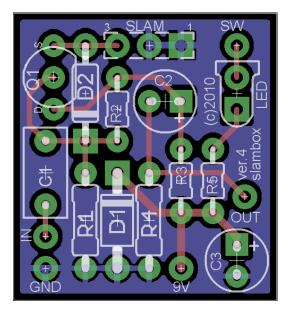
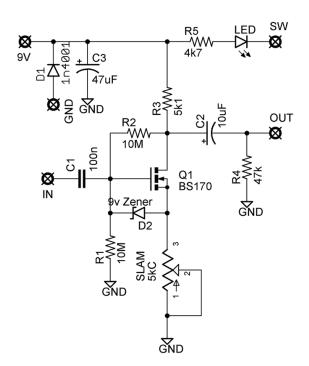




(based on the zVex Super Hard-On) PCB artwork ©2010 madbeanpedals **Ver.4** 09.10.10



Resistor		Caps		Diodes	
R1	10M	C1	100n	D1	1n4001
R2	10M	C2	10uF	D2	9.1v Zener
R3	5k1	C3	47uF		
R4	47k				
R5	4k7	Transistors		Pots	
		Q1	BS170	SLAM	5kC



<u>Notes</u>

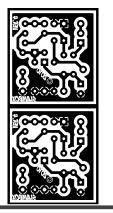
- If you find this effect too bright, try subbing smaller values for **R1** and **R2**. A 2M2 is a reasonable alternative.
- Stock unit uses a Zetex brand BS170: <u>http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail&name=BS170P-ND</u>
- Other brands will work as well (such as Fairchild).
- Some versions show a 100k resistor for R4. Either a 47k or 100k will work equally as well there. The 47k provides lower output impedance and the 100k might give you a little more signal output. Use 100k if you want the most accurate representation of the stock unit.

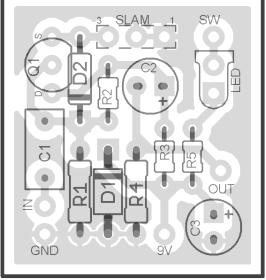
Parts

- Xicon General or Hi-Temp radial electrolytic caps, 25v
- Xicon carbon metal film resistors, ¼W
- Panasonic ECQ-V or WIMA box caps, 25v or above
- Alpha 16mm or 24mm potentiometers



.942" x1.022" (w / borders)





Visit <u>http://www.madbeanpedals.com/learn/index.html</u> for helpful wiring diagrams and drilling templates! This product is intended for DIY use. Commercial use is prohibited.