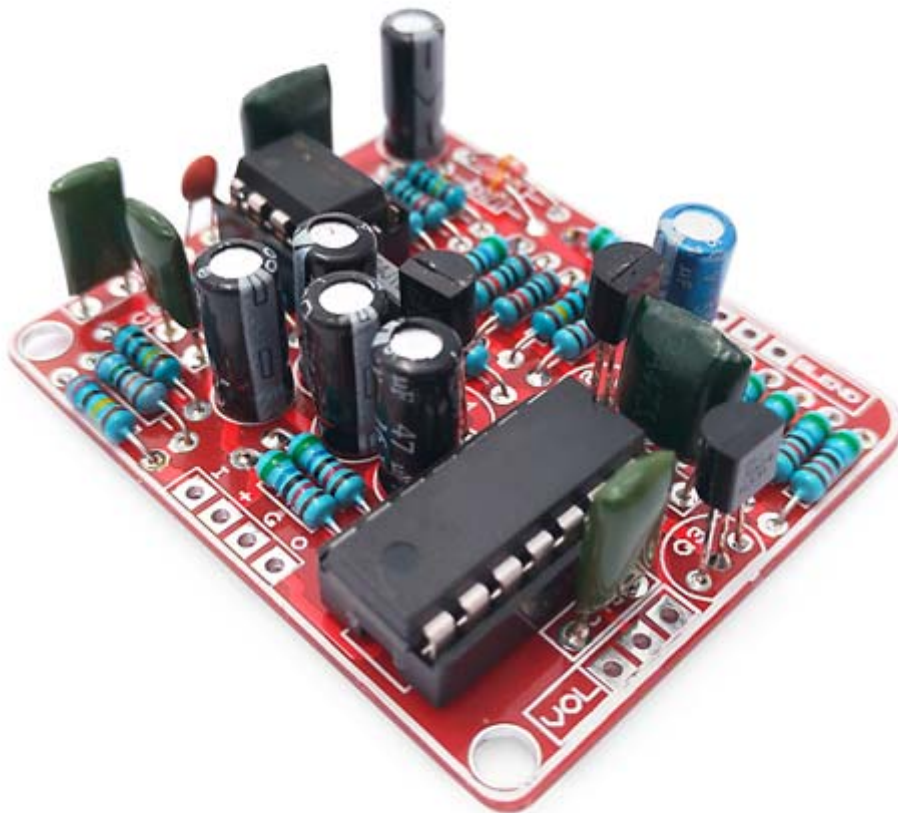


Blue Box Fuzz Kit Building Manual











Effect Pedal Kits:

Blue Box Octave

If you are bored with standard distortion pedals, the **Blue Box** might be the right effect for you! To know how it sounds like, this pedal was responsible for the tone on **Led Zeppelin's** *Fool in the Rain*. With the **Blue Box kit** you'll build a pedal that delivers an **aggressive fuzz**, but that's not it: what makes the Blue Box special is that it also produces a **two octave down** note, and you can choose how these two sounds are mixed together.

The Blue Box has **two potentiometers**. The *Output* knob selects the amount of volume, while the *Blend* knob lets you choose the amount of fuzz tones to be mixed with the two octaves down. While it may seem a simple pedal the Blue Box has a quite **unpredictable behaviour**, and will react in a very different way depending on the **string** you are playing the notes, your **dynamics** or the **pickups** you are using, making the Blue Box a very versatile effect perfect to get a different tone.

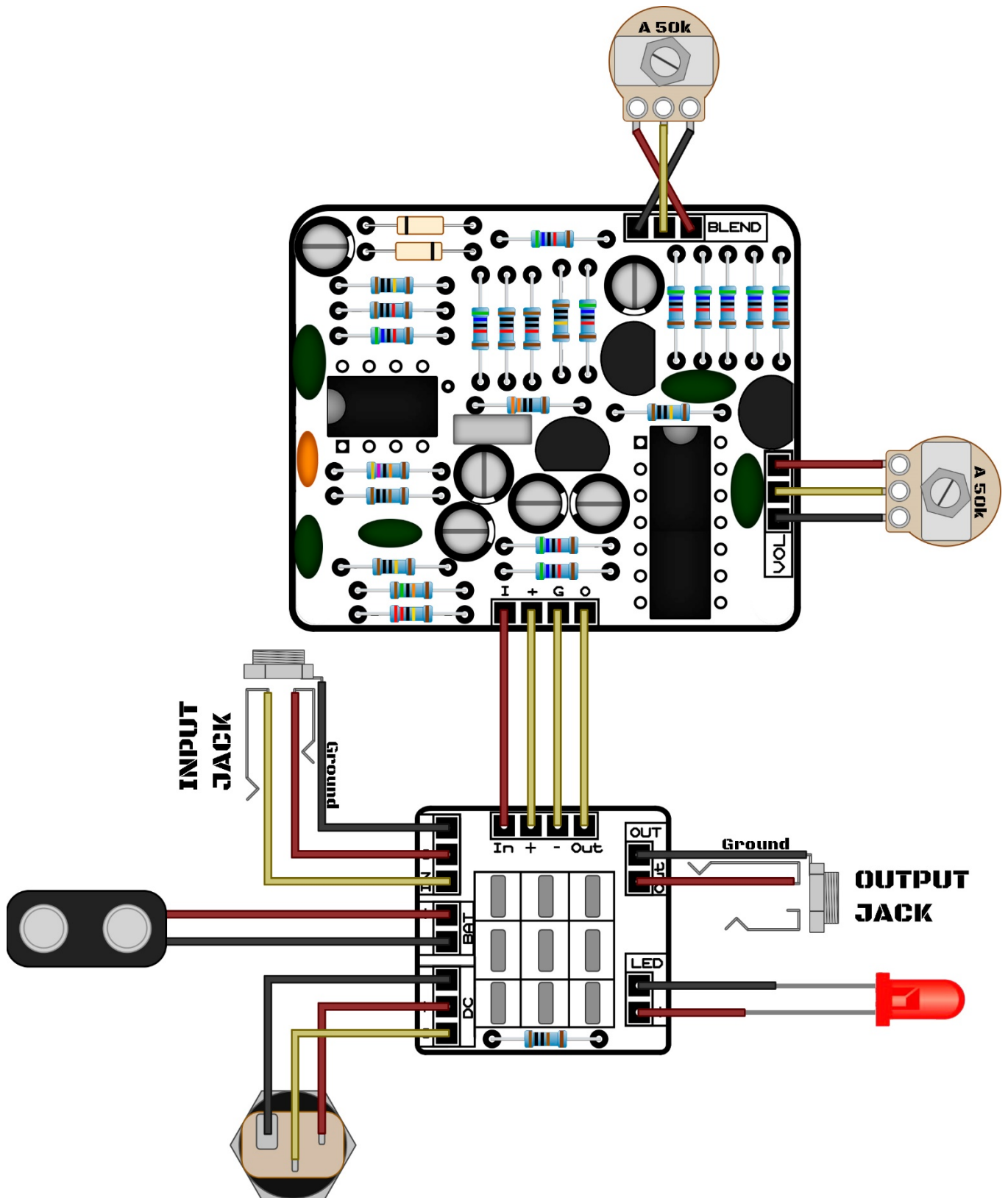
BOM (1/2)

Resistors (23)				Capacitors (13)		
1	R1	330		1	C1	100u (electrolytic)
11	R2, R3, R9, R12, R16, R17, R18, R19, R20, R21, R22	56k		2	C2, C4	47u (electrolytic)
1	R4	2.2M		1	C3	100n
1	R5	150k		2	C5, C13	10n
4	R6, R11, R15, R23	1M		1	C6	1n
1	R7	470k		1	C7	300p (ceramic)
1	R8	1k		1	C8	10u (electrolytic)
3	R10, R13, R14	10k		2	C9, C12	47n
				2	C10, C11	1u (electrolytic)

BOM (2/2)

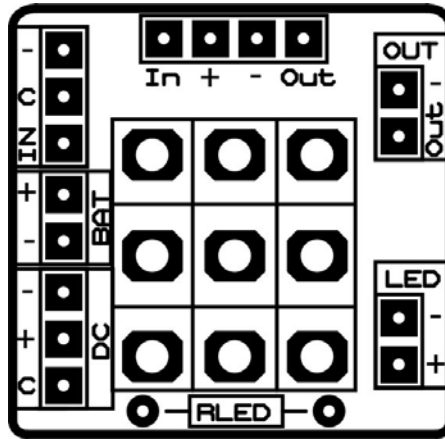
Diodes, Transistors and ICs			Generic Parts and Potentiometers		
1	U1	TL072	1	Battery clip	
1	U2	CD4013	1	DC Jack	
3	Q1, Q2, Q3	2N3904	1	RLED	1k LED resistor
2	D1, D2	1N914	1	LED Bezel	
			1	3PDT	
			2	IN, OUT	6.35mm Jacks
			2	50k Logarithmic (A) Potentiometer	Blend, Vol

Component Placement

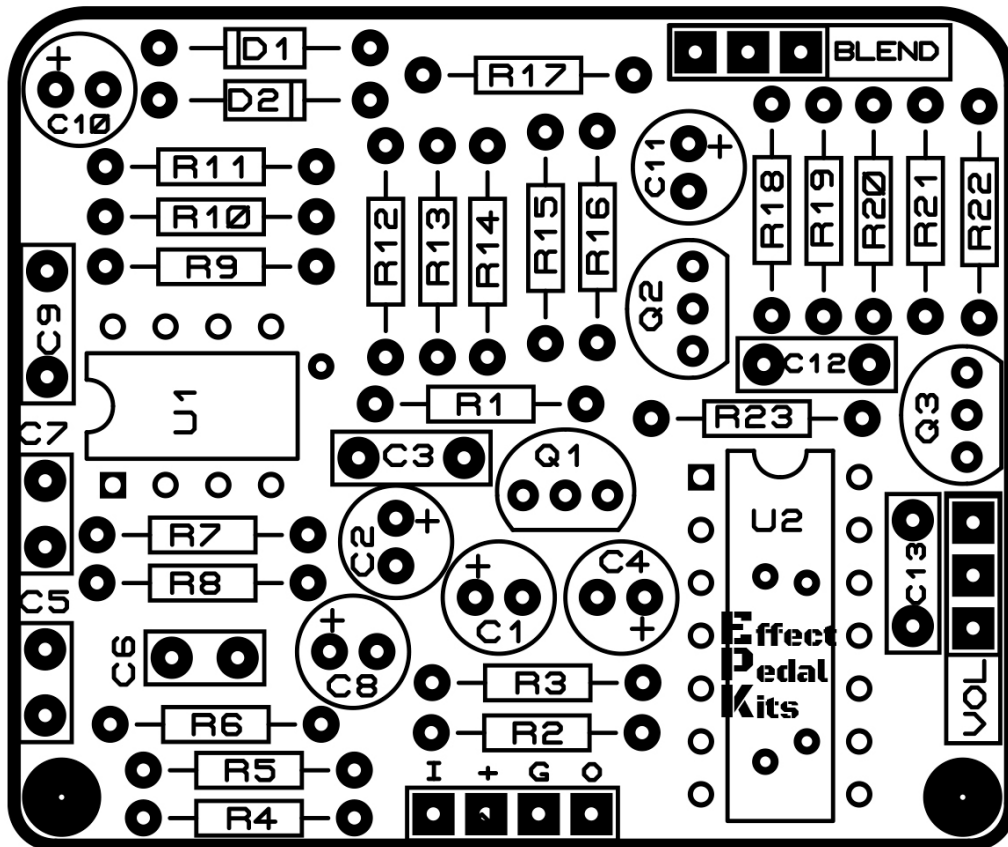


Board Layouts

3PDT PCB

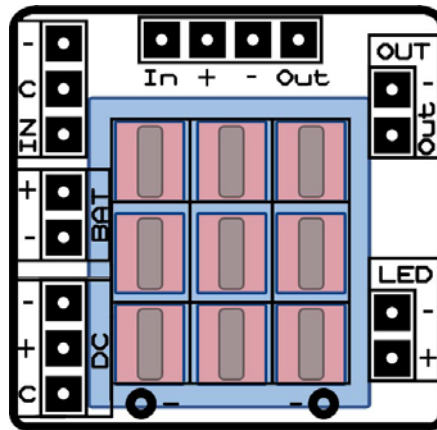


Effect PCB



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:

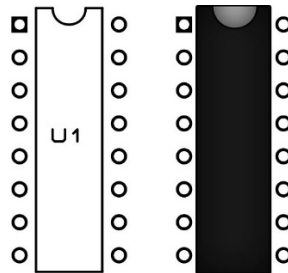


- 3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as possible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.
- 4- If having troubles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

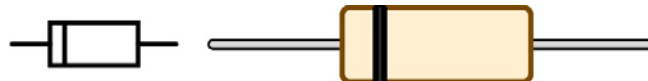
- **ICs** (they have a small dot or indication that must fit the indication in the board)



- **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)

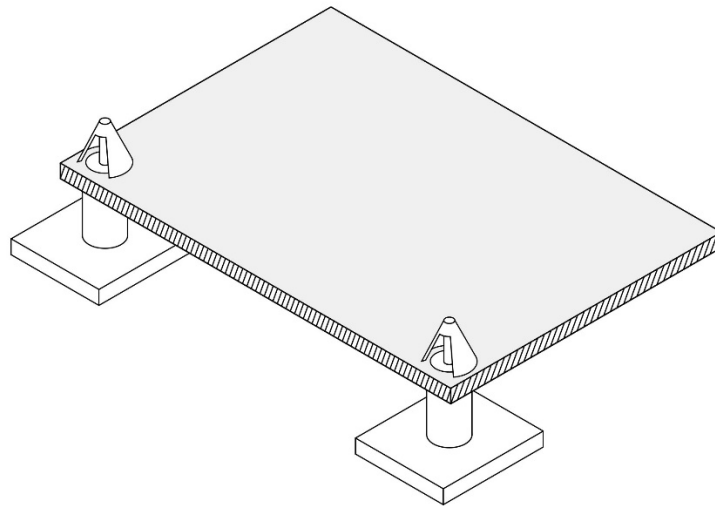


- **Transistors** (inserted to fit the drawing in the PCB)



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

