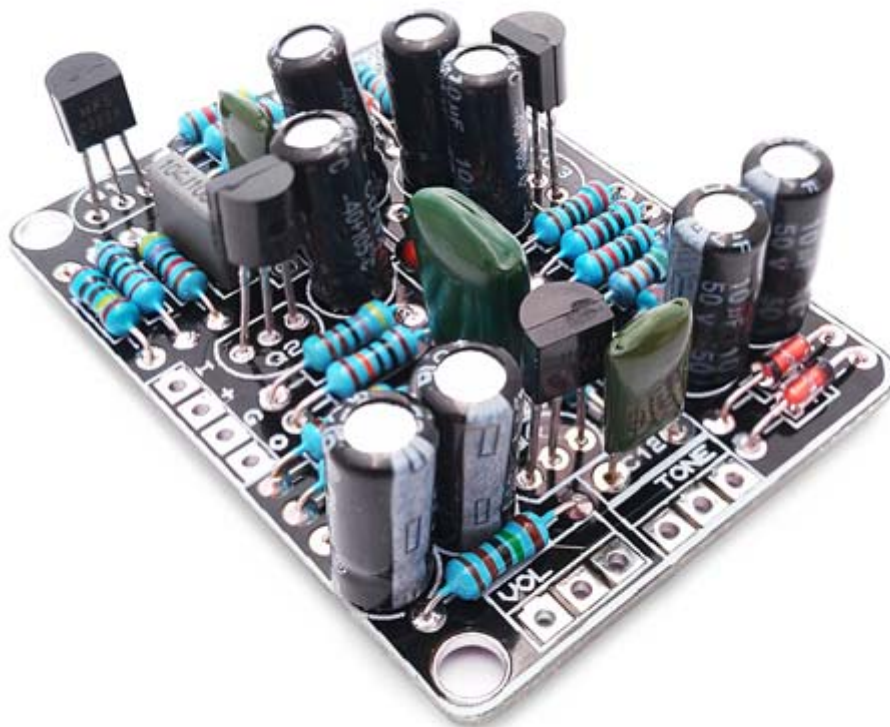# Foxx Tone Machine Fuzz
Kit Building Manual

Effect Pedal Kits:
Foxx Tone Machine Fuzz

Bring to your pedalboard the classic '70s fuzz tones with the Foxx Tone Machine. It is probably one of the thickest fuzz effect pedals out there! While having a huge saturated fuzz sound, the Foxx Tone Machine keeps the bottom end to deliver a very rounded and fat tone. The first stage of the pedal features a gain stage with feedback similar to the Fuzz Face, followed by a germanium diode based octave generator and a gain recovery stage. When strumming chords, the Foxx Tone Machine can even produce odd ring modulation effects.

The Foxx Tone Machine has three knobs to control the fuzz tone, plus a switch to go from standard fuzz to octave up fuzz. Gain sets the overall amount of fuzz the pedal will deliver. It covers a wide range and has the advantage that it doesn't change the tone of the sound. With Tone you can set the shape of the sound. Unlike in other pedals, in the Foxx Tone Machine this knob works nicely: even at maximum settings, the treble frequencies don't get too annoying and the pedal keeps some bottom end. If you want even more noise, turn on the Octave switch to produce a note an octave higher than the one you're actually playing!

BOM (1/2)

	Resistors (22)				Capacitors (13)	
1	R1	1M		2	C1, C4	100n
3	R2, R4, R20	47k		8	C2, C5, C6, C7, C8, C9, C10, C13	10u (electrolytic)
2	R3, R15	1k		1	C3	1n
5	R5, R6, R9, R10, R12	100k		1	C11	47n
3	R7, R8, R18	4.7k		1	C12	3.3n
1	R11	220				
1	R13	150k				
1	R14	15k				
2	R16, R21	10k				
1	R17	22k				
1	R19	470k				
1	R22	1.5k				

BOM (2/2)

Diodes, Transistors and ICs				Generic Parts and Potentiometers		
4	Q1, Q2, Q3, Q4	PN3565		1	Battery clip	
4	D1, D2, D3, D4	1N34		1	DC Jack	
				1	RLED	1k LED resistor
				1	LED Bezel	
				1	3PDT	
				2	IN, OUT	6.35mm Jacks
				3	50k Linear (B) Potentiometer	Sust, Tone, Vol
				1	SPDT switch	Octave

Component Placement
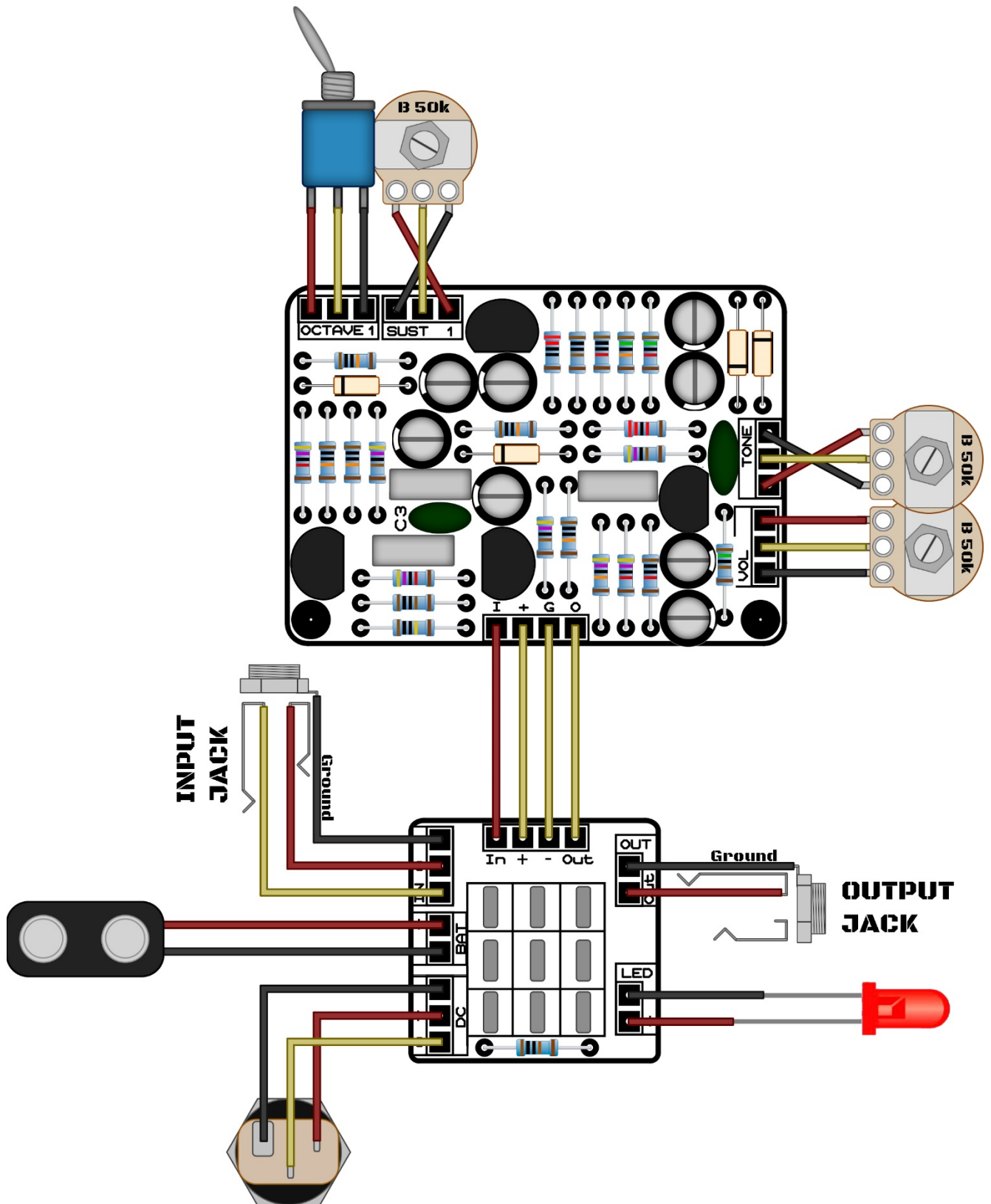
Board Layouts

3PDT PCB
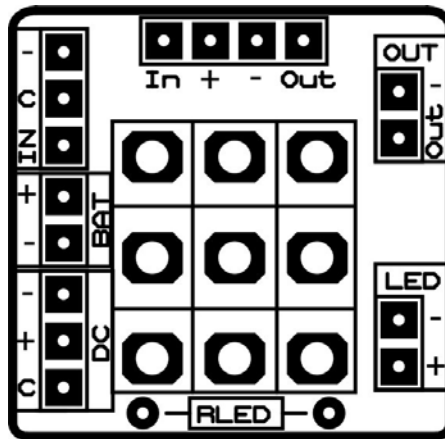
Effect PCB

Building Tips

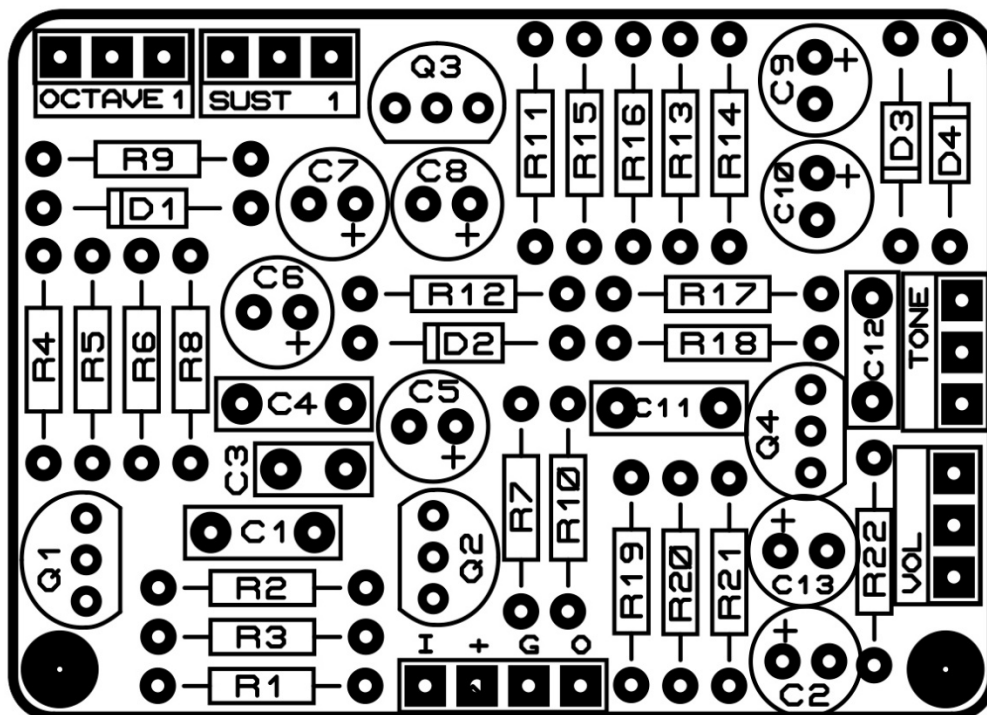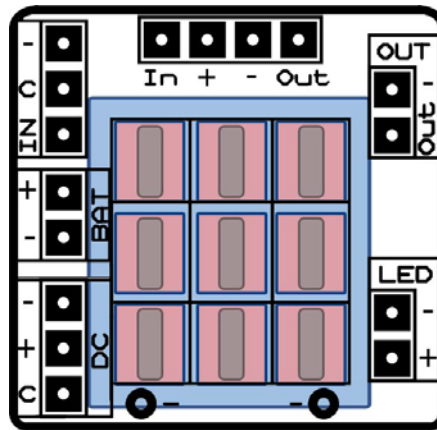1- Pay attention to the **orientation of the 3PDT**! In the following picture you can see how the 3PDT pins should be positioned (inserting the pins in the holes can be a bit tight to avoid movement while soldering):

2- For a proper soldering you just have to apply the **right amount of solder wire**. A right solder joint should have a concave shape around the joint and look like this:


3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as posible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.

4- If having troubles with the building, checking the schematic in the last page will help you find **where the audio signal stops**. When you find the spot, check out that **everything around that joint is ok** (components placed at their right place, solder joints…).

Building Tips

5- Pay attention to the **parts that have a polarity** and make sure they are connected as in the component placement picture:

- **ICs** (they have a small dot or indication that must fit the indication in the board
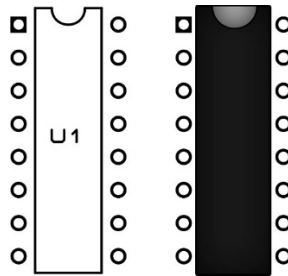
- **Electrolytic capacitors** (longer pin is connected to the "+" hole):

- **Diodes** (check for the mark and make it fit with the one in the PCB):

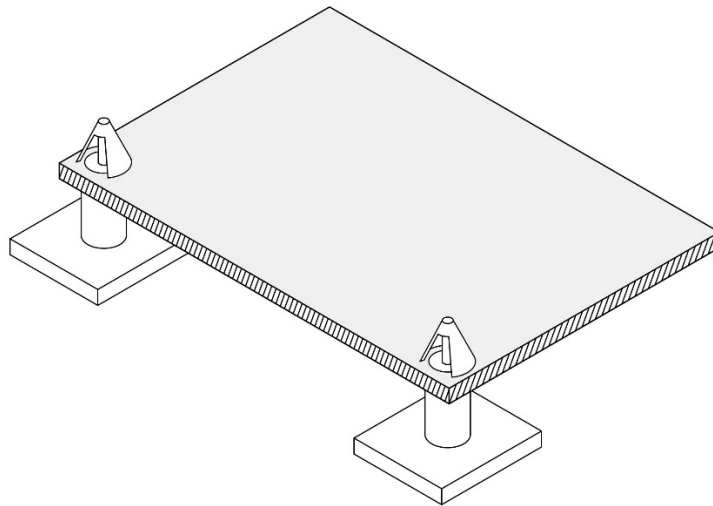- **Leds** (longer pin is connected to the "+" hole)

- **Transistors** (inserted to fit the drawing in the PCB)

Building Tips

6- With the kit we include plastic PCB supports with an adhesive bottom. You can use them to anchor the PCB to your enclosure for a better stability. Just insert the PCB support tip into the 3.5mm holes and remove the adhesive protective film.

To avoid any issue always check the latest building manual. Use the pictures only as a reference! Colors/shapes of wires, PCB or parts can change slightly, this doesn't affect their functionality in any way.

Always double check part polarity, resistor and capacitor values, potentiometer placement, IC orientation… before soldering.

Schematic

IN WIRE FROM 3PDT

W
CONN-SIL4

EF_IN
EF_OUT
VCC
GND