

Steel Stingray

Based on:
Vertex Steel String™
Effect type:
Dumble overdrive
Build difficult:
Easy

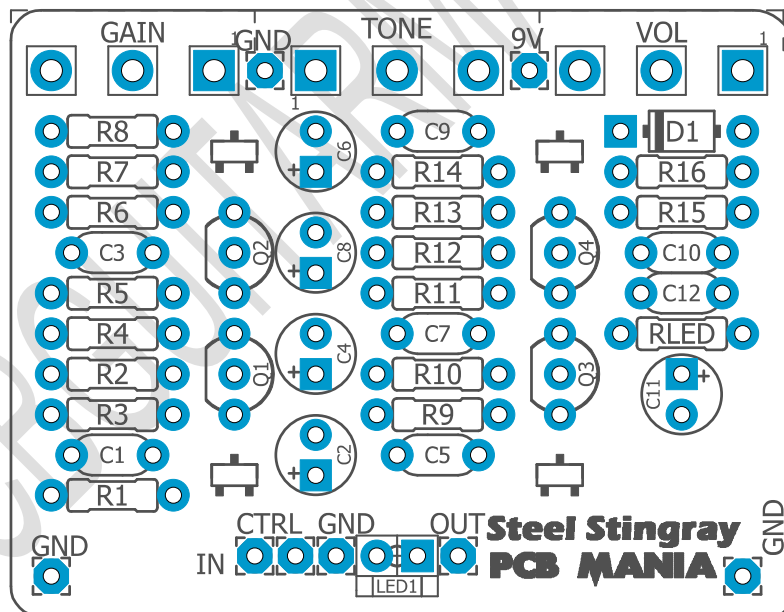
Amount of parts:
Medium, total 38 components
Technology:
JFET gain stages
Power consumption:
9V(22mA)

Enclosure type:
125b - 1590b
Get your board at:
[Steel Stingray](#)
Get your kit at:
[Das Musikding \(Europe\)](#)

Project overview:

The hype that surrounds Alexander Dumble's creations has led to an entire cottage industry of builders trying to replicate that sound on a pedal board friendly approach. Vertex Effects' take on a Dumble Steel String Singer is billed as a "clean drive," but you will be quite surprised with how much gain the SS could churn out. In front of a clean amp, the pedal got very growly and, at times, heavy on the low end.

Our Steel Stingray makes possible to achieve all that Dumble tone, in an affordable super easy to build pedal, ideal for beginners in the pedal building, but also solder masters will be delighted by play with this machine.



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Introduction

Ever wanted to dance slowly in a burning room?

Hold on, no one wants you to set your house on fire! But here comes our take on the world famous Vertex Steel String™ a pedal that reproduces that insane creamy Steel string singer Overdrive tone from a Dumble™ tube amp that costs more then a (not burning) House nowadays.

Honestly was blown away when I switched this thing on for the first time. A Simple and beginner friendly circuit, with low amount of parts and only three knobs for Volume, Gain and Tone that give you so much tone should be something you try out. Works pretty well when stacked with other low gain drives as well.

Controls

- Gain
- Volume
- Tone

Bill of materials

Resistors	
Part	Value
R1	2m2
R2	1M
R3	10K
R4	10k
R5	1M
R6	10k
R7	10k
R8	10k
R9	10K
R10	10K
R11	1M
R12	10K
R13	10K
R14	10K
R15	22K
R16	10K
RLED	4k7

Electrolytics	
Part	Value
C2	1u
C4	100u
C6	1u
C8	100u
C11	100u

Semiconductors	
Part	Value
D1	1n5817
LED1	3mm LED
Q1	J201
Q2	J201
Q3	J201
Q4	J201

Potentiometers	
Part	Value
GAIN	A500K
TONE	B100K
VOL	B100K

Capacitors	
Part	Value
C1	10n
C3	68n
C5	2n2
C7	68n
C9	22n
C10	2n2
C12	100n

Shopping list

Capacitors		
Qty	Value	Parts
1	10n	C1
1	100n	C12
2	1u electrolytic	C2, C6
2	68n	C3, C7
3	100u electrolytic	C4, C8, C11
2	2n2	C5, C10
1	22n	C9

Resistors		
Qty	Value	Parts
1	2m2	R1
1	22K	R15
3	1M	R2, R5, R11
7	10K	R3, R9, R10, R12, R13, R14, R16
4	10k	R4, R6, R7, R8
1	4k7	RLED

Potentiometers		
Qty	Value	Parts
2	B100K	TONE, VOL
1	A500K	GAIN

Semiconductors		
Qty	Value	Parts
1	1n5817	D1
1	3mm LED	LED1
4	J201	Q1, Q2, Q3, Q4

Components Recommendations

As many people like to experiment some pedals with higher voltage, always ensure the max tolerance of your **electrolytic capacitors** is over 25v.

This board has been tested using Film box capacitors for most of the values over 1nf, and ceramics discs for the ones under 1nf. However, high quality components such as Wima's Capacitors and Panasonic's electrolytics can deliver a better performance.

All the resistors used for testing this project are 1/4W Metal Film.

The BOM and Shopping list are exclusively regarding this project. It doesn't include all the hardware like the 3PDT bypass switch, audio/dc jacks, enclosure, etc.

The Transistors JFET J201 are the heart of this build. Make sure to get high quality ones from trusted vendors and not cheap Asian counterfeits! I strongly recommend the use of SMD transistors as they are much more reliable quality wise.

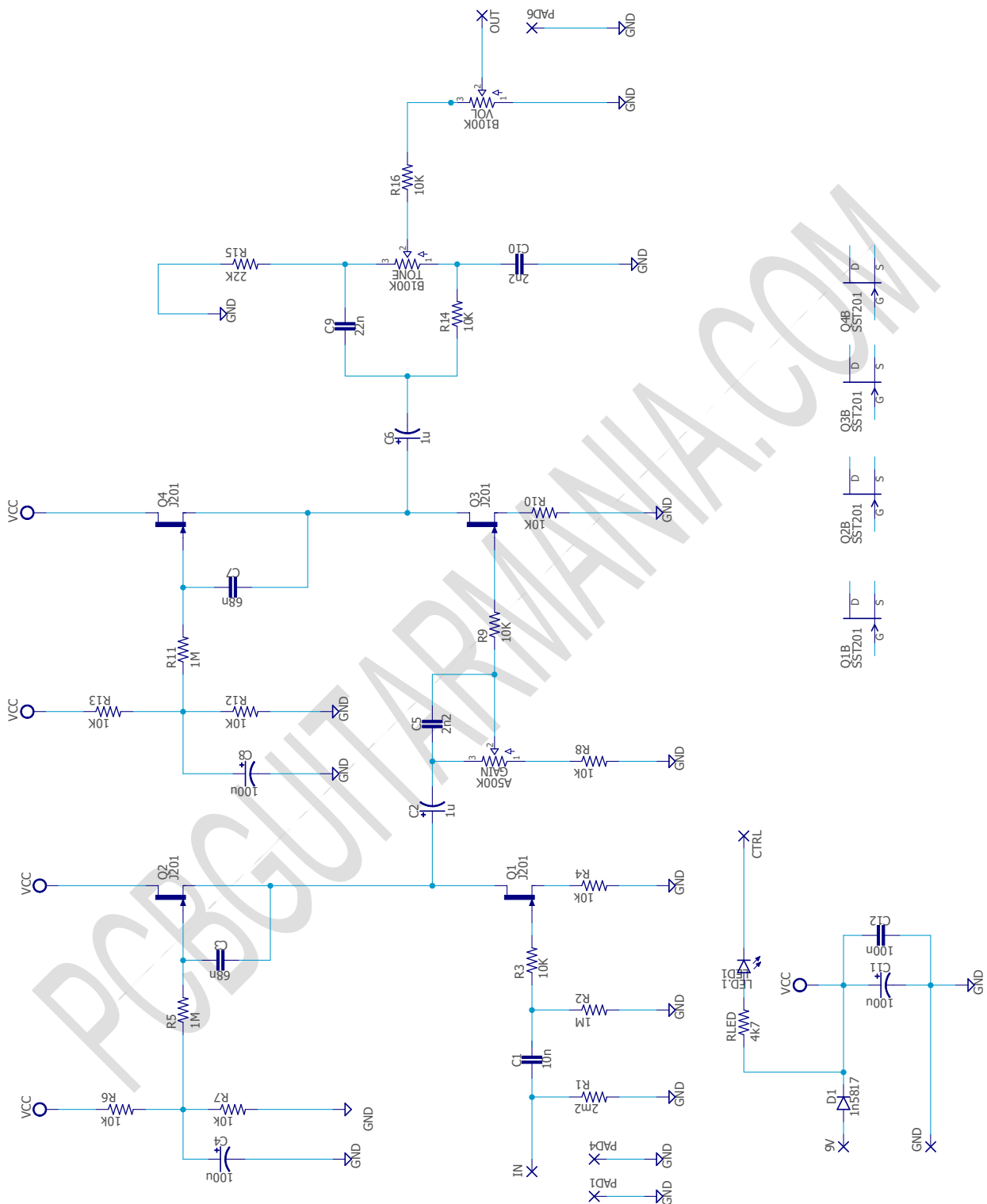
Build Notes

If this is one of your first projects I recommend you to take a look on our [Pedal Building Guide](#)

For a successful and tidy build it's recommended the following order:

1. Resistors & diodes
2. Capacitors, starting with the smaller ones and the ceramic ones.
3. Electrolytic capacitors (always check the polarity)
4. Transistors
5. Wires
6. Potentiometers and switches
7. Off board wiring

Schematic



Wiring Diagram

All our projects include a free 3PDT Board to make the wiring easier and tidier. Also all of our PCBs feature the status LED on board.

The pad named “Ctrl” or “LED” is the one that controls the status of the led, wire it to the “LED” pad on the 3PDT board, or in control slug of your 3PDT.

This board has been designed to match our EZ 3PDT PCB check it [here](#) to access to our [Pedal Wiring Guide](#)

Drill Template

This Project has been planned to fit into a 1590bb enclosure type.

Check the Attached “Drilling templates” to drill the box properly. The files are on Scale 1:1, ready to print in an A4 page.

Licensing and Usage

We really appreciate your trust and support buying this PCB, as well as your will to dive into the DIY electronics world. That’s why for us is really important that you can make this project work properly and to enjoy not only the building process, but also to experiment and play with it on your rig.

We try to reply to every question we receive on our email or in our social media, but we try to encourage all our customers to join our [PCB Guitar Mania – Builders Group](#) on Facebook, in order to post all your doubts, issues, suggestions or request, as well to share your builds and have some feedback from us and other fellow builders!

All of our projects have been tested following this same guide on their standard configurations. Although, not all of the variations and mods have necessarily been tested. These are suggestions based on the schematic analysis, and on the experiences and opinions of others. Feel free to share with us your opinions and suggestions regarding the mods your own personal experimentation.

These boards may be used for commercial endeavors in any quantity unless specifically noted. No attribution is necessary, though accreditation or a link back is always greatly appreciated.

If you are a builder planning to make your own run of pedals we also offer the service of custom made boards with your brand and logo, design according your specifications.

The only usage restrictions are that, first, you cannot resell the PCB as part of a kit without prior arrangement with us, and second, you cannot scratch off the silk screen, or other way of trying to hide our logos and the source of the PCBs. Like it’s written above, if you want to have your own designs, with your brand and logo we could certainly reach an agreement.

Follow us on [Instagram](#) and [Facebook](#) to stay in tune with the latest projects!