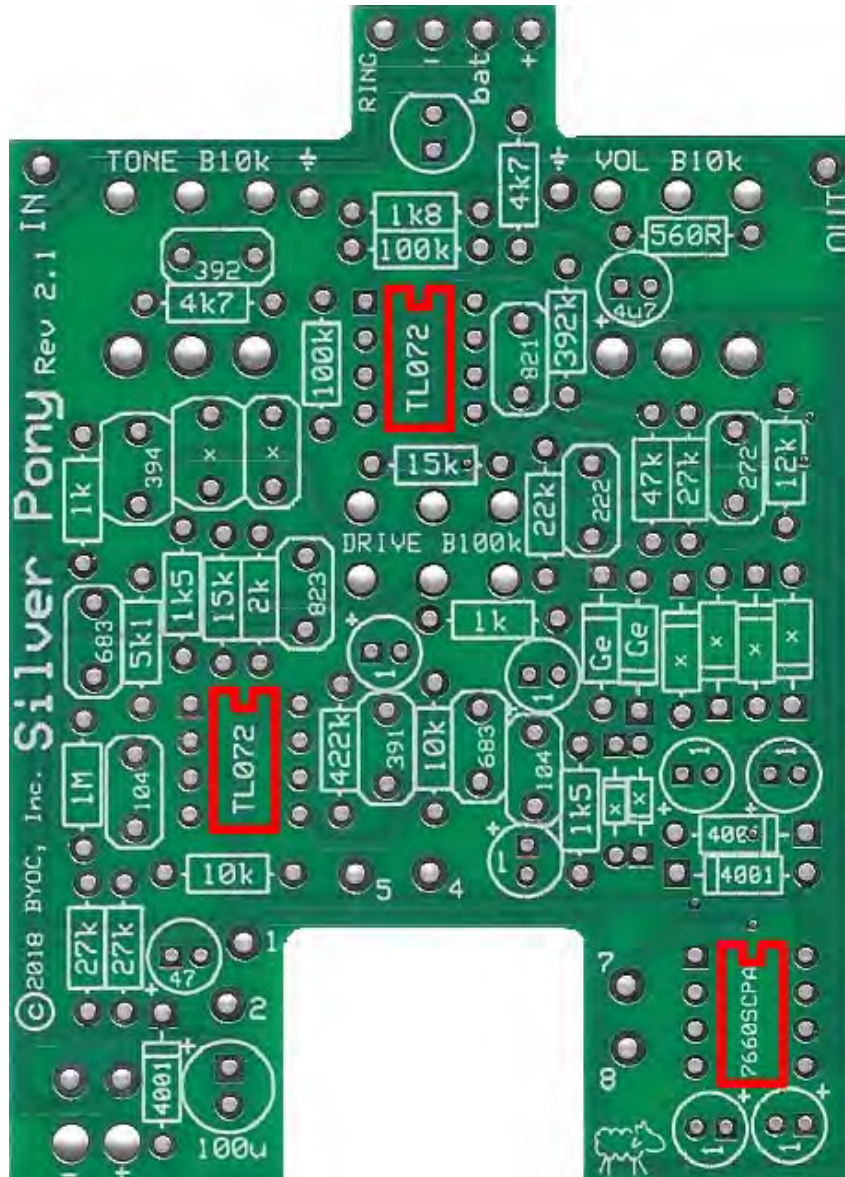








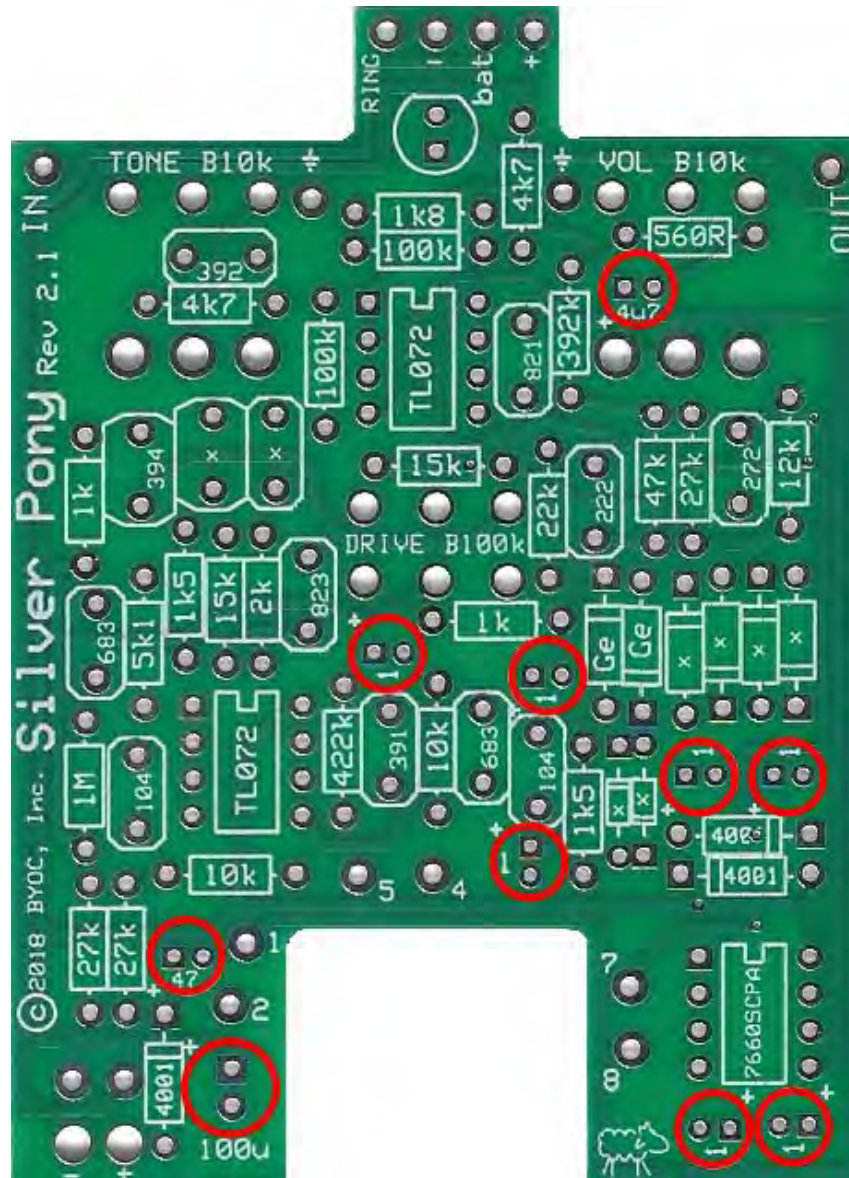
**Step 3:** Add three 8 pin IC sockets. **ONLY SOLDER THE SOCKET!** **NOT THE ACTUAL IC!** This is a socket. The sockets get soldered to the PCB. The ICs get inserted into the sockets. The actual IC chip itself, never gets soldered. You will insert the IC into the socket after the entire pedal has been built.





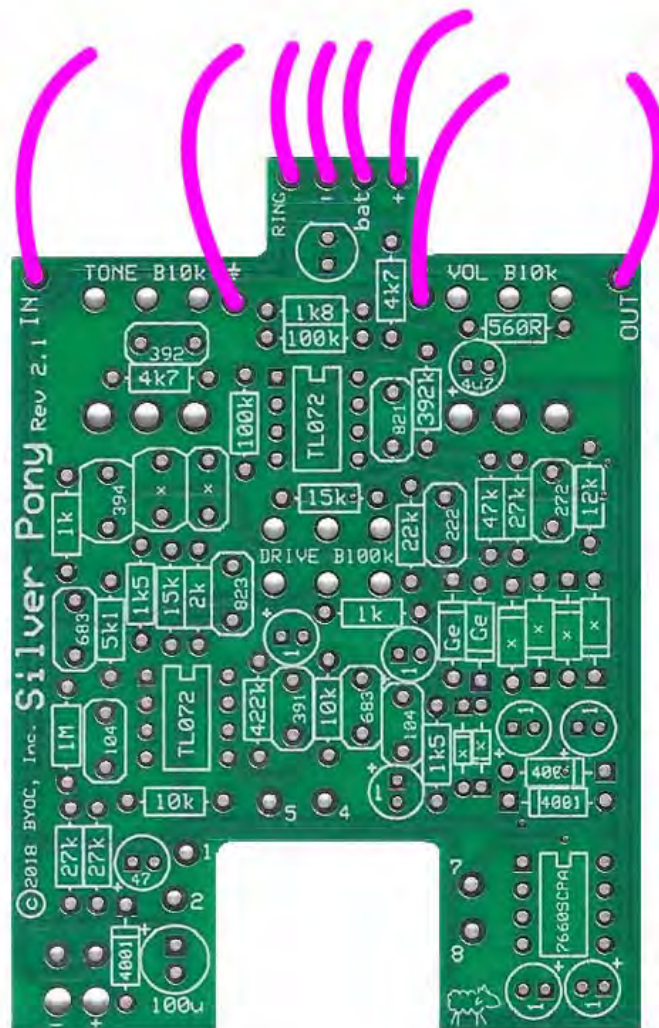


**Step 6:** Add the aluminum electrolytic capacitors. These ARE polarized, meaning there is a positive and negative end. The positive side will have a longer lead and goes in the square solder pad. The negative side will have a shorter lead and a stripe running along the body of the cap, and goes in the round solder pad.





**Step 9:** Add wires to the IN, OUT, RING, -, +, (+), and the two Ground eyelets. Start by cutting four 2.5" pieces of wire and 4 pieces of 1.5" wire. Strip 1/4" off each end and tin the ends. Tinning means to apply some solder to the stripped ends of the wires. This keeps the strands from fraying and primes the wire for soldering. Solder one end a 2.5" piece of wire to each of the IN, OUT, and Ground eyelets on the PCB. Load the wires in from the top and solder on the bottom of the PCB. Do the same with the 1.5" pieces of wire for the RING, -, +, and (+) eyelets.





## Main PCB Assembly



**Step 1:** Mount the AC adapter jack to the enclosure. Your kit may come with either an external thread or internal thread. Don't get confused by this. They still function exactly the same. You just thread the external nut on the outside and the internal nut on the inside. The picture below is of an internal nut jack.

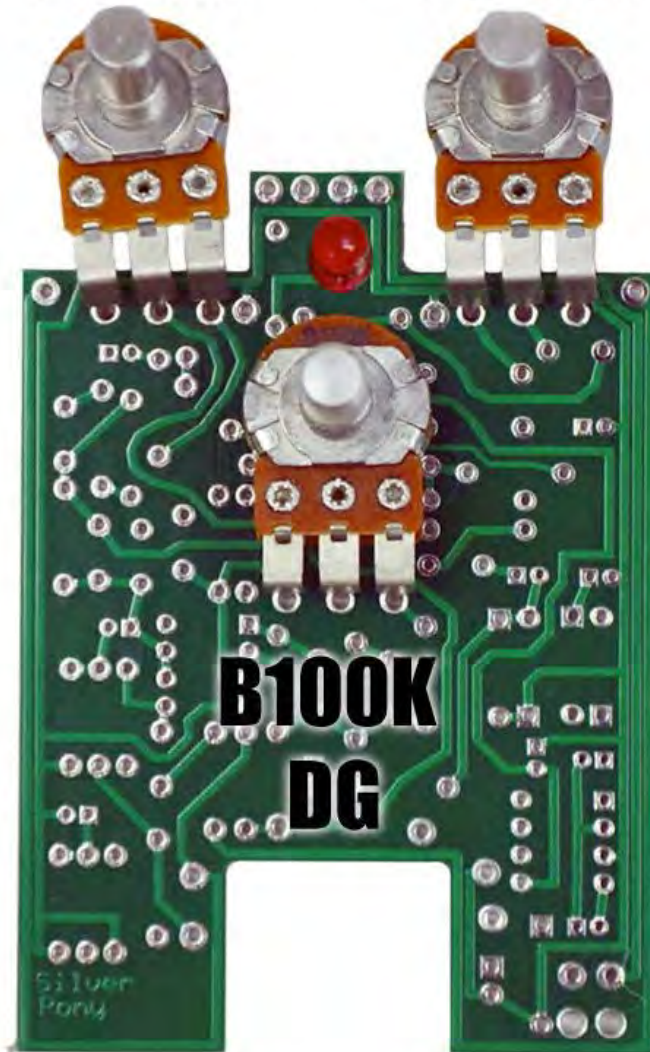


**Step 2:** Flip the PCB over so that the bottom or solder side is up. Insert the three potentiometers and the LED into the bottom side of the PCB. **DO NOT SOLDER ANYTHING YET!!!**

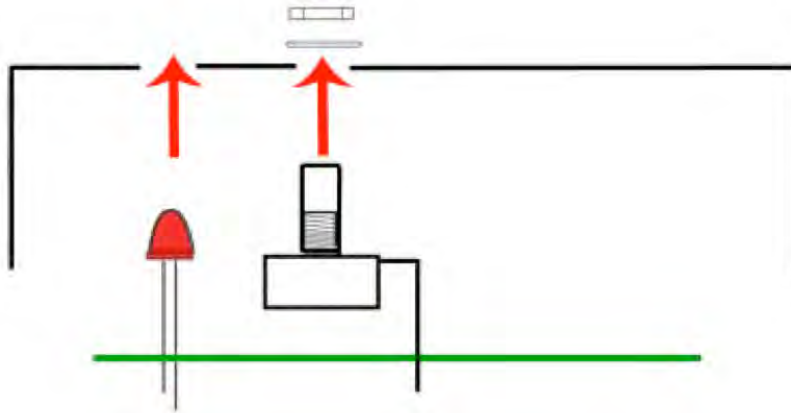
The LED will have one lead that is longer than the other. **THIS WILL GO INTO THE SQUARE SOLDER HOLE.**

**B10K**

**B10K**



**B100K  
DG**



**Step 3:** Hold the PCB in one hand so that the component side of the PCB is in the palm of your hand and the bottom side with the pots and LED is facing up. Now use your other hand to guide the predrilled enclosure onto the PCB assembly so that the pots and LED all go into their respective holes. Once the PCB assembly is in place, secure it by screwing on the washers and nuts for the pots. Only tighten them with your fingers. **You do not want them very tight yet.** Make sure you've removed the nuts and washers from the pots and that you've also snapped the tabs off the pots as well before installing.

**Step 4:** Turn the entire pedal over so that the component side of the PCB is facing up. Lift the PCB up off the pots about 2mm just to make sure that the back of the PCB does not short out against the pots. Make sure the PCB is level and symmetrically seated inside the enclosure.

**Step 5:** Solder the pots and LED. You will be soldering on the component side (top) of the PCB. After you have soldered them in place, be sure to tighten up their nuts. TIP: only solder one lug of each component at first. This will secure everything in place and still allow you to wiggle things around if you need to adjust the fit of anything. Once you have everything perfect, go ahead and solder everything else. **Before you solder, be sure to lift the PCB up away from the pots just a little bit. You don't want the PCB to short out against the B100k D.G. pot.**



### Stereo (input) Jack

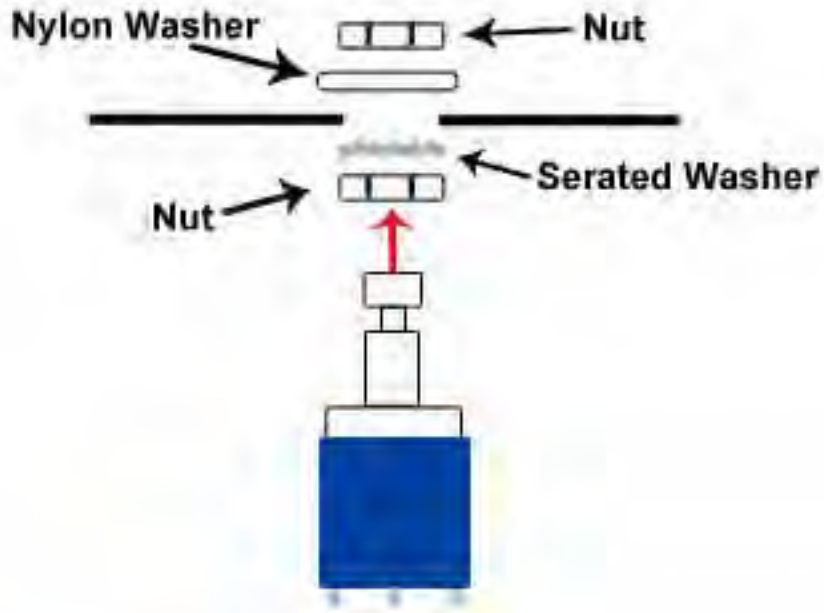


### Mono (output) Jack



**Step 1:** Install the 1/4" jacks to the enclosure.

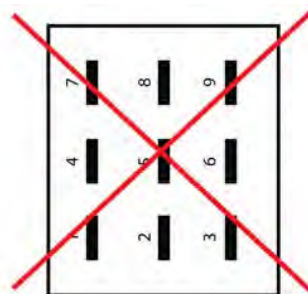
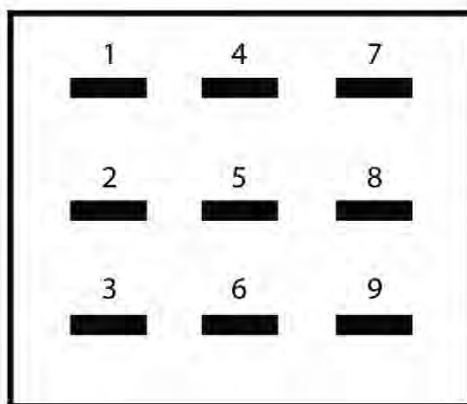




**Step 2:** Prepare the footswitch. Orient the footswitch so that the flat sides of the solder lugs are like the diagram below.

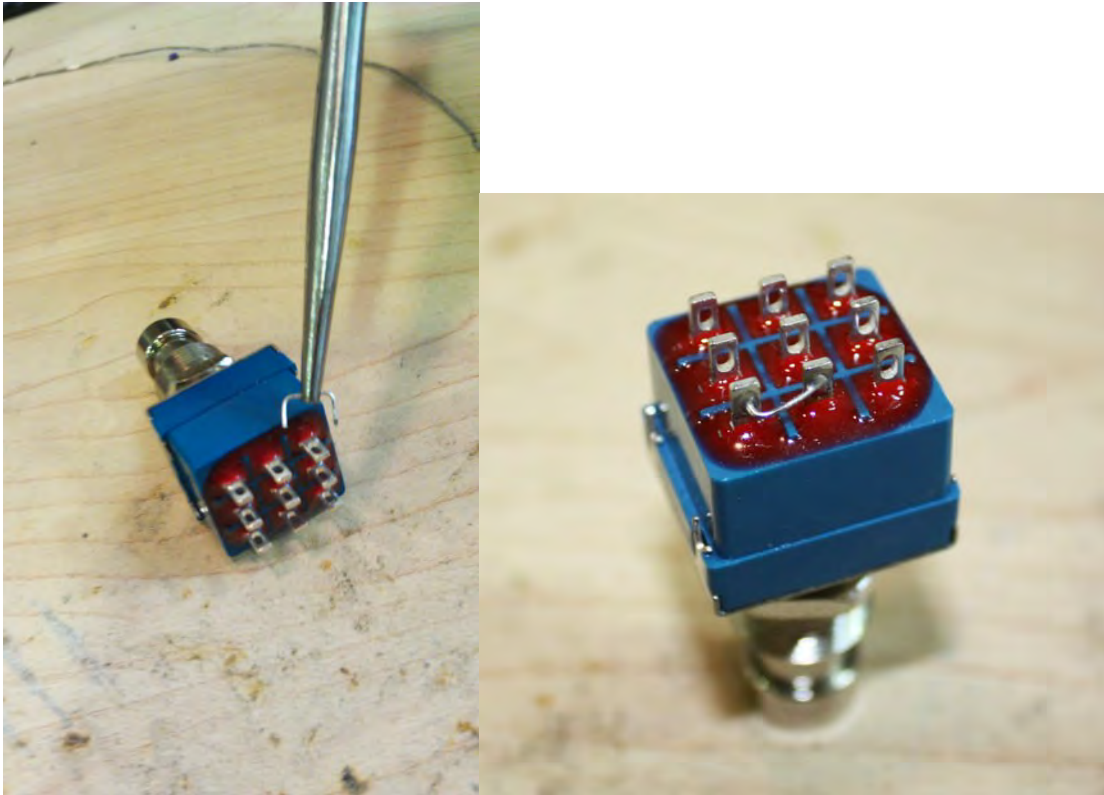
**NOTE:** There are no actual number markings on the footswitch. There are two correct ways you can orient the footswitch. They are both 180 degrees of each other. Either way is fine. It does not matter as long as the flat sides of the solder lugs are running horizontal, not vertical.

### FOOT SWITCH SOLDER LUG DESIGNATIONS



### Step 3: Wire the footswitch

**Step 3a:** Make a jumper between lugs 3 & 6 from clippings from the resistors. Simply use your needle nose pliers to make a U shape & insert into lugs 3 & 6, then solder.

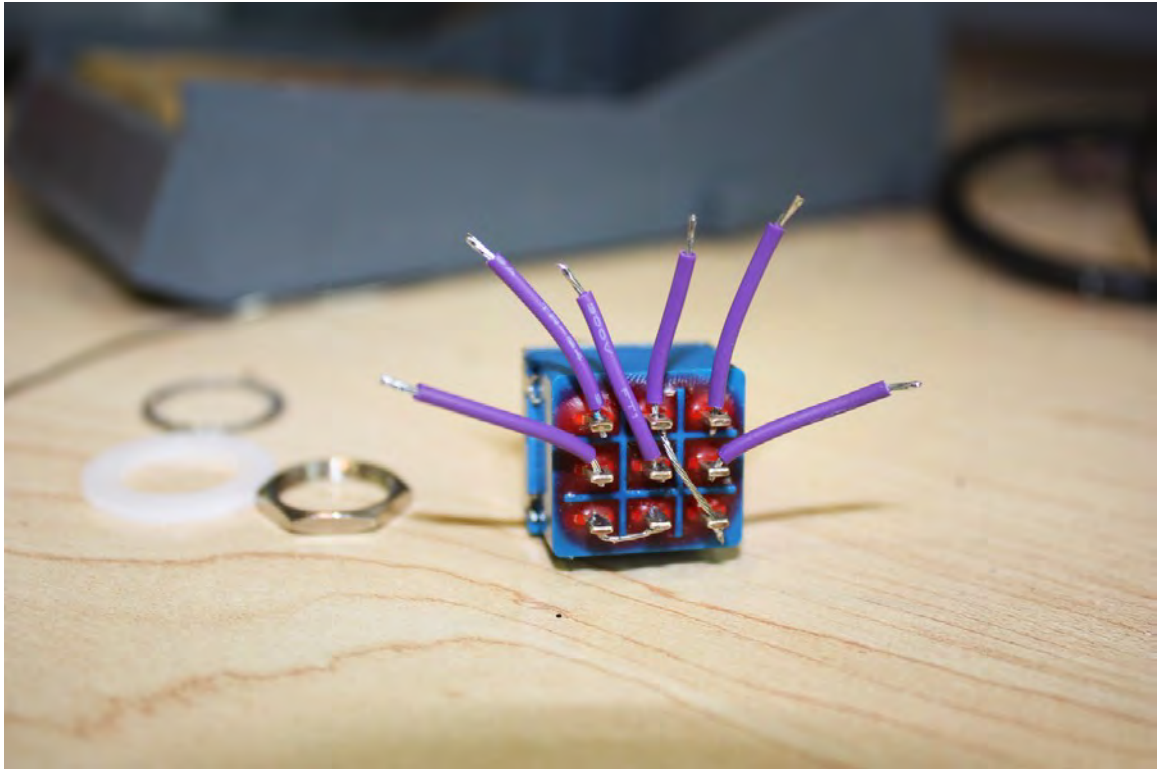


**Step 3b:** Cut a 1.5” piece of wire. Strip 1/8” of one end. Strip 1/2” off the other end. Tin both ends. This will be used to connect lug/eyelet 4. The longer stripped end will be used to jumper lug 4 to 9.



**Step 3c:** Cut two 1” pieces of wire. Strip 1/8” off each end and tin. These will be used to connect lugs/eyelets 1 & 7

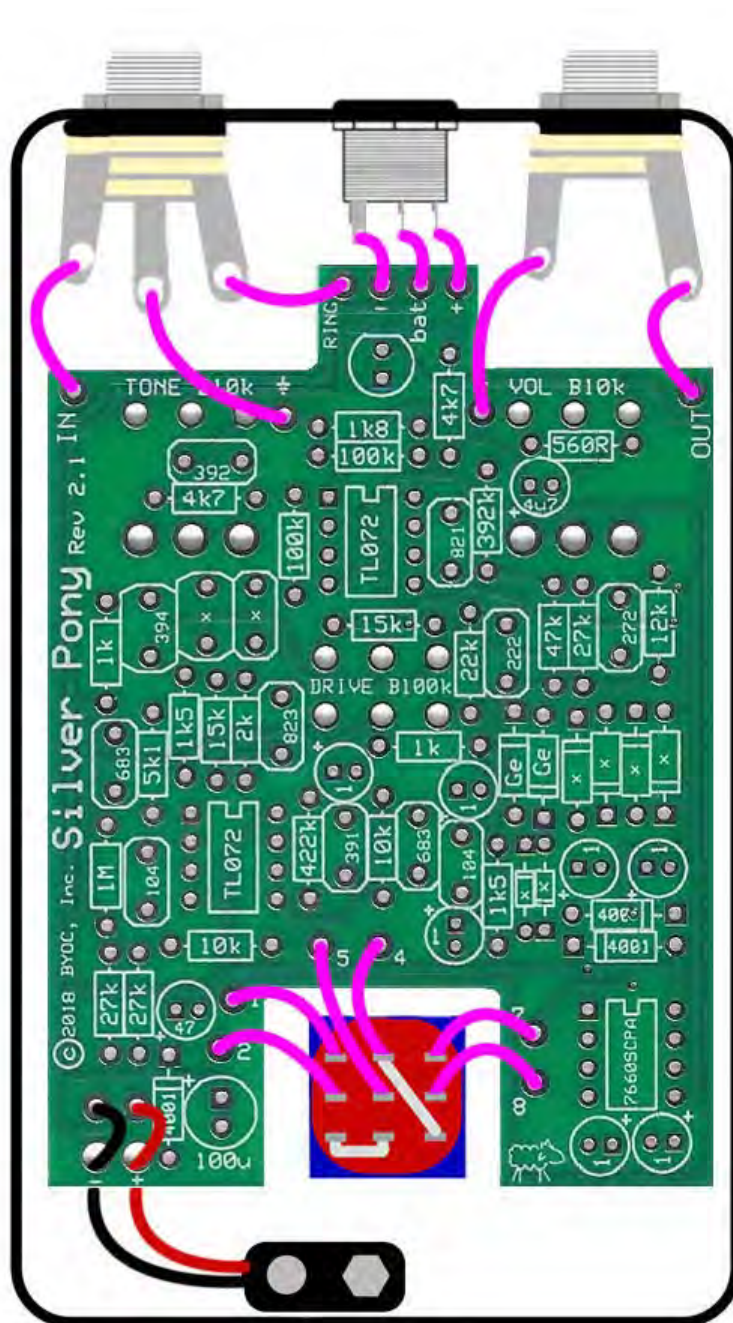
**Step 3d:** Cut three 1.25” pieces of wire. Strip 1/8” off each end and tin. This will be used to connect lugs/eyelets 2, 5, & 8



**Step 4:** Install the foot switch into the enclosure if it isn't already. Insert the foot switch wires into their respective eyelets on the PCB. You can insert them into the top-side and solder on the top side as well. The solder pads should be large enough (if you are using a soldering iron that isn't too big) to allow you to do this without burning the PVC coating on the wires if you are careful. If you do singe the plastic on the wires, it's OK. It's not going to hurt anything. It's purely aesthetic.

**Step 5:** Insert the foot switch wires into their respective eyelets on the PCB. You can insert them into the top side and solder on the top side as well. The solder pads should be large enough (if you are using a soldering iron that isn't too big) to allow you to do this without burning the PVC coating on the wires if you are careful. If you do singe the plastic on the wires, it's OK. It's not going to hurt anything. It's purely aesthetic. See diagram below.

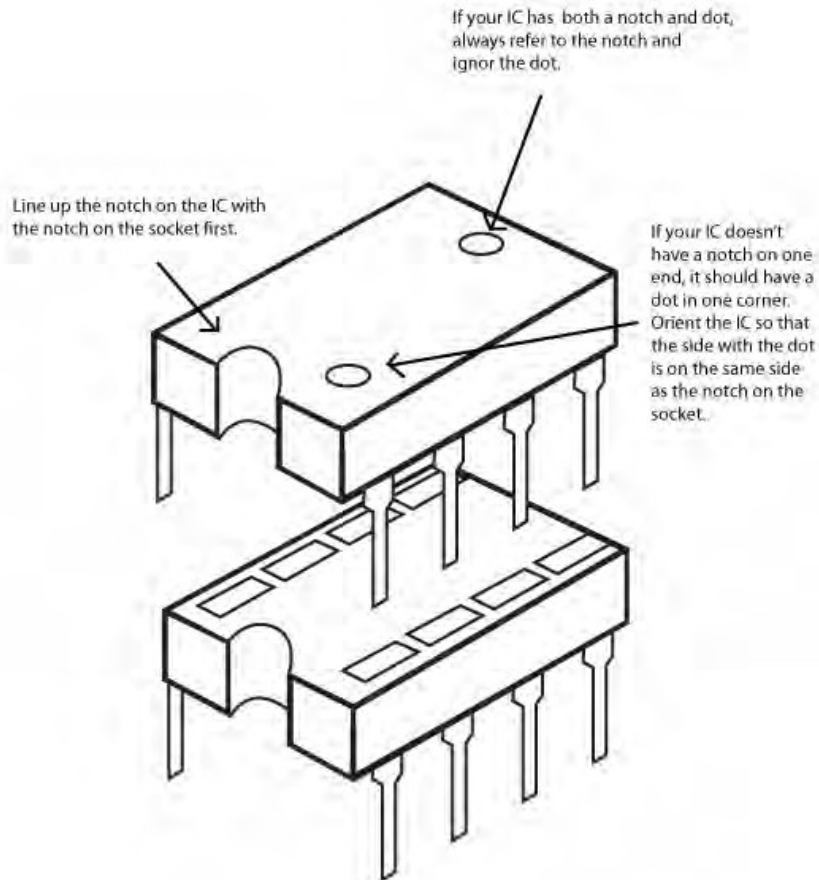
**Step 6:** Connect the wires at the top end of the PCB to the IN and OUT jacks. The “out” eyelet will go to the tip of the OUT jack and the “in” eyelet will go to the tip of the IN jack. Connect the ground eyelet on the left to the sleeve of the IN jack and the ground eyelet on the right to the sleeve of the OUT jack. Connect the “ring” eyelet to the ring of the IN jack. See diagram below.



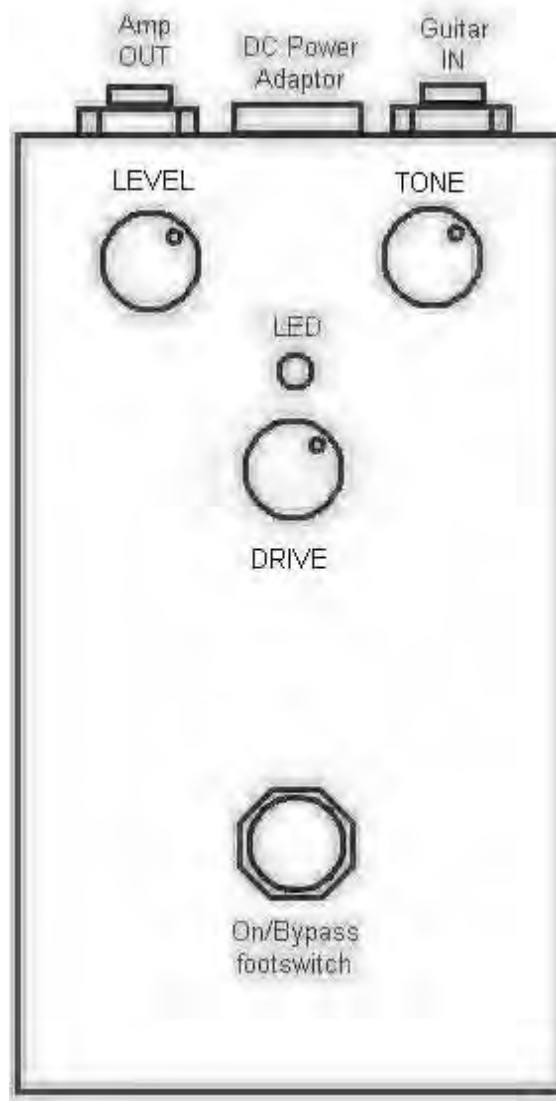


## Installing IC/Finish up

Don't forget to add the knobs, put the cover on the enclosure, and apply the bumpers to the cover.



## Operating Overview



**LEVEL:** This controls the amount of volume.

**TONE:** Boosts or cuts the treble

**GAIN:** Controls the amount of gain.

**Power supply:** 9V battery or 2.1mm negative tip 9V ONLY!!!! This has a charge pump, so you don't want to use more than 9V.

**Current Draw:** 7.5mA

**Input Impedance:** 1 Meg ohms

**Output Impedance:** 100k ohms



For hi-res schematic visit  
<http://www.byoelectronics.com/silverponyschematic.pdf>

**Please visit**  
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