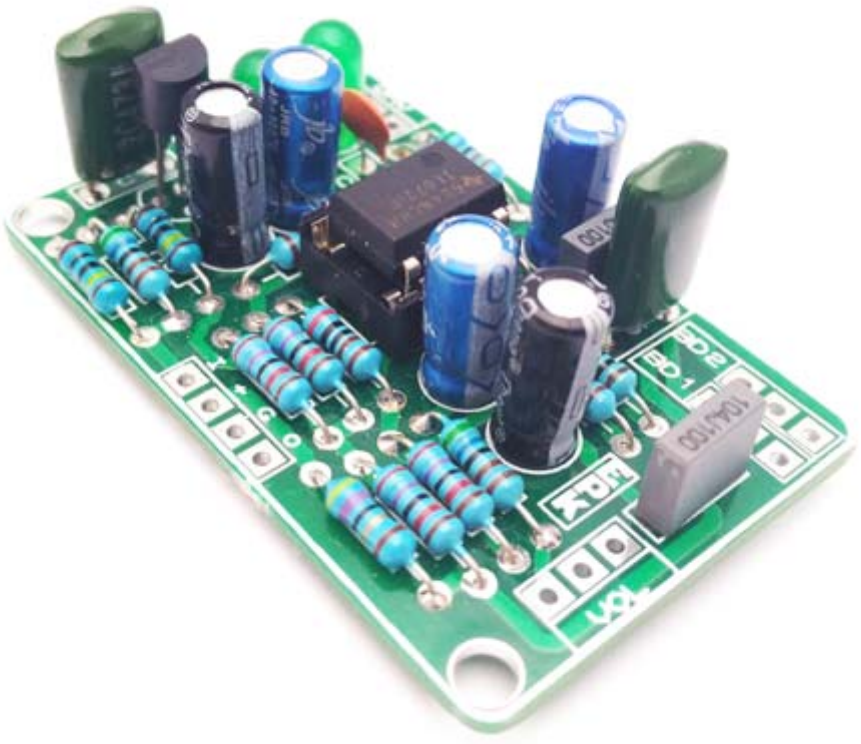
Green Little Gem Kit
Building Manual



Effect Pedal Kits:
Green Little Gem

While it's a very **modern overdrive**, the **Green Little Gem Overdrive** Kit sounds and reacts like a warm vintage effect pedal. Imagine playing through an overdriven tube amp with a lot of body: this is what you'll get with the Green Little Gem Overdrive!

Soundwise, the **Green Little Gem** has a very low compression along with a high headroom, making it perfect for **blues and rock tones**. It also works great with amps and other effect pedals!

– *Drive* sets the gain level. This is a very dynamic control that lets you set the Green Little Gem from almost a booster to a high gain overdrive

– *Body* sets the medium midhump up to the middle position, and allows for low mid/treble boost from the middle position on

BOM (1/2)

Resistors (17)			
2	R1, R3	1M	
4	R2, R5, R7, R14	5.6k	
1	R4	10k	
4	R6, R11, R16, R17	27k	
1	R8	1k	
3	R9, R10, R12	2k	
1	R13	470	
1	R15	47	

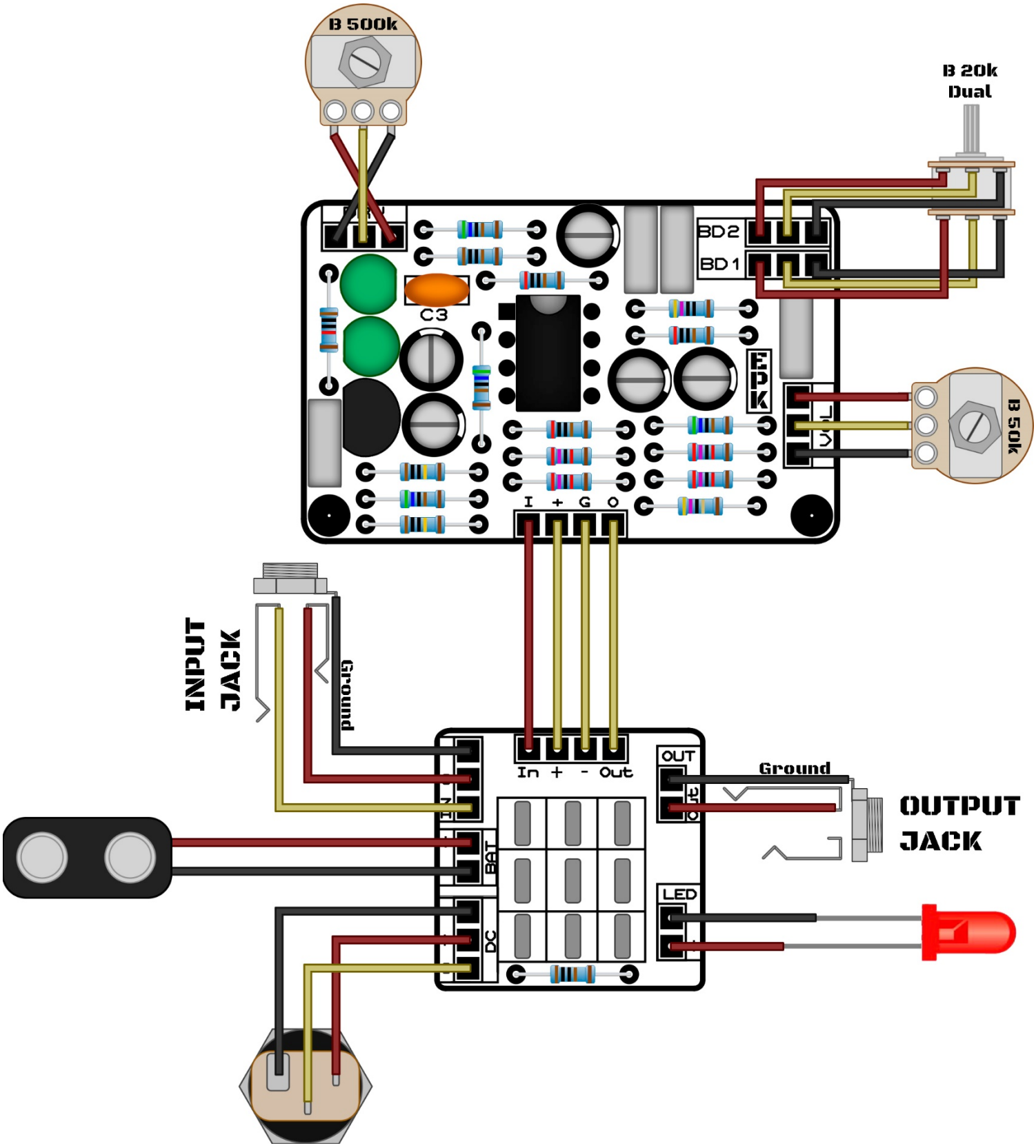
Capacitors (10)		
2	C1, C7	47n
3	C2, C4, C8	1u (electrolytic)
1	C3	100p (ceramic)
1	C5	220n
1	C6	100n
2	C9, C10	100u (electrolytic)

BOM (2/2)

Diodes, Transistors and ICs		
1	U1	TL072
1	Q1	J113
2	L1, L2	Green 3mm Led

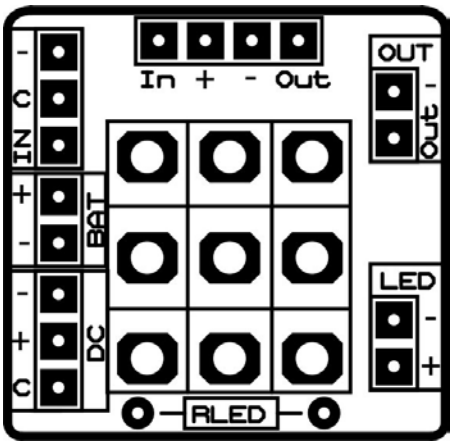
Generic Parts and Potentiometers		
1	Battery clip	
1	DC Jack	
1	RLED	1k LED resistor
1	LED Bezel	
1	3PDT	
2	IN, OUT	6.35mm Jacks
1	20kB Linear Dual Potentiometer	BD1, BD2
1	500kB Linear Potentiometer	DRV
1	50kB Linear Potentiometer	VOL

Component Placement

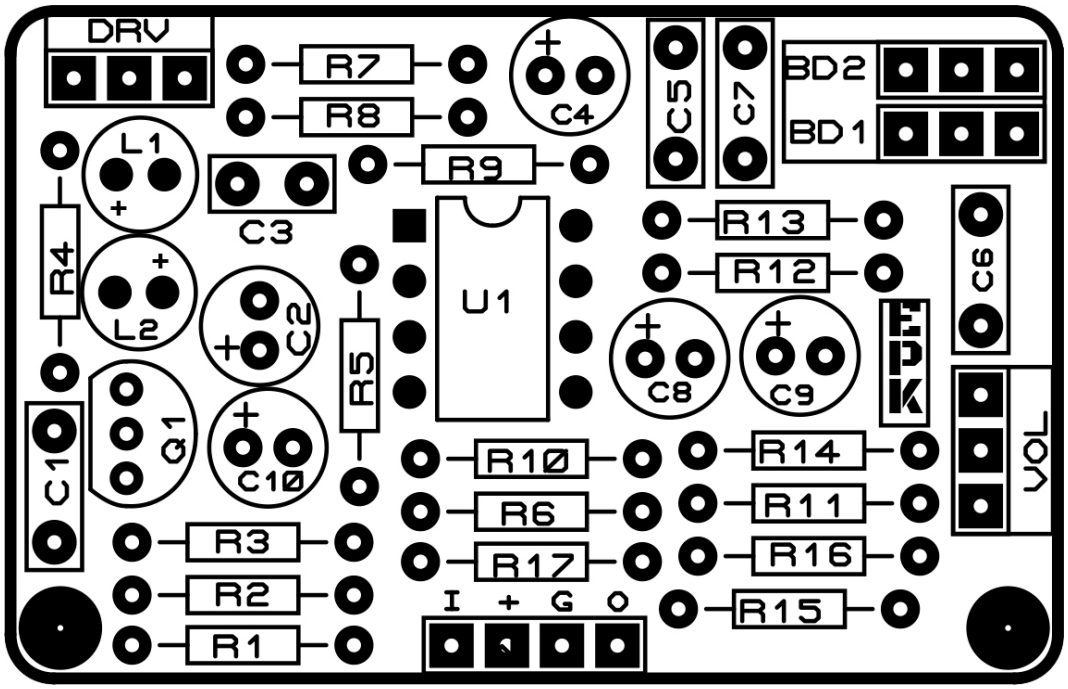


Board Layouts

3PDT PCB

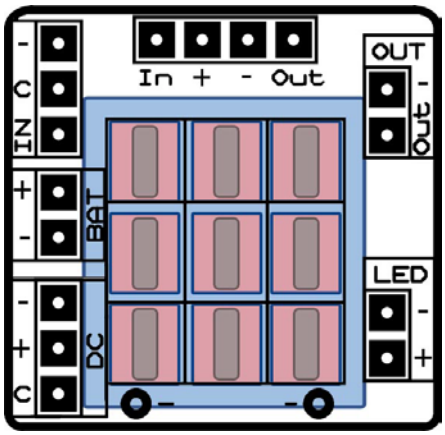


Effect PCB



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:

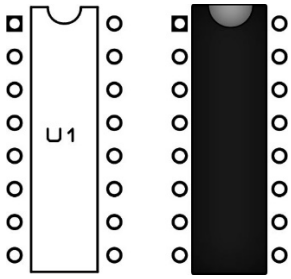
3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as posible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.

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…).

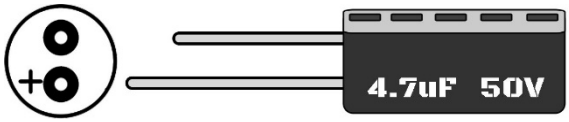
Building Tips

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

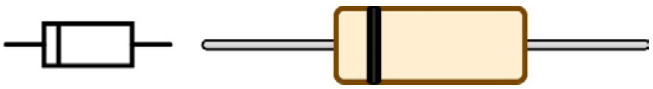
- **ICs** (they have a small dot or indication that must fit the indication in the board



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

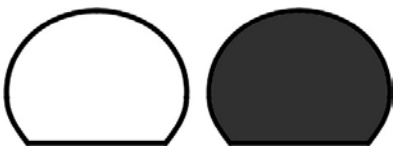


- **Diodes** (check for the mark and make it fit with the one in the PCB):



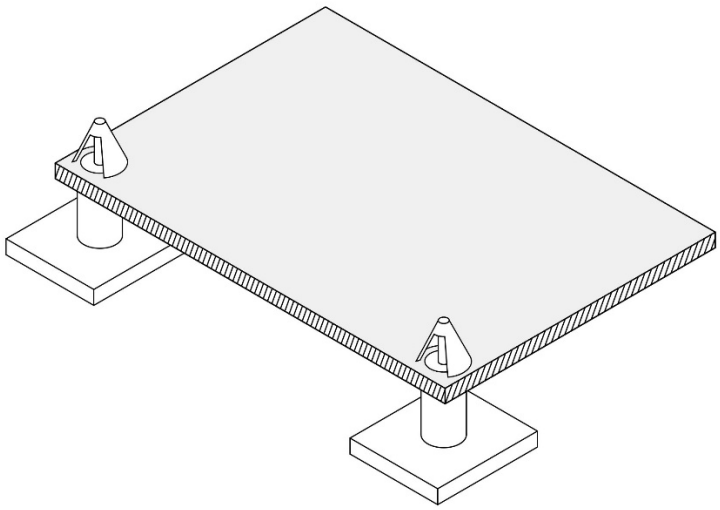
- **Leds** (longer pin is connected to the "+" hole)

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



Building Tips

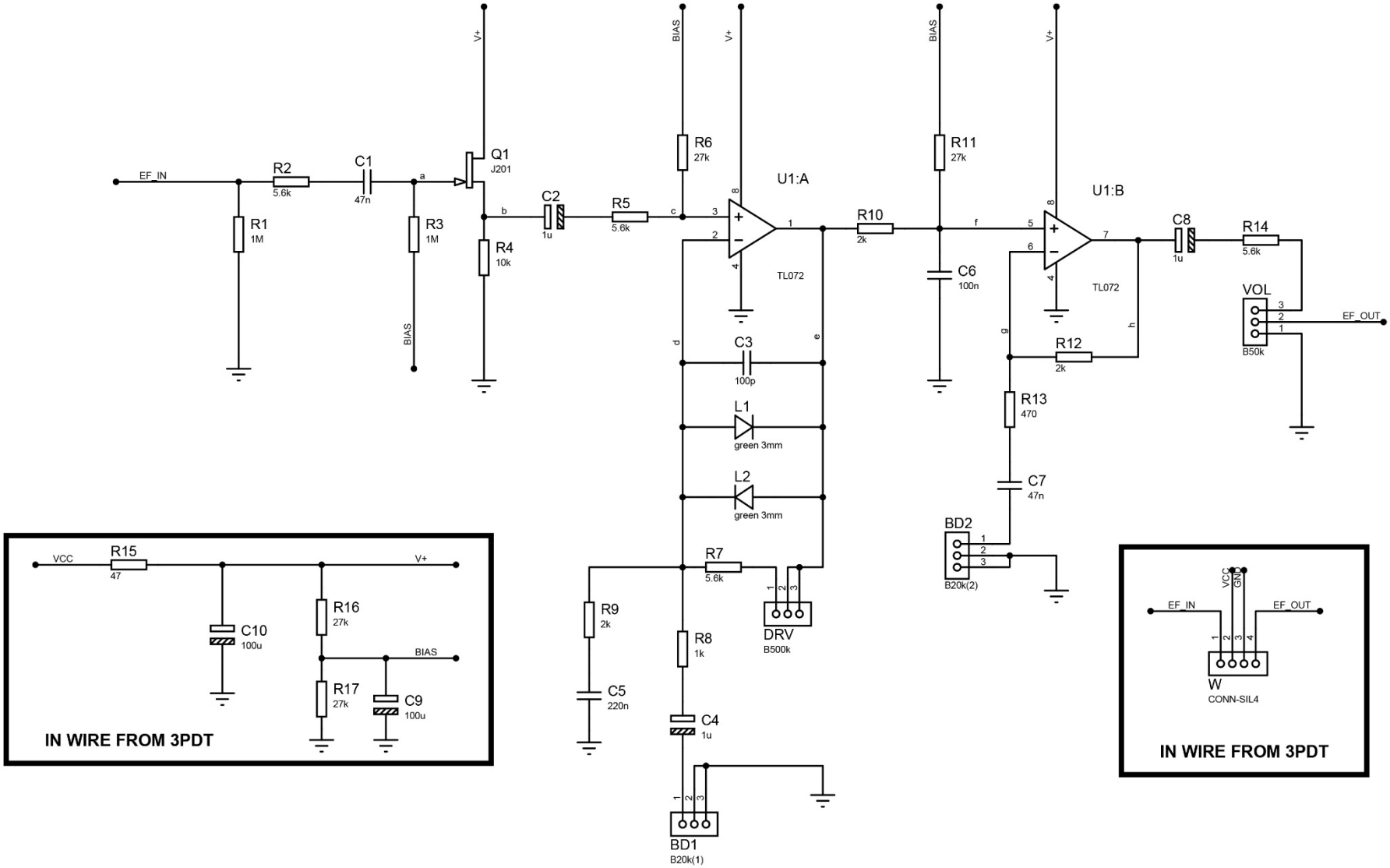
6- With the kit we include plastic PCB supports with an adhesive bottom. You can use them to anchor the PCB to your enclosure for a better stability. Just insert the PCB support tip into the 3.5mm holes and remove the adhesive protective film.



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


EF_IN
R2
5.6k
C1
47n
R1
1M
R3
1M
BIAS
Q1
J201
V+
C2
1u
R5
5.6k
R6
27k
BIAS
V+
U1:A
TL072
R10
2k
R11
27k
BIAS
V+
U1:B
TL072
C6
100n
C8
1u
R14
5.6k
VOL
B50k
EF_OUT
C3
100p
L1
green 3mm
L2
green 3mm
R12
2k
R13
470
C7
47n
BD2
B20k(2)
R7
5.6k
R9
2k
R8
1k
C5
220n
C4
1u
DRV
B500k
BD1
B20k(1)
VCC
R15
47
V+
C10
100u
R16
27k
BIAS
R17
27k
C9
100u
IN WIRE FROM 3PDT
EF_IN
VCC
GND
EF_OUT
W
CONN-SIL4
IN WIRE FROM 3PDT