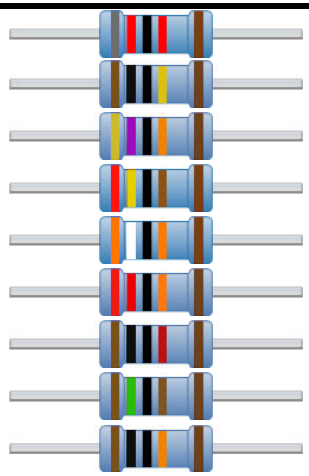
Orange Juicer Compressor
Kit Building Manual

Effect Pedal Kits:
Orange Juicer Compressor

The Orange Juicer is based on the Dan Armstrong Orange Squeezer. This effect pedal is well known for its smooth compression. Originally, it was designed to be mounted directly on the guitar, but the Orange Juicer is adapted to the stompbox format to fit a standard aluminium enclosure. Some of the most famous tones of the Orange Squeezer can be heard in ‘Sultans of Swing’, as Mark Knopfler was known for using this compressor in Dire Straits.

Unlike other compression effect pedals that use an optocoupler or a specialized opamp ic, the Orange Juicer creates the compression using JFET transistors. Because of that, the part count is low making the Orange Juicer an easy build. The amount of compression and sustain can be set by dialing the internal trimmer to your personal preference. As the Orange Squeezer, it’s a great pedal to place before an overdrive or distortion pedal to push it harder!very subtle effect, but you’ll miss it once you turn it off!

BOM (1/2)

Resistors (11)			
1	R1	82k	
1	R2	1M	
3	R3, R6, R11	470k	
1	R4	2.4k	
1	R5	390k	
1	R7	220k	
1	R8	10k	
1	R9	1.5k	
1	R10	100k	

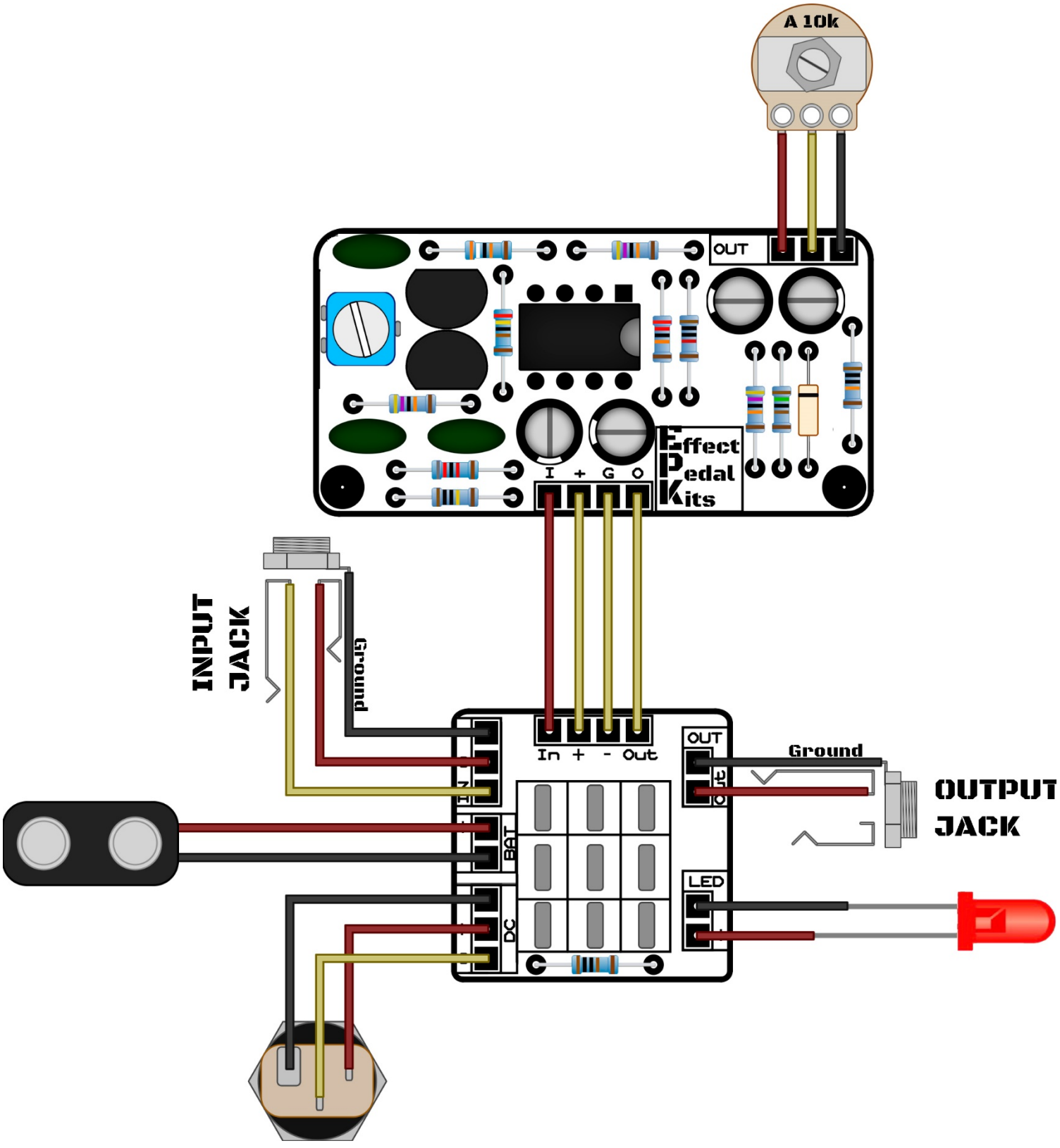
Capacitors (7)		
2	C1, C4	47n
1	C2	2.2n
4	C3, C5, C6, C8	4.7u (electrolytic)

BOM (2/2)

Diodes, Transistors and ICs		
1	U1	TL072
2	Q1, Q2	J113
1	D1	1N914
1	TR1	10k Trimmer

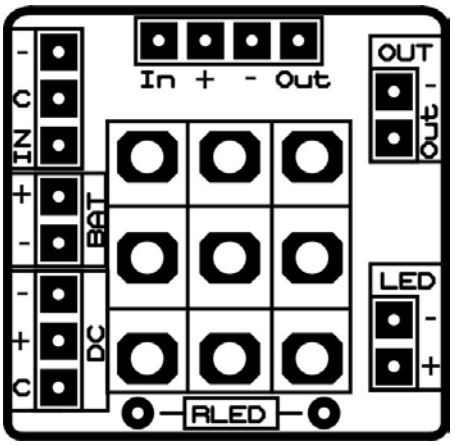
Generic Parts and Potentiometers		
1	Battery clip	
1	DC Jack	
1	RLED	1k LED resistor
1	LED Bezel	
1	3PDT	
2	IN, OUT	6.35mm Jacks
1	10k Logarithmic (A) Potentiometer	Out

Component Placement

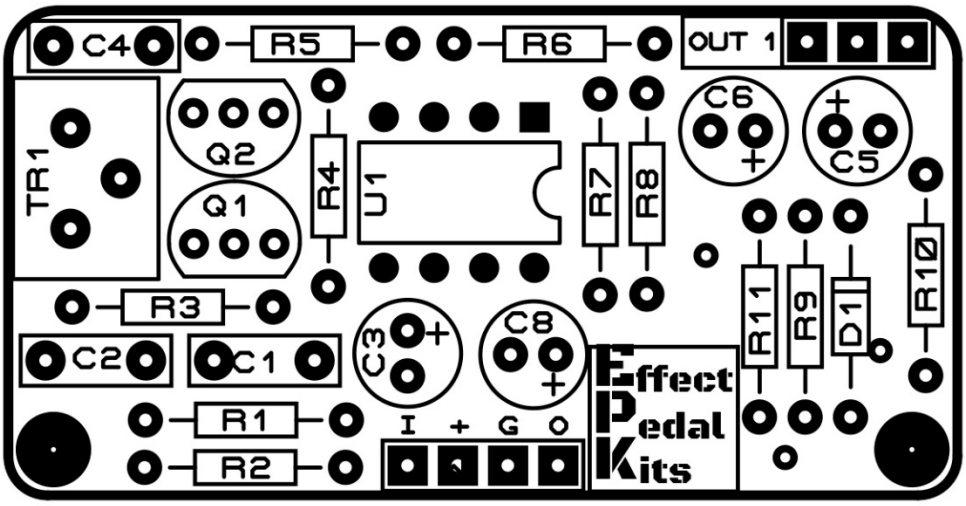


Board Layouts

3PDT PCB

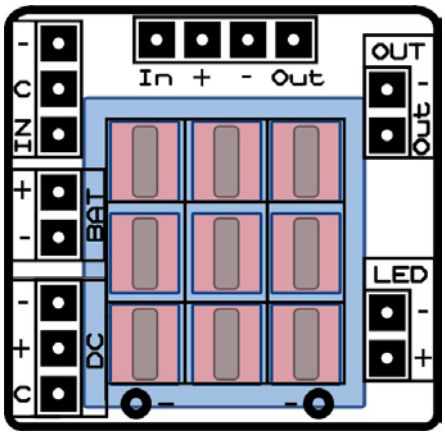


Effect PCB



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:

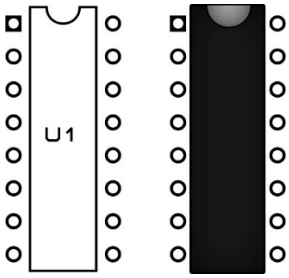
3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as posible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.

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…).

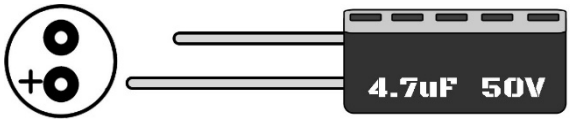
Building Tips

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

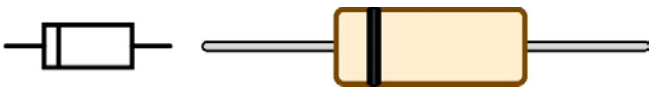
- **ICs** (they have a small dot or indication that must fit the indication in the board



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

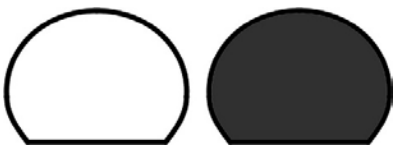


- **Diodes** (check for the mark and make it fit with the one in the PCB):



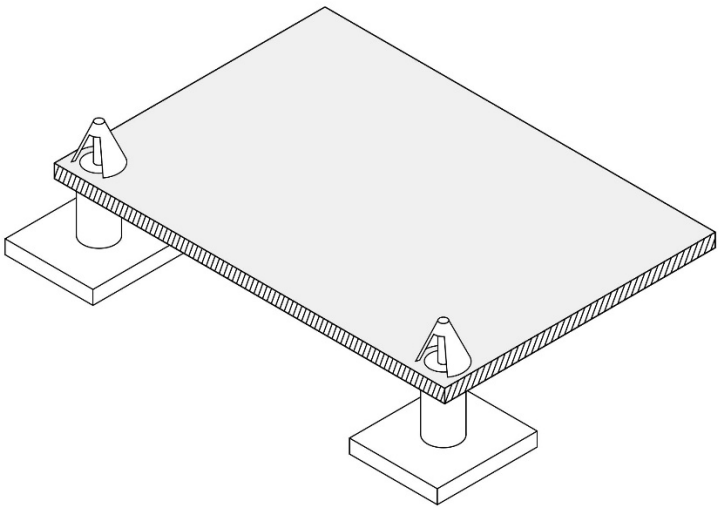
- **Leds** (longer pin is connected to the "+" hole)

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



Building Tips

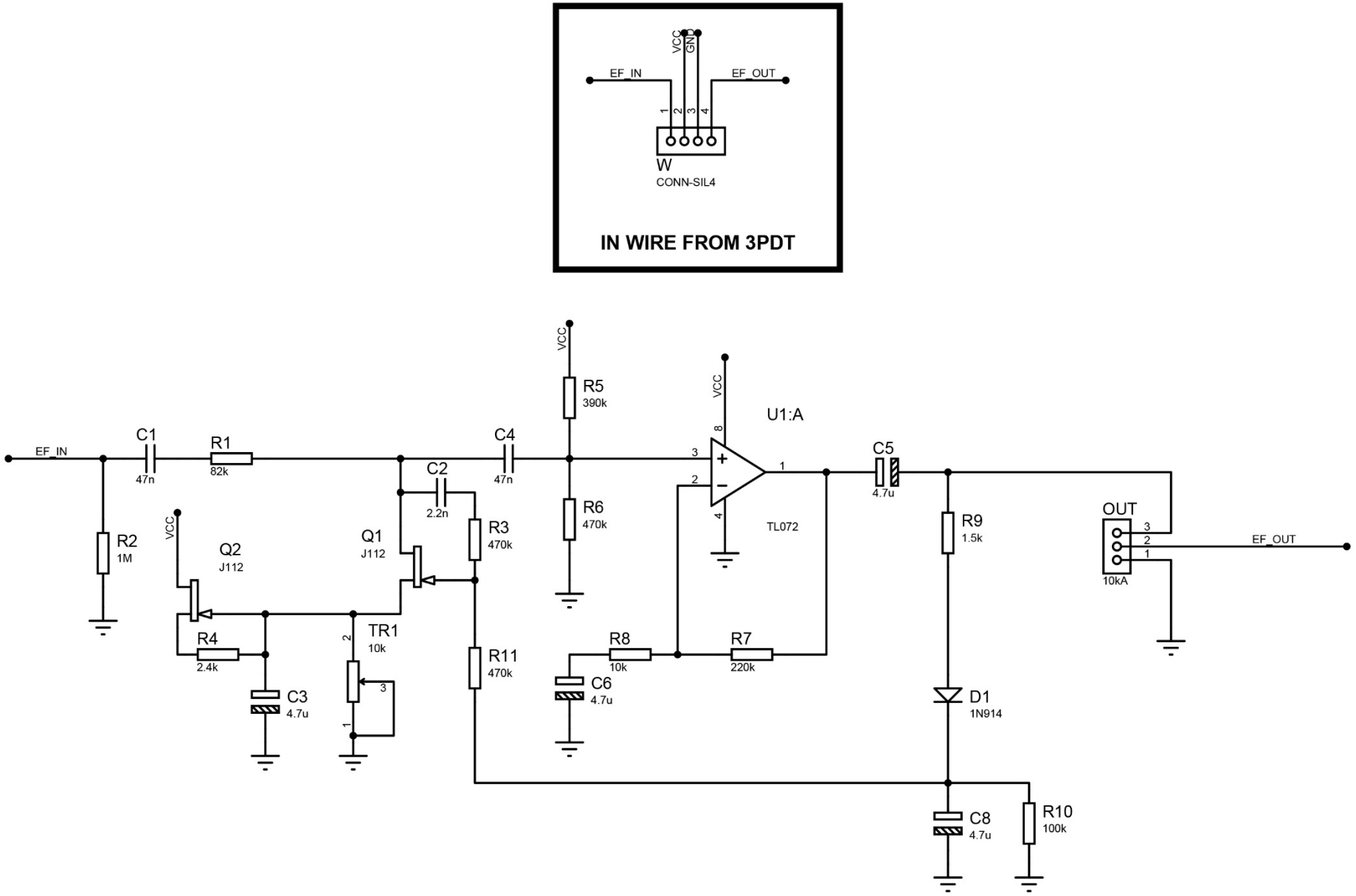
6- With the kit we include plastic PCB supports with an adhesive bottom. You can use them to anchor the PCB to your enclosure for a better stability. Just insert the PCB support tip into the 3.5mm holes and remove the adhesive protective film.



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


VCC
GND
EF_IN
EF_OUT
1
2
3
4
W
CONN-SIL4
IN WIRE FROM 3PDT
EF_IN
C1
47n
R1
82k
R2
1M
C2
2.2n
C4
47n
R5
390k
R6
470k
R3
470k
R11
470k
VCC
Q2
J112
Q1
J112
R4
2.4k
C3
4.7u
TR1
10k
U1:A
TL072
R8
10k
R7
220k
C6
4.7u
C5
4.7u
R9
1.5k
D1
1N914
C8
4.7u
R10
100k
OUT
10kA
EF_OUT