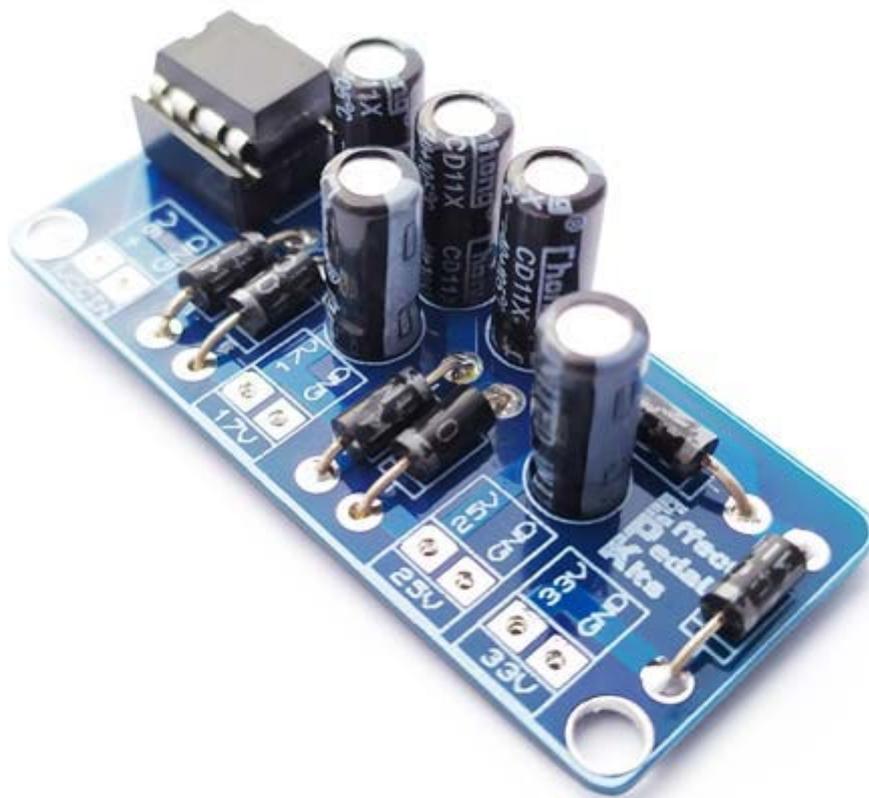




# Triple Step Power Supply Building Manual



# Effect Pedal Kits: Triple Step Power Supply

This 3-step power supply uses an ICL7660 charge pump and creates three available output voltages from a single standard 9V power supply: +17V, +25V and +33V.

Why would you want to use a higher input voltage for your effect pedals? This 3-step power supply is specially useful when used with boosters, overdrive and distortion pedals:

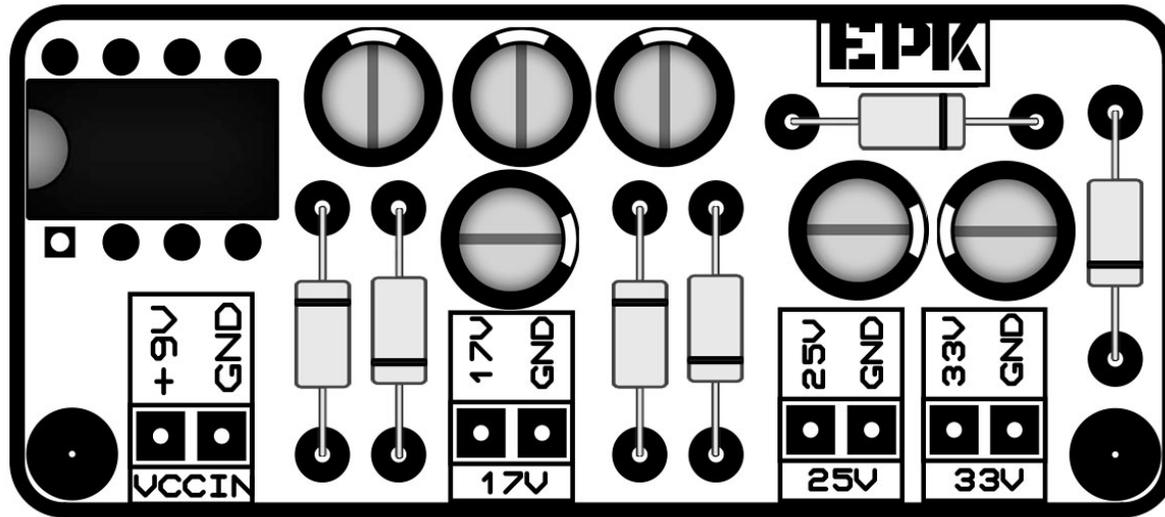
- In clean boosters, when the input signal is too loud, the pedal starts distorting it instead of just raising the volume. With a higher power supply you can apply louder input signals and the booster will amplify them without distortion
- In overdrives, distortion, fuzzes... a higher power supply means that the pedal will have a higher headroom

Note: always be careful and check that your pedals are compatible with more than 9V, otherwise they might get damaged!

# BOM

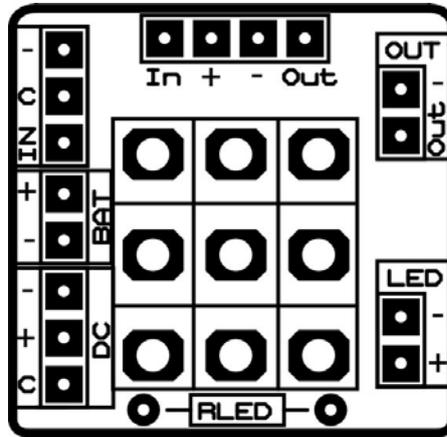
Capacitors (6)				Diodes, Transistors and ICs		
6	C1, C2, C3, C4, C5, C6	10u	(electrolytic)	1	U1	ICL7660 / MAX1044
				6	D1, D2, D3, D4, D5, D6	1N4001

# Component Placement

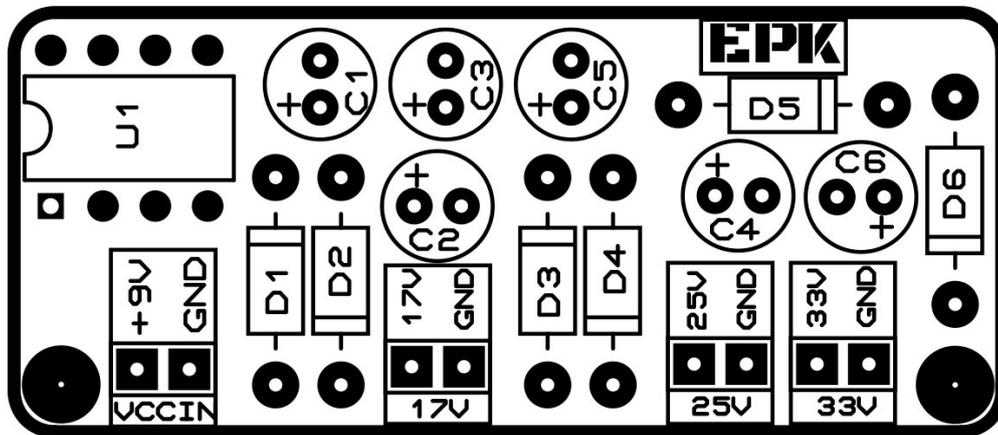


# Board Layouts

## 3PDT PCB

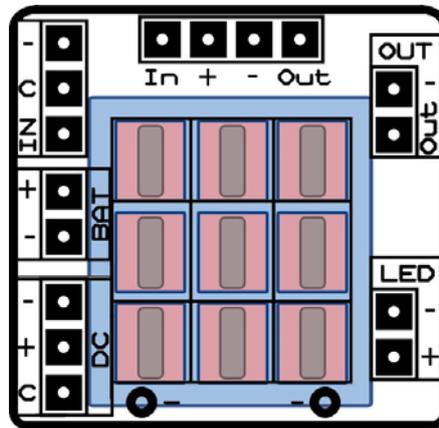


## Effect PCB



# 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:

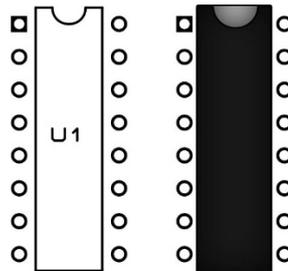


- 3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as possible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.
- 4- If having troubles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

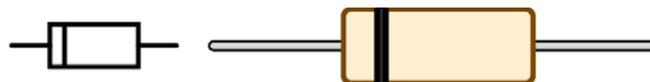
- **ICs** (they have a small dot or indication that must fit the indication in the board)



- **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)

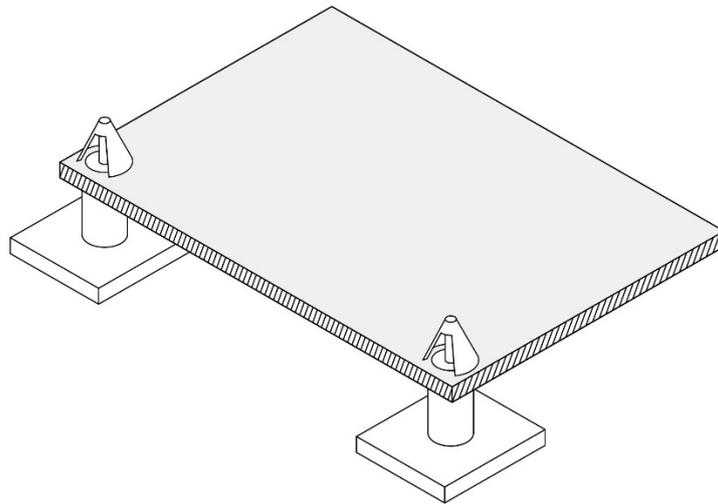


- **Transistors** (inserted to fit the drawing in the PCB)



# **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

