

# Harmonic Percolator

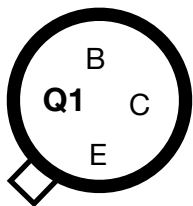
## Components

<b>R1</b>	750K	<b>C1</b>	100pF Silver Mica	<b>Q1</b>	2N404
<b>R2</b>	220K	<b>C2</b>	47nF Film	<b>Q2</b>	2N3565 (or 2N3904)
<b>R3</b>	91K	<b>C3</b>	100nF Ceramic	<b>D1,D2</b>	Germanium (1N34A, 1N60 etc)
<b>R4</b>	20K	<b>C4</b>	47uF Tanatalum	<b>HARM</b>	100K Log
<b>R5</b>	4K7	<b>C5</b>	100nF Ceramic	<b>BAL</b>	50K Log
		<b>C6</b>	47uF Tanatalum		
		<b>C7</b>	2.2uF Electrolytic		
		<b>C8</b>	1.5nF Ceramic/Film		

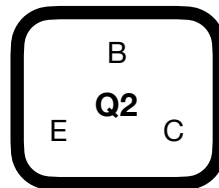
C1 was originally a silver mica capacitor but these can be quite expensive, but a ceramic capacitor will work as well. Electrolytic capacitors can be used for C4 and C6.

The original transistors can be hard to find as they are no longer manufactured, but a common replacement for Q2 is the popular BC108 or 2N3904. For the germanium Q1 you can try a different low gain (40-60 hfe) PNP. I suggest socketing these so you can swap them out easily if you want to test a few different ones. **Check the datasheet online for your transistors for the pinouts!**

Please note the pinout for the transistors on the PCB is:



**B:** Base  
**C:** Collector  
**E:** Emitter

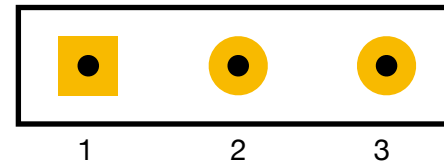


## Board Connections

The PCB connections are labelled as the following:

I - Input, O - Output, V - 9V DC in, G - Ground

Potentiometers are connected from pin 1 to the square pad on the PCB. This board was designed so you can use right-angle board mount potentiometers on it if desired, otherwise you will need to solder wired from the pads to the correct pin/lug. Jack sleeves and DC centre pin should be connected to ground. V, LED + should be connected to the positive pin of the DC connector.



**3PDT Footswitch**

