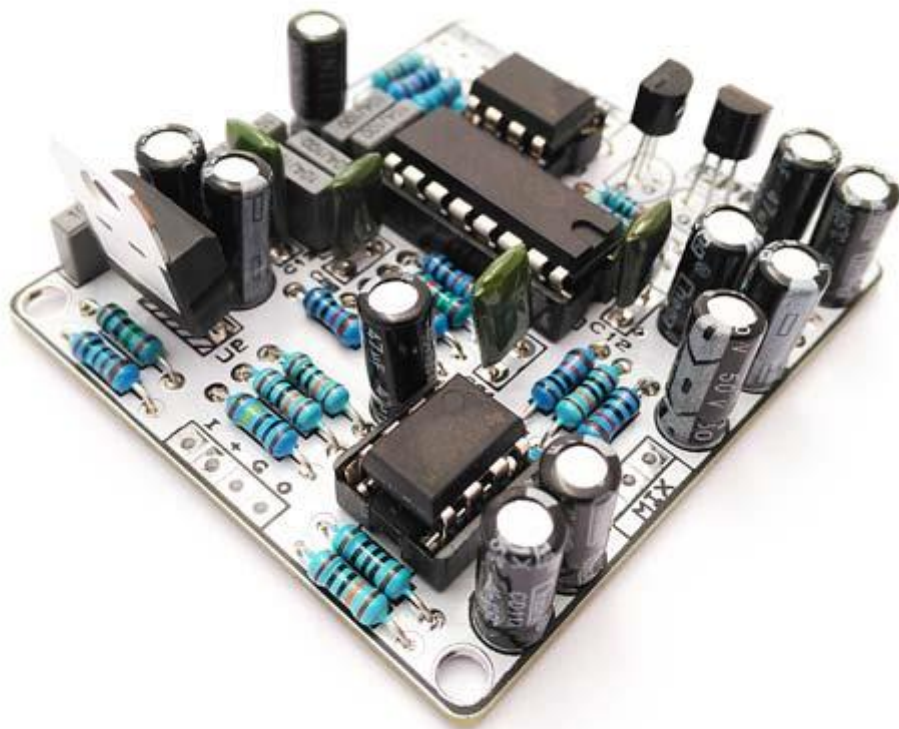


# **Wring Chorulator Kit Building Manual**















# Effect Pedal Kits: Wring Chorulator

The **Wring Chorulator** is a modern chorus effect that works with a PT2399 IC. Unlike BBD chips, this audio processor doesn't allow for very short delay times, and this results in a **thick chorus tone**. Besides thanks to the versatility of the PT2399, the Wring Chorulator can also deliver a lot of other side effects, like **pitch bend** and **ring modulation**, so it's a kit worth building if you want to bring new tonal possibilities to your pedalboard!

The Wring Chorulator has the following potentiometers:

- The **wet/dry switch** is an important feature. In the first position the Wet and Dry signals are mixed equally, creating the standard chorus sound. In the second position, only the Wet signal exits the pedal. This allows for more extreme pitchbend flavours.
- The **Rate potentiometer** varies the speed of the LFO between 1Hz and 10Hz.
- **Depth** sets how pronounced is the effect

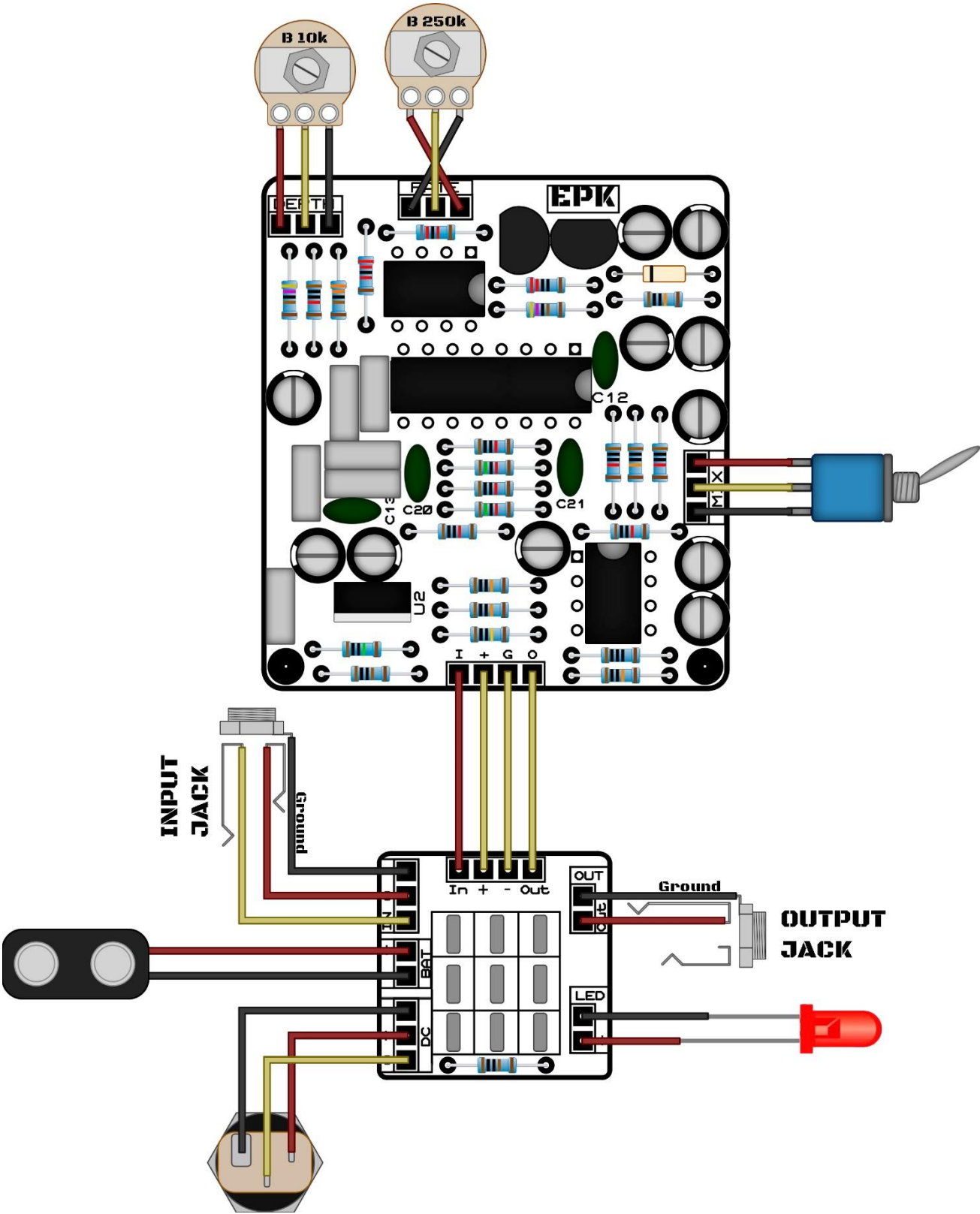
# BOM (1/2)

Resistors (24)				Capacitors (21)		
1	R1	1k		6	C1, C8, C16, C17, C18, C19	100n
1	R2	10M		5	C2, C3, C6, C9, C14	10u (electrolytic)
1	R3	1M		3	C4, C5, C10	1u (electrolytic)
5	R4, R5, R8, R10, R18	100k		3	C7, C11, C15	47u (electrolytic)
7	R6, R9, R11, R15, R21, R22, R23	10k		2	C12, C20	2.2n
1	R7	100		2	C13, C21	10n
1	R12	82k				
1	R13	22k				
1	R14	3.3k				
2	R16, R19	4.7k				
1	R17	220				
2	R20, R24	15k				

# BOM (2/2)

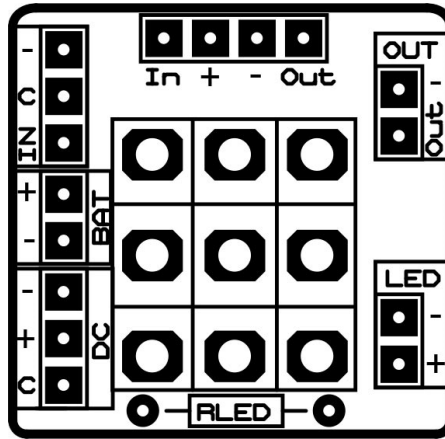
Diodes, Transistors and ICs			Generic Parts and Potentiometers		
2	U1, U3	TL072	1	Battery clip	
1	U2	7805	1	DC Jack	
1	U4	PT2399	1	RLED	1k LED resistor
2	Q1, Q2	BC337	1	LED Bezel	
1	D1	1N914 / 1N4148	1	3PDT	
			2	IN, OUT	6.35mm Jacks
			1	Depth	10kB
			1	Mix	SPDT
			1	Rate	250kB

# Component Placement

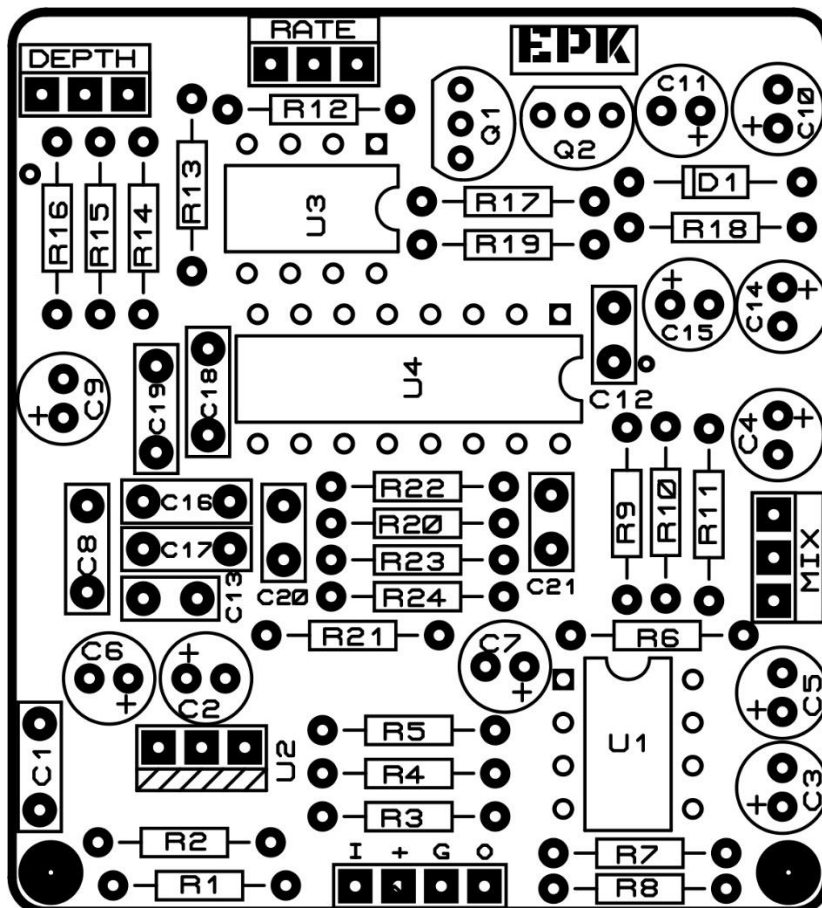


# Board Layouts

## 3PDT PCB

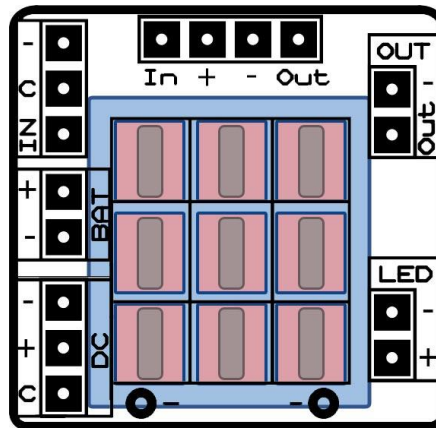


## Effect PCB



# 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:

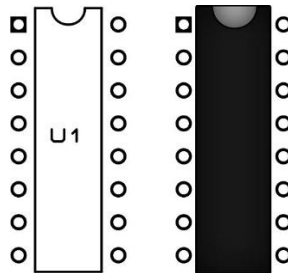


- 3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as possible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.
- 4- If having troubles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

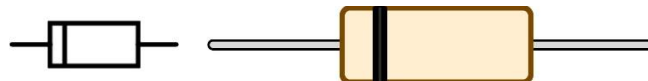
- **ICs** (they have a small dot or indication that must fit the indication in the board)



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



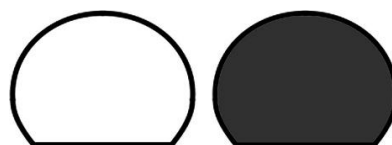
- **Diodes** (check for the mark and make it fit with the one in the PCB):



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



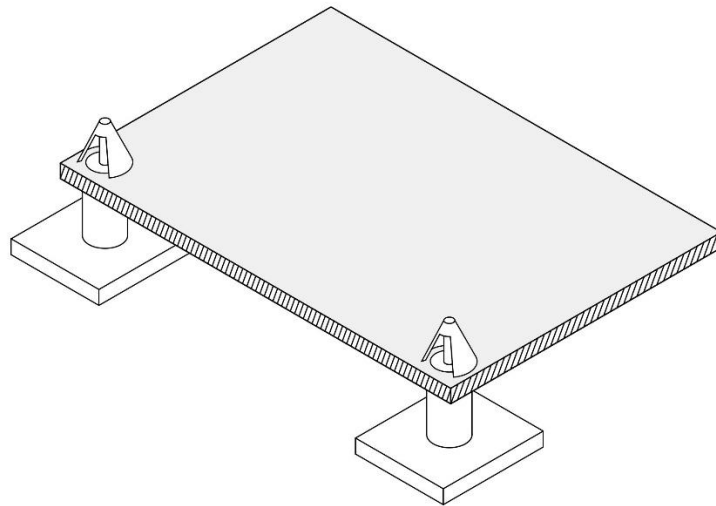
- **Transistors** (inserted to fit the drawing in the PCB)





# **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

