

# Analog Sun

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**Based on:**  
Analogman Surface

**Effect type:**  
Germanium Fuzz

**Build difficult:**  
Average

**Amount of parts:**  
Low, total 20 components

**Technology:**  
PNP Germanium transistors with  
voltage inverter

**Power consumption:**  
9V

**Enclosure type:**  
125b

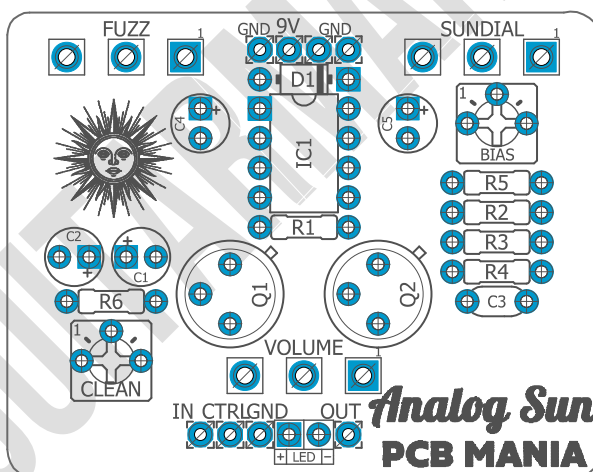
**Get your board at:**  
[Analog Sun](#)

**Get your kit at:**  
[Das Musikding \(Europe\)](#)

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## Project overview:

Inspired by Analogman's Surface. Vintage germanium fuzz with roots in Arbiter Fuzz Face.



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# Introduction

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Analogman's take on the Arbiter Fuzzface, is there more to say? Oh yes, it has an internal trimmer for the input's sensitivity, which lets you dial in a fatter and more compressed tone or thinner and more transparent. Makes it an excellent tool for any kind of pickup, and if you switch between guitars a lot, we recommend making this an external knob.

There are plenty of versions Analogman did; the most famous one has NOS red dot NTK275 Germanium PNP transistors. (Spoiler alert - they cost a fortune). But what matters more than the brand is that they are low leakage and a certain HFE. WE recommend Q1 50-70 and Q2 90-110. This Little hint should drop the price for your build quite a lot.

## Controls

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- FUZZ
- SUNDIAL
- VOLUME

# Bill of materials

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Resistors	
Part	Value
R1	100k
R2	33k
R3	1k
R4	470r
R5	4k7
R6	1m

Capacitors	
Part	Value
C3	10n

Electrolytics Capacitors	
Part	Value
C1	1u
C2	22u
C4	10u
C5	47u

Potentiometers	
Part	Value
FUZZ	1k B
SUNDIAL	5k B
VOLUME	250k A

Trim pots	
Part	Value
BIAS	5k
CLEAN	50k

IC	
Part	Value
IC1	tc1044scpa

Transistors	
Part	Value
Q1	NKT275
Q2	NKT275

Diodes	
Part	Value
D1	1n5817

# Shopping list

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Resistors		
Qty	Value	Parts
1	100k	R1
1	1k	R3
1	1m	R6
1	33k	R2
1	470r	R4
1	4k7	R5

Capacitors		
Qty	Value	Parts
1	10n	C3

Electrolytics Capacitors		
Qty	Value	Parts
1	10u	C4
1	1u	C1
1	22u	C2
1	47u	C5

Potentiometers		
Qty	Value	Parts
1	1k B	FUZZ
1	250k A	VOLUME
1	5k B	SUNDIAL

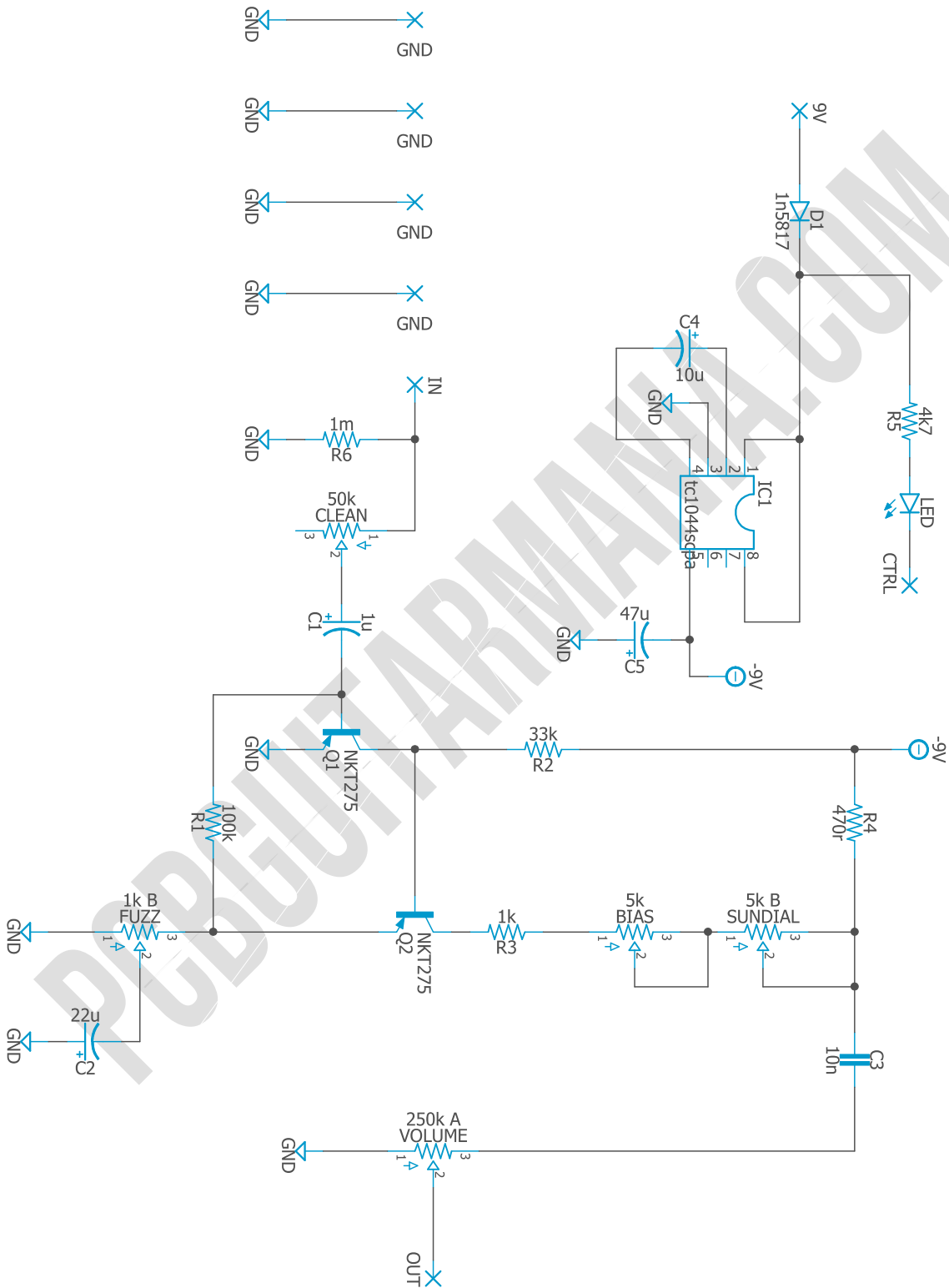
Trim pots		
Qty	Value	Parts
1	50k	CLEAN
1	5k	BIAS

IC		
Qty	Value	Parts
1	tc1044scpa	IC1

Transistors		
Qty	Value	Parts
2	NKT275	Q1, Q2

Diodes		
Qty	Value	Parts
1	1n5817	D1

# Schematic



# Components Recommendations

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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

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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

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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

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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

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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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