

Sour Sweet Corn

Based on:

Cornish SS-2

Effect type:

Drive/distortion

Build difficult:

Intermediate

Amount of parts:

Average, total 44 components

Technology:

Op Amp

Power consumption:

9V

Enclosure type:

125b

Get your board at:

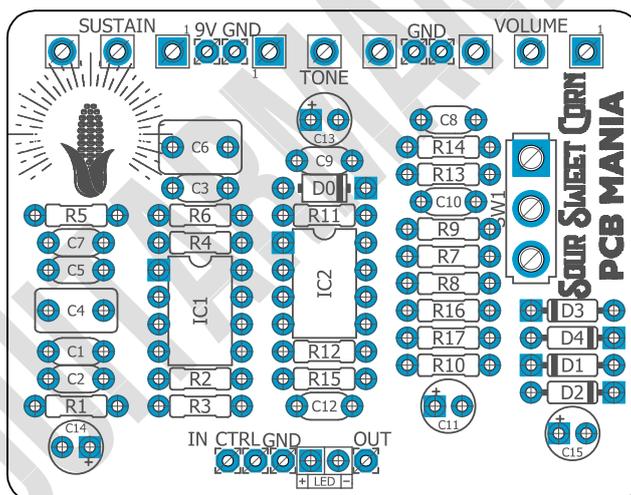
[Sour Sweet Corn](#)

Get your kit at:

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

Project overview:

Deluxe drive/distortion pedal. This board inspired by Cornish SS-2 is excellent for those searching for a unique tonal color palette. Pretty much an amp in a box!



Index

1. Project overview
2. Index, Introduction & Controls
3. Bills of Materials, BOM
4. Shopping Lists
5. Components Recommendations
6. Build Notes
7. Schematic
8. Wiring Diagram
9. Drill Template
10. Licensing and Usage

Introduction

The Sour Sweet Corn is totally different from any overdrive/distortion effect out there, with many great features that make it one of the sweetest boards on the field. Let's see them:

It is remarkably perceptive to changes in both Guitar volume and picking articulation. It has an outstanding "bottom end retention," while the mid-range is sweet and very clean. It preserves all the tonal subtleties of your guitar and is nuanced yet capable of tremendous power and sustain. When using it with a clean amp, it is possible to shift from subtle overdriven amp sounds, through rhythmic crunch, up to a blues' lead. None less important, all its tonal properties and dynamics of the guitar are preserved even when using this pedal at its maximum gain.

When being fed into a clean, total frequency response amplifier is when this pedal shine the most.

To acquire full knowledge of how the controls, interact, both with themselves and the guitar/amp controls, it is helpful to first connect it up without anything else in line. You can then add the rest of your effects and have that feast of tonal color palette that the Sour Sweet Corn adds to your playing!

Controls

- Sustain
- Tone
- Volume

Bill of materials

Resistors	
Part	Value
R1	1m
R2	10k
R3	1m
R4	150k
R5	510r
R6	10k
R7	100k
R8	1m
R9	1m
R10	2k4
R11	10k
R12	6k8
R13	10k
R14	91r
R15	4k7
R16	150k
R17	150k

Capacitors	
Part	Value
C1	10n
C2	1n
C3	10p
C4	470n
C5	4n7
C6	1u
C7	10n
C8	10n
C9	10n
C10	220n
C12	1n

Electrolytics Capacitors	
Part	Value
C11	10u
C13	22u
C14	100u
C15	10u

Potentiometers	
Part	Value
SUSTAIN	50k B
TONE	20k W
VOLUME	10k

IC	
Part	Value
IC1	LM741
IC2	LM741

Transistors	
Part	Value
SW1	SPDT ON/OFF/ON

Diodes	
Part	Value
D0	1n5817
D1	GE
D2	GE
D3	GE
D4	GE
LED	3mm red LED

Shopping list

Resistors		
Qty	Value	Parts
1	100k	R7
4	10k	R2, R6, R11, R13
3	150k	R4, R16, R17
4	1m	R1, R3, R8, R9
1	2k4	R10
1	4k7	R15
1	510r	R5
1	6k8	R12
1	91r	R14

Capacitors		
Qty	Value	Parts
4	10n	C1, C7, C8, C9
1	10p	C3
2	1n	C2, C12
1	1u	C6
1	220n	C10
1	470n	C4
1	4n7	C5

Electrolytics Capacitors		
Qty	Value	Parts
1	100u	C14
2	10u	C11, C15
1	22u	C13

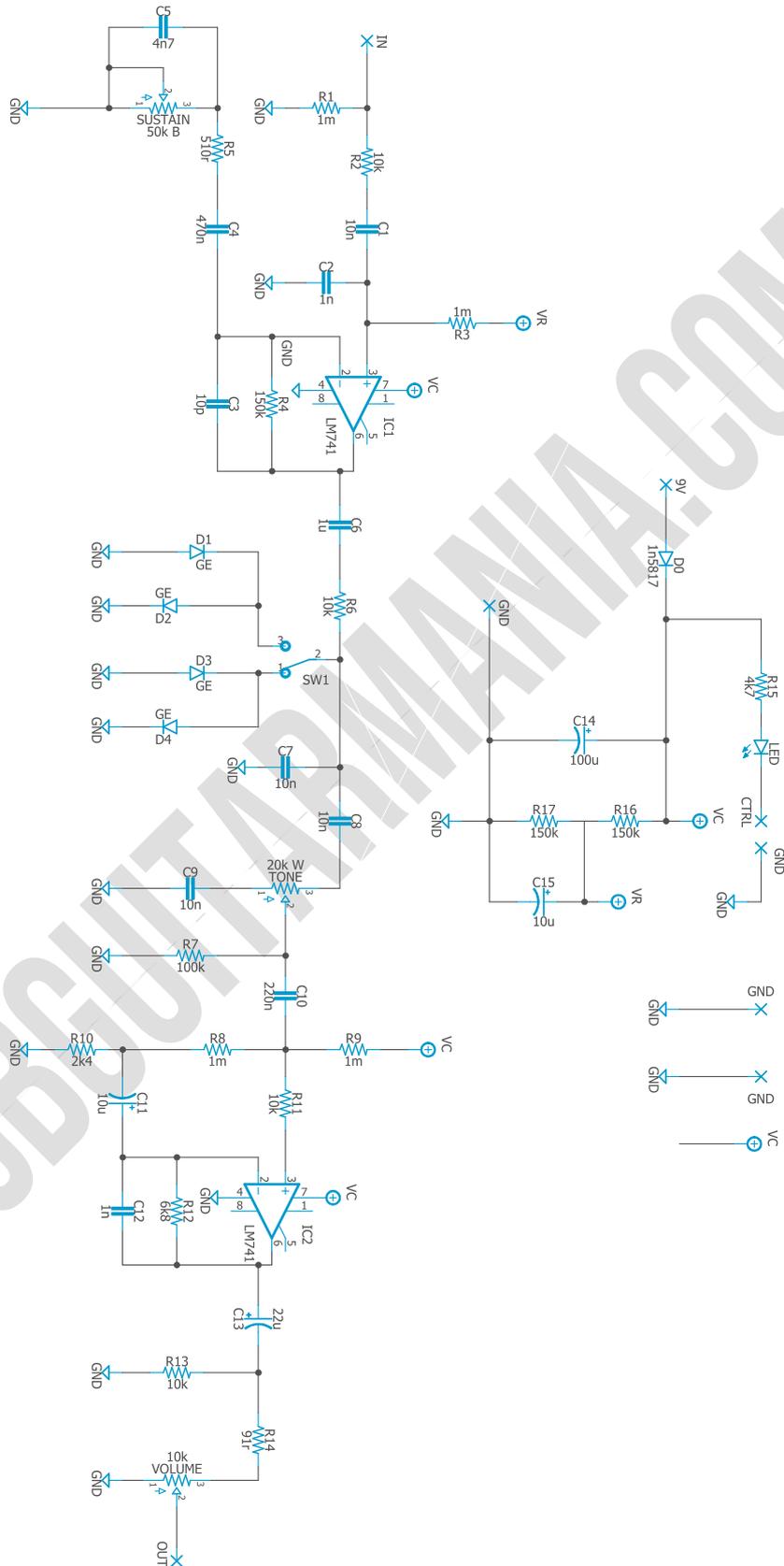
Potentiometers		
Qty	Value	Parts
1	10k	VOLUME
1	20k W	TONE
1	50k B	SUSTAIN

IC		
Qty	Value	Parts
2	LM741	IC1, IC2

Switches		
Qty	Value	Parts
1	SPDT ON/OFF/ON	SW1

Diodes		
Qty	Value	Parts
1	1n5817	D0
4	GE	D1, D2, D3, D4
1	3mm red LED	LED

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](#).

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!