



Hydra Fuzz

Based on the Sola Sound Tonebender™ 3-knob

Bill of materials

Resistors		Capacitors	
R1	1M	C1	22uf
R2	47K	C2	100nf (104)
R3	220K	C3	220pf
R4	10K	C4	100nf (104)
R5	10K	C5	10uf
R6	3.3K	C6	100nf (104)
R7	10k	C7	2.2nf (222)
R8	18k (or Trim)	C8	10uf
R9	10k	C9	100uf
R10	10k		
R11	220k (or Jumper)	Transistor	
		Q1	PNP Germanium Transistor
		Q2	PNP Germanium Transistor
		Q3	PNP Germanium Transistor
Diode			
D1	1n4001		
D2	1n270		
		Potentiometer	
IC		Volume	100KB Lin
IC1	Charge Pump (TC1044scpa)	Tone	100KB Lin
		Fuzz	100KB Lin

1590b

The board spacing will fit a 1590b enclosure. You can mount 9mm pots directly to the board.

Pot Tapers

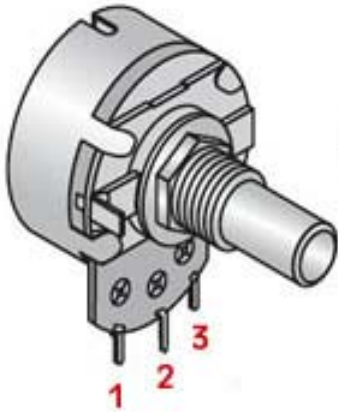
Pot tapers of the original Sola Sound Tonebender™ used all linear potentiometers, even for the volume control. I would definitely recommend a log pot for the volume control to avoid bunching.

Bias Mod

Replace the 18k resistor with a 50k trim to dial in some splatty misbiased fuzz sounds with your Hydra Fuzz! Wire in a pot instead for an easily adjustable bias control.

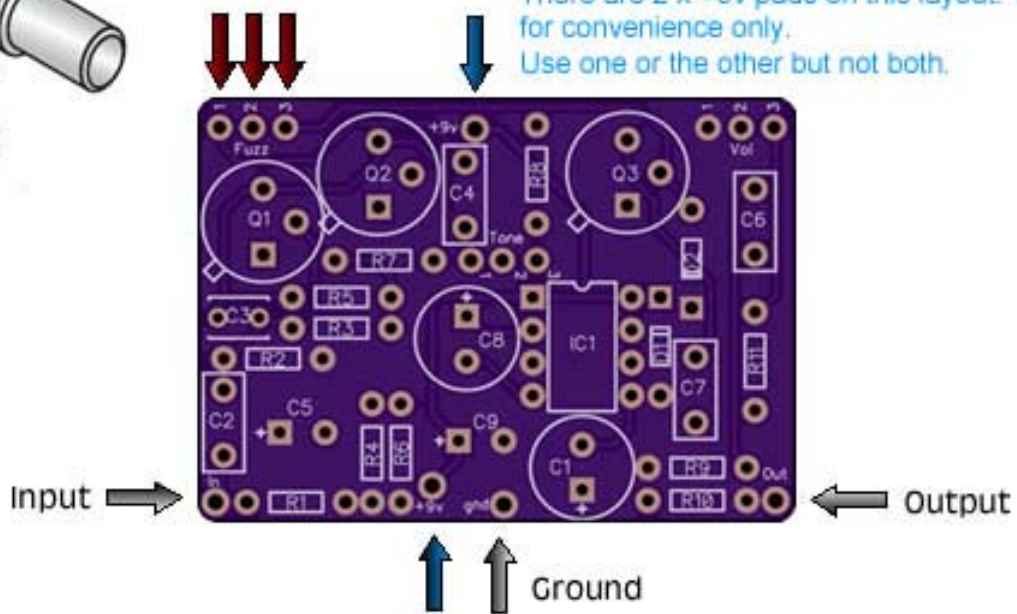
R11

Replacing R11 with a jumper will allow more output volume from the effect



Potentiometers - Note the numbers 1,2,3, on the layout. Be sure to connect the right pins on the pot to the right pads on the board

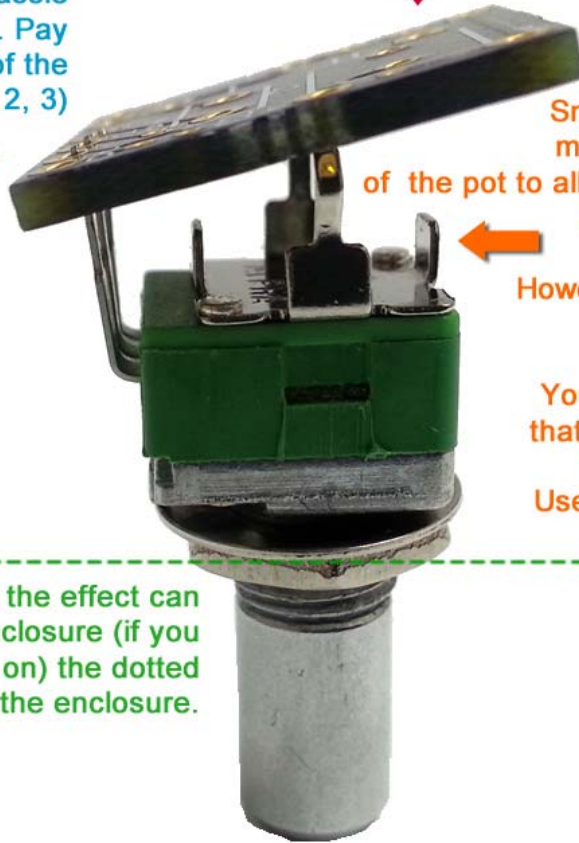
There are 2 x +9v pads on this layout. These are for convenience only. Use one or the other but not both.



The 9mm Alpha potentiometers that are included in our kits can be soldered directly to the PCB saving the hassle of connecting them with wires. Pay close attention to the pinout of the pot (1, 2, 3)



This is the component side of the pcb



Snip off or bend these four mounting lugs on the back of the pot to allow the pcb to be lowered closer to the back of the pot for soldering. However DO NOT remove the entire plate from the back of the pot. You will also need to ensure that the back plate of the pot does not touch anything. Use some double side tap to insulate it from the pcb

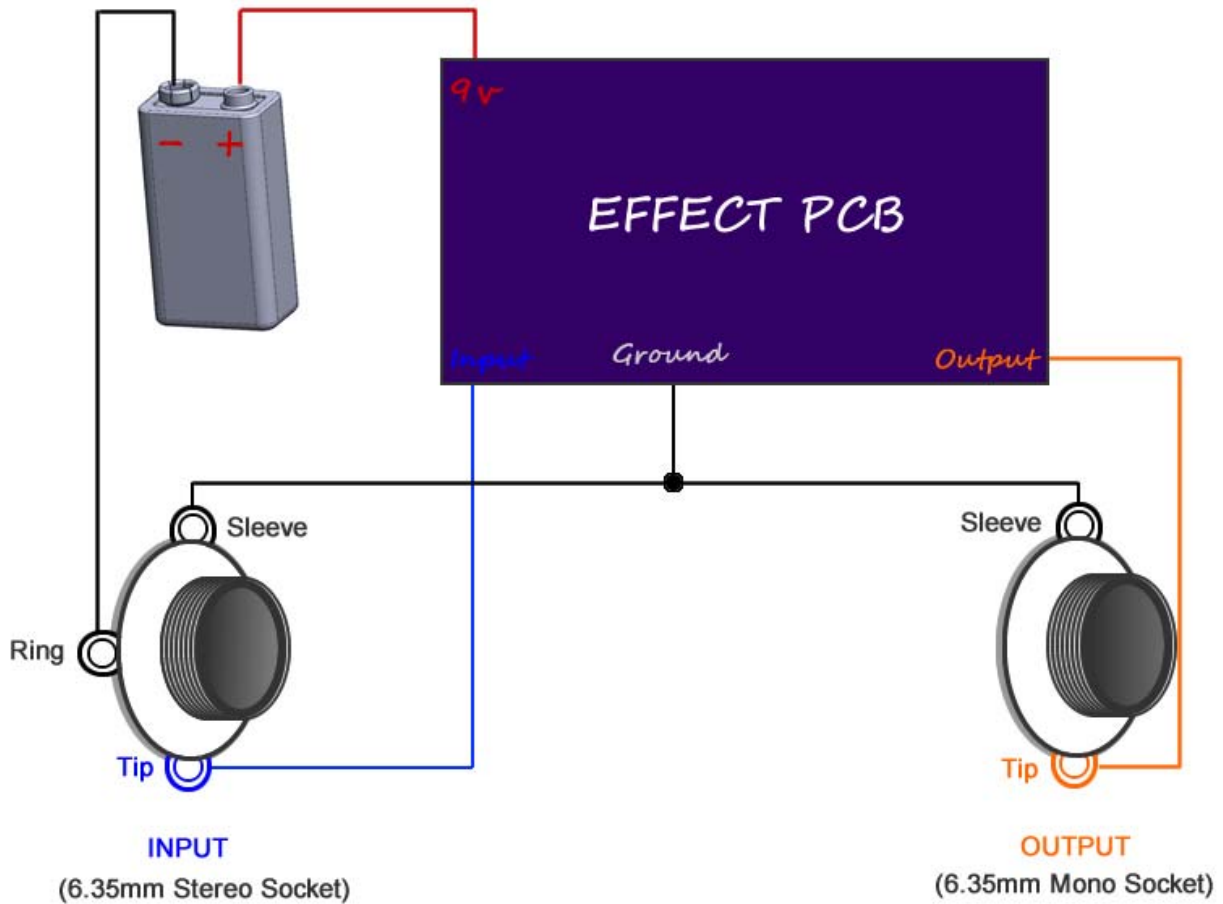


To help you visualise how the effect can be installed inside an enclosure (if you decided to do so later on) the dotted line above indicates the enclosure.



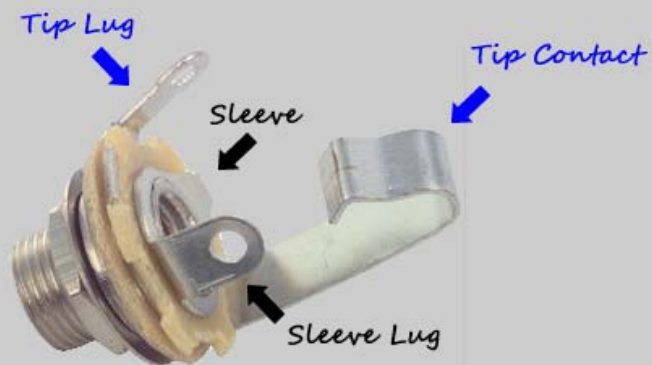
Testing Your Effect

Using aligator clips or soldering directly, wire your effect as in the following...



Input and Output Sockets

Pay close attention to the lugs of your sockets. Look at them side on so that you can distinguish the sockets individual layers. For instance the tip lug is connected to tip contact. The stereo jack looks the same as the socket below except it has an extra lug and contact for "Ring".



Boxing up your effect

Watch my offboard wiring tutorial for information on wiring this effect inside an enclosure with LED, stompswitch, etc

http://www.youtube.com/watch?v=z6fpwU8RY_0