

LaureateJR

FX Type: **OVERDRIVE**

Build Level: Intermediate

Based On: Nobels® ODR-1™

Last Updated: April 25, 2024 9:30 AM

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Overview

The first Laureate was released a few years ago as a stand-alone “Pro Series” project. It was designed for the 125B enclosure and included soft touch switching. In order to move it to the 1590B Standard Series it was necessary to revert back to standard mechanical switching. Having built the ODR-C, I also decided to include its bass control feature which is superior to the one I used in the original Laureate project.

This is an excellent overdrive, mixing soft and hard clipping, a unique gyrator-based tone control and offers plenty of texture and personality to a guitar tone. The ODR-1 has long been a staple of session guitarists. Give it a try!

Controls

- **VOL:** Total effect output.
- **GAIN:** Total gain, from mild to medium overdrive.
- **SPEC:** Tone control (called Spectrum on the ODR-1). The tone control circuitry features an active mid boost with low pass cut when set CCW. This control is quite unique in the world of overdrives. Recognizable bones, but unusual.
- **TRIM:** This control reduces the massive amount of low end in the circuit. It is the same control used in the newer ODR-C version.

Further study:

<https://nordland-electronics.de/en/blog/odr-1.html>

<https://nordland-electronics.de/en/products/odr-c.html>

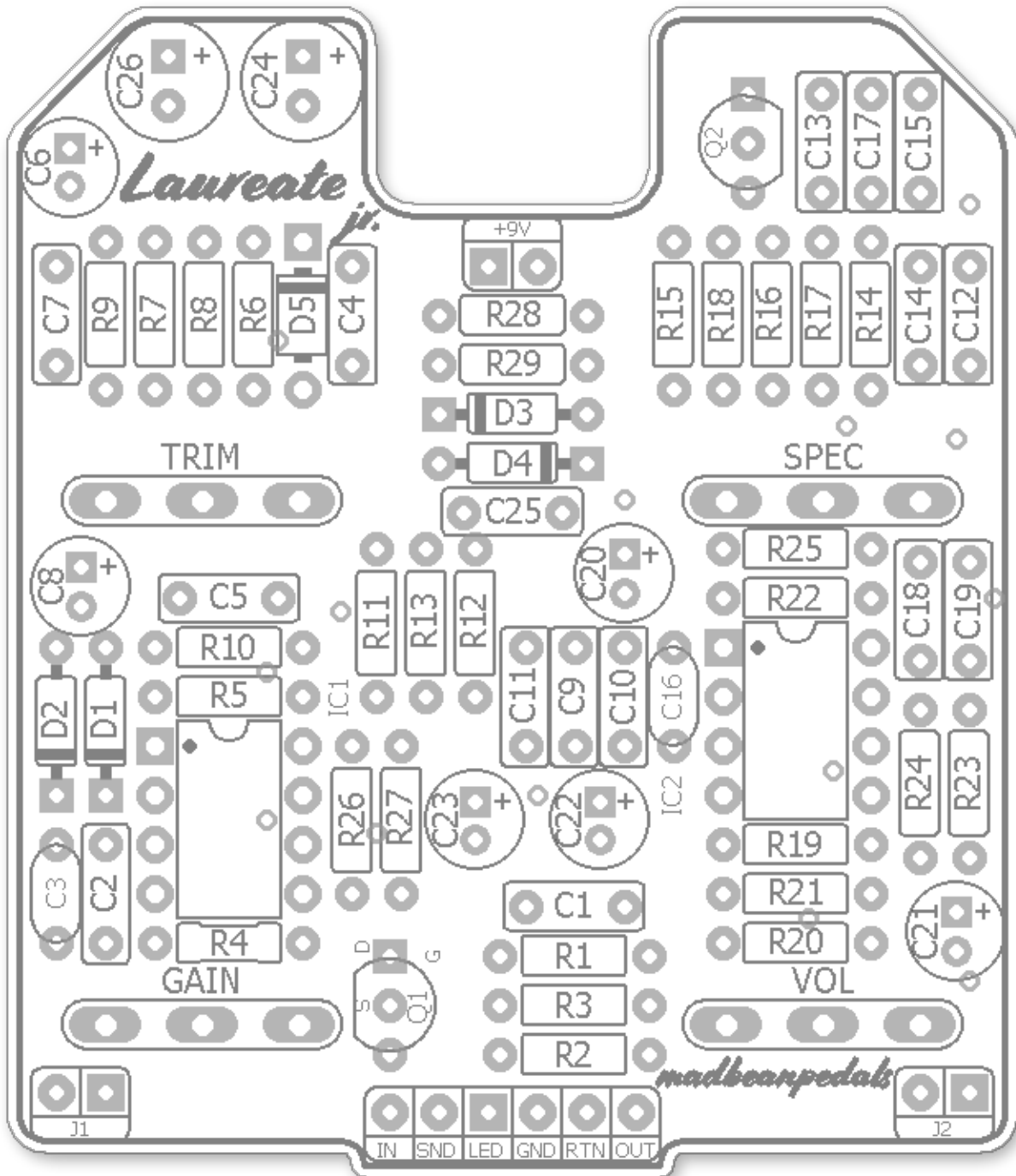
https://www.youtube.com/watch?v=yHudK6_B0c4

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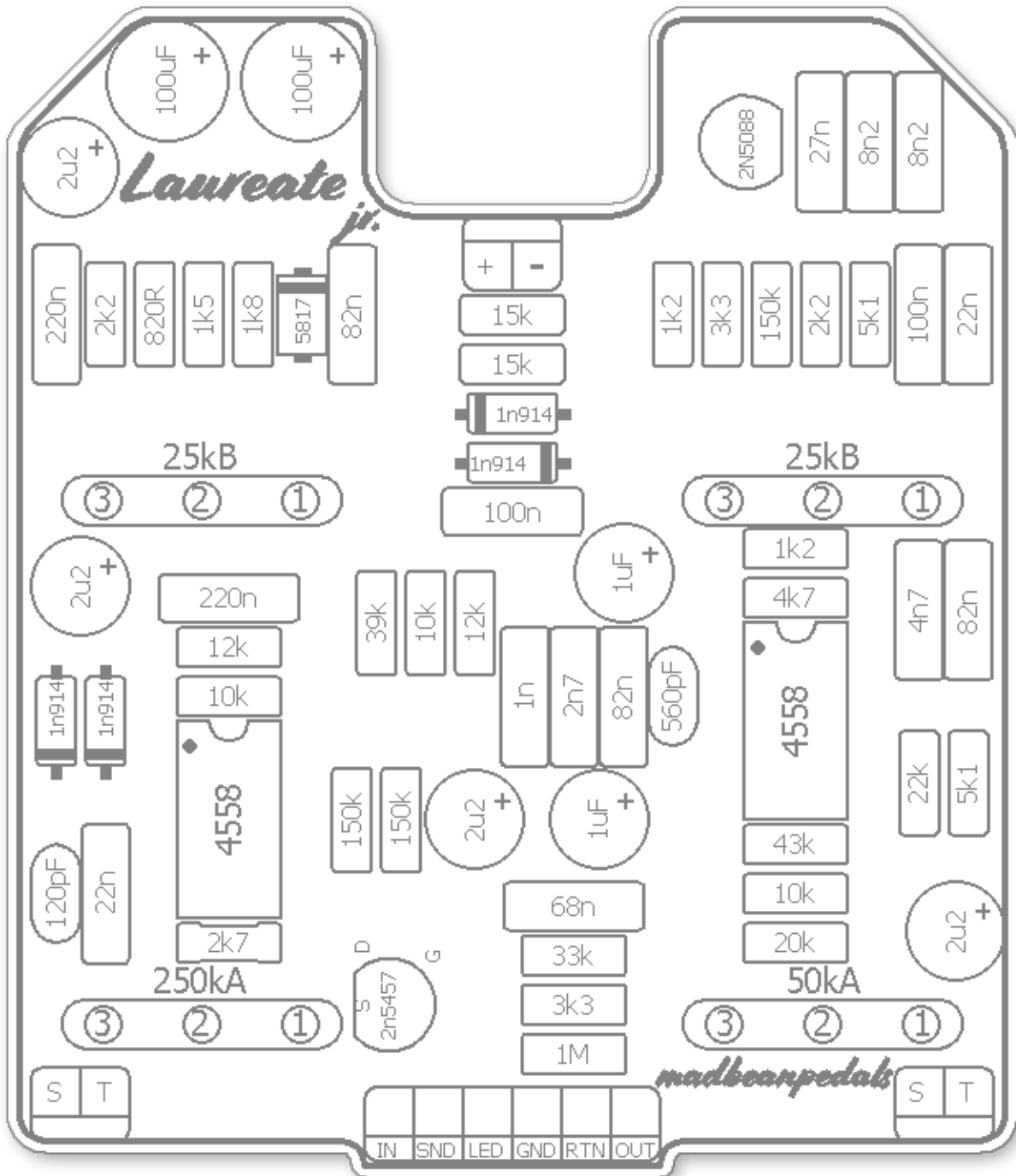
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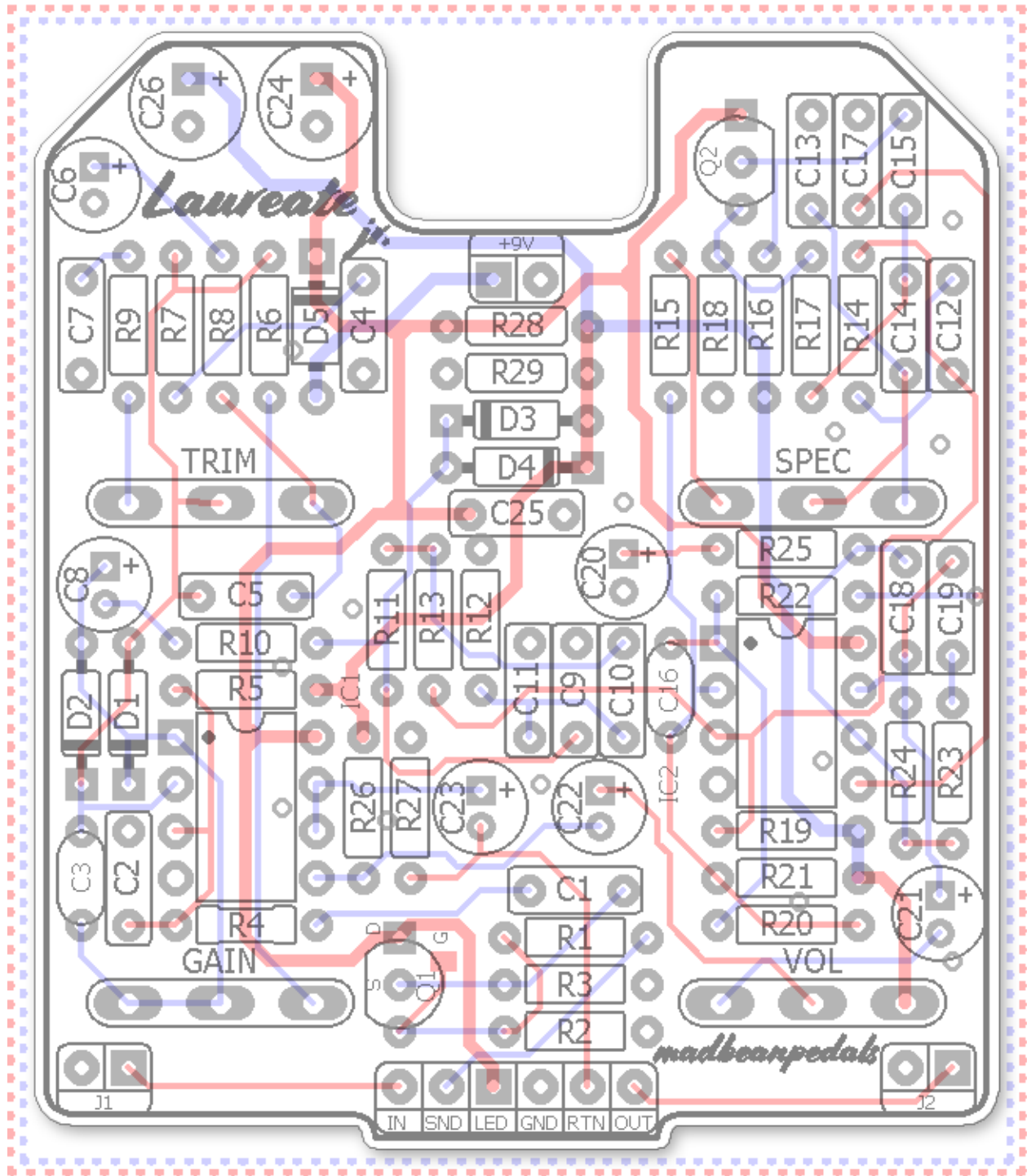
Parts Layout



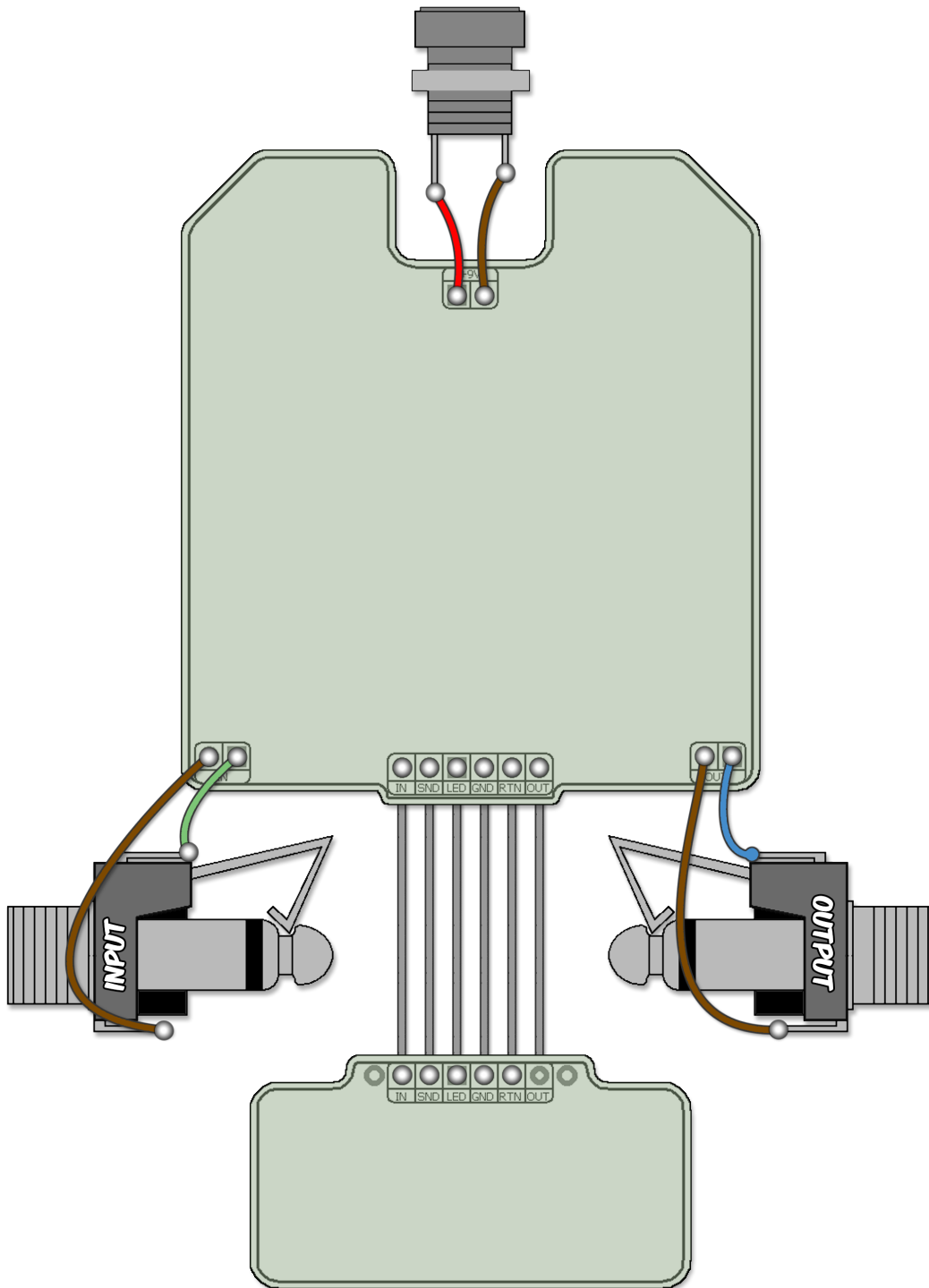
Component Values



Trace Layout



Wiring



Unless otherwise noted, all Standard Series projects have the same wiring regardless of which 3PDT bypass board is used. A 6-pin, 2" ribbon cable is recommended for soldering the connections between the two PCBs.

B.O.M.

Resistors		Caps		Diodes	
R1	33k	C1	68n	D1	1n914
R2	1M	C2	22n	D2	1n914
R3	3k3	C3	120pF	D3	1n914
R4	2k7	C4	82n	D4	1n914
R5	10k	C5	220n	D5	1n5817
R6	1k8	C6	2u2	Transistors	
R7	820R	C7	220n	Q1	2n5457
R8	1k5	C8	2u2	Q2	2N5088
R9	2k2	C9	2n7	IC	
R10	12k	C10	82n	IC1	4558
R11	39k	C11	1n	IC2	4558
R12	12k	C12	22n	Pots	
R13	10k	C13	27n	SPEC	25kB
R14	5k1	C14	100n	TRIM	25kB
R15	1k2	C15	8n2	VOL	50kA
R16	150k	C16	560pF	GAIN	250kA
R17	2k2	C17	8n2		
R18	3k3	C18	4n7		
R19	43k	C19	82n		
R20	20k	C20	1uF		
R21	10k	C21	2u2		
R22	4k7	C22	1uF		
R23	5k1	C23	2u2		
R24	22k	C24	100uF		
R25	1k2	C25	100n		
R26	150k	C26	100uF		
R27	150k				
R28	15k				
R29	15k				

Shopping List

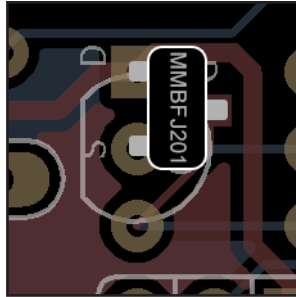
Value	QTY	Type	Rating
820R	1	Carbon / Metal Film	1/4W
1k2	2	Carbon / Metal Film	1/4W
1k5	1	Carbon / Metal Film	1/4W
1k8	1	Carbon / Metal Film	1/4W
2k2	2	Carbon / Metal Film	1/4W
2k7	1	Carbon / Metal Film	1/4W
3k3	2	Carbon / Metal Film	1/4W
4k7	1	Carbon / Metal Film	1/4W
5k1	2	Carbon / Metal Film	1/4W
10k	3	Carbon / Metal Film	1/4W
12k	2	Carbon / Metal Film	1/4W
15k	2	Carbon / Metal Film	1/4W
20k	1	Carbon / Metal Film	1/4W
22k	1	Carbon / Metal Film	1/4W
33k	1	Carbon / Metal Film	1/4W
39k	1	Carbon / Metal Film	1/4W
43k	1	Carbon / Metal Film	1/4W
150k	3	Carbon / Metal Film	1/4W
1M	1	Carbon / Metal Film	1/4W
120pF	1	Ceramic / MLCC	16v min.
560pF	1	Ceramic / MLCC	16v min.
1n	1	Film	16v min.
2n7	1	Film	16v min.
4n7	1	Film	16v min.
8n2	2	Film	16v min.
22n	2	Film	16v min.
27n	1	Film	16v min.
68n	1	Film	16v min.
82n	3	Film	16v min.
100n	2	Film	16v min.
220n	2	Film	16v min.
1uF	2	Electrolytic	16v min.
2u2	4	Electrolytic	16v min.
100uF	2	Electrolytic	16v min.
1n914	4		
1n5817	1		
2n5457	1	SMT or Through-Hole	
2N5088	1		
4558	2		
25kB	2	PCB Right Angle	16mm
50kA	1	PCB Right Angle	16mm
250kA	1	PCB Right Angle	16mm

Additional Hardware

- (1) 1590B enclosure
- (2) Lumberg 1/4" Compact mono jacks
- (1) Slim 2.1mm DC jack
- (1) Standard 3PDT footswitch
- (1) 5mm LED

Build Notes

- For Q1 you have the option of either a through-hole or a surface mount device. Rather than using two separate parts, they are combined into one so the surface mount version takes advantage of the two through-hole pads. This works out great and is actually easier to solder than a fully surface mount part. You can use the MMBFJ201 or MMBF5457. NOTE: some manufacturers may have the opposite pinout for the Source and Drain pins on surface mount devices. Doesn't matter - they can be used interchangeably in this application.



Circuit Voltages

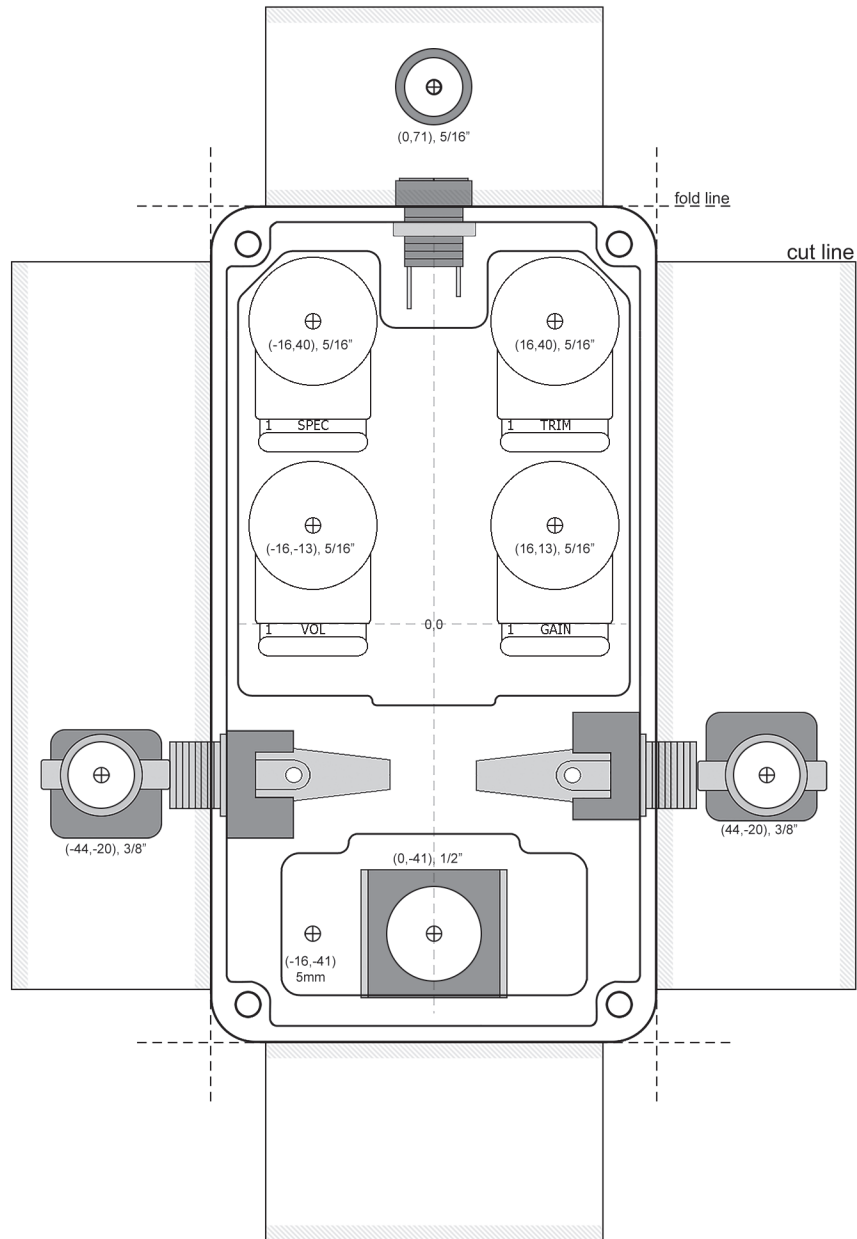
IC1	4558	IC2	4558	Q1	2n5457
1	4.60	1	4.60	D	9.24
2	4.60	2	4.60	S	555mV
3	4.59	3	4.57	G	0
4	0.00	4	0.00		
5	4.54	5	4.60	Q2	2n5088
6	4.60	6	4.60	C	9.24
7	4.60	7	4.61	B	4.21
8	9.24	8	9.24	E	3.65

9.44vDC One Spot supply
Current Draw: ~10mA
Knobs @ 50%

1590B Drill Template

Coordinates are denoted in (X,Y), drill size format starting from the center (0,0) location of the enclosure.

[Link to Tayda Standard Series master drill template](#)

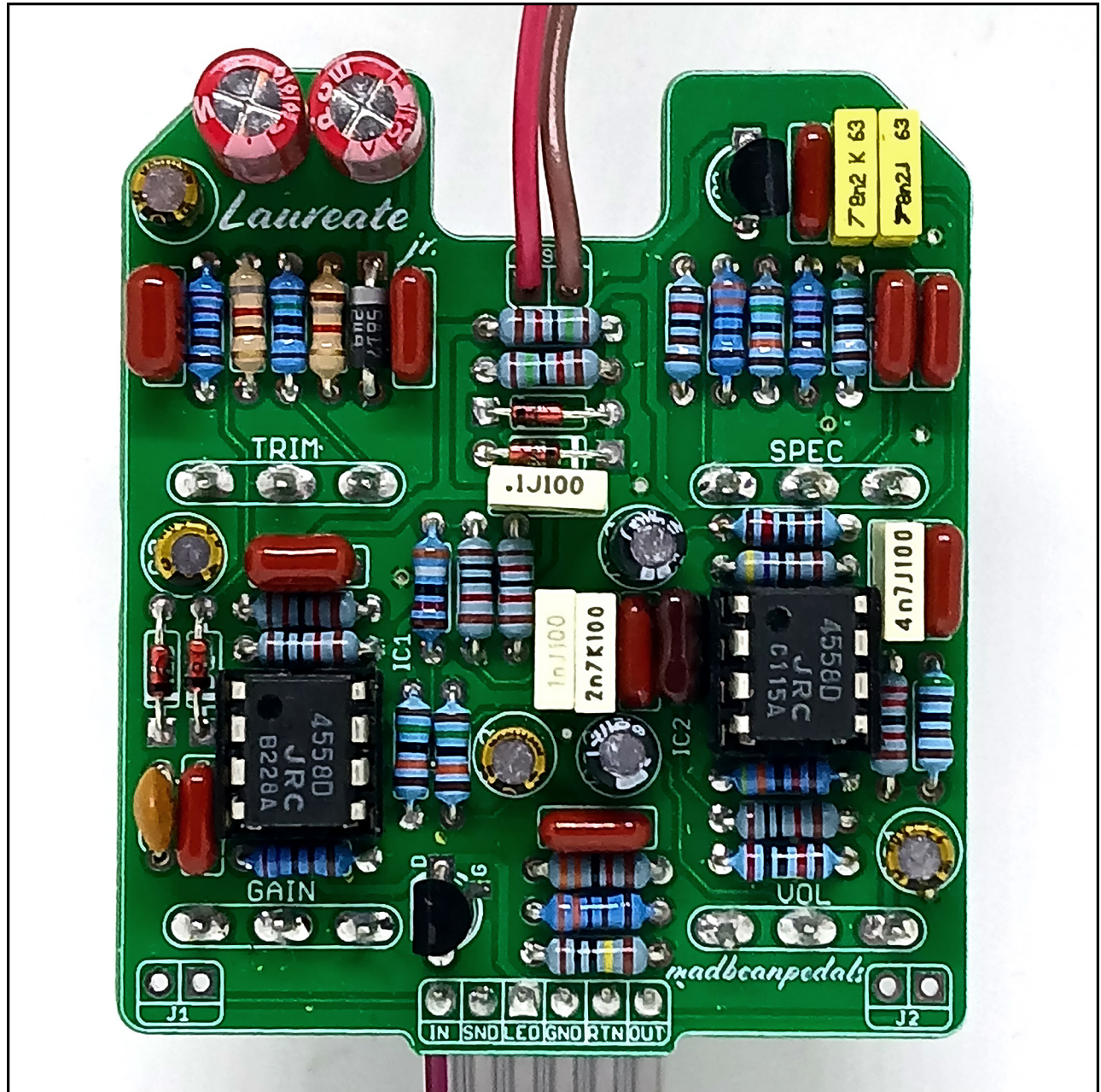


Hardware

1590B enclosure
16mm pots
Lumberg 1/4" Compact mono jacks
Slim 2.1mm DC jack
Standard 3PDT footswitch
5mm LED

NOTE: Different 1/4" and DC jack styles may require different sized drill holes.

Build Pic



Schematic

