

Soldado

Based on:

Soldano SLO 100

Effect type:

High gain Overdrive

Build difficult:

Average

Number of parts:

Low, total 59 components

Technology:

Ompamp Frequency response emulation

Power consumption:

9V

Enclosure type:

125b

Get your board at:

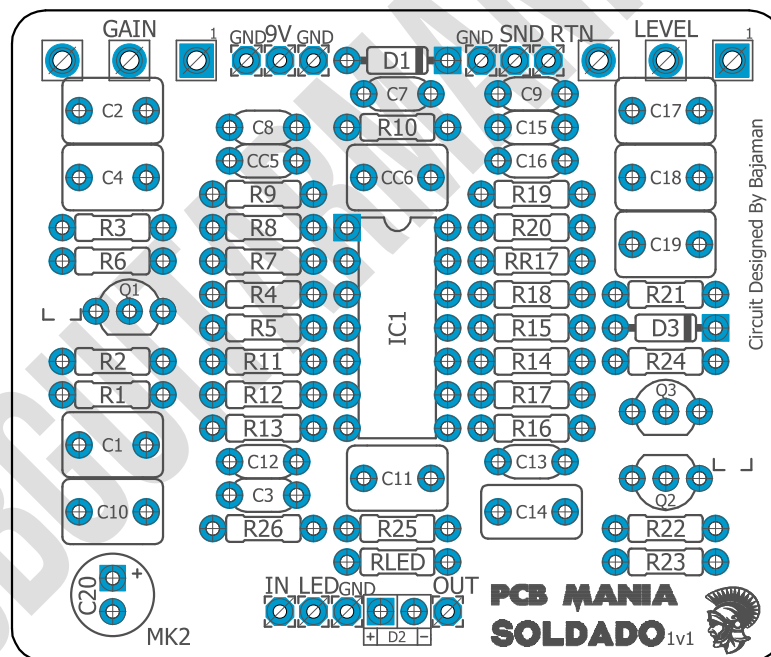
[Soldado](#)

Get your kit at:

[Das Musikding \(Europe\)](#)

Project overview:

Based on the frequency response of the Soldano Slo 100. Part of the series 'Develop your own Preamp' where you can combine preamp sections of iconic amplifiers with different types of EQs in order to create your own custom boutique pedal. [More information about the EQ sections here.](#)



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Introduction

Finally! My all-time favorite amp the Super Lead Overdrive was captured in a box without sacrificing the sound. So many disappointing versions out there... None of them nailed it, till now!

You may wonder what it took to make this possible. Well... there is this legend from Freestompboxes called Bajaman, and he worked on the circuit till his design matched the exact frequency response of the actual amp. Meaning this is not just a Jfet version of Preamp that gets you somehow... eventually close to it. THIS IS the tone you are looking for!

So how do I know that? Did I compare it to one of these super rare amps? Yes, because I actually own a Soldano SLO 100 [™] that never leaves my house and it only took me one strum to hear that the search is over. From classic Rock to pushing mid-pronounced metal tones that cut through. If you are looking for that SLO sound. I promise, you will not be disappointed.

Controls

Potentiometers

- Volume
- Gain

Bill of materials

Resistors	
Part	Value
R1	1M5
R2	1M
R3	10K
R4	100K
R5	6K8
R6	1K5
R7	1K
R8	8K2
R9	100K
R10	100K
R11	1K
R12	1K
R13	2K7
R14	47K
R15	100K
R16	2K7
R17	1K
R18	22K
R19	2K7
R20	1K
R21	2k2
R22	1M
R23	10K
R24	1K
R25	10K
R26	10K
RLED	4K7
RR17	33K

Diodes	
Part	Value
D1	1N5817
D2	3mm red LED
D3	1N4148

IC	
Part	Value
IC1	TL064

Capacitors	
Part	Value
C1	1u
C2	1u
C3	120p
C4	1u
C7	10n
C8	2n2
C9	560p
C10	1u
C11	1u
C12	560p
C13	33n
C14	220n
C15	330p
C16	10n
C17	1u
C18	1u
C19	1u
CC5	1n
CC6	1u

Electrolytic Capacitors	
Part	Value
C20	220u

Potentiometers	
Part	Value
GAIN	100K B
LEVEL	100K B

Transistors	
Part	Value
Q1	J201
Q2	J201
Q3	BC547B

Switches	
Part	Value
-	3PDT Stomp foot

Jacks	
Part	Value
-	DC JACK
-	AUDIO JACK
-	AUDIO JACK

Shopping list

Resistors		
Qty	Value	Parts
4	100K	R4, R9, R10, R15
4	10K	R3, R23, R25, R26
6	1K	R7, R11, R12, R17, R20, R24
1	1K5	R6
2	1M	R2, R22
1	1M5	R1
1	22K	R18
3	2K7	R13, R16, R19
1	2k2	R21
1	33K	RR17
1	47K	R14
1	4K7	RLED
1	6K8	R5
1	8K2	R8

Capacitors		
Qty	Value	Parts
3	10n	C7, C9, C16
1	120p	C3
1	1n	CC5
9	1u	C1, C2, C4, C10, C11, C17, C18, C19, CC6
1	220n	C14
1	2n2	C8
1	330p	C15
1	33n	C13
2	560p	C9, C12

Electrolytic Capacitors		
Qty	Value	Parts
1	220u	C20

Potentiometers		
Qty	Value	Parts
1	100K B	GAIN, LEVEL

IC		
Qty	Value	Parts
1	TL064	IC1

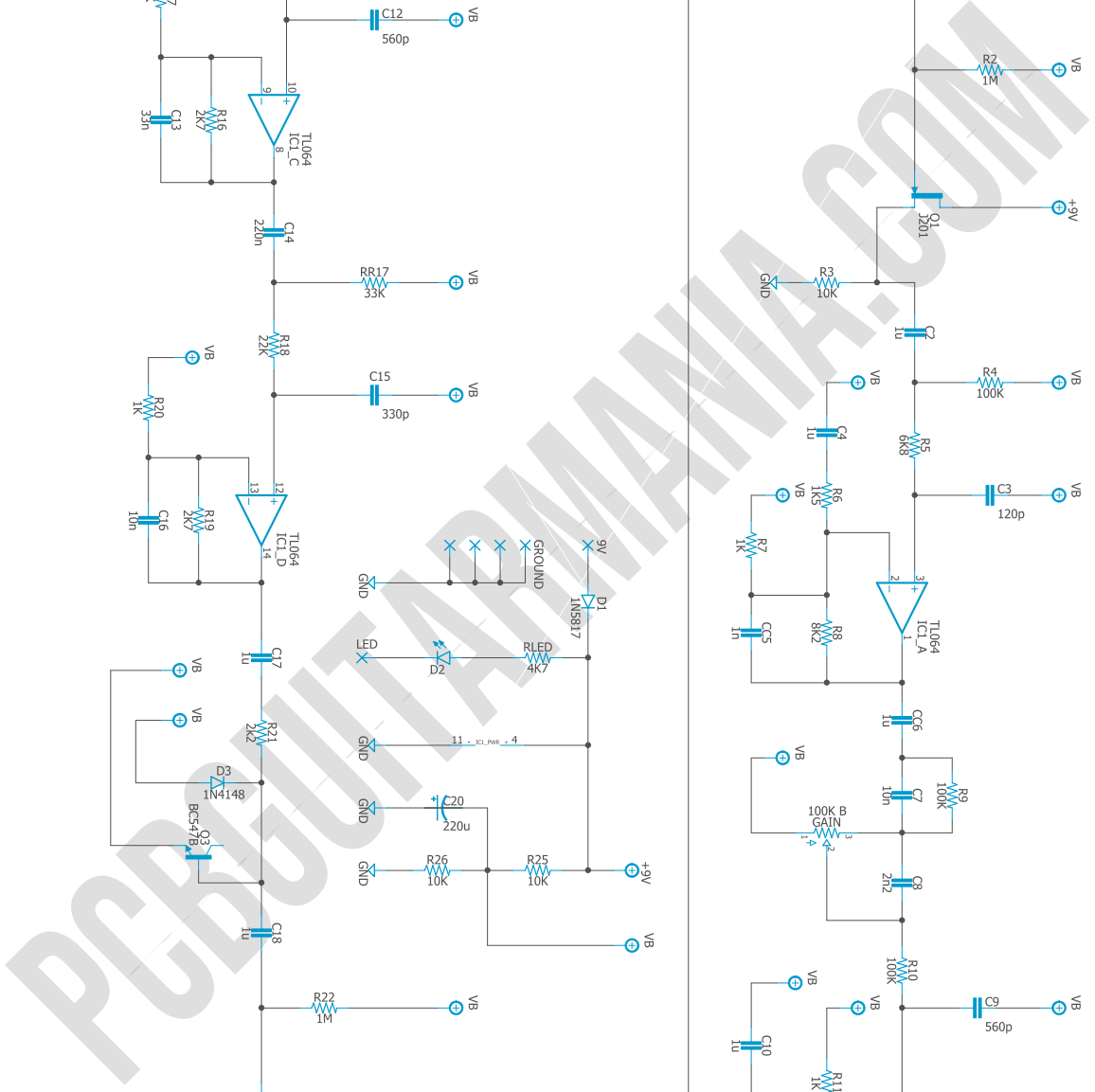
Transistors		
Qty	Value	Parts
1	BC547B	Q3
2	J201	Q1, Q2

Diodes		
Qty	Value	Parts
1	1N4148	D3
1	1N5817	D1
1	LED 3mm	D2

Switches		
Qty	Value	Parts
1	3PDT Stomp foot	-

Jacks		
Qty	Value	Parts
1	DC JACK	-
2	AUDIO JACK	-

Schematic



Components Recommendations

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

This board has been tested using Film box capacitors for most of the values over 1nf and ceramics discs for those 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 exclusive regarding this project. It doesn't include all the hardware like the 3PDT bypass switch, audio/dc jacks, enclosure, etc.

Build Notes

If this is one of your first projects, I recommend you to take a look at 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

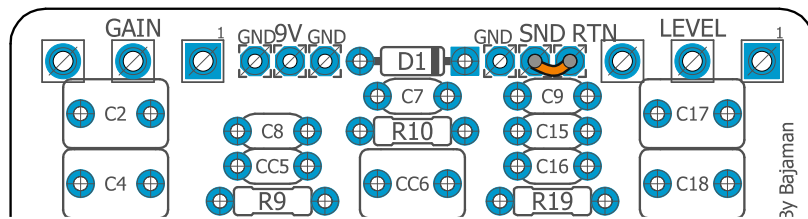
Wiring Diagram

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 the control slug of your 3PDT.

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

The newest version, 1.1v, features send and return pads above for hooking up a separate EQ board. For doing just the drive, place a jumper between pads and enjoy your drive!



Drill Template

This Project has been planned to fit into a 125b enclosure type.

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

Licensing and Usage

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

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

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

These boards may be used for commercial endeavors in any quantity unless expressly noted. No attribution is necessary, though accreditation or a link back is always much 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 to 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 silkscreen 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 designs with your brand and logo, we could undoubtedly reach an agreement.

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