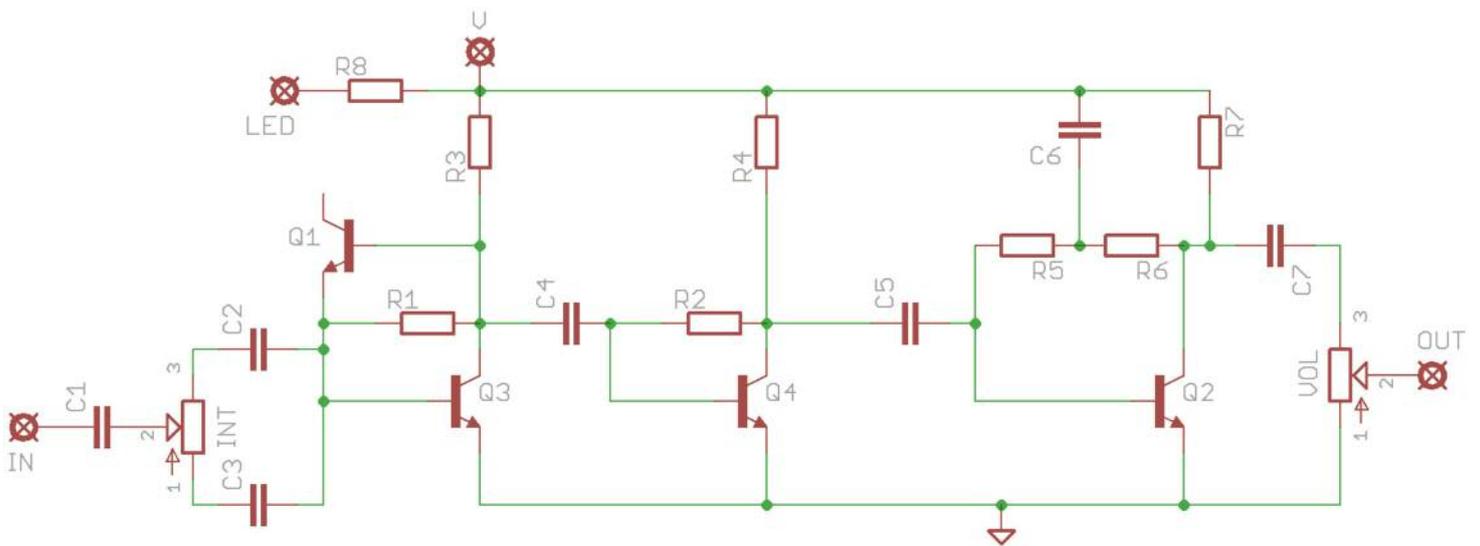


# Cone Ripper

Broken-speaker overdrive  
and glitchy fuzz fun



# Schematic + Layout



## BOM

<b>R1</b>	2M2	<b>C1</b>	100n	<b>Q1,2</b>	2N2222A
<b>R2</b>	2M2	<b>C2</b>	22n	<b>Q3,4</b>	MPSA18
<b>R3</b>	10K*	<b>C3</b>	1n	<b>INT</b>	500KC***
<b>R4</b>	10K	<b>C4</b>	100n	<b>VOL</b>	100KA
<b>R5</b>	100K	<b>C5</b>	100n**		
<b>R6</b>	100K	<b>C6</b>	1n		
<b>R7</b>	100K	<b>C7</b>	22n		
<b>R8</b>	2K2 (CLR)				

The above is the standard Cone Ripper overdrive, which will make it sounds like you have a ripped speaker cone in your cab. Wild!

\*\*\*The original Intensity knob value is 500KB. Reverse log works much better.

Some small tweaks will give you different results. Why not try these versions:

### Butt Flush Fuzz

Ridiculously high-gain, noisy fuzz.

Change **R3** to 100K

### American Octave

Tight, gated high-gain fuzz.

Change **R3** to 220K and **C5** to 10n.

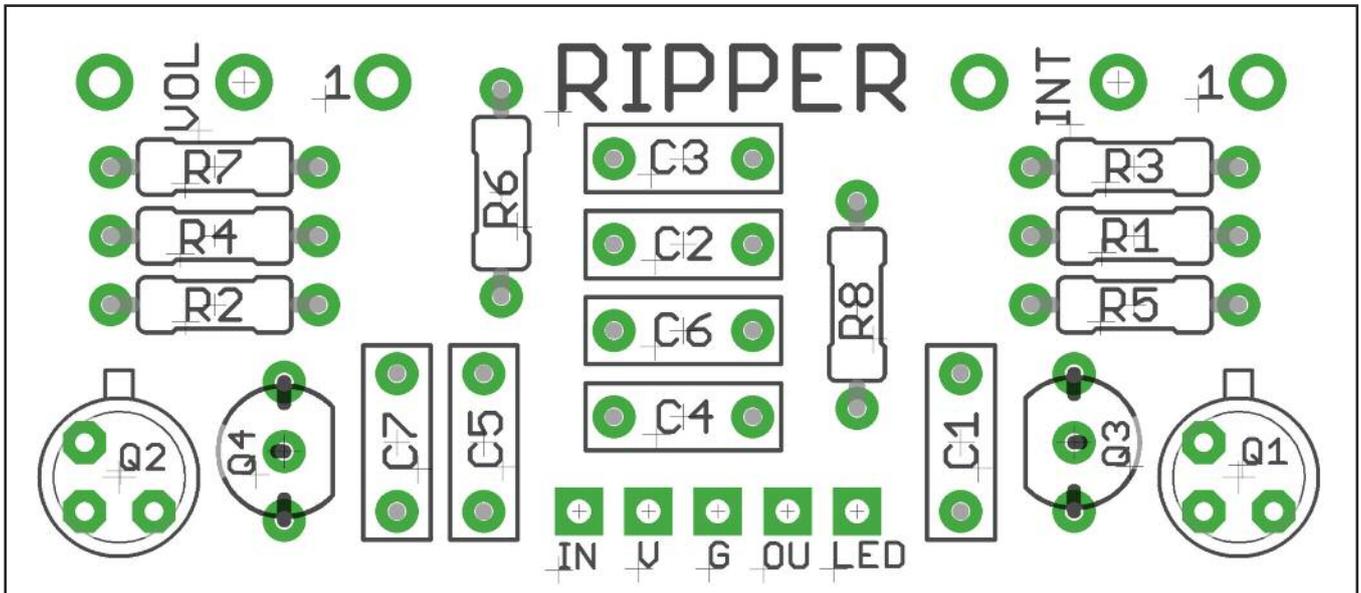
Leave out **R5, R6, C6**

### No Way Drive

Crazy high-gain fuzz with a pronounced octave-up.

Reverse the orientation of **Q1** and **Q2**

# PCB Layout



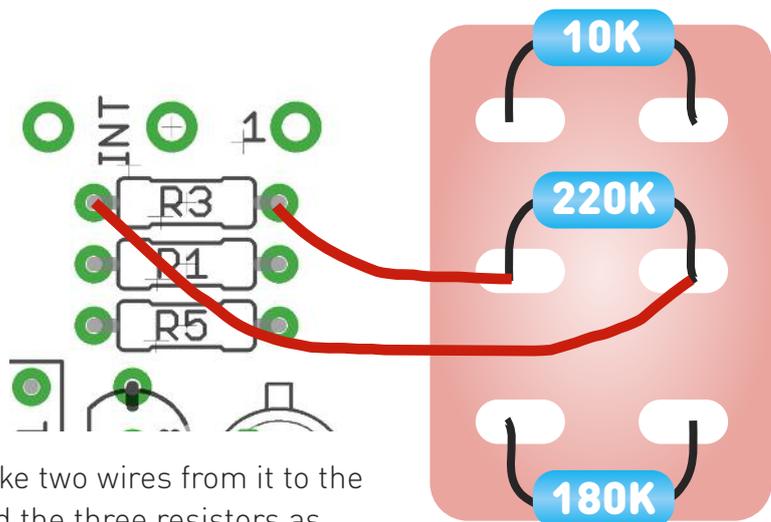
PCB Layout ©2014 Pedal Parts Ltd.

The power and signal pads on the PCB conform to the FuzzDog Direct Connection format, so can be paired with the appropriate daughterboard for quick and easy offboard wiring.

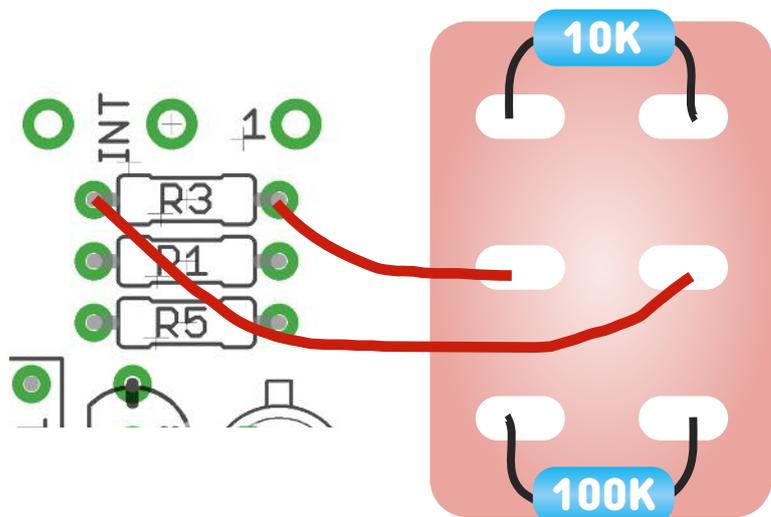
All variations of this circuit are going to be fairly noisy, some more than others. Live with it or build something else....

# 1 Switch, 3 Versions...

While adding a single switch won't give you all the variations available on this circuit, you can get three distinct sounds using a single DPDT ON-OFF-ON toggle switch. wire it as shown here - don't place R3 on the board. Instead, take two wires from it to the centre lugs of the toggle switch and add the three resistors as shown. In the top position you'll have the standard Cone Ripper, bottom you'll have the Butt Flush Fuzz. Middle will give you the same Q3 bias value as the American Octave.

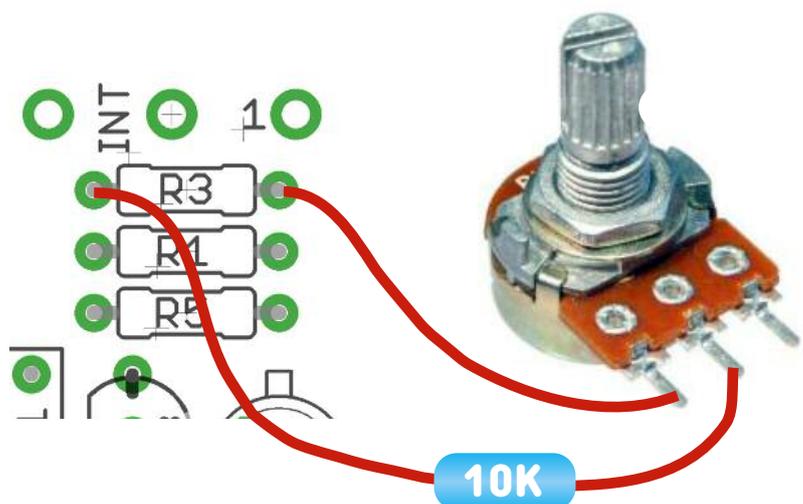


If you want to just switch between a Cone Ripper and a Butt Flush, use a DPDT ON-ON, and wire as here >>>

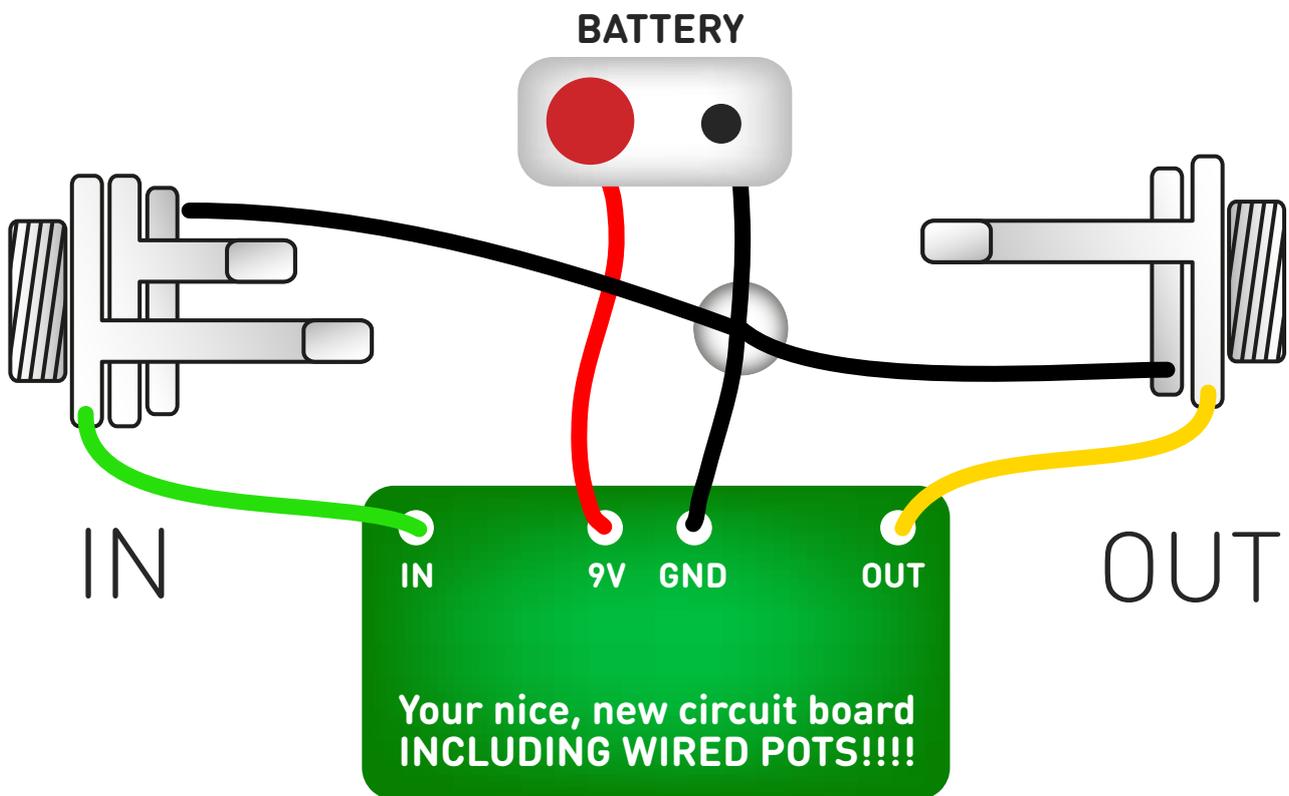


For even more glitchy variations, try a 250K pot and a 10K resistor in place of R3, wired like this >>>

Hey, no-one said it was going to sound pretty!



# Test the board!



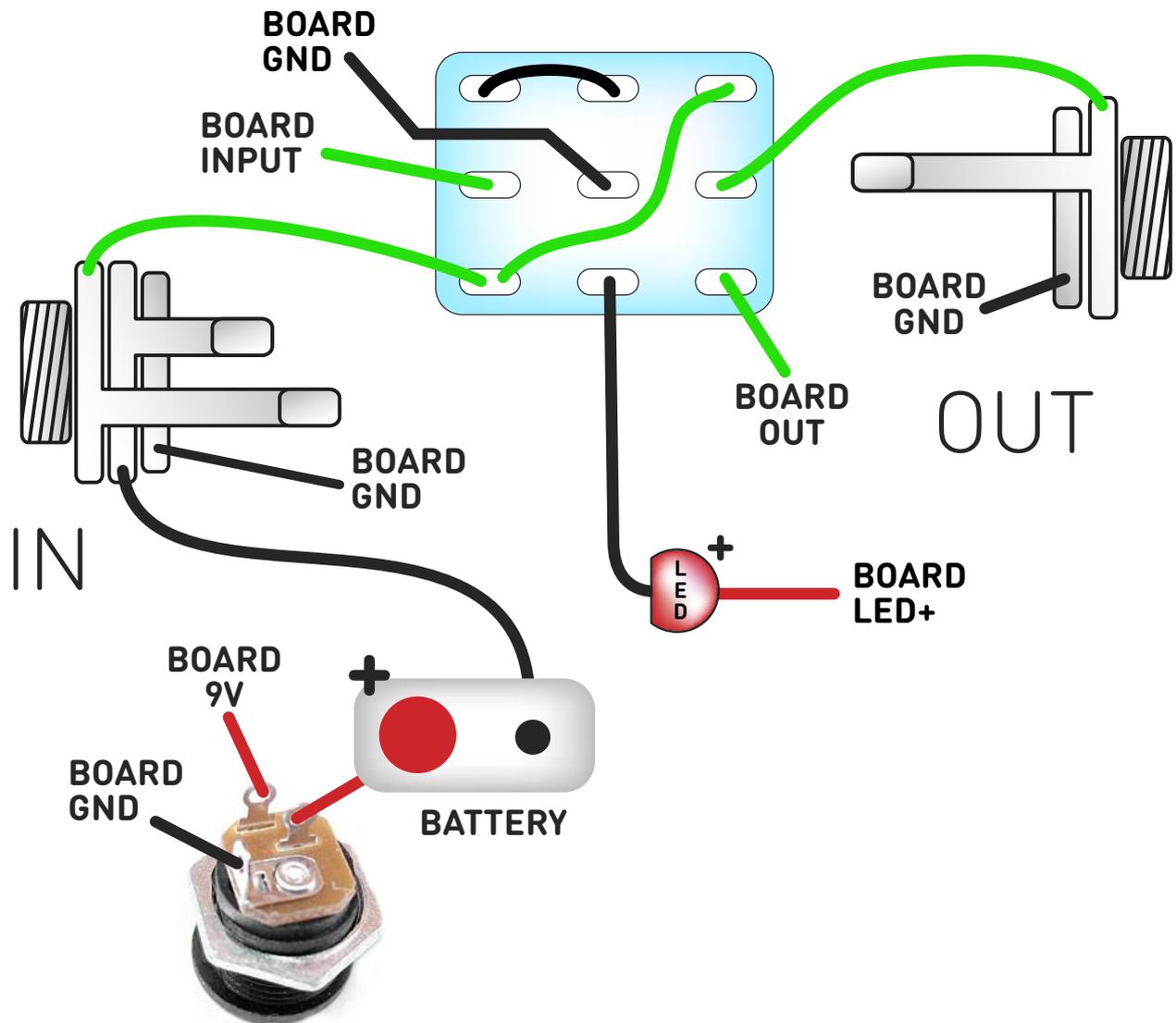
**UNDER NO CIRCUMSTANCES** will troubleshooting help be offered if you have skipped this stage. No exceptions.

Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

Solder some nice, long lengths of wire to the board connections for 9V, GND, IN and OUT. Connect IN and OUT to the jacks as shown. Connect all the GNDs together (twist them up and add a small amount of solder to tack it). Connect the battery + lead to the 9V wire, same method. Plug in. Go!

If it works, crack on and do your switch wiring. If not... aw man. At least you know the problem is with the circuit. Find out why, get it working, THEN worry about the switch etc.

# Wire it up (if using a daughterboard please refer to the relevant document)



Wiring shown above will disconnect the battery when you remove the jack plug from the input, and also when a DC plug is inserted.

The Board GND connections don't all have to directly attach to the board. You can run a couple of wires from the DC connector, one to the board, another to the IN jack, then daisy chain that over to the OUT jack.

It doesn't matter how they all connect, as long as they do.

This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

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