

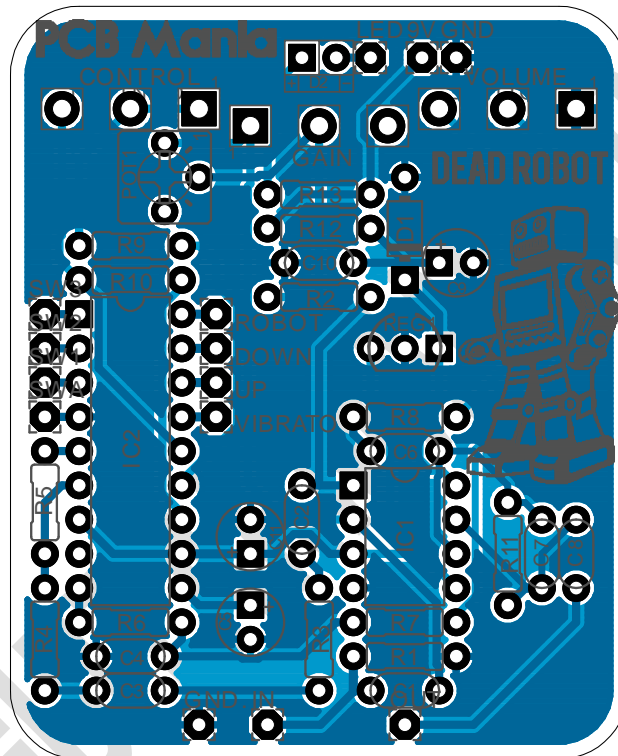
Dead Robot.

Based Death by audio's Robot.

Bitcrusher / Pitch shifter / Fuzz / Synth / Vibrato / Octave

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[Project link](#)



The Robot is a low fidelity 8 bit pitch transposer .It is completely synthetic and transforms any input into a puree of resynthesized robot jargon. Features bendable super lo-fi octave up, octave down, arp, and unity pitches.

- Ready to be wired as True Bypass.
- Optional External Gain Pot
- 4 Modes: Normal / Octave down / Octave up / Arpeggiator
- Optional Mods with momentary switches.

BOM

Resistors		Capacitors	
R1	1M	C1	330n
R2	27k	C2	330n
R3	10k	C3	100n
R4	1k5	C4	100n
R5	43k	C5	2.2uf Electro
R6	330r	C6	330n
R7	10k	C7	470pf
R8	27k	C8	330n
R9	5k6	C9	100uf Electro
R10	100k	C10	100n
R11	430k	C11	33uf Electro
R12	43r		
R13	led	Semiconductors	
		IC1	TL072
Pots		IC2	HT8950
CONTROL	500k B	REG1	L78L33
GAIN	1M B		
VOLUME	100k A	Diodes	
POT1	1M trim	D1	4001
		D2	Led 3mm
Switches			
Rotary Switch 1P12t			
Spdt Momentary (mod)			

The original version by DBA has a dedicated power section that runs the HT8950 on 2.4-4 volts, making it not functional to be played on a daisy chain. I have replaced that section of the pedal with a simple L78L33 regulator to feed the IC at 3.3v.

The gain control on the original unit is a set by an internal trim-pot, on this project you could choose either to use a trimmer or an external Pot, for a more user-friendly control. **Choose ONE.**

The HT8950 is a very versatile a poly-functional IC that offers many possible mods. I designed this board with some extra pads on the right of the IC (Robot / Down / Up / Vibrato) the idea of this is to wire them to a momentary switch to control each of them individually while stepping on the switch. My favorite one, the one I found the most useful is the Vibrato, so I just added that one on my build. Follow the diagram bellow on how to add these switches.

General Building notes

To populate the PCB it's recommended to follow this order.

1. Resistors & diodes
2. IC Sockets (set up the proper IC at last)
3. Capacitors, starting with the smaller ones and the ceramic ones.
4. Electrolytic capacitors (always check the polarity)
5. Transistors
6. Wires
7. Potentiometers
8. Off board wiring

Off Board Wiring

For the rotary mode switch I used a 1p12t, setting with the washer on 4 positions. SWA goes to the middle position, to the pole. SW1, SW2, SW3, goes to the pins 1,2 and 3 respectively, let pin 4 of the switch unpopulated.

I'll be updating the docs with pictures of my build soon.

For the momentary switch, choose one of the modes at the right of the switch (robot, down, up, vibrato) take a wire from there and wire it to one of the pins of the momentary spdt switch. Wire the other pin to ground. Feel free to experiment with the four of this modes, you could even wire all of them and end up having a 5 footswitch beast!

In all of my projects the LED is on board (D2 in this case) already connected to the power supply. To the right you have the pad "LED", that's the negative tip to be wired on the control pin of the 3PDT switch.

Drilling the enclosure

This Project has been planned to fit into a 1590BB enclosure type (112x60x31mm)

Check the Attached "Drilling templates" to drill the box properly. The files are on Scale 1:1, ready to print in a A4 page.

Schematic

