Blender Kit
Building Manual

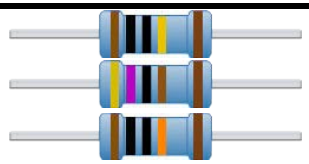
Effect Pedal Kits:
Blender

The **Blender** a simple little circuit that lets you **mix one signal with another**. The original signal is connected to *In* and *Out* jacks, and the signal you want to blend is connected to *Send* and *Return*. Then, with the Mix pot, you can set the **amount of each signal** you want to have in your output. A **Level trimmer** has been added so you can set the Blender volume: besides of mixing, you can also use the **Blender kit as a booster**!

With our **Blender kit** you'll be able to experiment and get a whole **new variety of tones**. For example, you can mix a bit of fuzz with your dry signal, and set the amount with the *Blend* potentiometer. That way you would still retain the bass end.

Quick connection example: lets say you want to **mix a bit of fuzz to your dry signal** to give your tone a bit more of character, but without being too aggressive. The connections would be: *In* jack to guitar output, *Out* jack to amplifier input, *Send* jack to fuzz input, and *Return* jack to fuzz output.

BOM (1/2)

Resistors (5)				Capacitors (2)		
2	R1, R2	1M		1	C1	100n (guitar) /1u(bass)
1	R3	4.7k		1	C2	10u
2	R4, R5	100k				

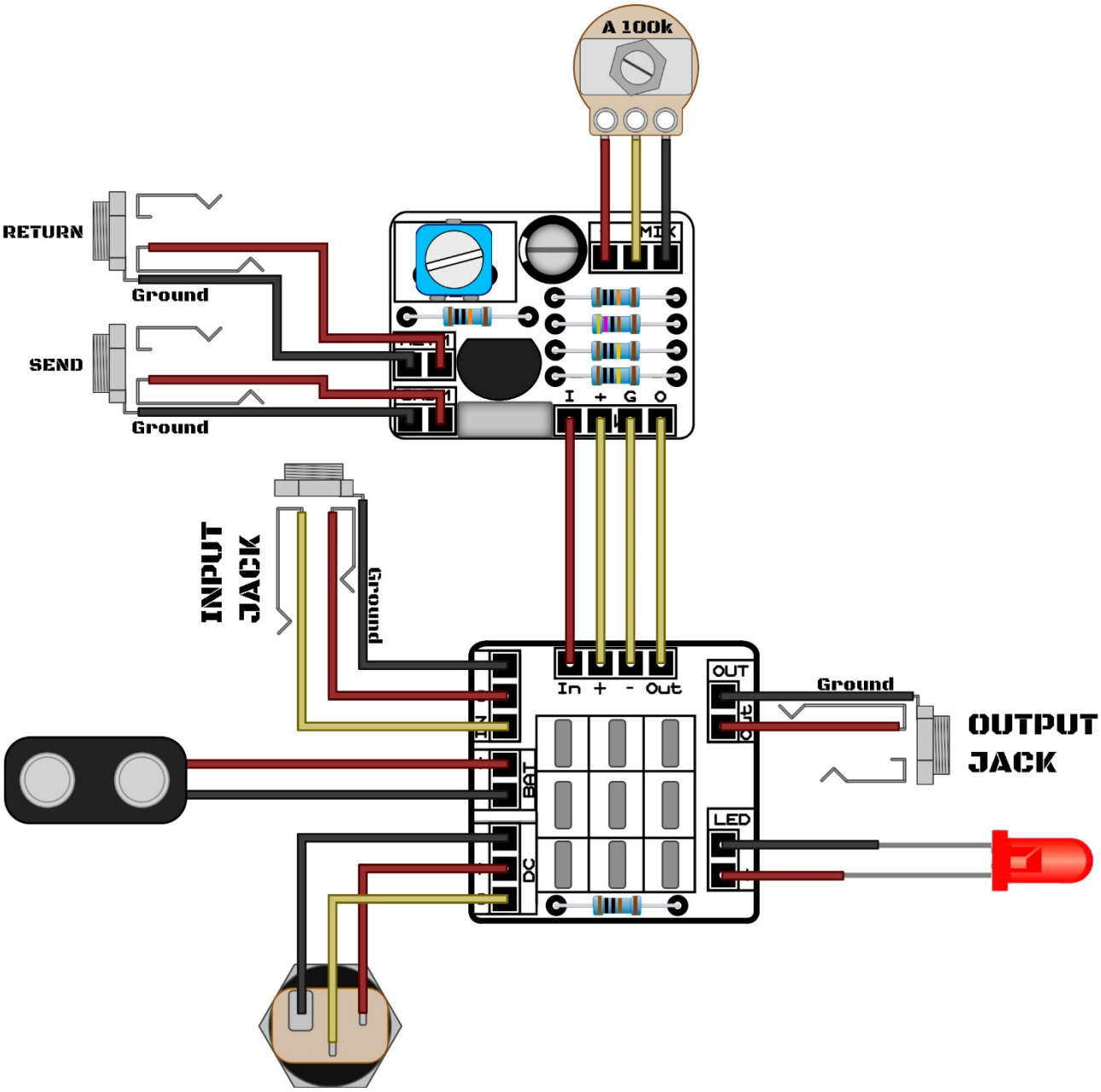
Note: Capacitors both guitar and bass are included. For guitar, use C1=100n, for bass use C1=1u

BOM (2/2)

Diodes, Transistors and ICs		
1	Q1	J113
1	LEV	100k trimmer

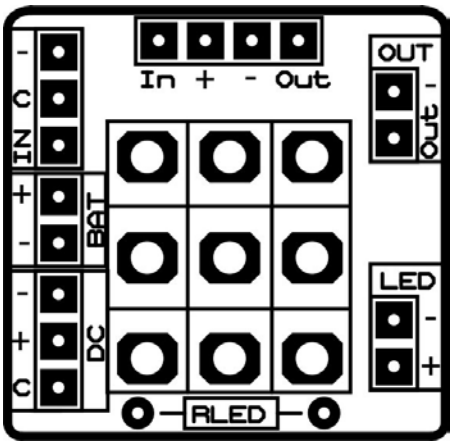
Generic Parts and Potentiometers		
1	Battery clip	
1	RLED	1k LED resistor
1	LED Bezel	
1	3PDT	
4	IN, OUT, SEND, RETURN	6.35mm Jacks
1	100k Logarithmic (A) Potentiometer	Mix

Component Placement

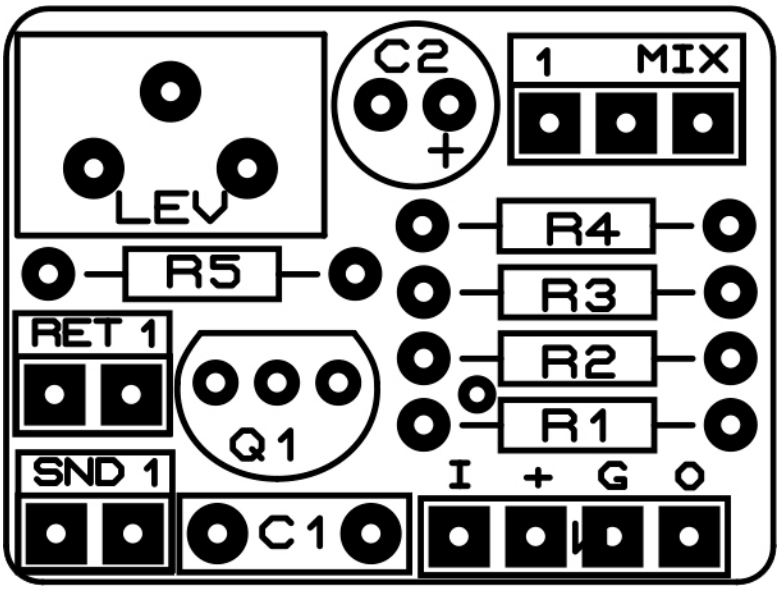


Board Layouts

3PDT PCB

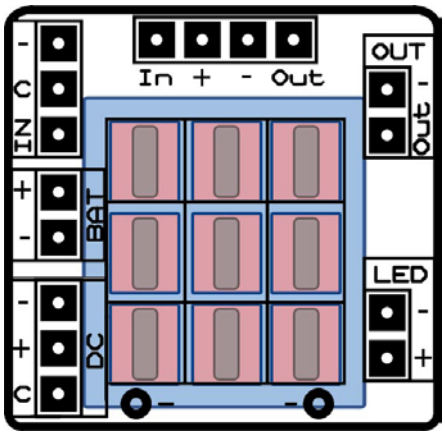


Effect PCB



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:

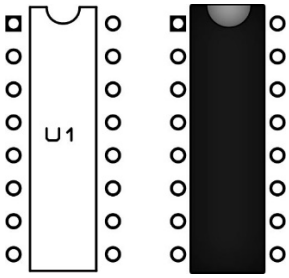
3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as posible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.

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…).

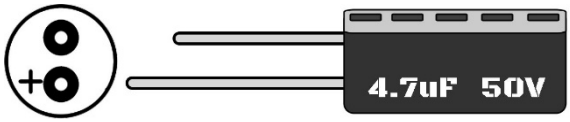
Building Tips

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

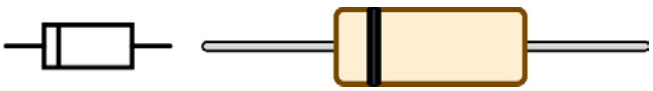
- **ICs** (they have a small dot or indication that must fit the indication in the board



- **Electrolytic capacitors** (longer pin is connected to the "+" hole):

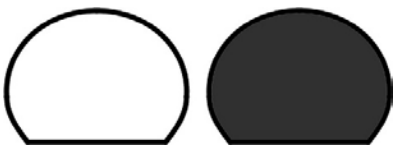


- **Diodes** (check for the mark and make it fit with the one in the PCB):

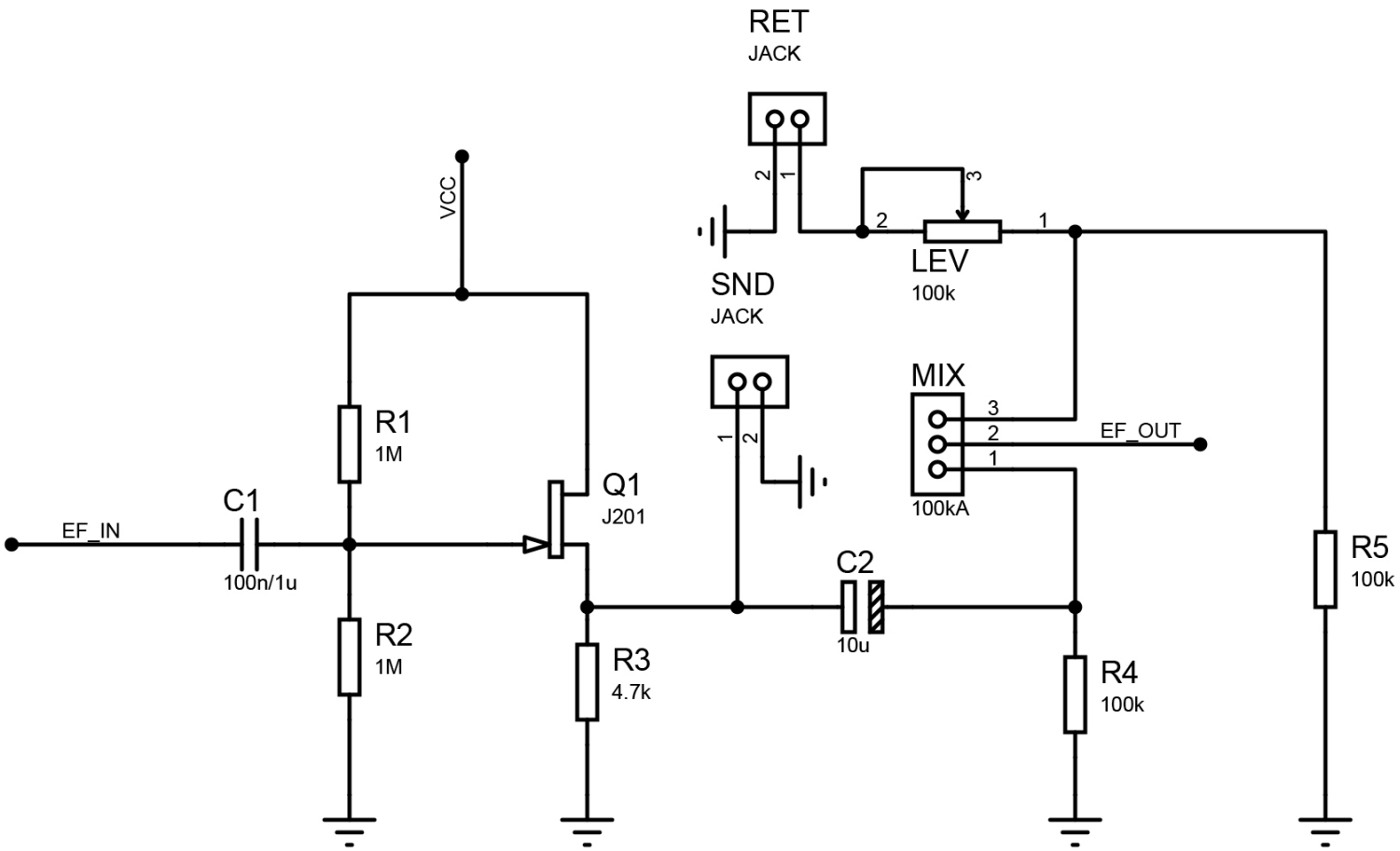


- **Leds** (longer pin is connected to the "+" hole)

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



Schematic


RET
JACK
VCC
SND
JACK
LEV
100k
MIX
100kA
EF_OUT
EF_IN
C1
100n/1u
R1
1M
R2
1M
Q1
J201
R3
4.7k
C2
10u
R4
100k
R5
100k