

Sheepylove OD81 Build Doc

Updated: 2026-02-21

It's woolly, it's greasy, it's Sheepylove.

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Sounds like a Boss SD-1

The Boss SD-1 Super Overdrive is a cornerstone of guitar history. Since its release in 1981, its design has remained virtually unchanged, a rarity in the rapidly evolving world of guitar gear.

The SD-1 was born as an evolution of the revolutionary Boss OD-1 Overdrive, which in 1977 pioneered the "overdrive" category by using a patented asymmetrical clipping circuit to mimic the natural saturation of a tube amplifier.

While the OD-1 was groundbreaking, it lacked a tone control. After the Ibanez Tube Screamer gained market dominance by offering a tone knob (using symmetrical clipping to avoid Boss's patent), Boss responded in 1981 by releasing the SD-1 as a direct competitor.

Asymmetrical vs. Symmetrical Clipping: The SD-1's technical legacy lies in its asymmetrical clipping, which produces even-order harmonics that many guitarists find more harmonically rich and "tube-like" than the symmetrical clipping found in Tube Screamer-style pedals.

Build notes

There's nothing special here, you can swap the op-amp for pretty much any dual op-amp. The transistors are the input and output buffers and also not so critical, though the SMD 2SC1815 is easily found in SMD package.

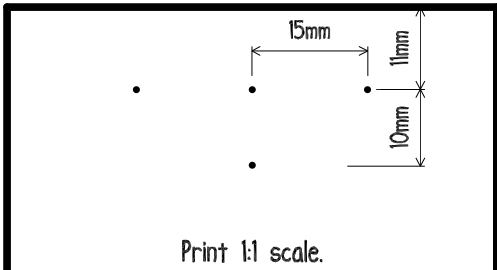
Same with the clipping diodes, nothing special, use 1N4148 or something more exotic if you think there's magic mojo to be had.

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Bill of Materials

Reference	Value	Quantity	Notes
C1	100u	1	
C2	47u	1	
C3,C6,C14	47n	3	
C4	10n	1	
C5	27n	1	
C7,C13	1u	2	
C10,C12	18n	2	
D1	1N5817	1	
D2	LED	1	
D6-D8	1S2473	3	Si diode, 1N4148/1N914 is a substitute
IC1	RC4558	1	Most dual op-amps will work.
POT1	B10k	1	
POT2	B1M	1	
POT3	B20k	1	
Q1,Q2	2SC1815	2	Easy to find in SMD.
R1	CLR	1	
R2	22	1	
R3,R4,R20	33k	3	
R5	2M2	1	
R6-R8,R14,R22	10k	5	
R9	470	1	
R10,R13	4k7	2	
R11	22k	1	
R12	1M	1	
R15	1k	1	
R18	470k	1	
R19,R21	100k	2	

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Sheepylove Drill Template

-16.5 0 16.5
 38.1 • •

12.7 •

0 +

-12.7 • LED



-45.1 • Footswitch

Print 1:1 scale.
 All units are in millimeters.