

GOD CITY INSTRUMENTS – Indifferent Snowman V1.0 Build guide

The God City Instruments (GCI) Indifferent Snowman, is a simple, yet very effective op-amp overdrive based on a prototype with some happy accident build errors which was decoupled in blasé snowman wrapping paper. This circuit eventually became Riffchild, but it's presented here in its purest form.

This pedal is an easy build, but 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/>

A complete parts kit is not available at this time, but check this Google sheet for ordering information from many parts used in this PCB. It lists one possible brand and supplier for all parts commonly used by GCI, but many other brands and suppliers will work just as well.

docs.google.com/spreadsheets/d/1gRTF1VFbeBc9FX1ohjrtKPWfhw_TVHnxki03l3m7lcU/edit?pli=1#gid=27209130

Available separately is the GCI 3PDT utility PCB for PCB pin 3PDT footswitches. This PCB makes footswitch wiring quick and easy. Not compatible with solder lug style switches.

Don't forget to connect the ground pad of the PCB to the ground lug of the input, output, and DC power jacks! And the long leg of the status LED should go through the square pad.

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. The schematic and a drill template for a 125B (1590N1) sized enclosure are also attached.

Part	Value	Description	Substitute	Substitution Notes
C1, C2	100u	Electrolytic capacitor	47u	Power filtering
C3	47n	Film capacitor	22n -100n	Forms HPF with R10. Influences timbre of overdrive
C4	22n	Film capacitor	10n-47n	Input cap
C5	10u	Electrolytic capacitor		
C6	390p	Ceramic capacitor	220p-1n	Mellow out overdrive with larger values
C7	1n	Film capacitor		
C8	1u	Film capacitor		
C9	100n	Film capacitor		
Z1	1N4739a	Zener diode		
D1, D2, D3	1n4148	Small signal diode	1n401, 1n34a, LED, etc.	Soft clipping diodes
D4	1n5818	Schottky diode	1n4001	Protection diode
CLR	4.7k	1/4 watt resistor	1k-10k	Affects LED brightness
R6	4.7k	1/4 watt resistor	220R - 5.1k	Lower values increase output volume.
R1, R2, R11, R12	10k	1/4 watt resistor		
R3, R5	1M	1/4 watt resistor	470k-2.2M	
R4	1k	1/4 watt resistor		
R7	5.1k	1/4 watt resistor		
R8, R9	2.2M	1/4 watt resistor		
R10	3.3k	1/4 watt resistor		Forms HPF with C3. Influences timbre of overdrive and gain
R13	33k	1/4 watt resistor	22k-100k	Determines amount of gain of second stage
R14	1k	1/4 watt resistor	Forms voltage divider with R15	Increase value to decrease output volume
R15	100k	1/4 watt resistor	Forms voltage divider with R14	Decrease value to decrease output volume
IC1	RC4558	DIP-08 dual op-amp	MC1458, TL072, etc.	
LED	L1	3mm LED		
Q1	BS170	N-Chan Mosfet TO-92		
DRIVE	A500k	16mm potentiometer	A250k-A1M	Determines amount of gain of first stage
S	Pad	Send to PCB		
L+	Pad	LED +		
L-	Pad	LED -		
R	Pad	Return from PCB		
V	Pad	9V input		
G	Pad	Ground		



