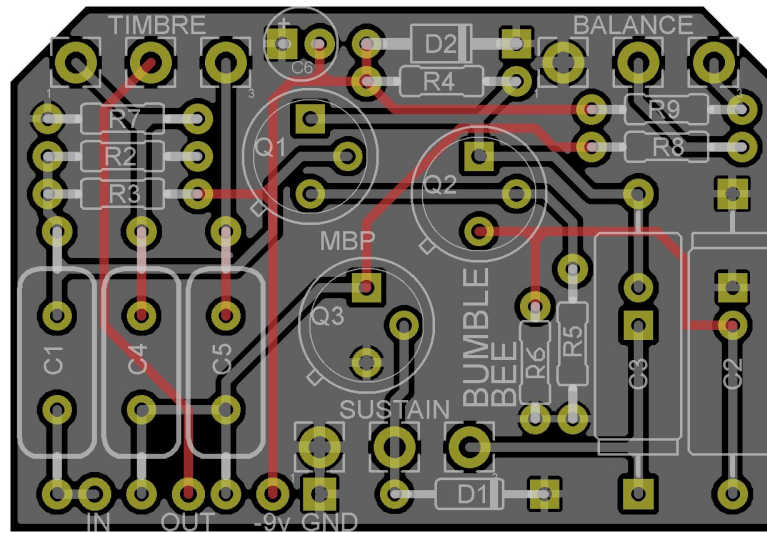
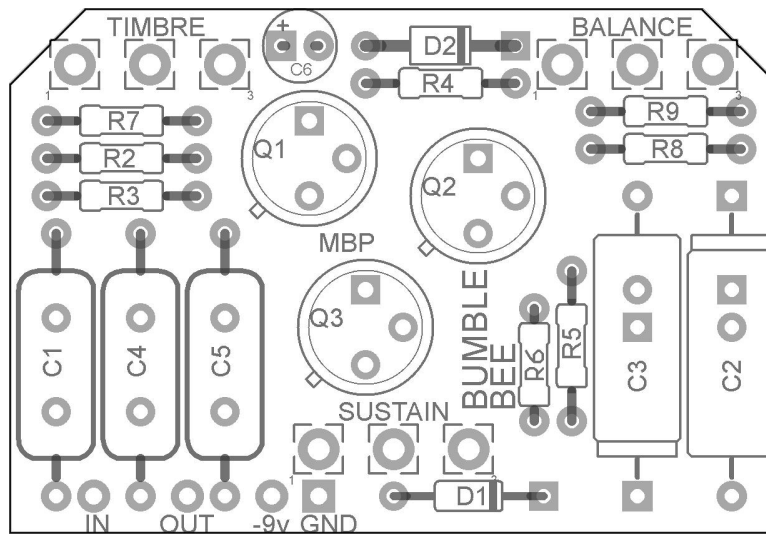


# BUMBLEBEE

11.2011 madbeanpedals

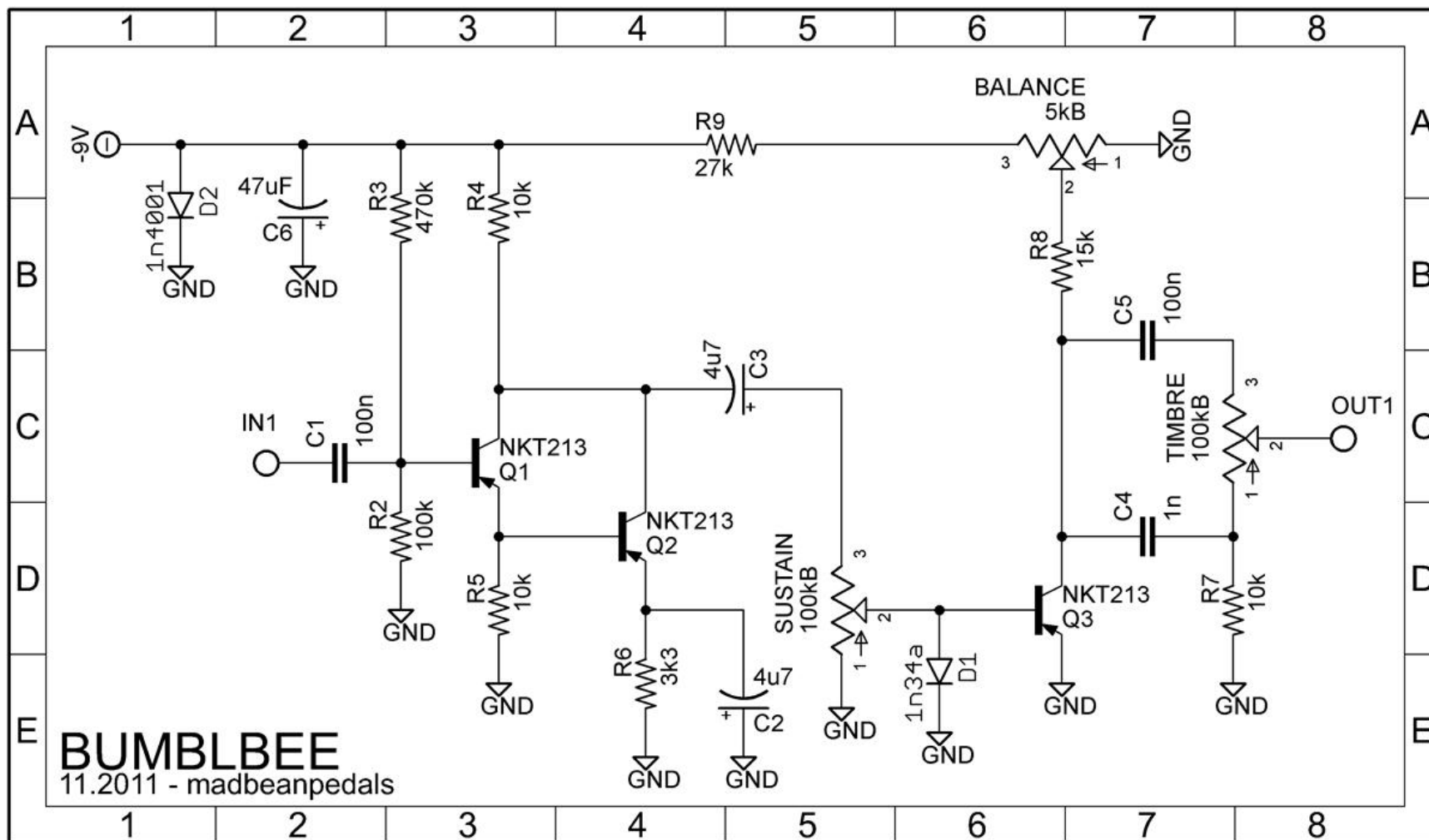


2"W x 1.4" H



Resistors		Caps		Diodes	
R2	100k	C1	100n	D1	1n34a
R3	470k	C2	4u7	D2	1n4001
R4	10k	C3	4u7	Transistors	
R5	10k	C4	1n	Q1 - Q3 NKT213	
R6	3k3	C5	100n	Pots	
R7	10k	C6	47uF	SUSTAIN	100kB
R8	15k			TIMBRE	100kB
R9	27k			BALANCE	5kB

\*R1 omitted



## What Is It?

The **BumbleBee** is a re-creation of the Baldwin Burns Buzzaround; a very rare and somewhat legendary fuzz monster.

## Controls

**Sustain** – The overall fuzz amount generated by the fuzz circuit.

**Balance** – A variable bias control for Q3. This also acts as a pseudo-volume control.

**Timbre** – A simple tone control blend.

## Notes

The **BumbleBee** is a **positive ground** effect. There are several options available to power it. The simplest is to just run it off a single 9v battery. Current draw is not too demanding and therefore the battery should last quite a while, especially if you wire it to disconnect when your input jack is unplugged. You can also use the PedalPower, which has isolated 9v outputs IF you use the special cable they have available for positive ground effects. Similarly, you can use a 9vDC, center-pin-positive wall wart as a power supply. Lastly, you can use the madbeanpedals **Road Rage** board which accepts any standard positive 9v supply and inverts the voltage to power positive ground effects. For more info about the **Road Rage**, visit the [Projects Page](#) at the madbeanpedals website.

The NKT213 is listed for the stock version of the **BumbleBee**. These are the transistors used in the original Buzzaround. Unfortunately, they are very rare these days, and almost impossible to find. However, you can use nearly any matched Tonbender set of PNP transistors in place of the NKT213s. The OC75 is a very good replacement and offers an incredible fuzz tone. These are available as a matched set from smallbear.

The PCB has been designed to accept either axial or radial capacitors depending on your preference. Please refer to the images on page 1 for an illustration. Under each axial cap pictured you will see two additional pads for connecting radial caps. The spacing for the radial electrolytic caps is standard. For the film caps, the radial spacing is about 6.5mm. The Panasonic ECQ-V series are a good choice of radial caps for this build. For axial film, something like the Mallory 150s will be most appropriate.

The PCB has also been designed for PCB mounted 16mm pots. These mount underneath the board and are soldered to the corresponding pads for each pot.

If you wish to add a true volume control, simply wire the "OUT" pad to lug3 of either a 100kA or 500kA pot. Lug1 should be connected to ground and lug2 is the new output that gets wired to your switch. Note that if you are adding a volume control you should not use a PCB mounted pot for the Sustain control. This will allow you to place the Sustain and Volume pots side-by-side.

MOD – For a wider range of fuzz tones, you can try 25kB instead of the 5kB listed for the Balance control.

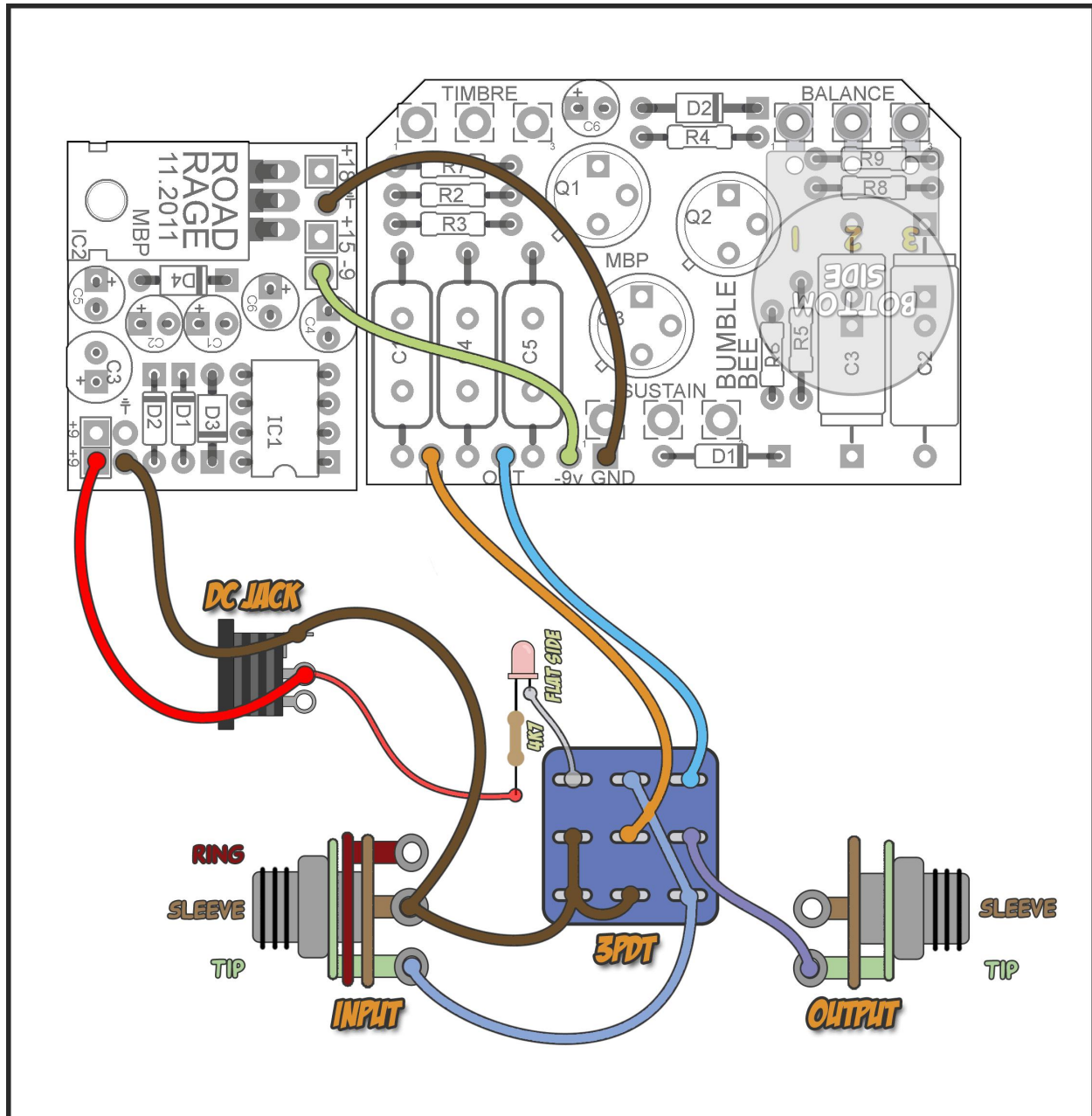
## Links

FSB thread about the Burns Buzzaround: <http://freestompboxes.org/viewtopic.php?f=19&t=1211>

A YouTube demo of the Buzzaround from blondegraemey: <http://www.youtube.com/watch?v=pZViQ2H-5s4>

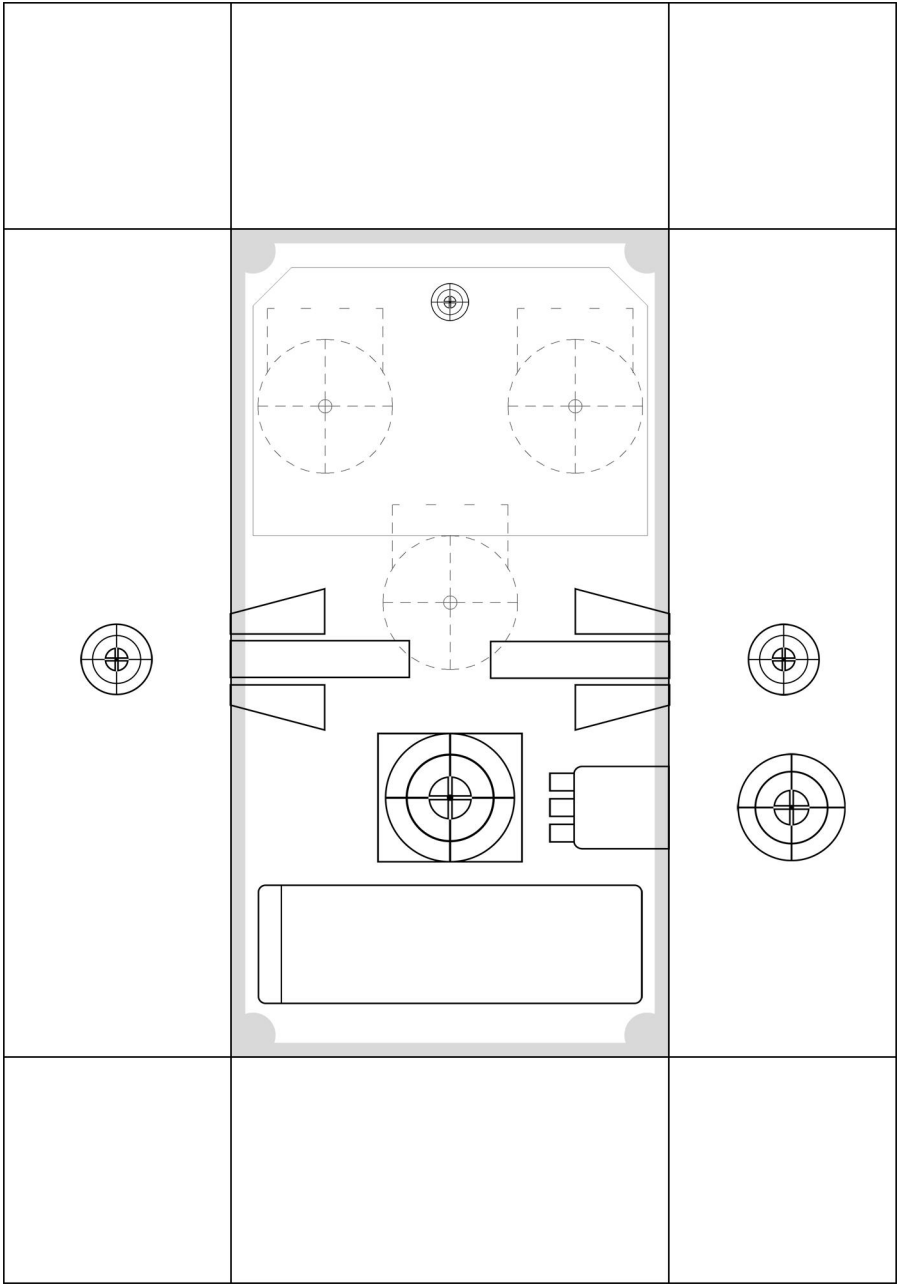
OC75 matched set: <http://www.smallbearelec.com/Detail.bok?no=841>

## Wiring



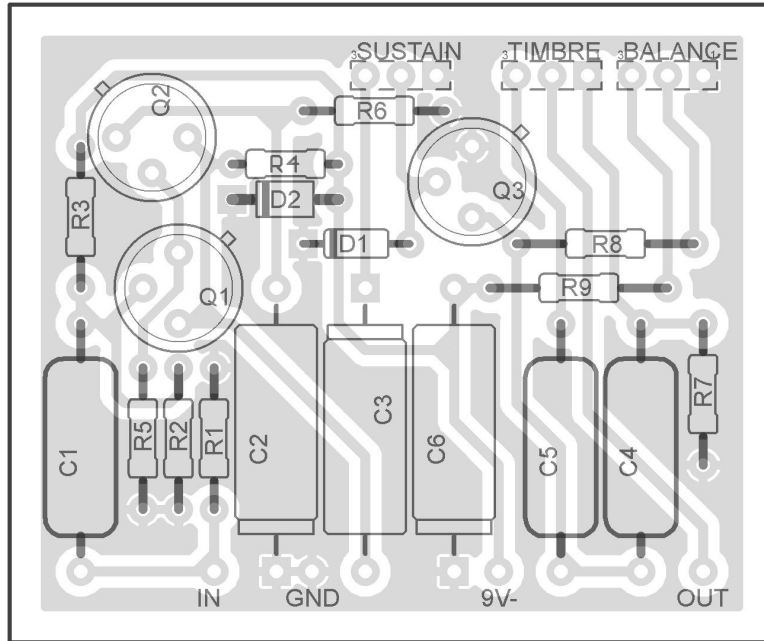
Please refer to the Road Rage documentation for more info on using it to power positive ground effects.

**Drill Template**

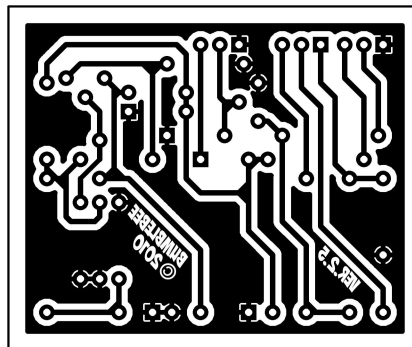


## Single Sided version for etching

\*\*R1 on this layout is a 1M pulldown. It is optional and most likely not needed.



2.17"W x 1.8"H (w/ borders)



## Licensing

The user may utilize either a purchased **BumbleBee** PCB from madbeanpedals or their own etched PCB using the artwork provided 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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