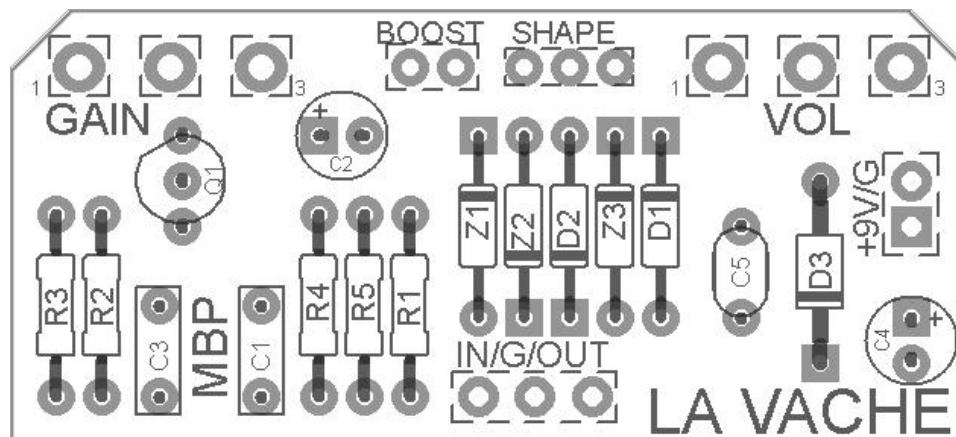
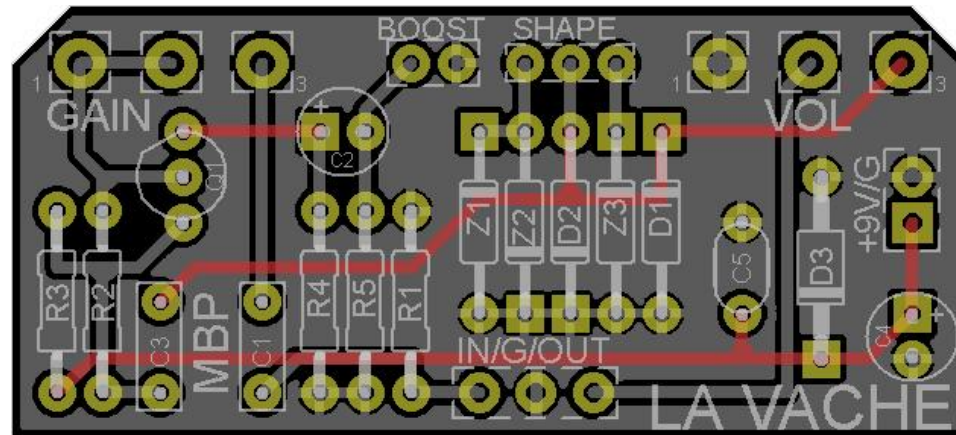


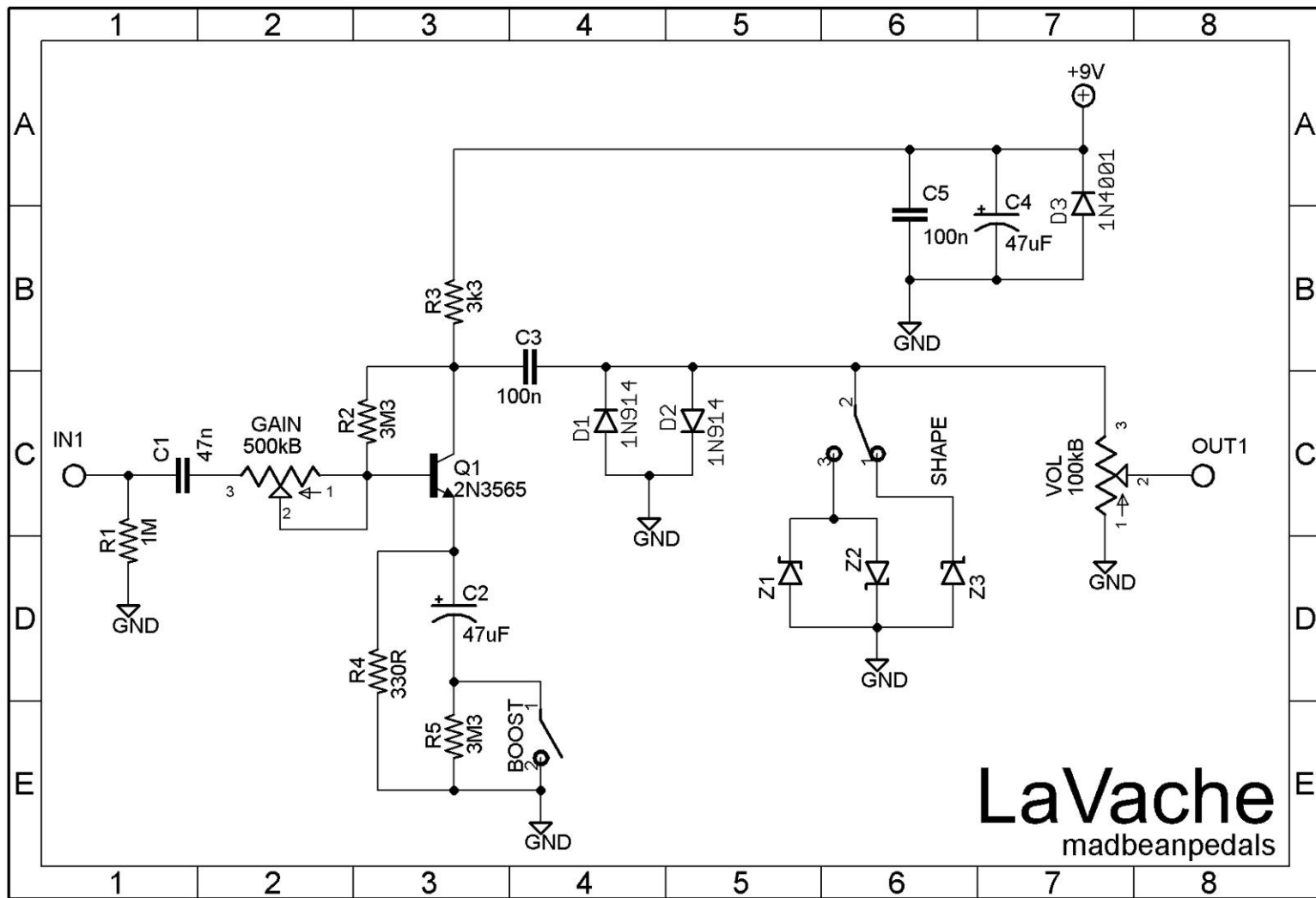
# LA VACHE

01.2012 madbeanpedals

PCB Dimensions: 2.1"W x 0.95"H



Resistors		Diodes	
R1	1M	D1, D2	1N914
R2	3M3	D3	1N4001
R3	3k3	Z1 - Z3	BAT46
R4	330R	<b>Transistor</b>	
R5	3M3	Q1	2N3565
Caps		Switch	
C1	47n	SHAPE	On-Off-On
C2	47uF	BOOST	On/On
C3	100n	<b>Pots</b>	
C4	47uF	VOL	100kB
C5	100n	GAIN	500kB



## What Is It?

The **LaVache** is a modified Lovepedal® Les Lius™ which is modeled after the well-worn Electra Distortion. Improvements have been made in the form of a simplified boost mechanism and a re-configured gain pot. The new gain pot lets you control the overdrive amount in both the boosted and non-boosted modes (a feature not available with the Les Lius). Lastly, the stock 2n5088 transistor has been replaced by the 2N3565. This allows much greater single note clarity without compromising the overall tone or distortion amount.

## Controls

**GAIN:** Sets the overdrive in both boosted and non-boosted modes.

**VOL:** A passive volume control.

**BOOST:** This switch adds gain by putting a large capacitor in parallel with the emitter resistor.

**SHAPE:** This switch offers three choices of clipping. The middle position is **D1** and **D2**. The left position adds **Z1** and **Z2** in parallel to those and the right position adds **Z3** in parallel.

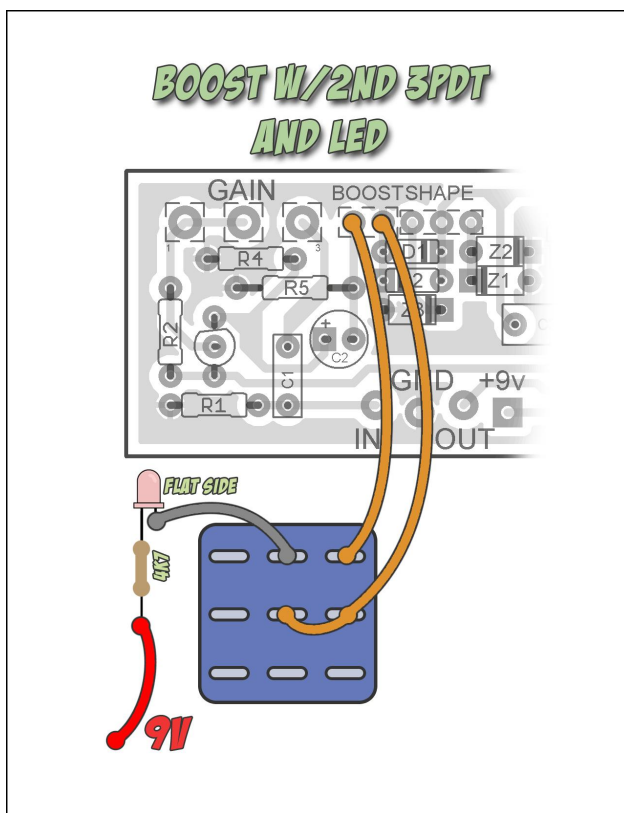
## Notes

The stock transistor in the Les Lius™ is the 2n5088. The suggested replacement (2n3565) was found to be more responsive to dynamics and pick attack and is the best choice for this circuit.

BAT41 also work well for Z1-Z3. Note that the middle and right positions of the SHAPE switch are not a great deal different. You can substitute a different diode for Z3 for more variety.

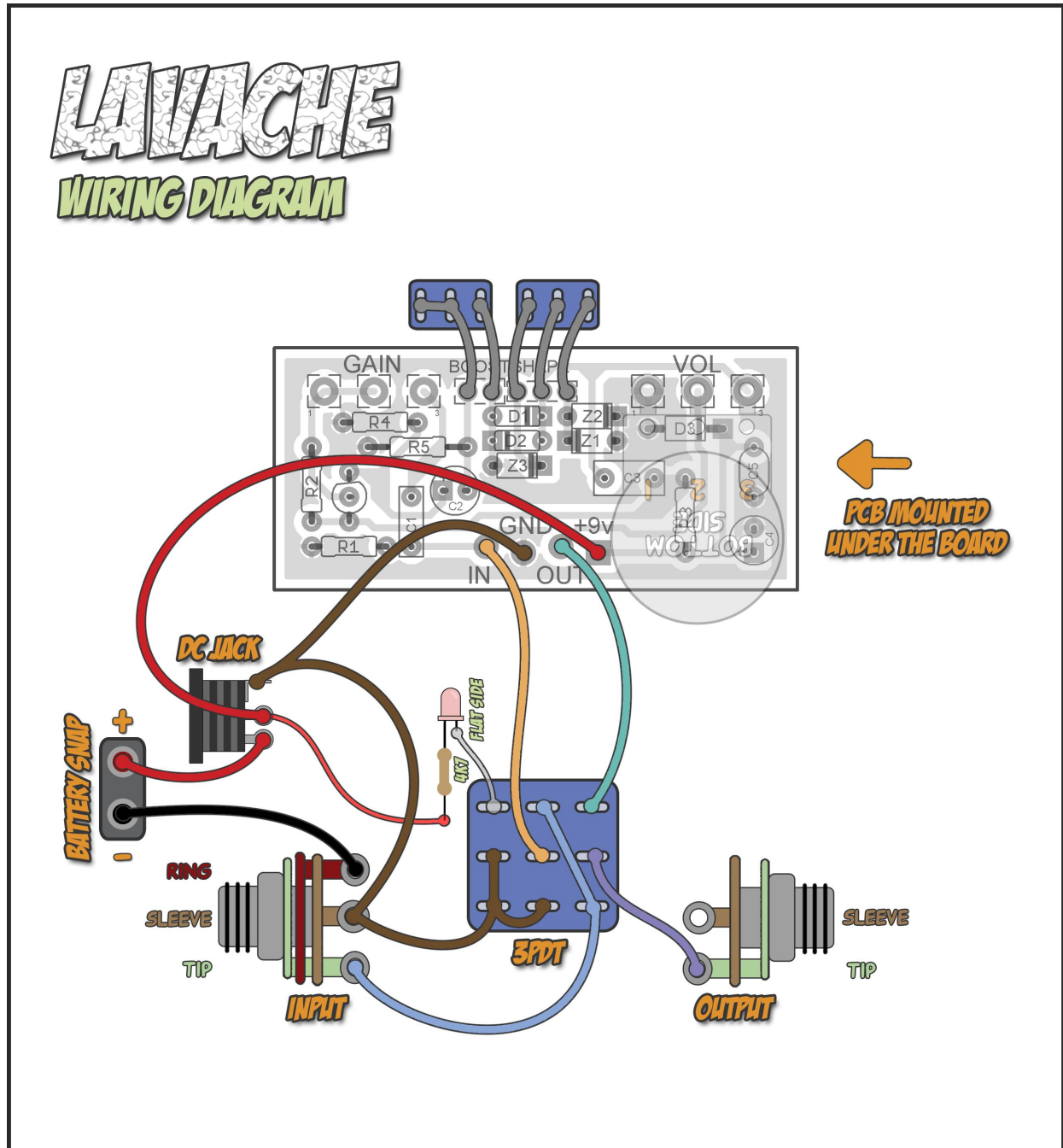
You can use 16mm, short pin PCB mounted pots for this build soldered underneath the board.

<http://www.smallbearelec.com/Detail.bok?no=692>



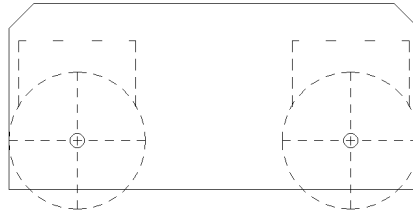
## Wiring

This wiring diagram is for the single sided, etching layout but works exactly the same for the new, fabricated board. The only difference is in the positions of components and pads.

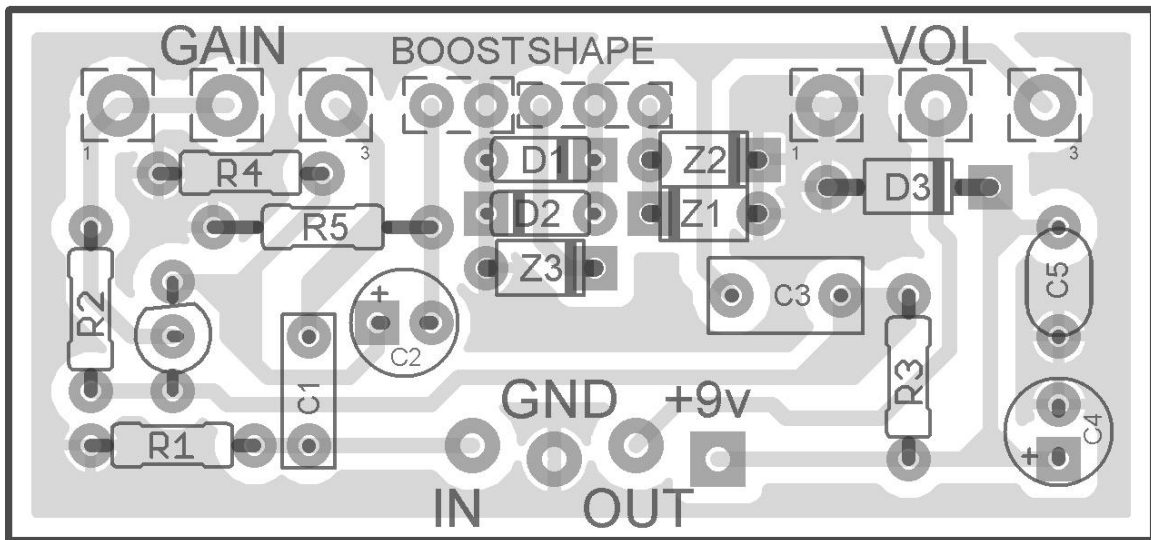


## Drill markers for PCB mounted pots – Fabbed PCB

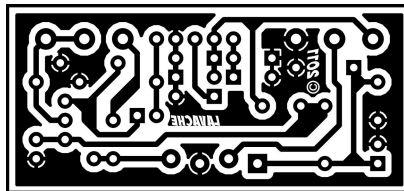
(actual size)



## Single Sided Layout



This PCB will fit in a 1590B enclosure  
2.115"W x .99"H



## Licensing

The user may utilize a purchased **LaVache** PCB from madbeanpedals for DIY/non-commercial purposes. You may not use the artwork to sell your own version of the PCB design or as part of a “kit” or similar commercial product.

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