

DEADRINGER

FX TYPE: OVERDRIVE

Based upon / compares to: Fulltone® "FullDrive"

PCB artwork ©2011 madbeanpedals

Release date: 01.05.11

The **DeadRinger** is a faithful recreation of perhaps one of the first and most popular modern "boutique" pedals: the Fulltone® Fulldrive™. The Fulldrive™ began a revolution in modern stompbox building in that it created a market for small companies manufacturing their own custom, hand-made pedals. The effect bares strong similarity to the Ibanez® Tube Screamer™ but there are several key differences.

The Fulldrive™ includes several modifications to the op-amp clipping section, adds a second switch as a "Boost" and more recently adds a second clipping option (the 'Anniversary Ed.')

 based on the use of mosfets as diodes. These mods add up to a very versatile effect that can be used in many different playing and music styles.

The controls are as follows

DRIVE: The overall gain of the overdrive section.

BOOST: This adds a second pot in series with the **DRIVE** control for even more gain.

TONE: An active tone control similar to the Ibanez® Tube Screamer™.

VOL: The output level.

MOS/SIL: This switch lets you choose between two silicon diodes and two mosfets for clipping.

FCV: This stands for "Flat Mids", "Comp Cut" and "Vintage". The Flat Mids mode adds a 10n/47k combination in parallel with the tone control to flatten out the inherent mid-range emphasis. The "Comp Cut" mode removes the clipping diodes altogether for a large volume boost. The "Vintage" mode is normal silicon/mosfet clipping in the feedback loop of the op-amp.

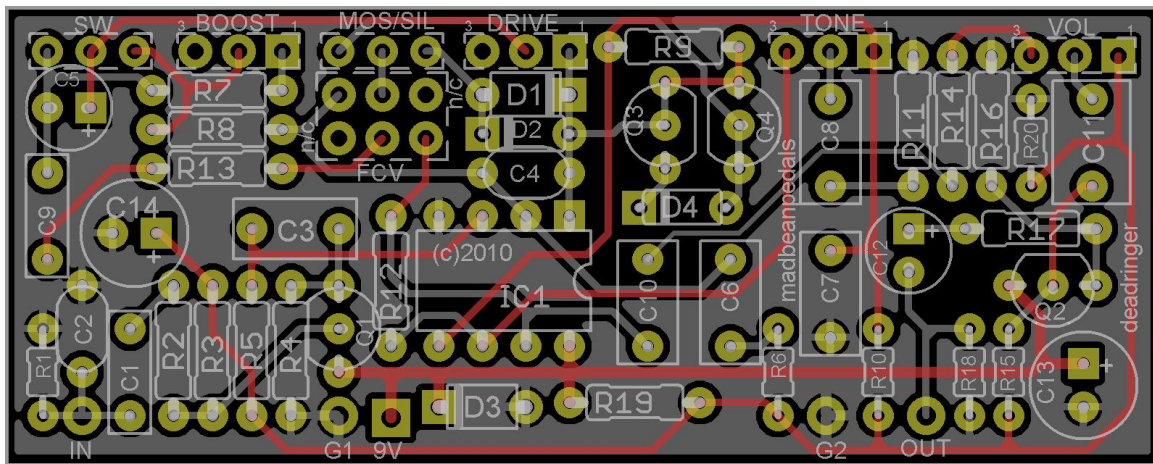
SmallBear Parts Guide – www.smallbearelec.com

- 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
- 16mm Alpha Pots

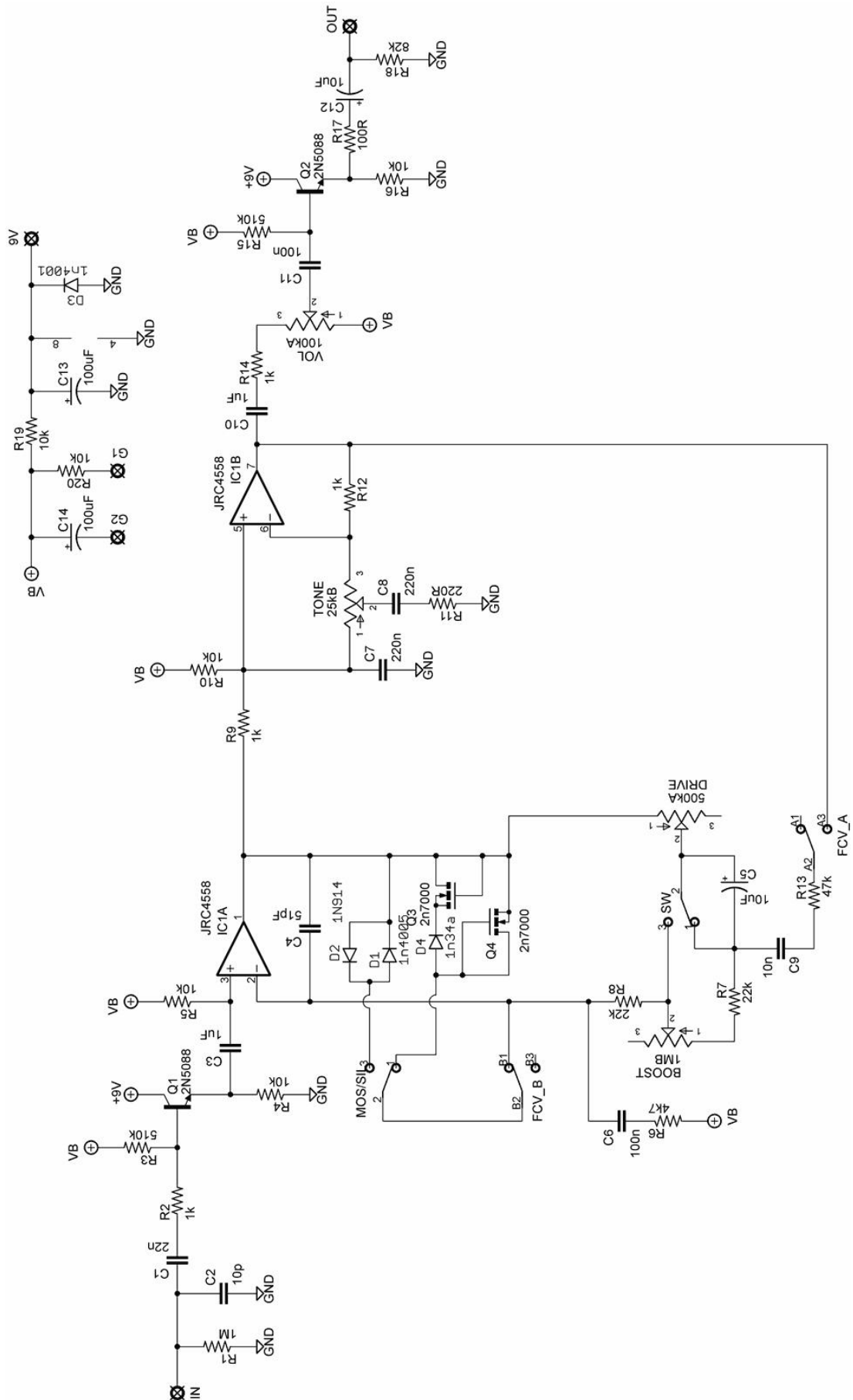
Notes

- The DPDT for the **FCV** switch is an On/On/On: <http://www.smallbearelec.com/Detail.bok?no=900>
- If you would like more variation between the drive and boost portions of the circuit, consider using a 250kA for the **DRIVE** control.
- Some schematics show **C8** as a 330n cap.
- The **DeadRinger** can be built into a 1590B with careful planning!

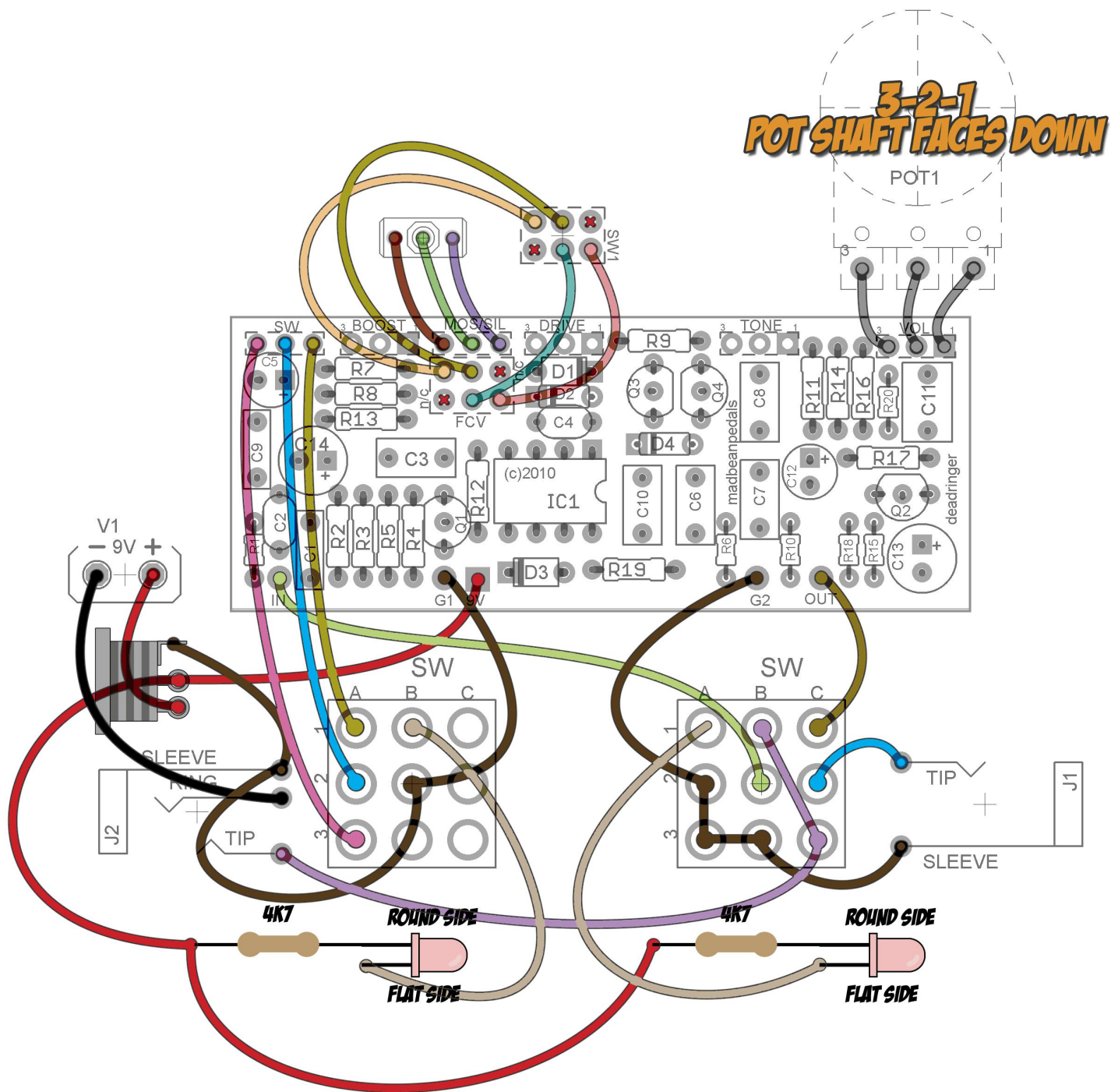
FABBED VERSION



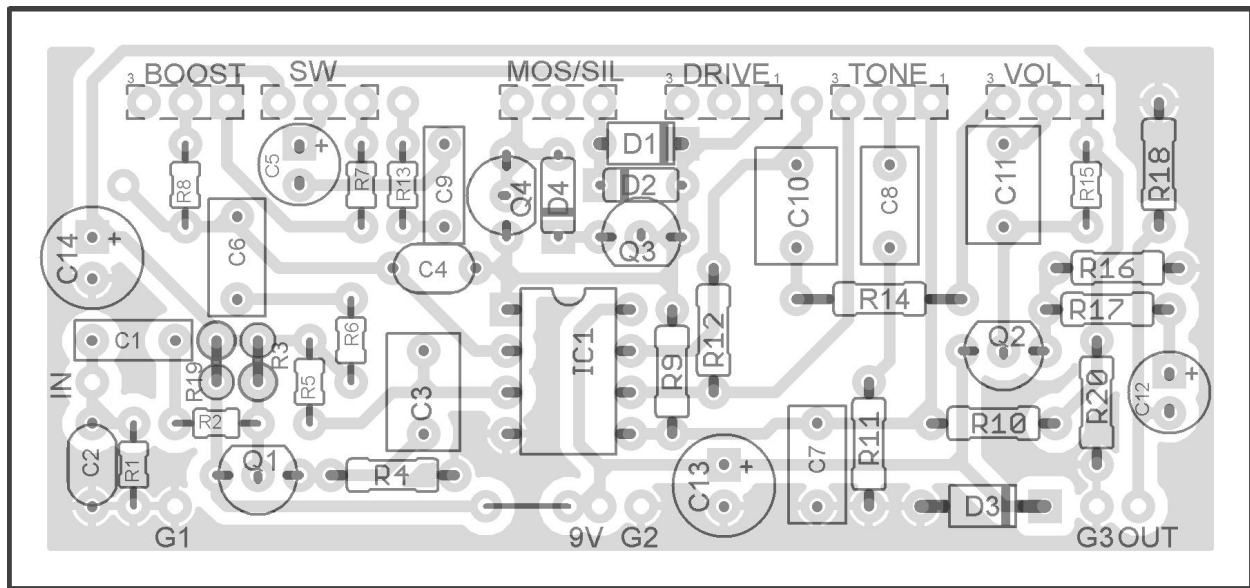
Resistors		Caps		Transistors	
R1	1M	C1	22n	Q1, Q2	2N5088
R2	1k	C2	10p	Q3, Q4	2n7000
R3	510k	C3	1uF	IC	
R4	10k	C4	51pF	IC1	JRC4558
R5	10k	C5	10uF	Diodes	
R6	4k7	C6	100n	D1	1n4005
R7	22k	C7	220n	D2	1N914
R8	22k	C8	220n	D3	1n4001
R9	1k	C9	10n	D4	1n34a
R10	10k	C10	1uF	Switches	
R11	220R	C11	100n	MOS/SIL	SPDT (On/On)
R12	1k	C12	10uF	FCV	DPDT (On/On/On)
R13	47k	C13	100uF	Pots	
R14	1k	C14	100uF	BOOST	1MB
R15	510k			DRIVE	500kA
R16	10k			TONE	25kB
R17	100R			VOL	100kA
R18	82k				
R19	10k				
R20	10k				



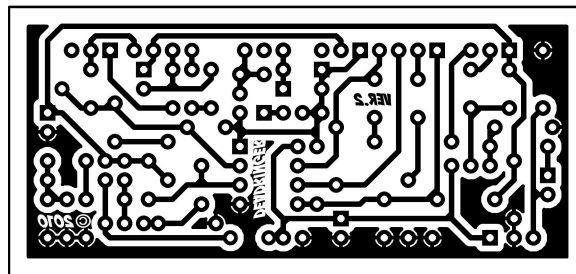
WIRING GUIDE FOR FABBED VERSION



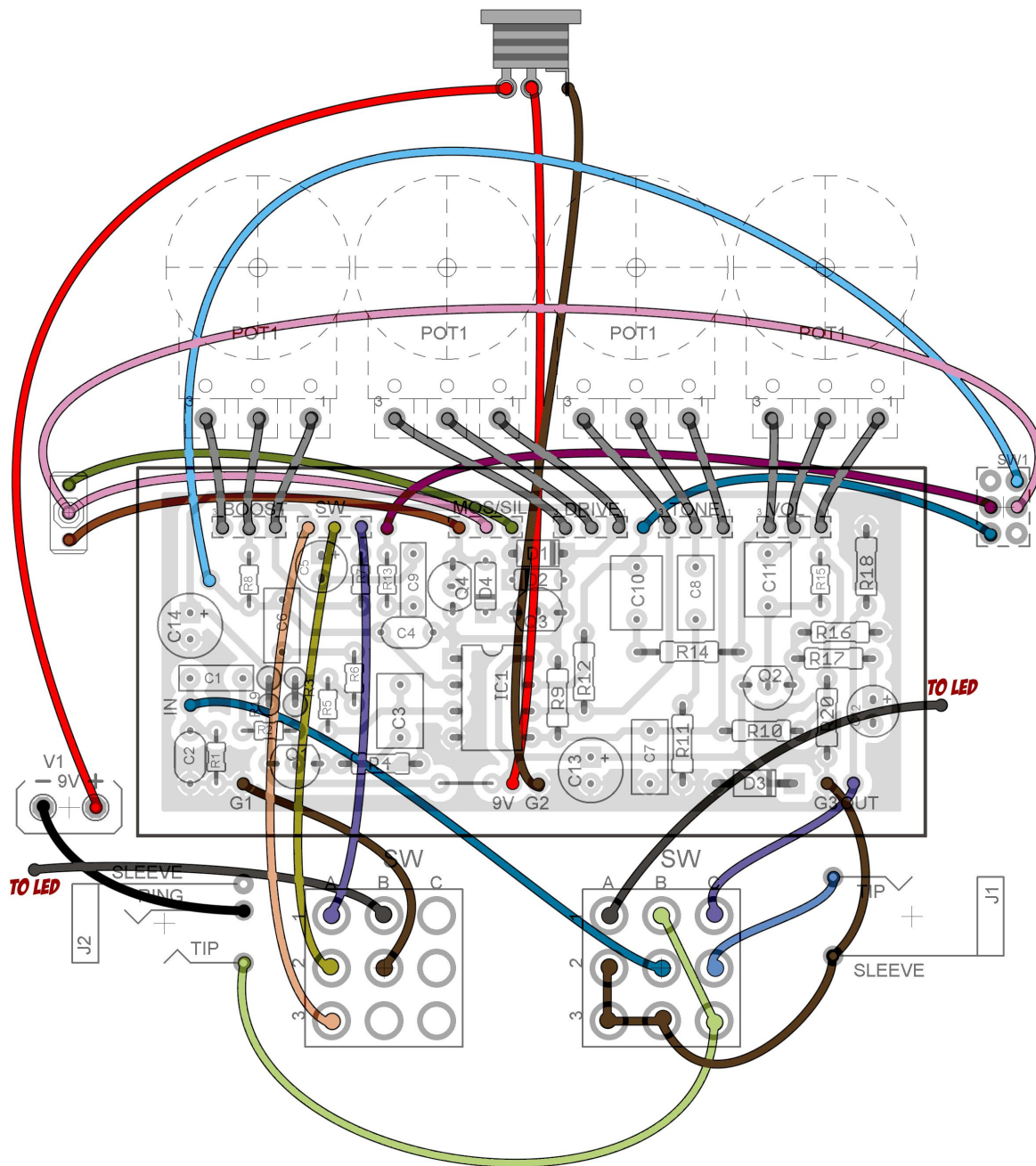
SINGLE SIDED VERSION – FOR ETCHING



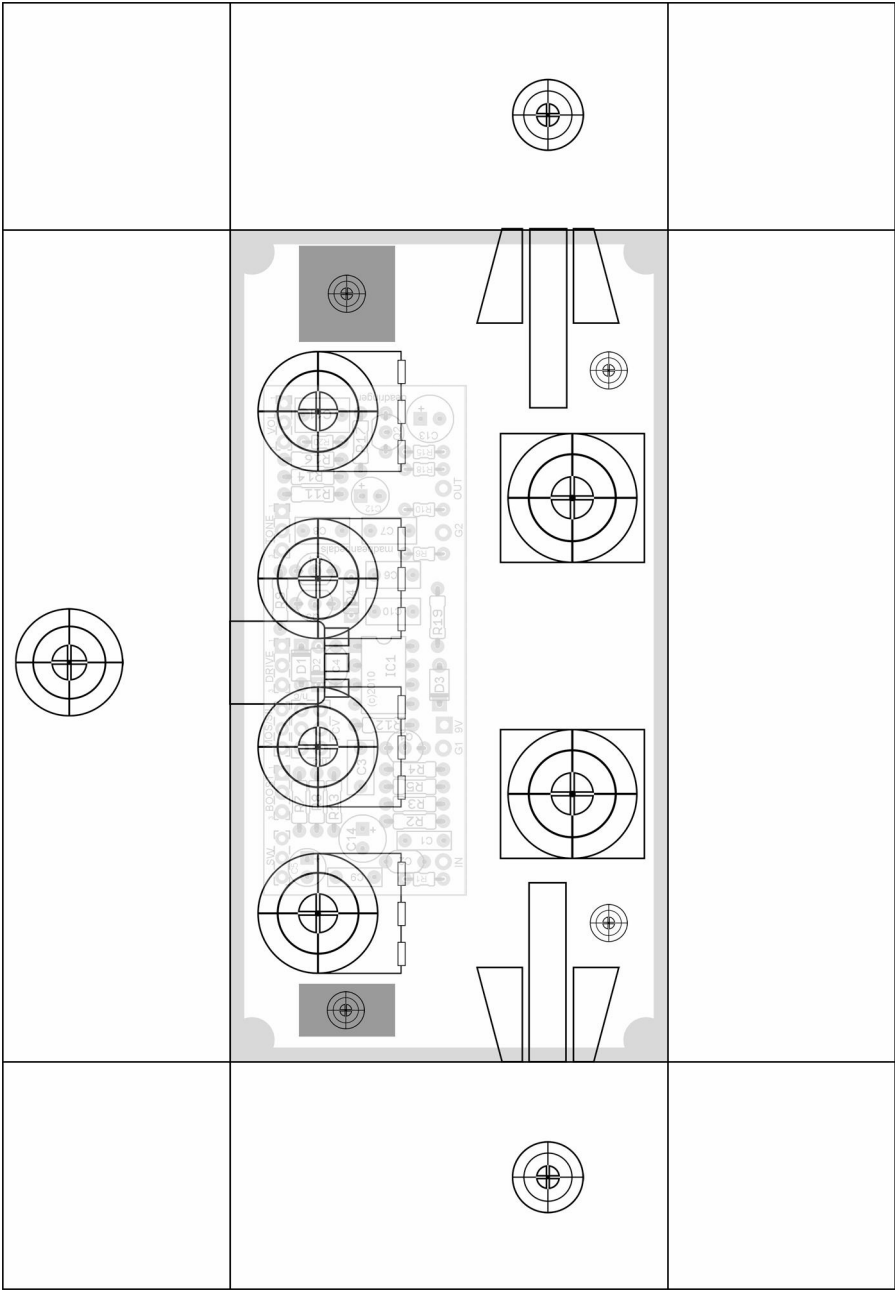
3.01" W x 1.42" H (including borders)



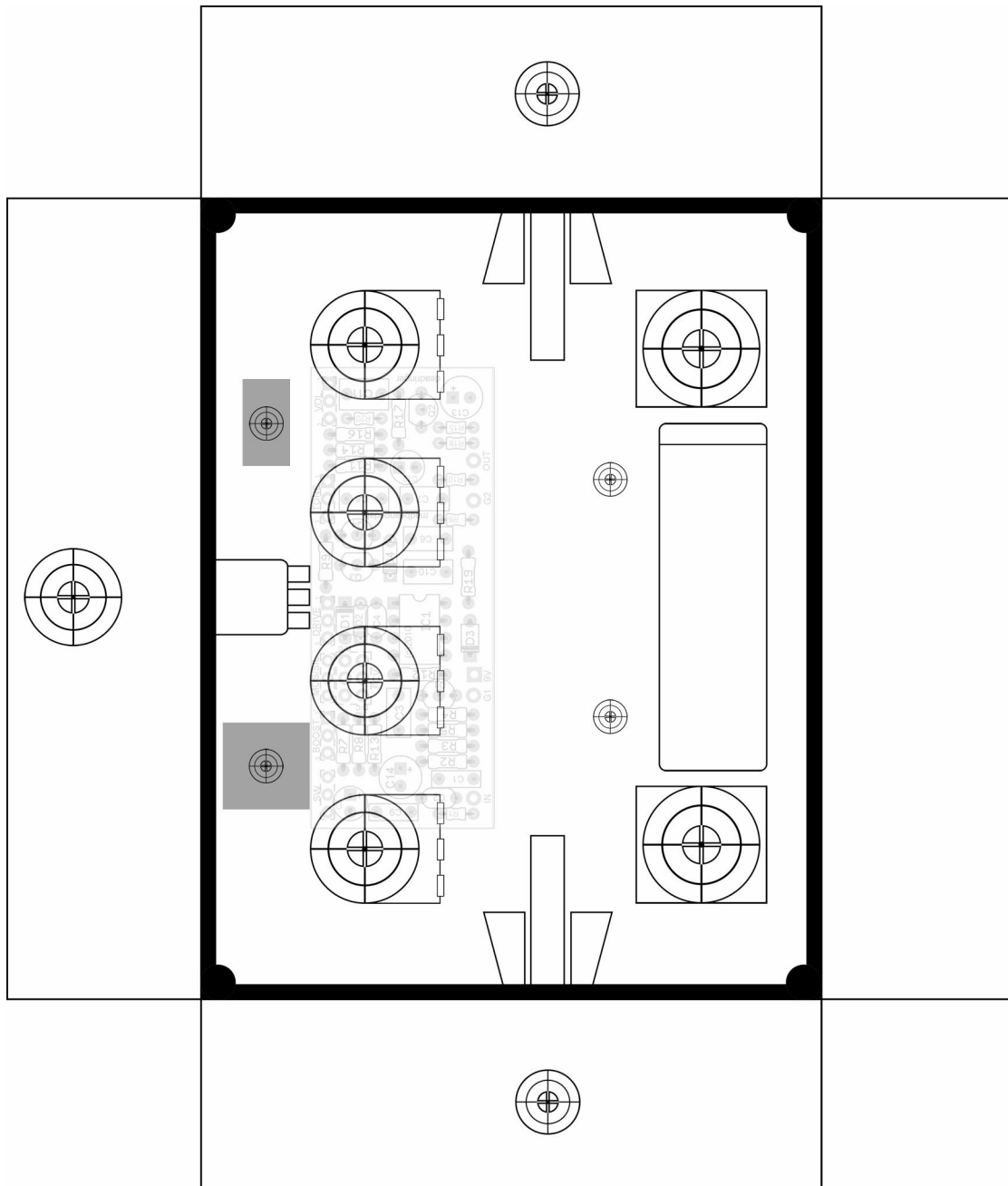
WIRING GUIDE FOR SINGLE SIDED VERSION



1590B Layout
4.64" W x 6.69" H



1590BB Layout
5.81" W x 6.81" H



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