

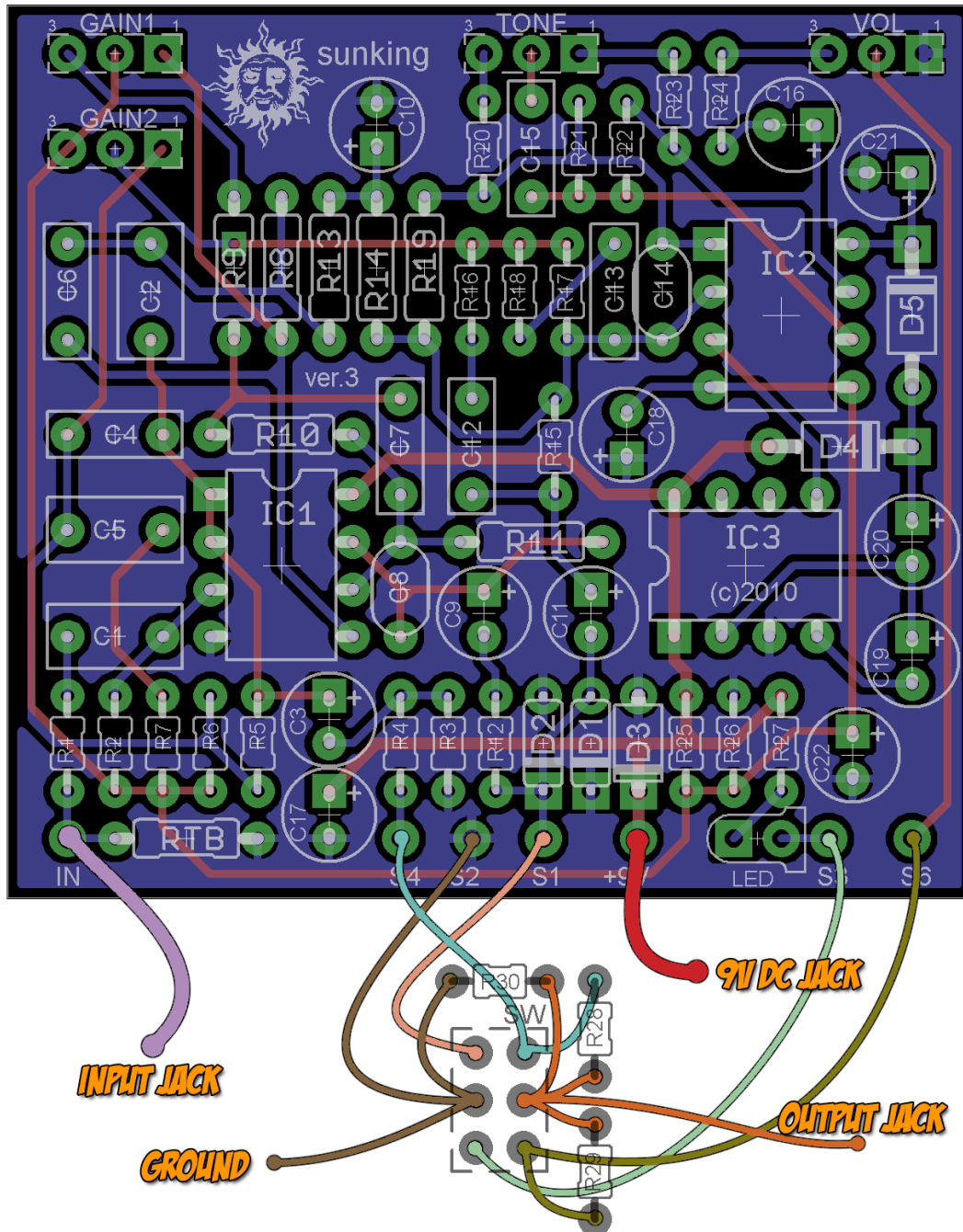
Madbeanpedals presents

SUNKING

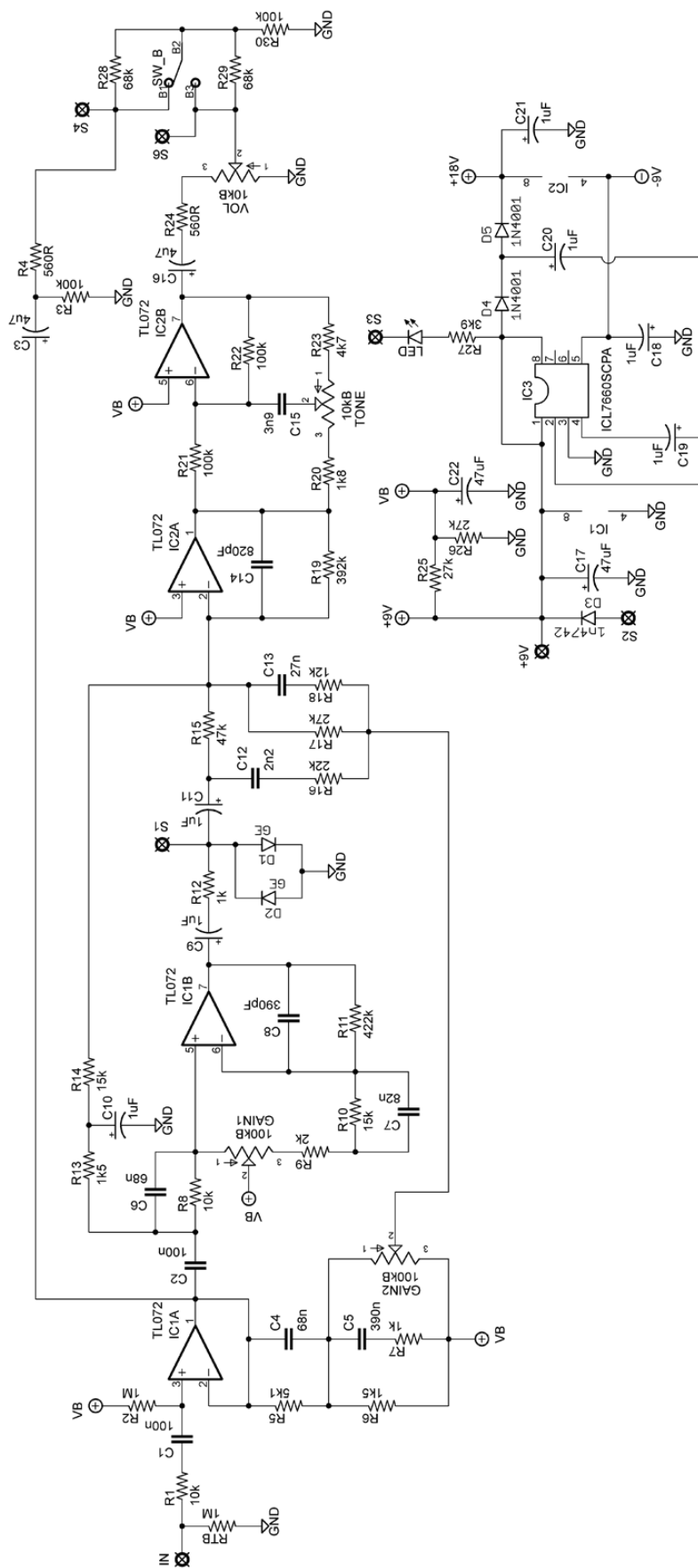
(Based on the Klon Centaur)

PCB artwork m2010 madbeanpedals

Ver.3 10.15.10



Resistors		Caps		Diodes		
R1	10k	C1	100n	D1, D2	GE	
R2	1M	C2	100n	D3	1n4742	
R3	100k	C3	4u7	D4, D5	1N4001	
R4	560R	C4	68n			
R5	5k1	C5	390n	IC		
R6	1k5	C6	68n	IC1, IC2	TL072	
R7	1k	C7	82n	IC3	ICL7660SCPA	
R8	10k	C8	390pF			
R9	2k	C9	1uF	Pots		
R10	15k	C10	1uF	GAIN1	100kB	Dual-Ganged 100kB Pot
R11	422k	C11	1uF	GAIN2	100kB	
R12	1k	C12	2n2	TONE	10kB	
R13	1k5	C13	27n	VOL	10kB	
R14	15k	C14	820pF			
R15	47k	C15	3n9			
R16	22k	C16	4u7			
R17	27k	C17	47uF			
R18	12k	C18	1uF			
R19	392k	C19	1uF			
R20	1k8	C20	1uF			
R21	100k	C21	1uF			
R22	100k	C22	47uF			
R23	4k7					
R24	560R					
R25	27k					
R26	27k					
R27	3k9					
R28	68k					
R29	68k					
R30	100k					
RTB	1M					



Notes

The newest version of the **Sunking** offers a slightly reduced PCB footprint for easier fitting in a 1590B enclosure. Corrections were also made to the output section. Ver.2 had three resistors placed on the PCB that should have been wired directly to the bypass switch in a slightly different configuration. This has been fixed for ver.3 (instructions on how to make the correction on ver.2 are contained in the archived documents for the **Sunking** at www.madbeanpedals.com/projects/index.html).

The schematic has also been re-drawn in an attempt to simplify it for analysis. The component values between all versions are identical, but the numbering is not. Ver.3 components are labeled in a slightly different order, so you do not want to use the bill of materials in this document to build any of the previous versions.

Lastly, an extra spot for a pull-down resistor was included should you want to build the **Sunking** as true-bypass.

A MAX1044 or TC1044 may be substituted for IC3.

The exact germanium diodes used for D1 and D2 is unknown. The designer claims that the use of these diodes is critical to fully realizing the tone of the Klon. In practice, there are a number of diodes that can be used that produce excellent results. These are 1n34a, 1n270, 1n60, BAT41 and 1n914. It's a good idea to socket these two and experiment to find your favorites. My personal favorite is BAT41.

If using a 3PDT, wire the two outside columns of lugs, leaving the middle column completely unconnected.

To make the Sunking true-bypass

- Remove **C3, R3, R4, R28, R29, R30**
- Add **RTB** (1M resistor)

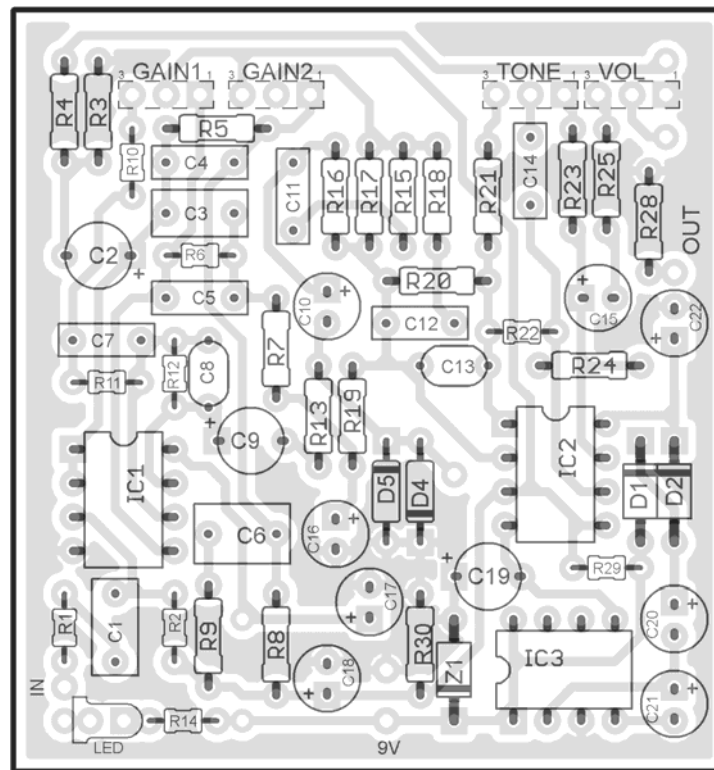
Wiring True-Bypass

- The **IN** pad is wired to the FX input
- **9v** is wired to your DC jack
- **S2** is wired to ground
- **S3** is wired for toggling the LED indicator
- **S6** is wired to FX output
- **S1** and **S4** are left unconnected

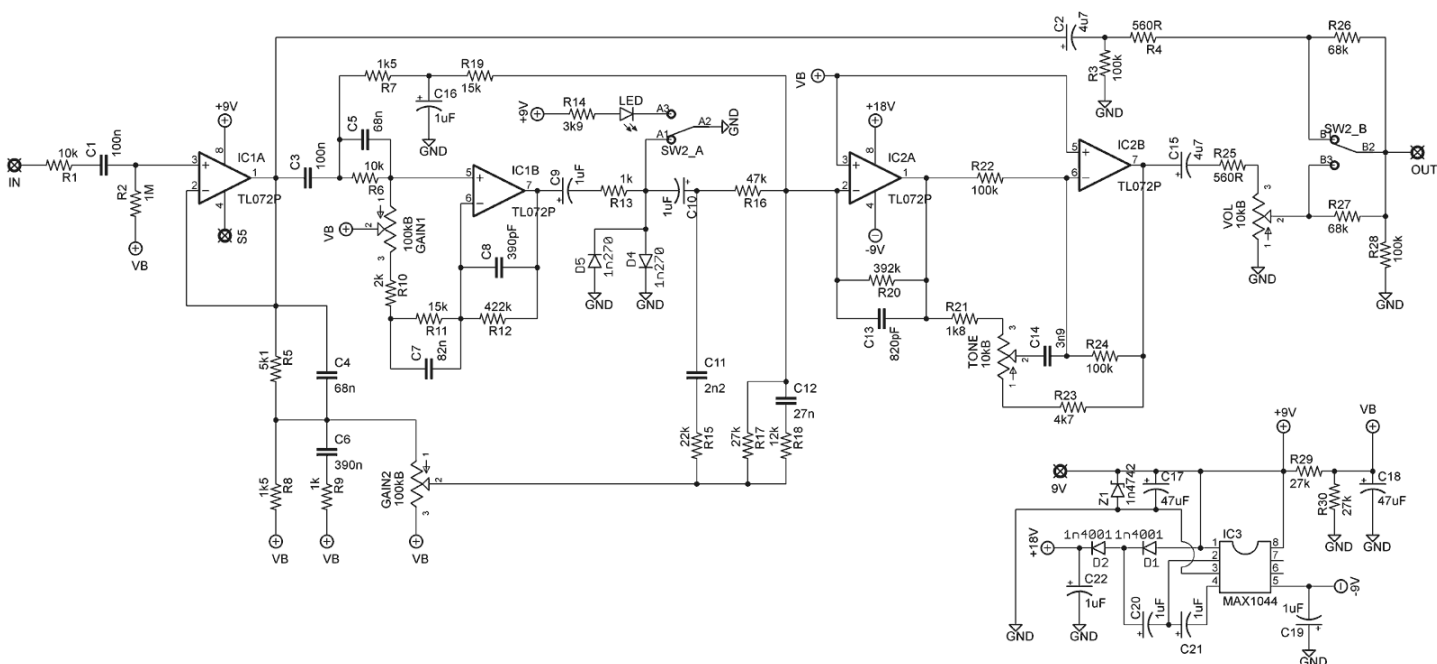
Parts

- Xicon General or Hi-Temp radial electrolytic caps, 25v
- Panasonic ECQ-B or ECQ-V film caps
- Xicon carbon or metal film resistors, ¼ W
- Ceramic, Silver Mica or film for the 390pF and 820pF (stock unit uses film).

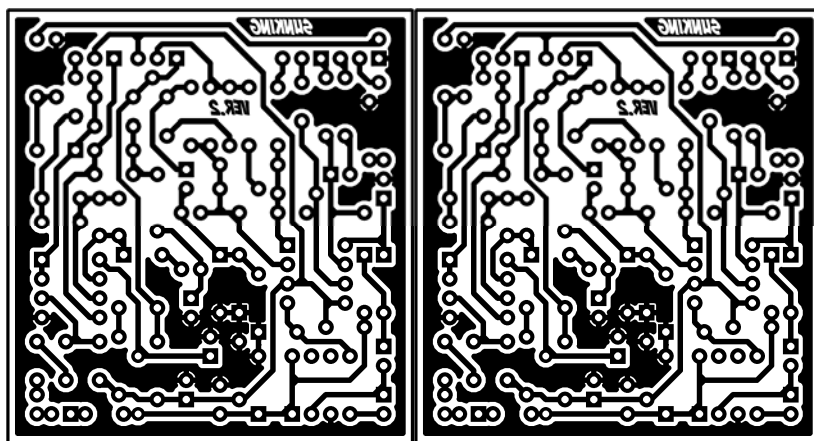
SINGLE SIDED VERSION — FOR ETCHING



R1	10k	R16	47k	C1	100n	C16	1uF
R2	1M	R17	27k	C2	4u7	C17	47uF
R3	100k	R18	12k	C3	100n	C18	47uF
R4	560R	R19	15k	C4	68n	C19	1uF
R5	5k1	R20	392k	C5	68n	C20	1uF
R6	10k	R21	1k8	C6	390n	C21	1uF
R7	1k5	R22	100k	C7	82n	C22	1uF
R8	1k5	R23	4k7	C8	390pF		
R9	1k	R24	100k	C9	1uF	D1/D2	1n4001
R10	2k	R25	560R	C10	1uF	D4/D5	1n270
R11	15k	R26	68k	C11	2n2	Z1	1n4742
R12	422k	R27	68k	C12	27n		
R13	1k	R28	100k	C13	820pF	IC1/IC2	TL072
R14	3k9	R29	27k	C14	3n9	IC3	ICL7660SCPA
R15	22k	R30	27k	C15	4u7		
						GAIN1/2	100kB Dual
						TONE	10kB
						VOL	10kB



2.13" x 2.27" (w / borders)



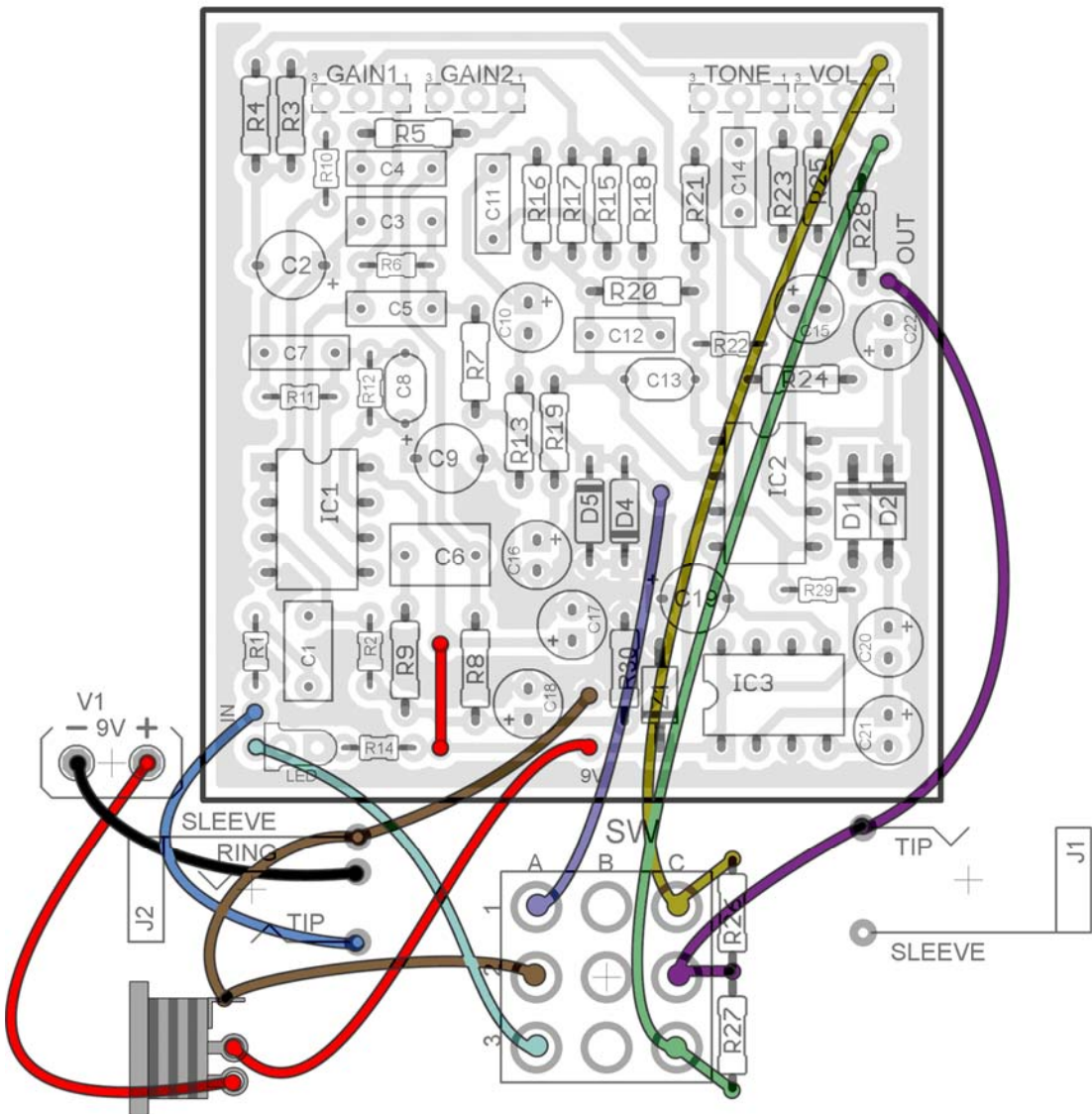
- The PCB here is labeled "ver.2" but it is exactly the same as ver.3 (i.e. the output section is correct).
- If you want to simplify the wiring, connect **R28** on the 3PDT/DPDT switch (between the middle lugs -purple and brown on the wiring diagram). If you do this, you do not need a wire from the "OUT" pad on the board to the tip of the output jack.
- Note the jumper between **R8** and **R9**.

Visit <http://www.madbeanpedals.com/learn/index.html> for helpful wiring diagrams and drilling templates!

This product is intended for DIY use. Commercial use is prohibited.

Voltages (off DC supply @ 8.89v)

Pins	IC1	IC2	IC3
1	4.45	4.52	8.88
2	4.47	4.47	4.55
3	3.43	4.46	0
4	0	-8.46	-4.15
5	4.45	4.45	-8.47
6	4.46	4.46	3.99
7	4.45	4.41	5.33
8	8.88	16.03	8.88



TRUE BYPASS

- OMIT C2, R3, R4
R26 AND R27
- R28 SHOULD BE CONNECTED
FROM THE FX OUT TO GROUND.
YOU CAN JUMPER AS SHOWN OR
PUT IT ON THE 3PDT

