

Texas Storm

Based on:

SoloDallas Schaffer Replica EX Tower

Effect type:

Unique Overdrive

Build difficult:

Intermediate

Number of parts:

Average, total 49 components

Technology:

Op Amp

Power consumption:

9V

Enclosure type:

125b

Get your board at:

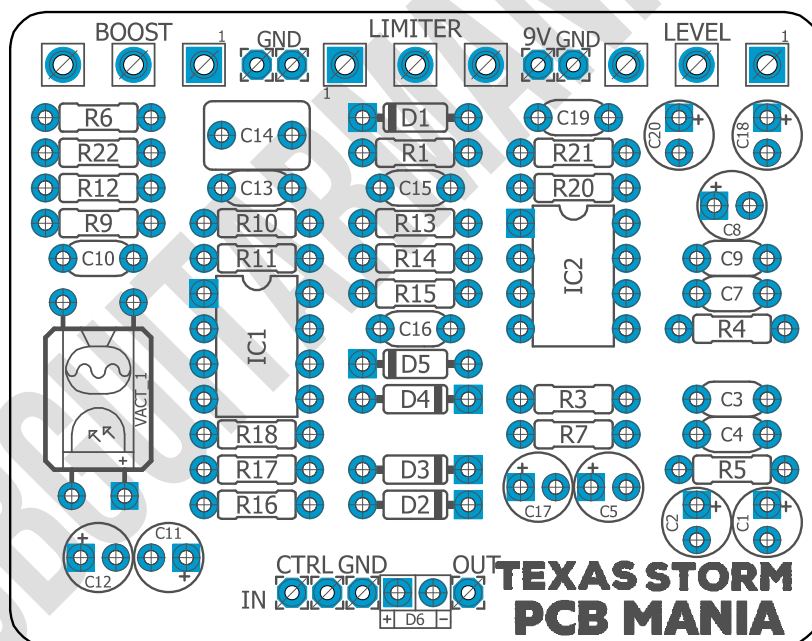
[Texas Storm](#)

Get your kit at:

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

Project overview:

This board was designed to replicate the tone of Schaffer towers used by Angus Young from AC/DC live and in studio. Get five circuits in one: optical limiter + EQ expander + harmonic clipping circuit + boost + line buffer!!!



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Introduction

Texas Storm is based on the tone-enhancing circuitry contained within the most widely used wireless system throughout the 1970s to mid-1980s: the Schaffer Vega Diversity System (SVDS). The result is a circuit that accomplishes a delicate balance of five iconic circuits in one.

This vintage effect was used by legendary guitarists such as Carlos Santana, David Gilmour, Eddie Van Halen, Peter Frampton, Peter Green, Joe Walsh, Elliot Randall, Angus Young, Jerry Garcia, Bob Weir, and an ongoing list of legends responsible for some of the best guitar parts ever recorded.

It has everything it takes to deliver the most reliable tone and sustain. Now it's your turn, give it a try and become part of the legacy!

Controls

Potentiometers

- Boost
- Limiter
- Level

Bill of materials

Resistors	
Part	Value
R1	10r
R3	10k
R4	10k
R5	4k7
R6	2k
R7	10r
R9	2k
R10	1m
R11	15k
R12	10k
R13	2k
R14	8k2
R15	2k
R16	2k
R17	2k
R18	10k
R20	10r
R21	10r
R22	1m

Capacitors	
Part	Value
C3	100n
C4	100n
C7	100n
C9	100n
C10	120p
C13	120p
C14	1u
C15	1n
C16	100n
C19	100n

Electrolytic Capacitors	
Part	Value
C1	10u
C2	10u
C5	10u
C8	10u
C11	1u
C12	10u
C17	10u
C18	10u
C20	10u

Potentiometers	
Part	Value
BOOST	100K B
LEVEL	1K B
LIMITER	100K A

Trim pots	
Part	Value
IC1	RC4558P
IC2	LM386N-1

Vactrols	
Part	Value
VACT*	NSL-32

Diodes	
Part	Value
D1	1n5817
D2	BAT42
D3	BAT42
D4	BAT42
D5	BAT42
D6	3mm red LED

Shopping list

Resistors		
Qty	Value	Parts
4	10k	R3, R4, R12, R18
4	10r	R1, R7, R20, R21
1	15k	R11
2	1m	R10, R22
6	2k	R6, R9, R13, R15, R16, R17
1	4k7	R5
1	8k2	R14

Capacitors		
Qty	Value	Parts
6	100n	C3, C4, C7, C9, C16, C19
2	120p	C10, C13
1	1n	C15
1	1u	C14

Electrolytic Capacitors		
Qty	Value	Parts
8	10u	C1, C2, C5, C8, C12, C17, C18, C20
1	1u	C11

Potentiometers		
Qty	Value	Parts
1	100K A	LIMITER
1	100K B	BOOST
1	1K B	LEVEL

IC		
Qty	Value	Parts
1	LM386N-1	IC2
1	RC4558P	IC1

Qty	Value	Parts
1	NSL-32	VACT*

Diodes		
Qty	Value	Parts
1	1n5817	D1
1	3mm red LED	D6
4	BAT42	D2, D3, D4, D5

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

VACT*

For this component you can choose either of the two options:

- [Silonex NSL-32](#)

https://www.musikding.de/Silonex-NSL-32_1

- [Photo resistor \(500k dark resistance\) + clear green LED 5mm](#)

<https://www.taydaelectronics.com/photo-conductive-cell-resistor-ldr-650nm-radial-ke-10715.html>

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.

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