Bloozehound
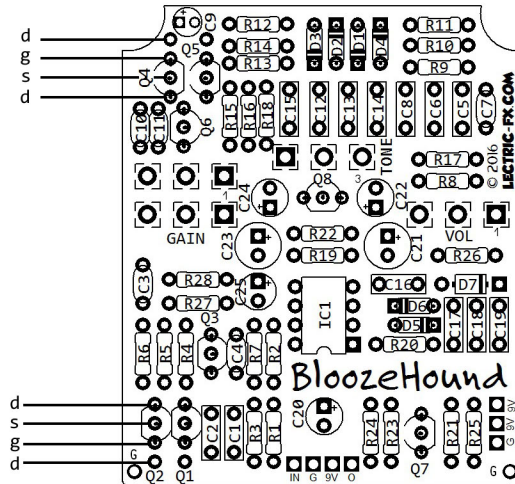
Project Info

The lectric-fx Bloozehound pcb is a project based on the Boss BD-2™.
The circuit uses a couple of discrete opamps for its gain stages, then
goes through some tone shaping and gain recovery.
Here, we've made it true bypass, and offer it as a diy project to build
either as stock, or as a possible platform for modding if so desired.
It's a fun project to build!

Notes

We feel this overdrive is at its best with matched jfets in each stage,
which are Q1 & Q2, and then Q4 & Q5. There are probably any number of
jfets that would work fine in this. My favorite is the 2SK117. BF245A
would probably also be a good fit if you can find them. I tried some
BF545A smd fets (BF245A replacement) from mouser in it and those sound
pretty good. The usual J201 and 2N5457 sounded a bit too fuzzy & woolly
for me in this circuit, but YMMV.
An extra pad has been added to the end of each jfet in a DGSD pattern,
allowing easy usage of different pinouts without bending legs.

The PCB was laid out to use pcb mounted pots, but it seems dual gang
250KA PCB-mount is impossible to find. You could try a couple of things
here. You might find that a 250KB dual gang pot works just as well for

you, or you could get a dual gang 250KA w solder lugs, bend the lugs out straight, and wire it up to the pads with very short wires, effectively forcing it to be pcb-mount yourself. Another cool option is to use 2 independent 250K pots! I built mine this way and it works great (it is certainly not necessary, however). As a courtesy, both 3-knob and 4-knob drill patterns are included in this document.

BTW, I decided to re-number the schematic in order to clean it up, which seemed like a good idea at the time. Then I relalized all the mods use the Boss part numbers, and the original schematic is almost impossible to read. Oops.
So what I've done is made a cross reference between my part numbering & the original ones. It is available for you on the last page. So even though the re-numbering has made things a little trickier (my apolo-gies), this "Part # Quick-Reference" should still allow you to try any existing mods with minimum hassle.

B.O.M.

Part #	Value	Part #	Value	Part #	Value
R1	1M	C1	100n	D1	1n4148
R2	220k	C2	150n	D2	1n4148
R3	4k7	C3	47p	D3	1n4148
R4	2k2	C4	47p	D4	1n4148
R5	1k5	C5	100n	D5	1n4148
R6	22k	C6	47n	D6	1n4148
R7	2k2	C7	220p	D7	1n4001
R8	100k	C8	2n2		
R9	1M	C9	1uF	IC1	TL072
R10	15k	C10	100p		
R11	330k	C11	100p	Q1	*
R12	1M	C12	5n6	Q2	*
R13	4k7	C13	5n6	Q3	2N5087
R14	2k2	C14	18n	Q4	*
R15	2k2	C15	18n	Q5	*
R16	33k	C16	47n	Q6	2N5087
R17	2k2	C17	2n2	Q7	2N5088
R18	5k6	C18	56n	Q8	2N5088
R19	470k	C19	56n		
R20	6k8	C20	10u	GAINA	250KA
R21	1k2	C21	100u	GAINB	250KA
R22	470k	C22	47u	TONE	10KB
R23	10k	C23	100u	VOL	100KA
R24	100k	C24	47u		
R25	22R	C25	47u		
R26	2k2				
R27	10k				
R28	10k				

* See notes

Quantities

Qty	Value	Qty	Value
2	100k	2	100n
3	10k	2	100p
1	15k	2	100uF
1	1k2	1	10uF
1	1k5	1	150n
3	1M	2	18n
1	220k	1	1uF
1	22k	1	220p
1	22R	2	2n2
6	2k2	2	47n
1	330k	2	47p
1	33k	3	47uF
2	470k	2	56n
2	4k7	2	5n6
1	5k6		
1	6k8	1	1n4001
		6	1n4148
		IC1	TL072
		4	JFET
		2	2N5087
		2	2N5088

Be advised that the usage of a dual gang GAIN pot may require low profile caps for 1590B enclosure!
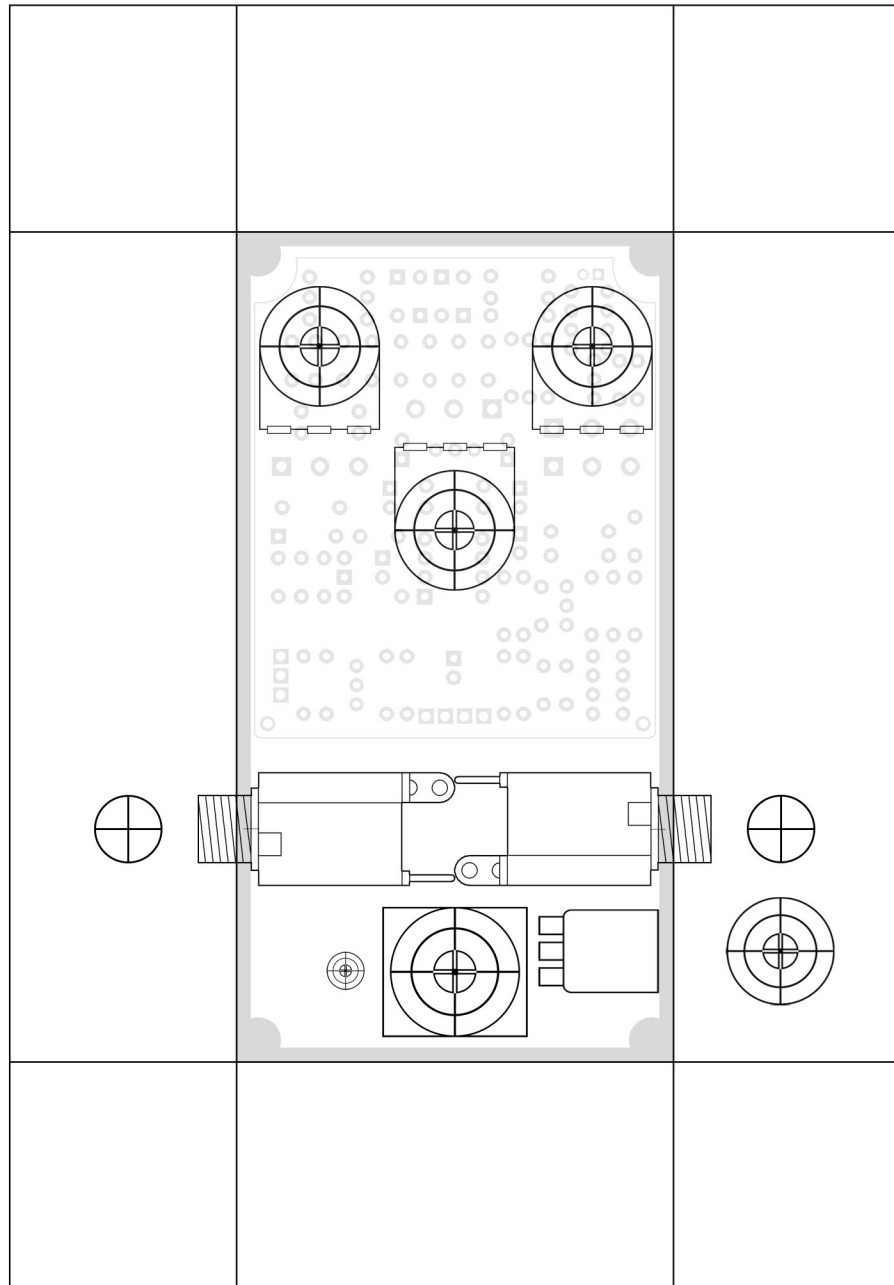
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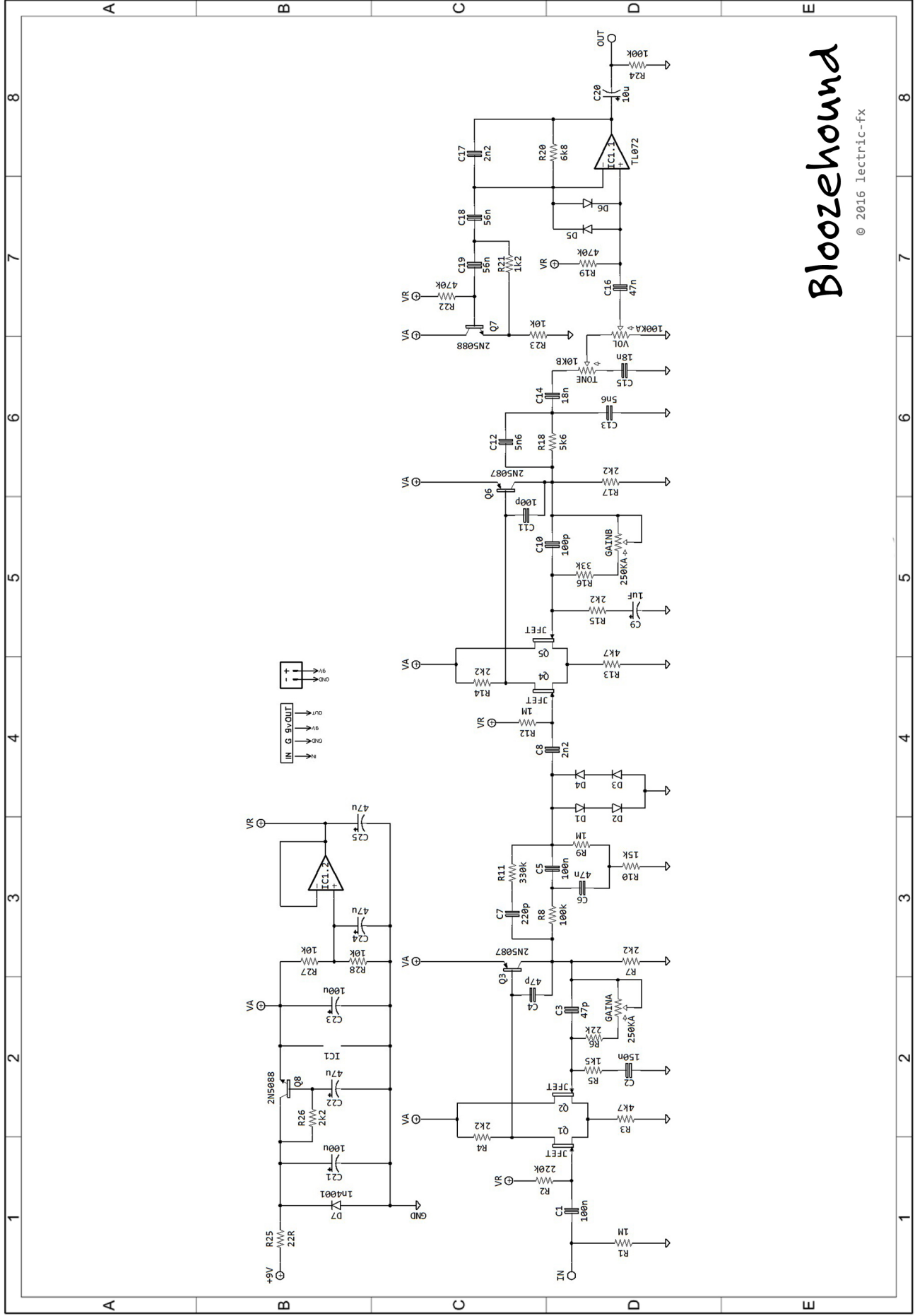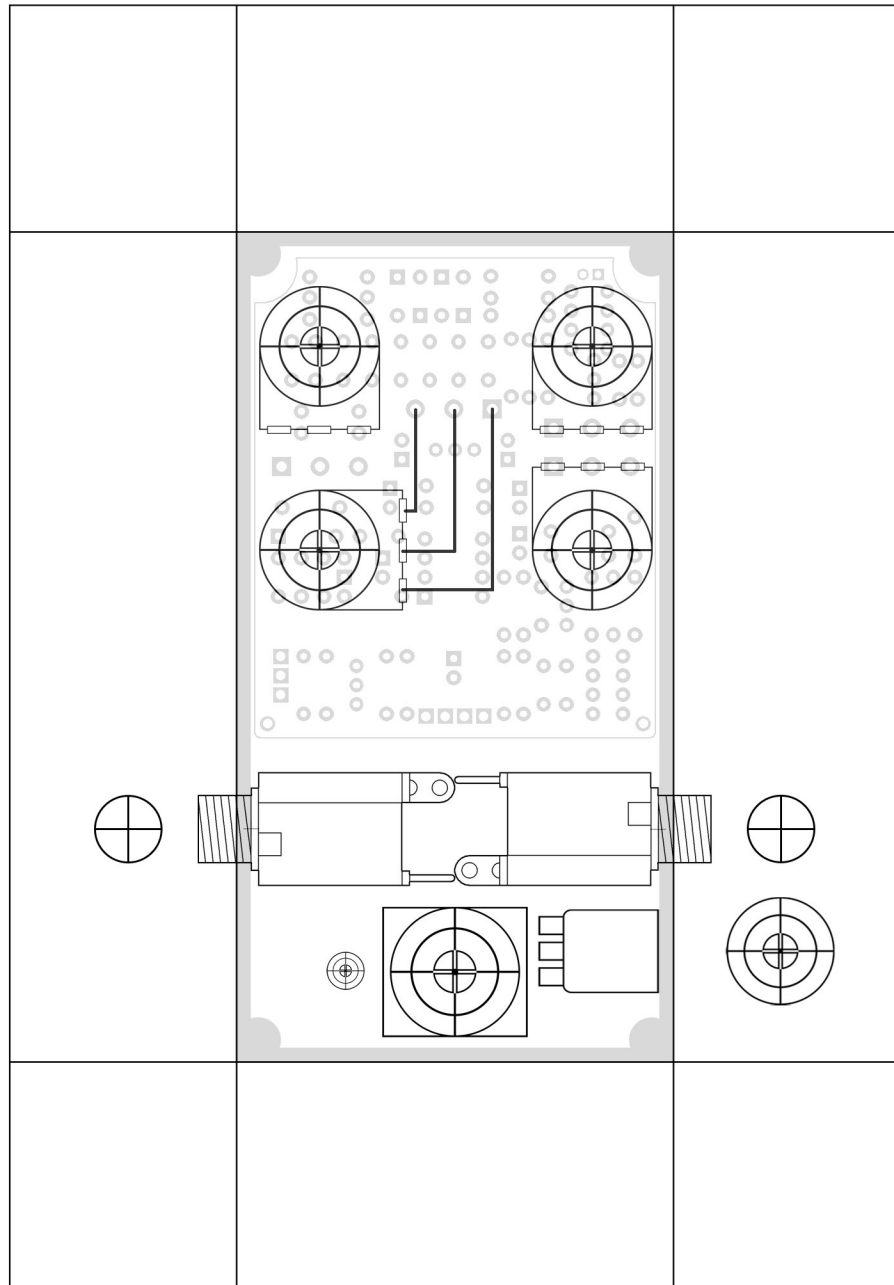
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3 Knob Drilling Template

Drill at your own risk, this is estimated.

4 Knob Drilling Template

Drill at your own risk, this is estimated.

You'll want to use lug pots for all but possibly the volume pot for the
4 knob method, because pc mounts will not line up correctly.
The wires for lugs 1 & 3 on the lower gain pot need to be criss-crossed,
or CW will lower the gain instead of the other way around.

Part # Quick-Reference

BH Part #	Value	BD-2 Part #
R1	1M	NA
R2	220k	R23
R3	4k7	R30
R4	2k2	R28?
R5	1k5	R31
R6	22k	R29
R7	2k2	R32
R8	100k	R36
R9	1M	R50
R10	15k	R51
R11	330k	R37
R12	1M	R35
R13	4k7	R36
R14	2k2	R33
R15	2k2	R34
R16	33k	R27
R17	2k2	R25
R18	5k6	R26
R19	470k	R13
R20	6k8	R8
R21	1k2	R21
R22	470k	R10
R23	10k	R20
R24	100k	R3
R25	22R	NA
R26	2k2	R6
R27	10k	R5
R28	10k	R4

BH Part #	Value	BD-2 Part #
C1	100n	C16
C2	150n	C22
C3	47p	C23
C4	47p	C21
C5	100n	C34
C6	47n	C35
C7	220p	C26
C8	2n2	C27
C9	1uF	C24
C10	100p	C25
C11	100p	C20
C12	5n6	C17
C13	5n6	C19
C14	18n	C100
C15	18n	C101
C16	47n	C10
C17	2n2	C8?
C18	56n	C9
C19	56n	C18?
C20	10u	C7
C21	100u	NA
C22	47u	NA
C23	100u	NA
C24	47u	NA
C25	47u	NA

BH Part #	Value	BD-2 Part #
D1	1n4148	D7
D2	1n4148	D8
D3	1n4148	D10
D4	1n4148	D9
D5	1n4148	D1
D6	1n4148	D3
D7	1n4001	D2
Q1	JFET	Q10
Q2	JFET	Q11
Q3	2N5087	Q9
Q4	JFET	Q14
Q5	JFET	Q13
Q6	2N5087	Q12
Q7	2N5088	Q7
Q8	2N5088	Q2