

# Eggploder

**F**X Type: **FUZZ OCTAVE**

Build Level: Beginner

Based On: Ampeg® Scrambler™

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## Overview

*The Standard Series version of the Eggploder is the same circuit as the 2021 project, but ported to the new layout format.*

2021 turned into a year of me finally building some classic effects I had overlooked for a long time. I was familiar with the Scrambler, of course, but all the demos I had heard left me pretty unimpressed. But, then one day I decided to breadboard the circuit and wow! After about 10 minutes I was in love. It's got a certain rawness to it that's unique. And, the octave up it can produce is very sweet and pronounced. It sounds great on both bass and guitar. The Balance control is especially good for bass as it allows you to mix in some clean with the fuzz.

The **Eggploder** has got all the Scrambler elements plus a little bit more. An output gain stage has been added to allow for a decent amount of boost, if desired. An alternative "Splode" mode is also included. This subs a Darlington for Q2 but connected in reverse. It was a complete breadboard accident on my part but I thought it sounded very cool. It nearly breaks the fuzz but not quite. It's the sonic equivalent of adding eggs into a pan filled with hot bacon grease.

## Controls

- **VOL:** Effect output level.
- **BAL:** Sets the blend between clean and fuzz. Very useful for bass!
- **TEXTR:** Turning CW introduces a light octave up and an odd sounding harmonic texture. This is the typical oct up sound where it is most effective on the 12th fret and up and esp. with the guitar/bass tone knob rolled down.
- **SPLODE:** The Splode mode (up position) is basically barely controlled chaos. It will produce sub-octaves and gated sounds. A brain fryer.

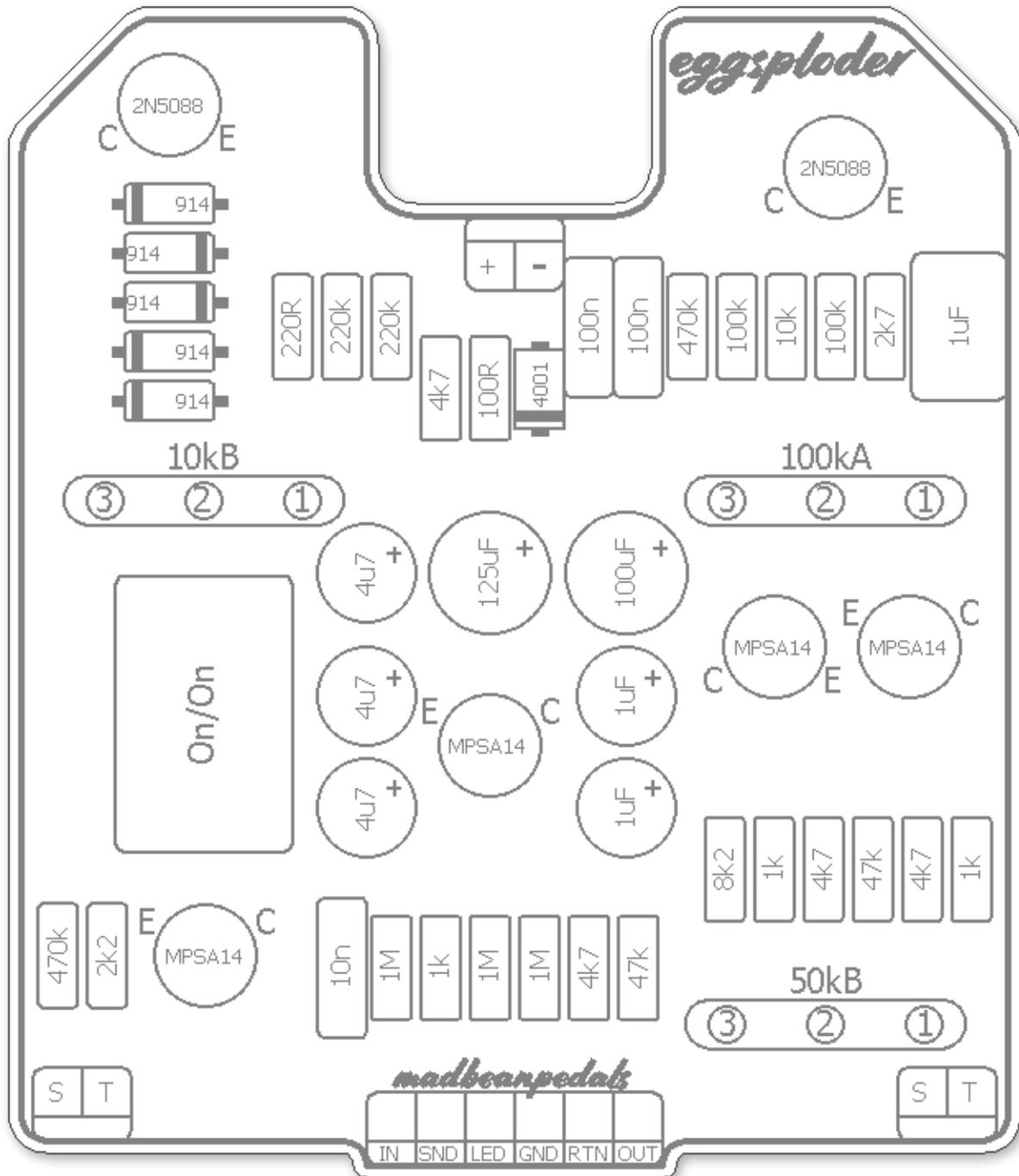
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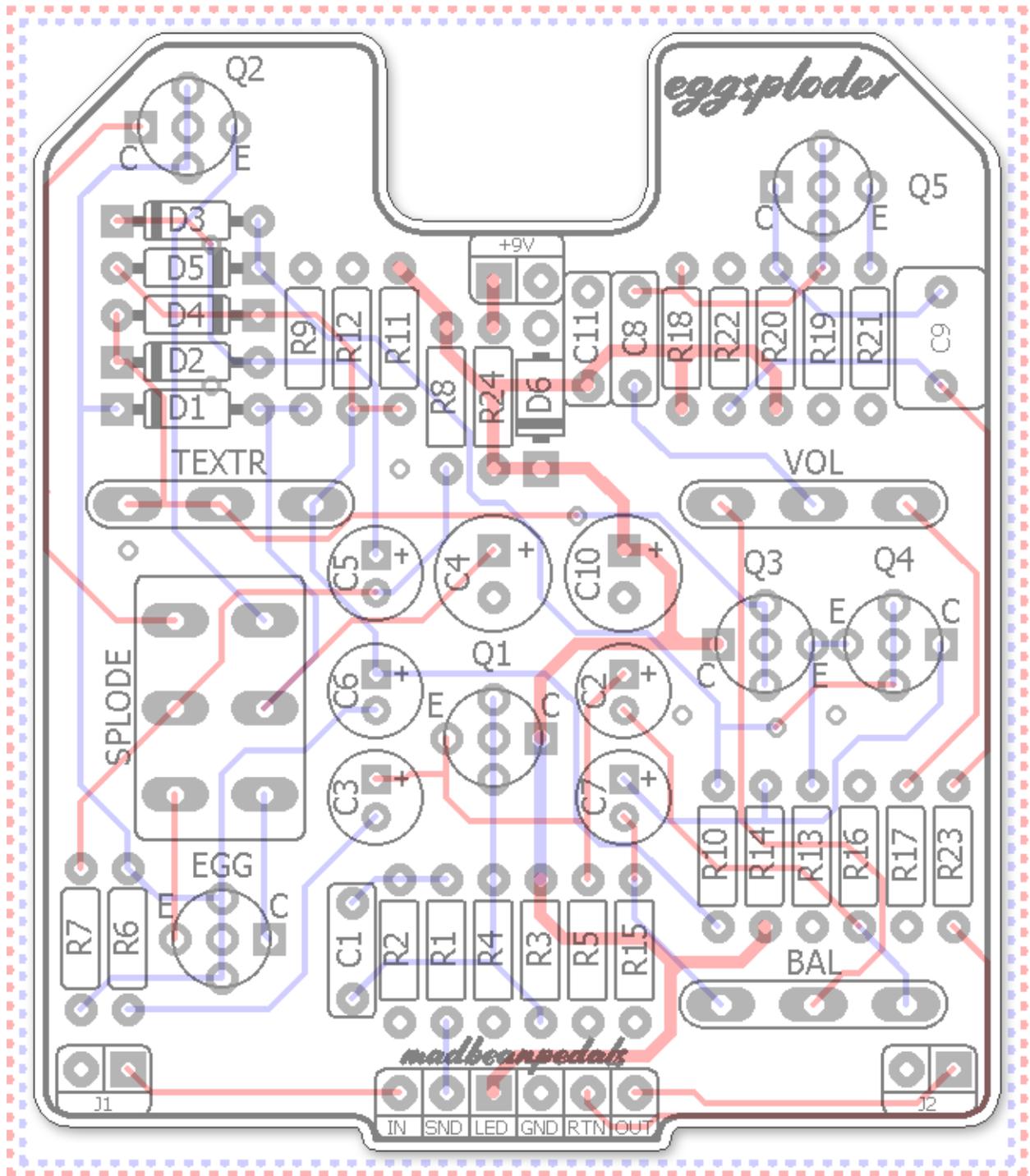
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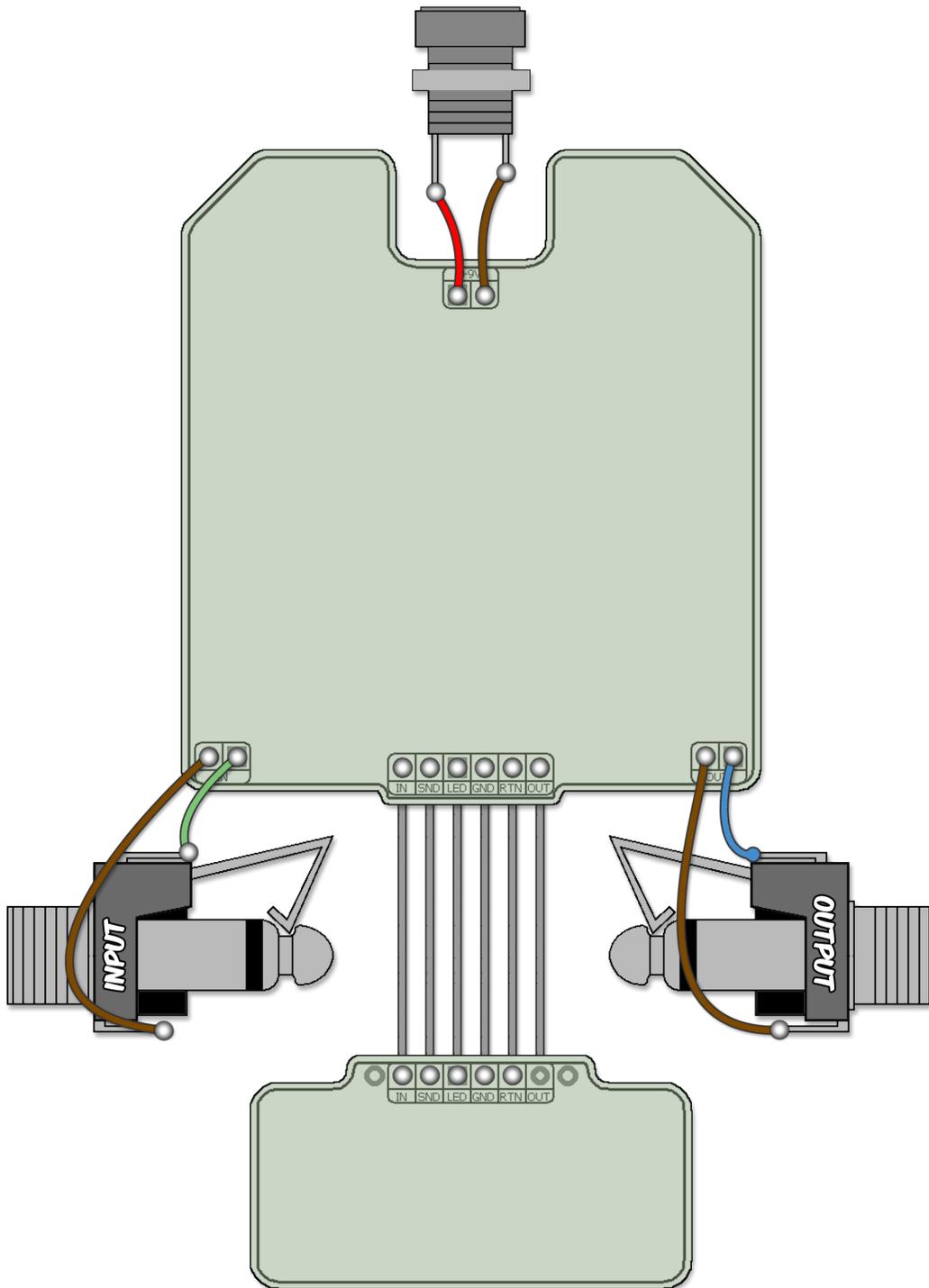
## Component Values



# 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	1k	C1	10n	D1 - D5	1n914
R2	1M	C2	1uF	D6	1n4001
R3	1M	C3	1uF	<b>Transistors</b>	
R4	1M	C4	125uF	Q1	MPSA14
R5	4k7	C5	1uF	Q2	2N5088
R6	2k2	C6	1uF	Q3	MPSA14
R7	470k	C7	1uF	Q4	MPSA14
R8	4k7	C8	100n	Q5	2N5088
R9	220R	C9	1uF	EGG	MPSA14
R10	8k2	C10	100uF	<b>Switches</b>	
R11	220k	C11	100n	SPLODE	On/On
R12	220k	<b>Pots</b>			
R13	4k7			TEXTR	10kB
R14	1k			BAL	50kB
R15	47k			VOL	100kA
R16	47k				
R17	4k7				
R18	470k				
R19	100k				
R20	10k				
R21	2k7				
R22	100k				
R23	1k				
R24	100R				
R25	4k7				

## Shopping List

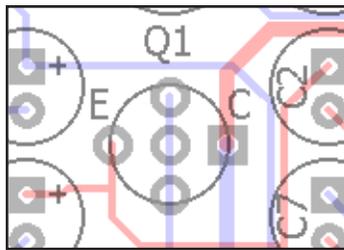
Value	QTY	Type	Rating
100R	1	Metal / Carbon Film	1/4W
220R	1	Metal / Carbon Film	1/4W
1k	3	Metal / Carbon Film	1/4W
2k2	1	Metal / Carbon Film	1/4W
2k7	1	Metal / Carbon Film	1/4W
4k7	5	Metal / Carbon Film	1/4W
8k2	1	Metal / Carbon Film	1/4W
10k	1	Metal / Carbon Film	1/4W
47k	2	Metal / Carbon Film	1/4W
100k	2	Metal / Carbon Film	1/4W
220k	2	Metal / Carbon Film	1/4W
470k	2	Metal / Carbon Film	1/4W
1M	3	Metal / Carbon Film	1/4W
10n	1	Film	16v min.
100n	2	Film	16v min.
1uF	6	Film	16v min.
100uF	1	Electrolytic	16v min.
125uF	1	120uF included w/ purchase	16v min.
1n914	5	or, 1N456	
1n4001	1		
MPSA14	4	or, MPSA13, 2N5306	
2N5088	2	or, BC549B, BC169B	
DPDT	1	On/On Pin Mount	
10kB	1	PCB Right Angle	16mm
50kB	1	PCB Right Angle	16mm
100kA	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

- You can build the Eggspoder with the transistors I specified (MPSA14, 2N5088) or stick with the original spec'd ones (2N5306, BC169B). Same goes for the diodes (1N914 vs. 1N456). The BC169B may be hard to get but all the others are readily available. The BC549B can be subbed for the BC169B. I compared both sets of transistors and diodes while working on this project and thought the MPSA14, 2n5088 and 1n914 gave the effect just a bit more edge and character. YMMV.
- I've used a multi-pin transistor layout for the entire PCB so any number of NPN and Darlington combos can be used. But, be mindful of transistor pinouts. The board is laid in a C-B-E configuration (the same as a 2N5088 and MPSA14). The 2N5306 has a B-C-E pinout. So, those transistors would need their leads twisted around a bit to fit the pin configuration on the Eggsplooder PCB.



- NOTE: I suggest using a socket for the EGG transistor. Having built this circuit a few times now I've found transistor selection makes a difference here. It does not appear to be related to the HFE (other than it needs to be high) so I simply cycled through the batch I had until I got the result I wanted. What you are shooting for in the Splode mode is some gnarly subs with a decent amount of decay and the note "gates" out at the tail end.

## Circuit Voltages

Q1 MPSA14		Q4 MPSA14	
C	9.16	C	8.99
B	4.43	B	4.6
E	3.51	E	3.63
Q2 2N5088		Q5 2N5088	
C	2.5	C	6.15
B	0.94	B	1.43
E	312mV	E	0.81
Q3 MPSA14		EGG MPSA14	
C	9.16	C	104mV
B	4.71	B	0.66
E	3.63	E	7.02

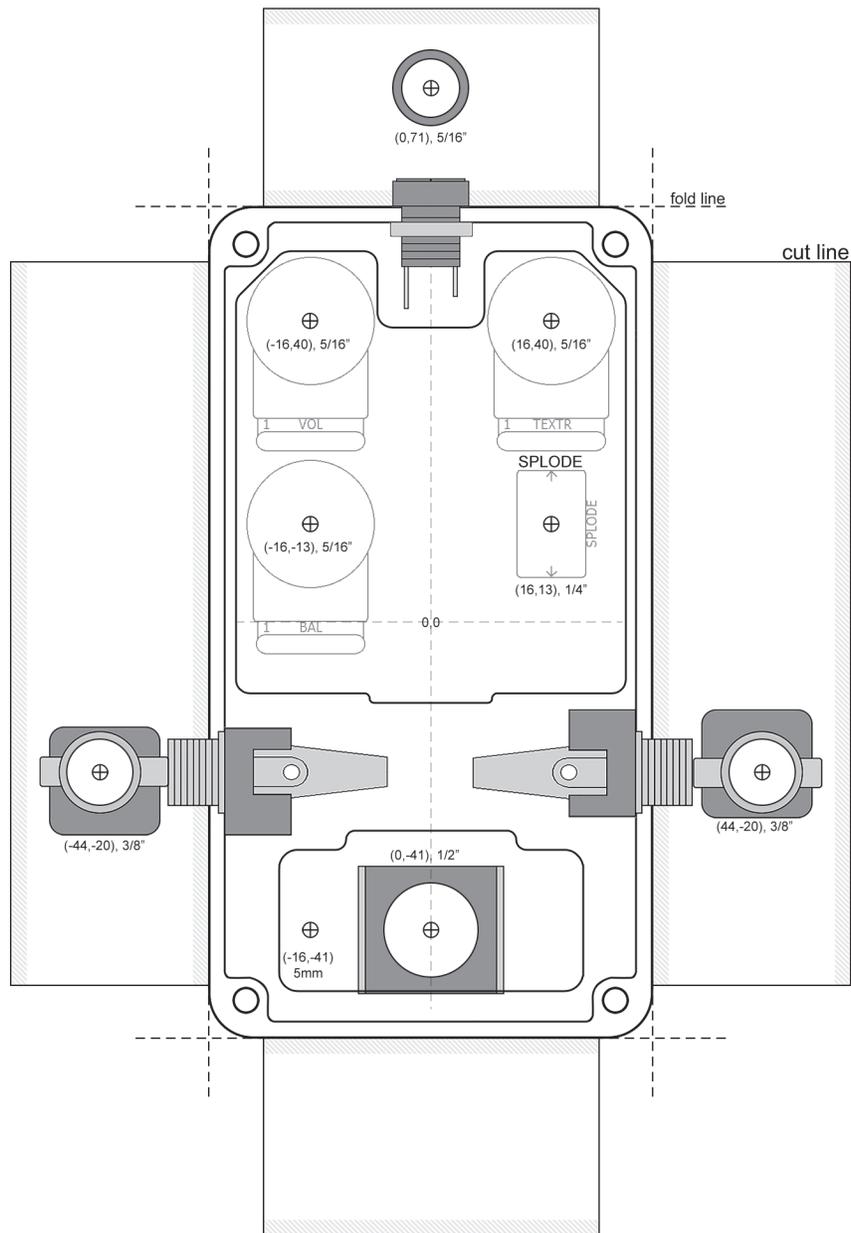
9.44vDC One Spot supply  
Current Draw: ~3mA

- Knobs set to 50%
- For the Q2 measurement, the Splode switch is set to Normal. For the Egg measurement, the switch is set to Splode.

## 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  
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.**



# Schematic

