

GOD CITY INSTRUMENTS – Not Okay V1.4 Build guide

The God City Instruments (GCI) Not Okay is a 3pdt footswitch utility PCB with integrated MOSFET boost. It can be built as a stand alone boost with fixed or variable gain or used as a mod to boost another circuit.

When built as stand-alone, the minimum enclosure size is 1590A. When building in shallow enclosures like 1590A or 1590B, take care that the capacitors and MOSFET have adequate clearance from the lid of the enclosure. Taller components may need to be installed on the back side of the PCB. If mounting the MOSFET on the back of the PCB, be certain to orient the pins correctly. Jump the S and R (send and return) for stand-alone operation

When built as a mod to an existing pedal, use the S and R pads to send signal to and return signal from the external PCB. If the external PCB has switch pads for an integrated status LED, like all the GCI pedals do, you can omit connections to those pads as well as the LED and CLR from the main PCB. Use the CLR and LED on the Not Okay PCB instead.

This pedal is easy to build, however this guide is intended for people who have some experience building pedals. Component sourcing, component identification, assembly techniques, wiring stomp switches, etc. is not covered. The GCI Brutalist Jr. assembly guide has helpful information for less experienced builders. That guide can be found here:

<http://www.kurtballou.com/brutalistjr/>

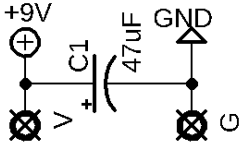
Don't forget to connect the ground pad of the PCB to the ground lug of the input, output, and DC power jacks!

Due to the scope of this project, technical support is not available. However, consider joining the GCI DIY PCB Builders group on Facebook to get advice from and share your work with other builders. We require that all group members agree to the rules before being accepted into the group.

<https://www.facebook.com/groups/2454786551255317/>

Component values for the PCB as well as some alternate values are listed below. This is a BOM for the PCB only. Resistors and diodes are 6.3mm leg spacing, film and ceramic capacitors are 5.08mm leg spacing, and electrolytic capacitors are 2.54mm leg spacing. I/O jacks, DC jack, switch, enclosure, and knobs are not listed.

Part	Value	Description	Substitute	Substitution Notes
C1	47uF	Electrolytic capacitor	22u - 100u	Power filtering.
C2	10p	ceramic capacitor	none - 470pF	Low pass filtering. Bigger = darker.
C3	47n	Film capacitor	22n - 100n	May influence system bass response.
C4	1u	Film capacitor		
LED	3mm LED	3mm LED		
Z1	1n4739a	9.1v Zener diode	any 9.1v Zener	Protects MOSFET.
Q	BS170	N-CHANNEL MOS FET		
BOOST	A100k	Trim pot or wired pot	jump pins 2 and 3	Jump for fixed gain operation.
CLR	5.1k	1/4 watt resistor	1k-10k	Current limiting resistor for LED.
R1	1k	1/4 watt resistor	0R-47k	Sets maximum output volume with R2.
R2	100k	1/4 watt resistor	47k-1M	Sets maximum output volume with R1.
R3	2.2M	1/4 watt resistor	3.3M-10M	Sets Q bias. R3 and R4 must match.
R4	2.2M	1/4 watt resistor	3.3M-10M	Sets Q bias. R3 and R4 must match.
R5	5.1K	1/4 watt resistor		
R6	100R	1/4 watt resistor	10R - 2.2k	Sets gain of MOSFET.
SW_1	3PDT Switches	Solder pin footswitch		
S	PAD	send to external PCB	jump S and R if using as stand-alone	
R	PAD	return from external PCB	jump S and R if using as stand-alone	
V	PAD	9v input		
G	PAD	ground		
I	PAD	from input jack		
O	PAD	to output jack		



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Kurt Ballou 2019

