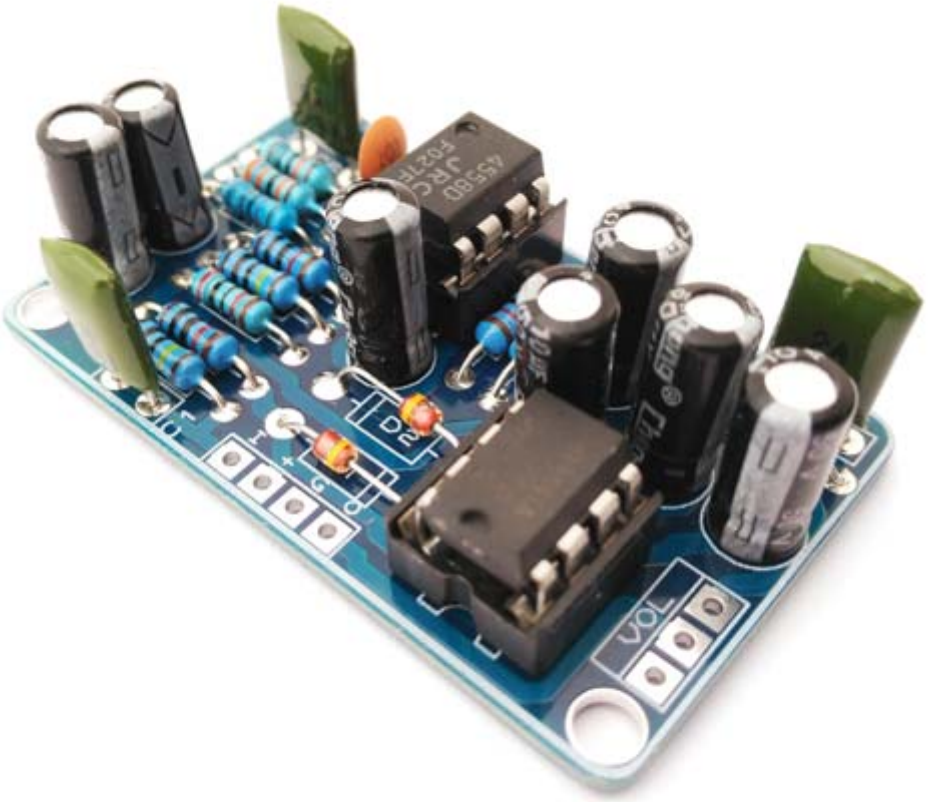
27V Super Boost Kit
Building Manual



Effect Pedal Kits:
27V Super Boost

The **27V Super Boost Kit** is the cleanest booster you'll ever find! Why? As most of the boost effect pedals out there, the **27V Super Boost Kit** uses a standard 9V power supply. But the magic happens internally: thanks to its charge pump IC, the **27V Super Boost** circuit takes the 9V supply and transforms it into a 27V supply.

What does that mean? Basically that you can throw input signals **three times bigger** than you would with a standard booster and the output will be completely undistorted.

– The Treble control lets you cut or boost frequencies above 3.3kHz.

– The Volume potentiometer acts as a master volume control

BOM (1/2)

Resistors (12)			
2	R1, R3	1M	
4	R2, R4, R9, R11	10k	
1	R5	20k	
1	R6	330k	
1	R7	100k	
1	R8	18k	
1	R10	2.2k	
1	R12	1k	

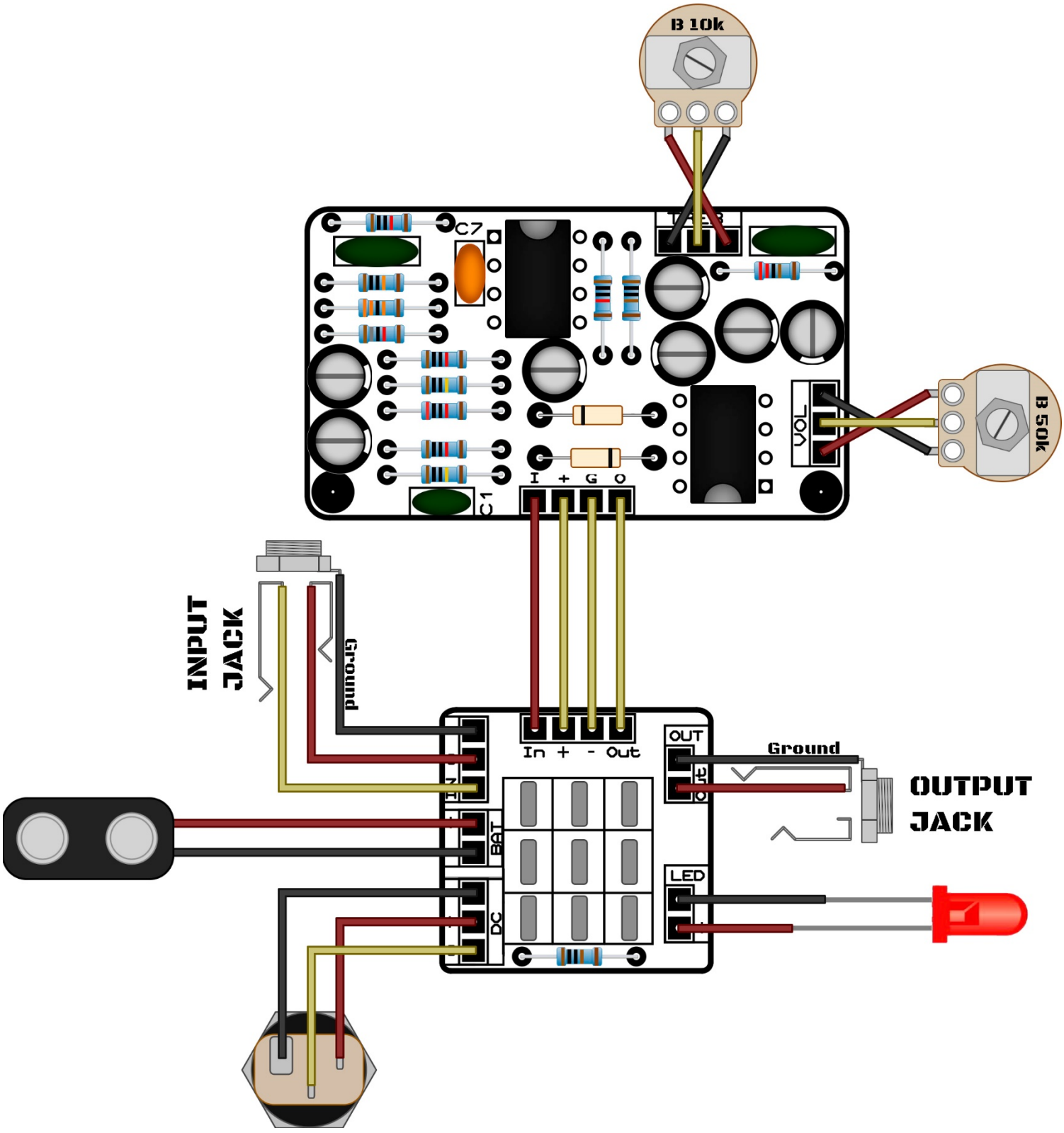
Capacitors (11)		
1	C1	10n
6	C2, C3, C4, C5, C10, C11	10u (electrolytic)
2	C6, C9	22n
1	C7	100p (ceramic)
1	C8	4.7u (electrolytic)

BOM (2/2)

Diodes, Transistors and ICs		
1	U1	TL072
1	U2	ICL7660/MAX1044
2	D1, D2	1N5818

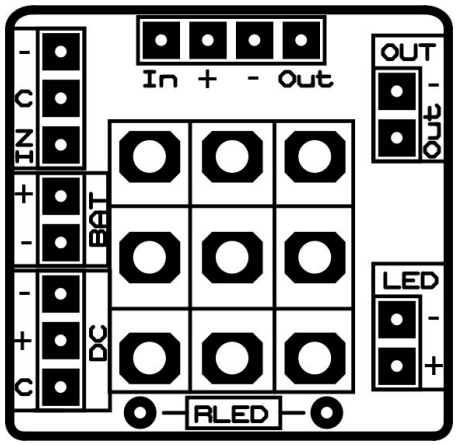
Generic Parts and Potentiometers		
1	Battery clip	
1	DC Jack	
1	RLED	1k LED resistor
1	LED Bezel	
1	3PDT	
2	IN, OUT	6.35mm Jacks
1	10kB Linear Potentiometer	Treb
1	50kB Linear Potentiometer	Vol

Component Placement

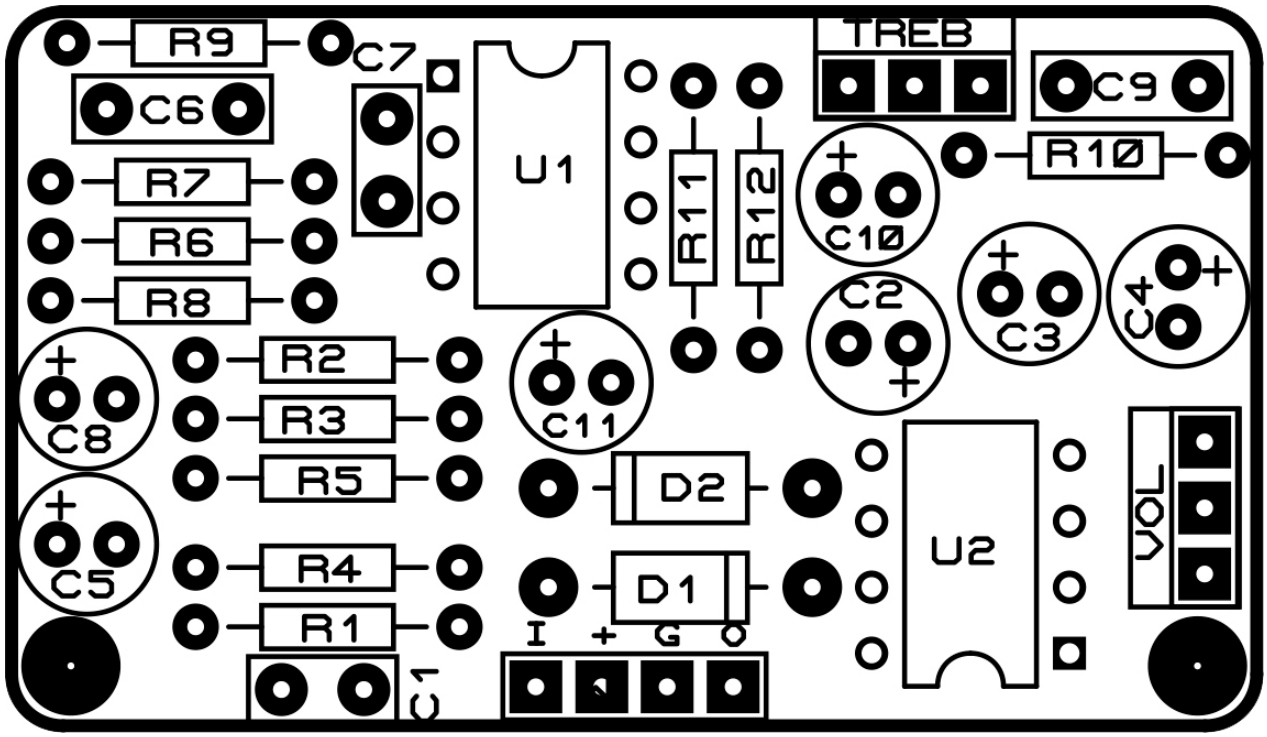


Board Layouts

3PDT PCB

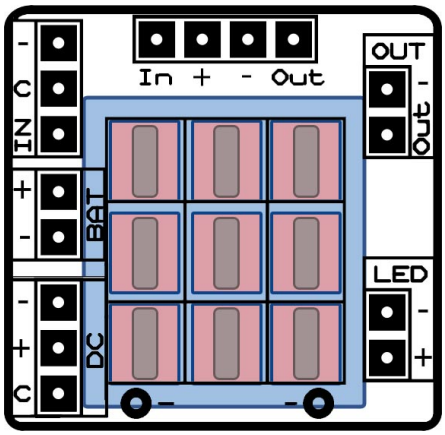


Effect PCB



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:

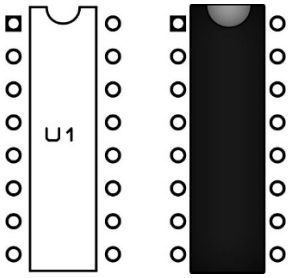
3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as posible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.

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…).

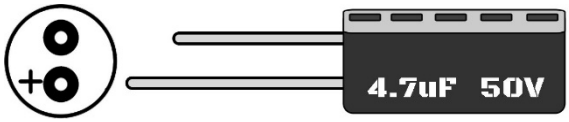
Building Tips

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

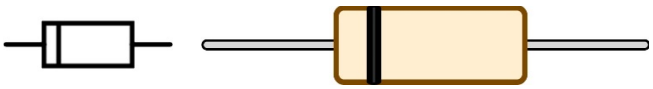
- **ICs** (they have a small dot or indication that must fit the indication in the board



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

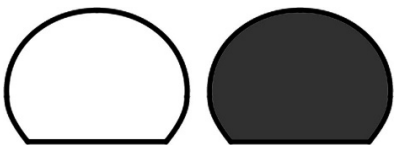


- **Diodes** (check for the mark and make it fit with the one in the PCB):



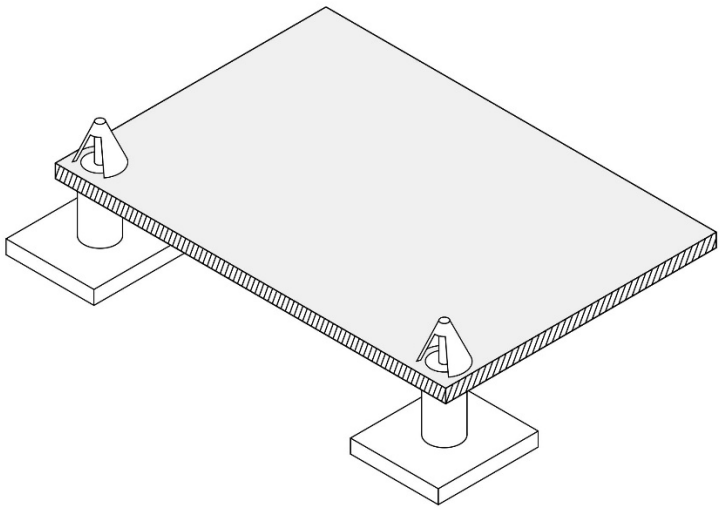
- **Leds** (longer pin is connected to the "+" hole)

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



Building Tips

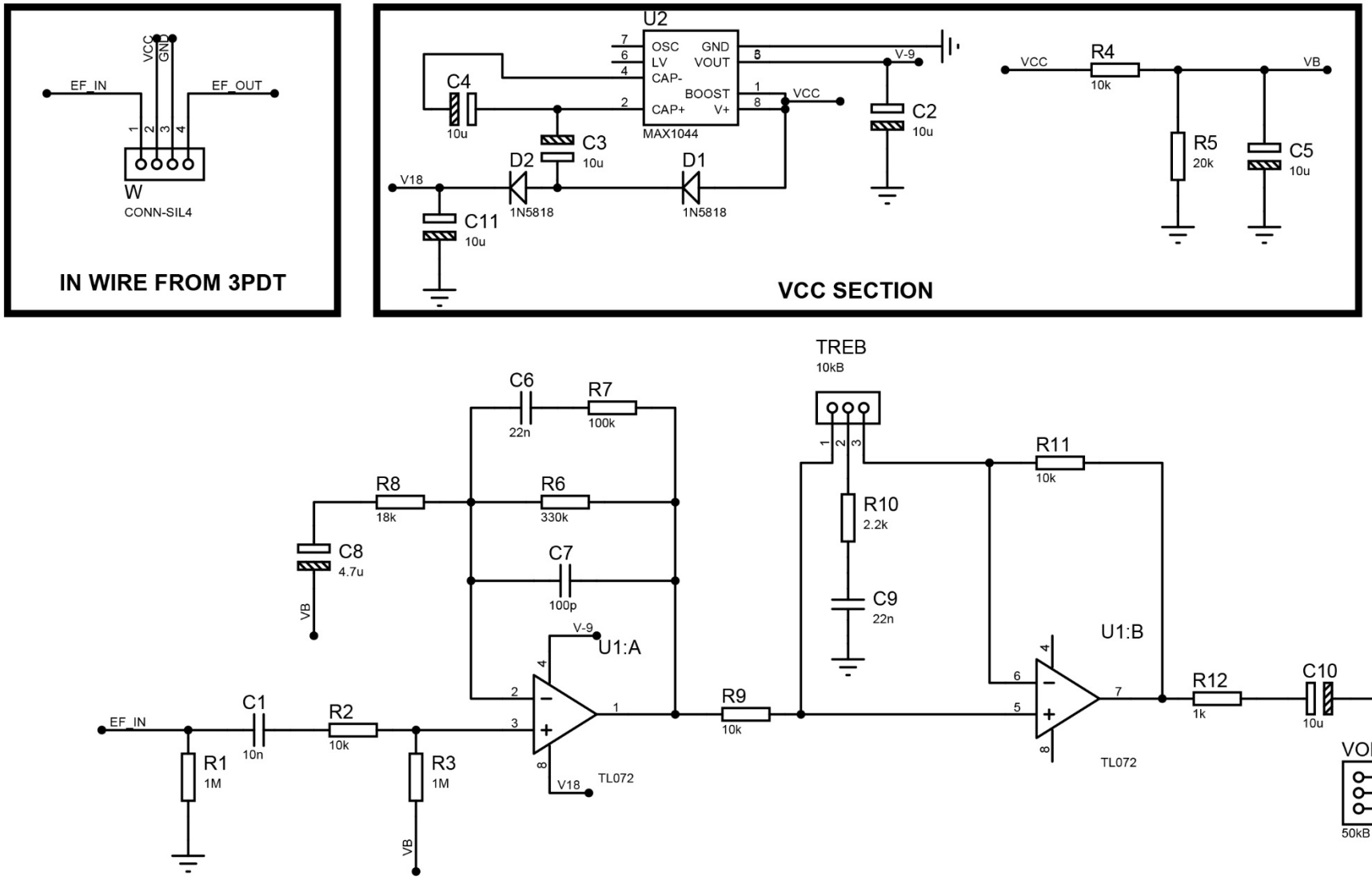
6- With the kit we include plastic PCB supports with an adhesive bottom. You can use them to anchor the PCB to your enclosure for a better stability. Just insert the PCB support tip into the 3.5mm holes and remove the adhesive protective film.



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
EF_OUT
VCC
GND
W
CONN-SIL4
IN WIRE FROM 3PDT
U2
OSC
LV
CAP-
CAP+
GND
VOUT
BOOST
V+
MAX1044
C4
10u
C3
10u
C2
10u
C11
10u
D2
1N5818
D1
1N5818
V18
V-9
VCC
VCC SECTION
R4
10k
R5
20k
C5
10u
VB
TREB
10kB
C6
22n
R7
100k
R8
18k
R6
330k
C7
100p
C8
4.7u
R11
10k
R10
2.2k
C9
22n
U1:A
U1:B
TL072
R9
10k
R12
1k
C10
10u
VOL
50kB
C1
10n
R2
10k
R1
1M
R3
1M