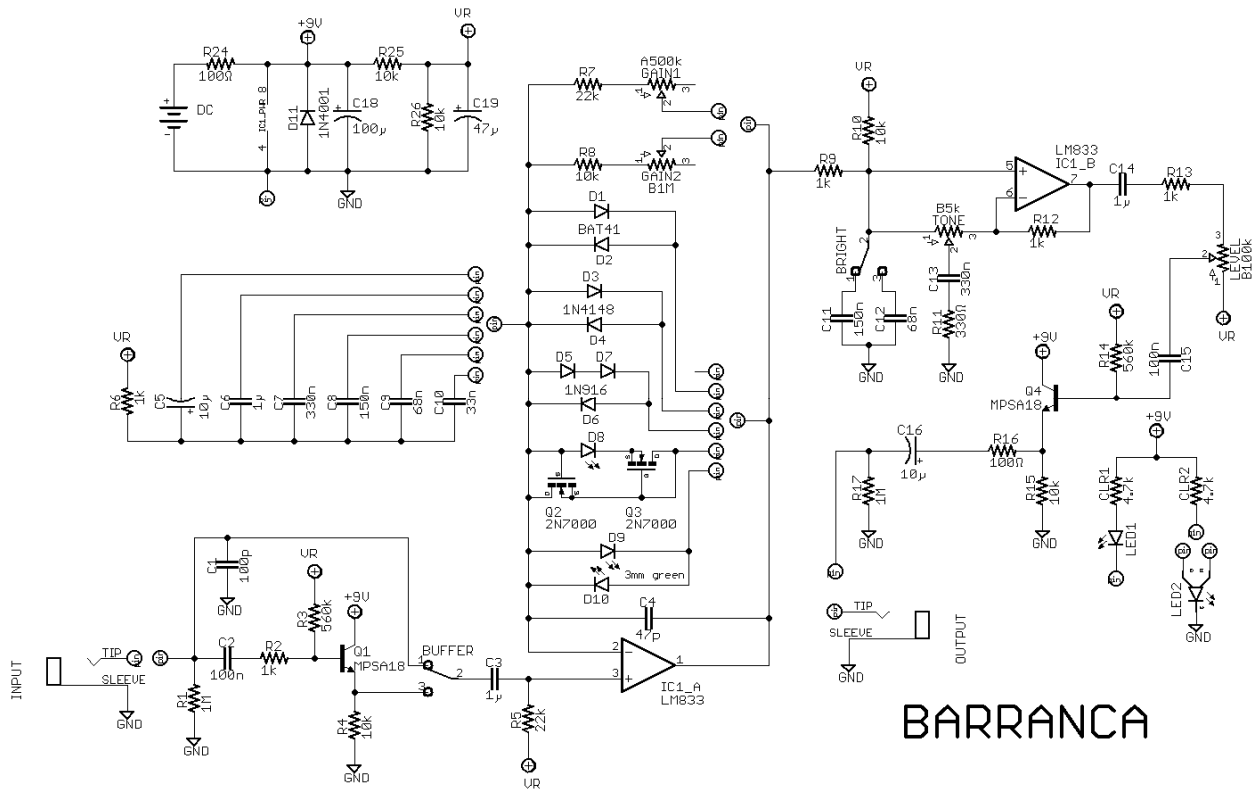


# BARRANCA OVERDRIVE

## DESCRIPTION

The BARRANCA takes a fairly standard Tube Screamer and applies several popular mods to this classic circuit. It is closely based on the EarthQuaker Devices Palisades, but not a direct clone and lacks the built-in boost. It features 2 switchable gain controls, 6 clipping options, 6 bass response options, a bright switch, and an input buffer bypass switch. It's designed to be built with long-leg PCB-mount 16mm pots into a 125B enclosure. To fit into this size enclosure (at least with everything board-mounted), 9mm rotary switches need to be used for the Bandwidth and Clipping controls. These rotaries can be board-mounted via the included daughterboards with header pins (not included).

## SCHEMATIC



BARRANCA

## BILL OF MATERIALS

### Resistors

R1	1M
R2	1k
R3	560k
R4	10k
R5	22k
R6	1k
R7	22k
R8	10k
R9	1k
R10	10k
R11	330Ω
R12	1k
R13	1k
R14	560k
R15	10k
R16	100Ω
R17	1M
R24	100Ω
R25	10k
R26	10k
CLR1	4.7k
CLR2	4.7k

### Capacitors

C1	100p
C2	100n
C3	1μ
C4	47p
C5	10μ
C6	1μ
C7	330n
C8	150n
C9	68n
C10	33n
C11	150n
C12	68n
C13	330n
C14	1μ
C15	100n

C16	10μ
C18	100μ
C19	47μ

### Semiconductors

D1	BAT41
D2	BAT41
D3	1N4148
D4	1N4148
D5	1N916
D6	1N916
D7	1N916
D8	3mm diffused red LED
D9	3mm green LED
D10	3mm green LED
D11	1N4001
LED1	5mm LED
LED2	5mm bi-color LED
IC1	LM833 or other dual opamp
Q1	MPSA18, 2N5088, 2N5089, or 2N3904
Q2	2N7000
Q3	2N7000
Q4	MPSA18, 2N5088, 2N5089, or 2N3904

### Electromechanical

ACTIVATE FOOTSWITCH	3PDT footswitch
BANDWIDTH	9mm 1P6T rotary
BRIGHT	SPDT
BUFFER	SPST
CLIPPING	9mm 1P6T rotary
GAIN1	A500k
GAIN2	B1M
GAIN FOOTSWITCH	DPDT footswitch
LEVEL	B100k
TONE	B5k

Notes:

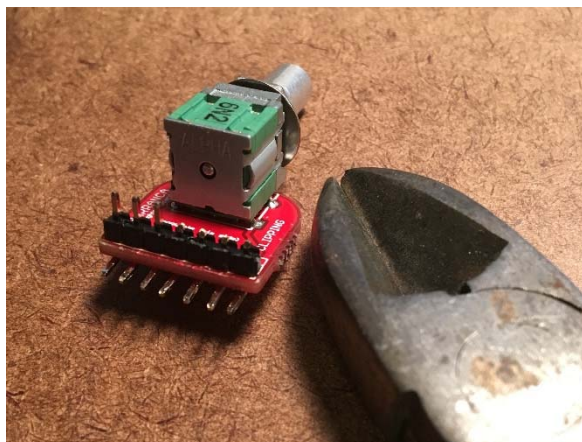
Pots are populated from the component side of the PCB. Jumper lug 3 to lug 9 of the Activate 3PDT footswitch. The 9mm rotary switches are designed to be populated like this:



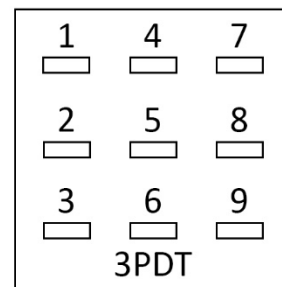
Then use some header pins (I use [these](#)) and populate the long legs through the pad from the same side as the switch. Then bend the legs downwards:



Finally, trim the short legs of the header pins to avoid shorting:



Footswitch lug numbering:

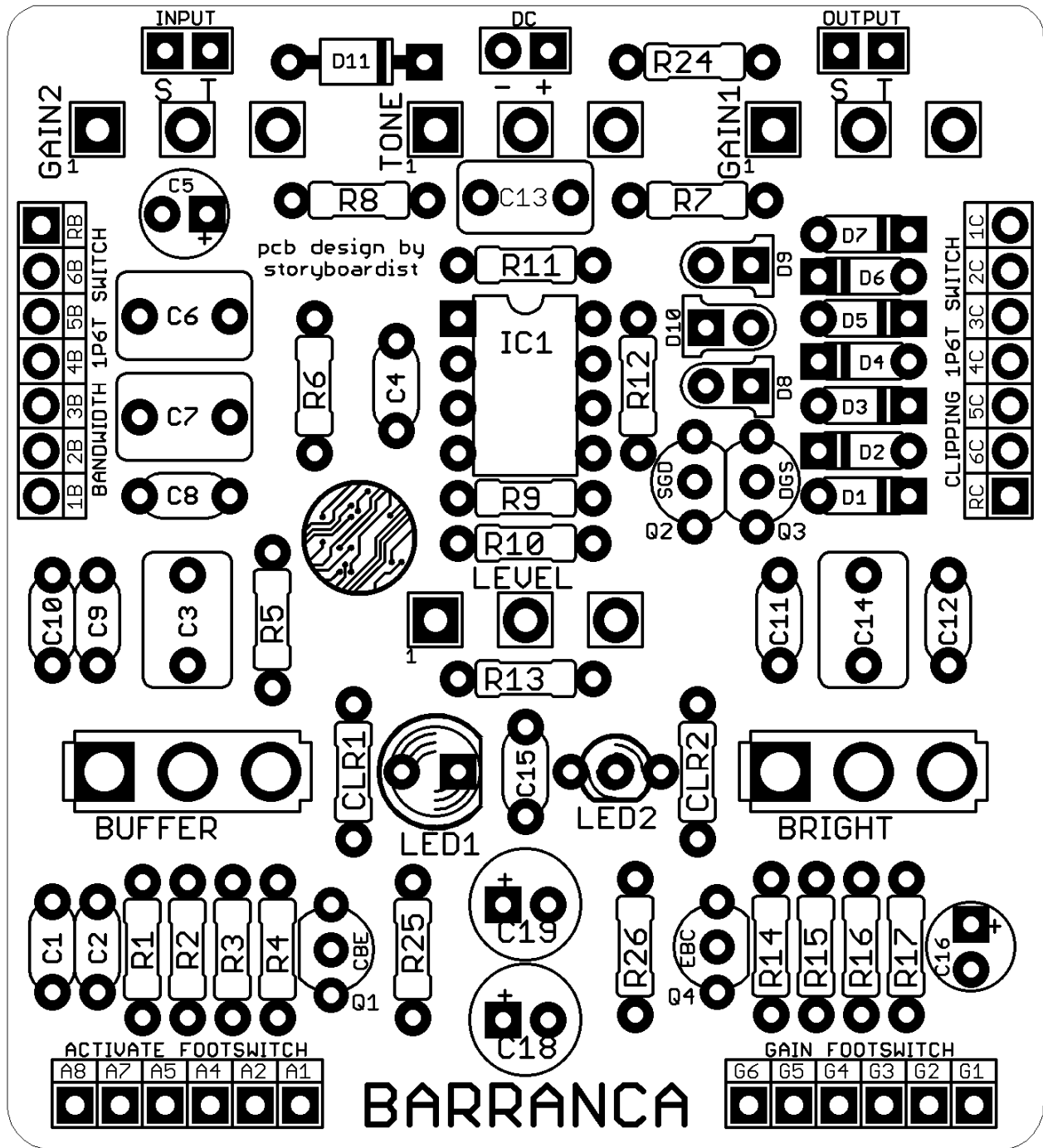


For DPDT ignore the 3<sup>rd</sup> column (lugs 7-9)

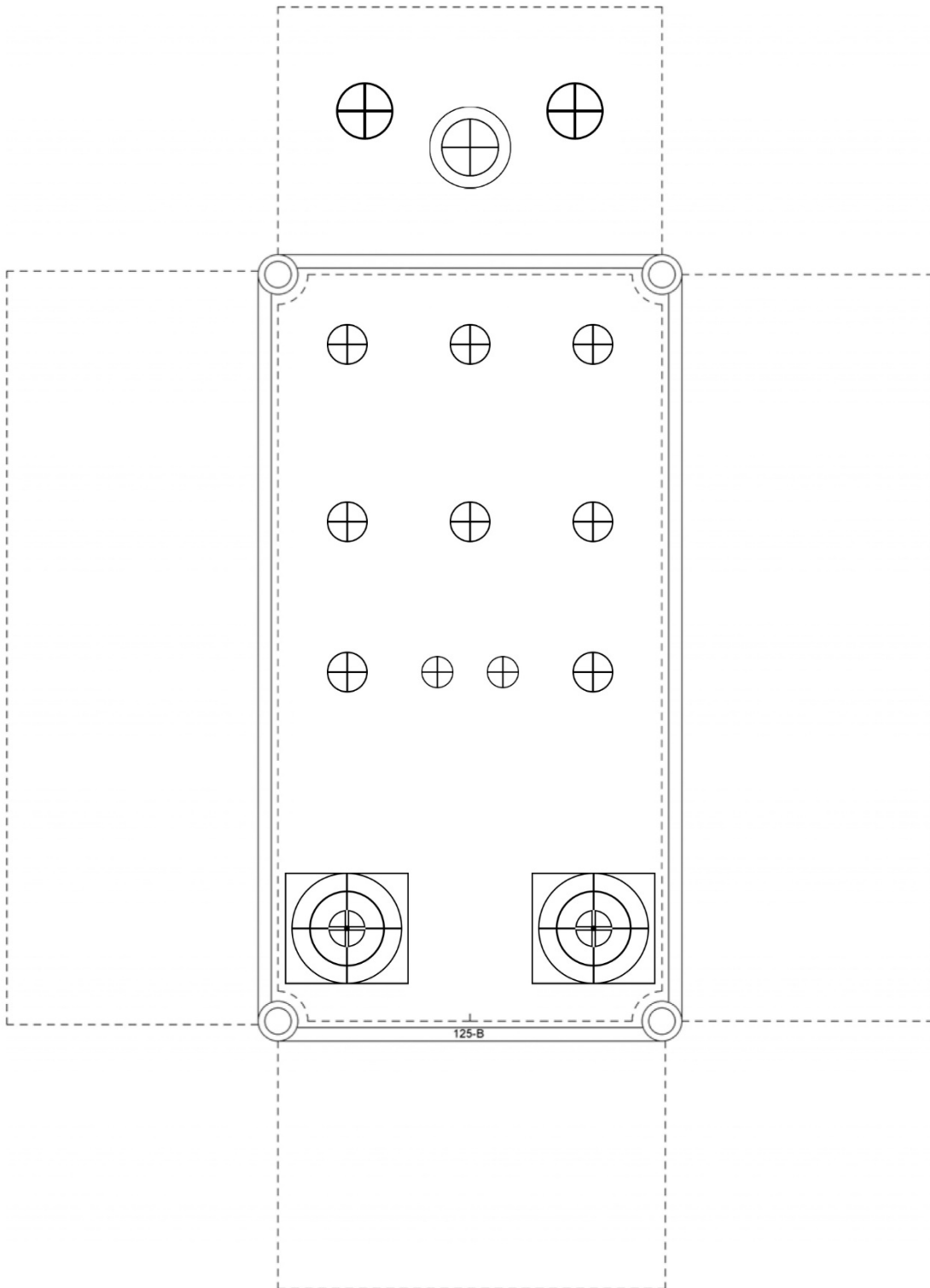
## SHOPPING LIST

Value	Type (suggested)	Quantity
100Ω	¼ watt metal or carbon film	2
330Ω	¼ watt metal or carbon film	1
1k	¼ watt metal or carbon film	5
4.7k	¼ watt metal or carbon film	2
10k	¼ watt metal or carbon film	6
22k	¼ watt metal or carbon film	2
560k	¼ watt metal or carbon film	2
1M	¼ watt metal or carbon film	2
47p	Ceramic (63v or higher)	1
100p	Ceramic (63v or higher)	1
33n	Film (63v or higher)	1
68n	Film (63v or higher)	2
100n	Film (63v or higher)	2
150n	Film (63v or higher)	2
330n	Film (63v or higher)	2
1μ	Film (63v or higher)	3
10μ	Electrolytic (35v or higher)	2
47μ	Electrolytic (35v or higher)	1
100μ	Electrolytic (35v or higher)	1
BAT41		2
1N916		3
1N4001		1
1N4148		2
3mm diffused red LED		1
3mm red LED		2
5mm LED		1
5mm bi-color LED		1
LM833	Dual opamp	1
MPSA18	NPN silicon BJT	2
2N7000		2
1P6T	9mm rotary switch	2
3PDT	Footswitch	1
DPDT	Footswitch	1
A500k	16mm right angle PC mount long pin	1
B5k	16mm right angle PC mount long pin	1
B100k	16mm right angle PC mount long pin	1
B1M	16mm right angle PC mount long pin	1
SPDT	Toggle switch	2

LAYOUT



# DRILL TEMPLATE



EFFECTS LAYOUTS © 2018  
For DIY and small commercial applications.  
Not for non-peer to peer resale.