http://www.madbeanpedals.com PRESENTS

DEADPOOL

FX TYPE: FUZZ

Based on the OS Mutantes™

Release date: 01.23.11

The **Deadpool** is a derivative of the little known Os Mutantes fuzz pedal. This monster of a fuzz box was designed by Claudio Baptista for Sergio Dias, the guitar player in the Brazilian band Os Mutantes.

Several modifications were made to the original design to achieve the **Deadpool**. The input cap selection remains, although the value of **C2** was changed to the more common 4n7. A pulldown resistor was added, as well a **C1**, which helps reduce the noise in this high gain circuit. **R3** was lowered to 2k2, which still retains proper bias for **Q1** (~ 7.6v on the collector). For **Q2**, a trimpot was added to dial in bias a little more precisely. I found that anywhere between 1- 3.5v on the collector sounds great.

C5 was changed from 100n to 470pF. This has the effect of smoothing the fuzz without clamping it too much. **C6** was changed from a 10uF electrolytic to 2u2 film for better tone. The output was increased to 100kB from the original 15k. Finally, two changes were made to the clipping diodes after **C6**. The diodes are now switch-able. With the diodes out of the circuit, the fuzz becomes fatter and less compressed. Additionally, the **FAT** control reduces a series resistance with **D1** for signal shaping. With the **FAT** control all the way to the left, the tone is very compressed and both diodes clamp the signal to their fullest. As the control is turned up, compression is reduced and the fuzz becomes meatier (and a little asymmetrical).

All of these mods add up to a versatile and unique sounding fuzz. There are many subtle tones to be found in combination of control and switch settings. You should be able to get full on, wall of fuzz, to fat and meaty single notes. You may also find settings that generate a lower octave with the volume on your guitar rolled down!

The controls are as follows

BODY: This switch adds a 4n7 input cap in series with the default 10uF (see the pdf linked above for more explanation).
COMP: This switches the clamping diodes out of the circuit.
FAT: This variable resistor allows you to dial in the compression amount allowed by the clipping diodes.
LOUD: The output level.

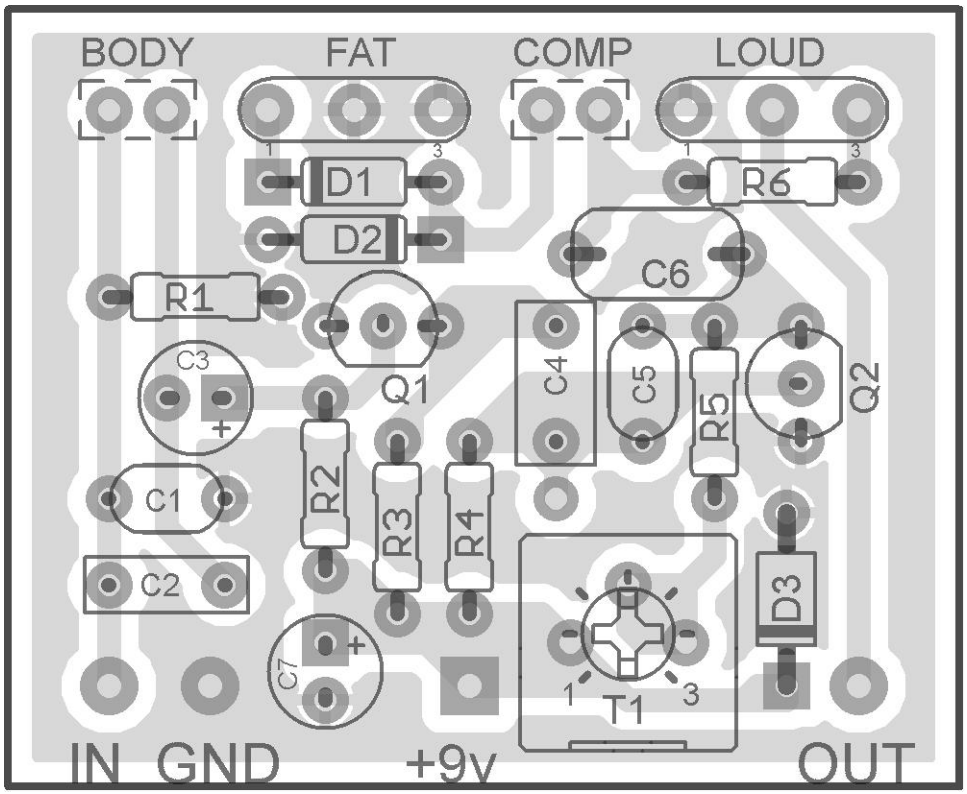
SmallBear Parts Guide – www.smallbearelec.com

- Panasonic ECQ-B / V film caps or Topmay box caps
- Carbon film Resistors 1/4W and/or metal film resistors 1/4W
- 16v electrolytic radial caps
- Ceramic caps (for pF values)
- 16mm Alpha Pots

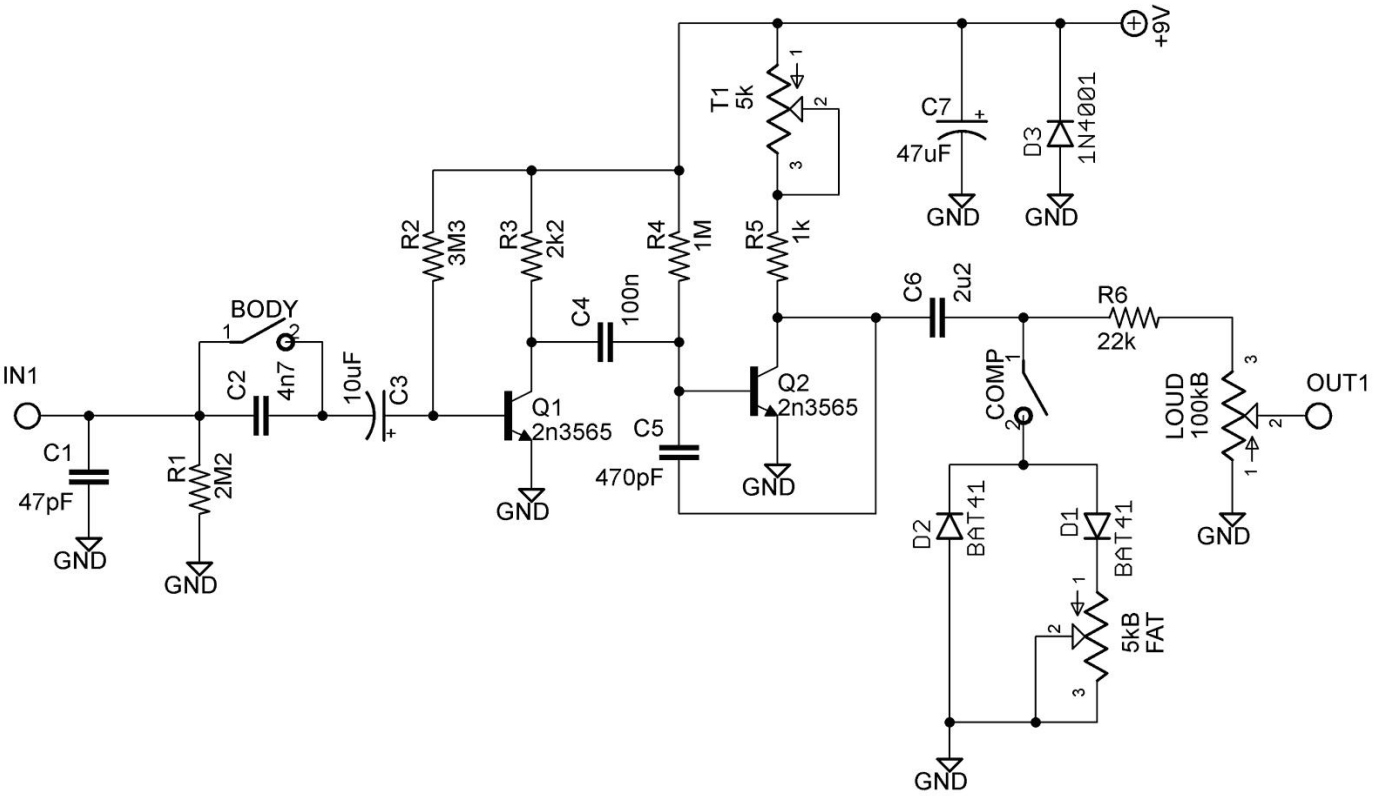
Notes

I strongly recommend purchasing the 2n3565 transistors from smallbear. It's a good idea to buy several and test the gains on them. I found that about 260 Hfe was ideal. Other transistors will work, provided they have similar gains. 2n3904 will work well as a substitute. BC109s, as indicated in the original schematic, did not work as well, I found.

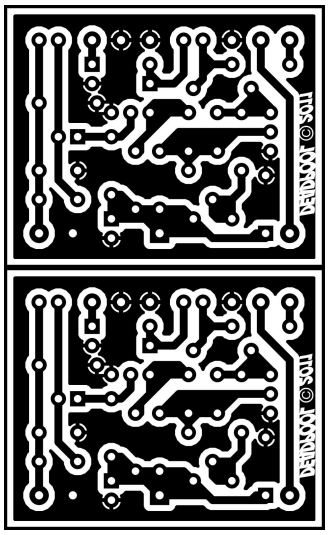
You can use a tantalum for **C6**, if you cannot get the 2u2 value in a film cap. Make sue the negative end goes to **R6**. Alternatively, a 1uF film cap will work just as well.

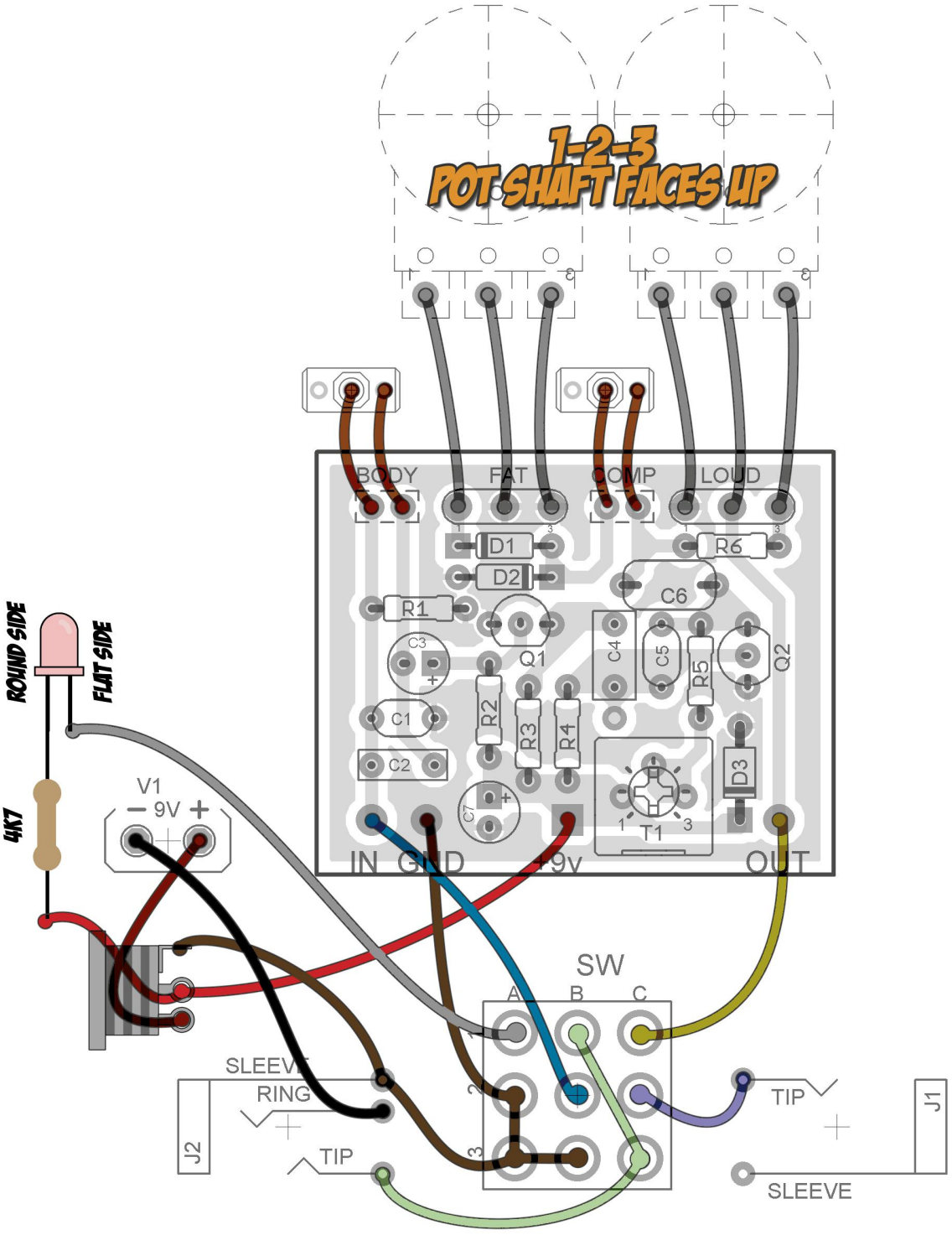


Resistors		Diodes	
R1	2M2	D1, D2	BAT41
R2	3M3	D3	1N4001
R3	2k2	**Transistors**	
R4	1M	Q1, Q2	2n3565
R5	1k	**Switches**	
R6	22k	BODY	SPST
Caps		COMP	SPST
C1	47pF	**Trimpot**	
C2	4n7	T1	5kB
C3	10uF	**Pots**	
C4	100n	FAT	5kB
C5	470pF	LOUD	100kB
C6	2u2		
C7	47uF		



1.67” W x 1.36” H (including borders)




1-2-3
POT SHAFT FACES UP
BODY
FAT
COMP
LOUD
D1
D2
R1
R6
C6
C3
Q1
C4
C5
R5
Q2
C1
R2
R3
R4
C2
C7
T1
D3
IN
GND
+9v
OUT
ROUND SIDE
FLAT SIDE
4K7
V1
9V
SW
A
B
C
SLEEVE
RING
TIP
J2
TIP
J1
SLEEVE

1590B Layout
4.64” W x 6.69” H