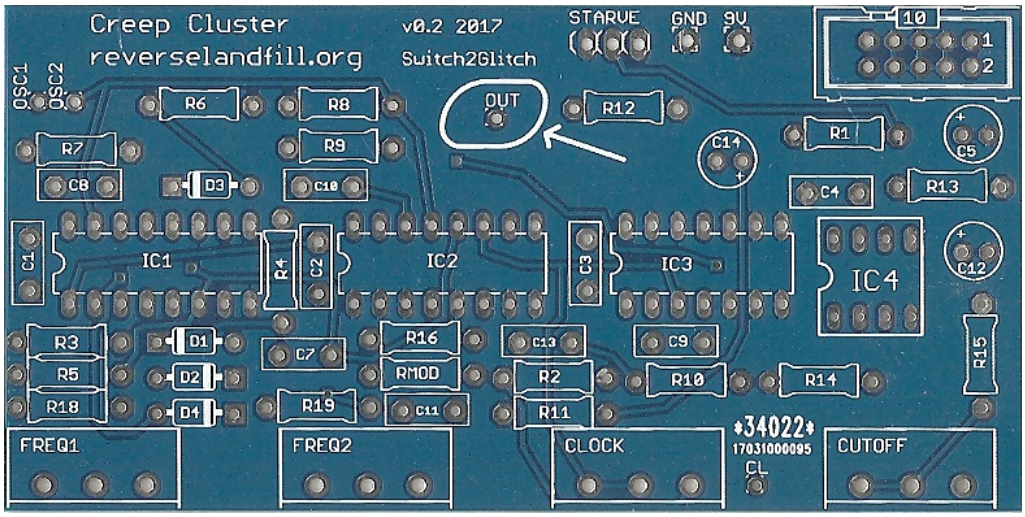
# Creep Cluster

Dual triangle oscillators are hard-switched by a fast squarewave.
Then the signal goes into a resonant lowpass filter.
Sounds vary from deep rumbling drones to phasing screaming lead sounds.
[www.reverselandfill.org](http://www.reverselandfill.org)




**Resistors:**
Seek out the right locations for the resistors.
Bend both legs 90 degrees. Push the resistor in and solder.
Be careful with the resistor color codes. The 470r , 4.7k and 470k look alike.
Use a multimeter to be sure of the value!!

| | |
|---|---|
| r1: 10r | [brown-black-black] |
| r2: 470r | [yellow-purple-black-black-brown] |
| r3 to r8: 10k | [brown-black-orange] |
| r9: 750k | [purple-green-black-orange-brown] |
| r10: 10M | [brown-black-blue-gold] |
| r11 + r12 + r15: 1k | [brown-brown-black-black-brown] |
| r13 + r14: 100k | [brown-black-black-orange-brown] |
| r16: 470k | [yellow-purple-black-orange-brown] |
| There is no r17! | |
| r18 + r19: 2k | [red-black-black-brown-brown] |
| RMOD: 4.7k | [yellow-purple-red] or [yellow-purple-black-brown-brown] |

**Starve:**
Bridge the middle and right holes with a snipped off piece of wire.


**Diodes:**
The diodes have a orientation.
The black stripe should correspond with the white stripe on the pcb!!

d1 to d4: 1n914 (an orange part with a black marking at one end)

**IC sockets:**
Fit the IC sockets. Beware of their orientation!
The gap should correspond with the marking on the pcb

The best way to solder these in without them falling out is to mount the sockets, then take book and lay it over the pcb.
Flip the book+ pcb and solder two pins of each IC's socket. (one on each side)
Remove the book and check if the sockets are flat to the pcb.
If not, softly press the IC socket to the pcb and reheat the pins with the solder iron.
The socket should click flat to the pcb.

IC1: 16pin socket
IC2: 16pin socket
IC3: 14pin socket
IC4: 8pin socket

**Capacitors:**

| | |
|---|---|
| c1, c2, c3, c4, c10: 100nF | [Marked '104'] |
| c7, c8, c9: 220nF | [Marked '.22j63'] |
| c11, c13: 470pF | [Small orange disks marked '471'] |

These next capacitors have an orientation.
The longer leg goes in the hole marked with a "+" (PLUS) sign.
c5, c14: 10uF
c12: 4.7uF

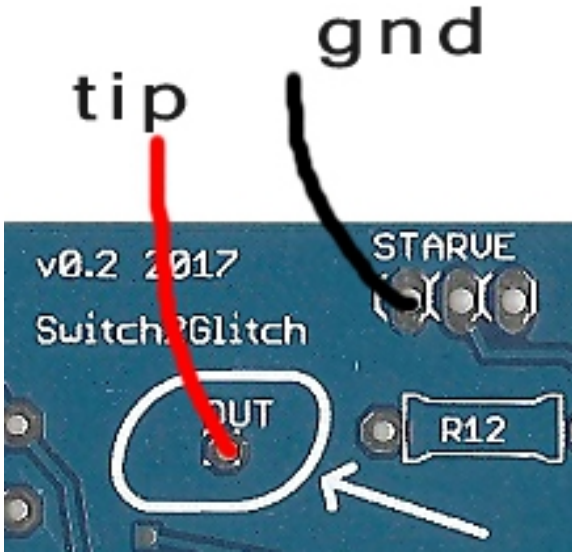
**IC's:**
Take the IC's from the foam. Observe the pins.
Bend the pins of the IC's so that they are in an angle of 90 degrees.
You can use a flat surface to bend the pins (per side) all at once.

IC1: CD4049
IC2: CD4053
IC3: CD4093
IC4: TL061

**Potmeters:**
Stick the potmeters in the right holes and solder one pin of each.
Check if the pots are seated correctly (flat to the pcb, at the correct angle). Reheat if necessary, then solder the rest of the pins.

FREQ1: B20k
FREQ2: B20k
CLOCK: B100K
CUTOFF: B100K

**Output:**
Strip 2 wires and solder them to the OUT and the leftmost hole of the STARVE hole (that one is the GND connection)
Solder the TIP to the jack socket (the angled side) and also connect the GND. (flat side)
See Picture!





**Power:**
Connect the 9v battery cable to the PCB. Red cable connects to the 9v hole, the black cable to the GND hole.

**Panel:**
Attach the PCB to the panel with the rings + nuts. Fasten the nuts.
Screw the fontpanel to the two sidepanels with the four screws.
The battery can be attached to the sidepanel with the four holes. Use two tiewraps.
Put the battery cable through the tiewrap too, to hold it in position!

**Knobs:**
Turn the four potmeters all the way to the left (CCW) and fit the knobs on.
Push them firmly in, while supporting the back of the potmeter.

**Testing:**
Connect the battery. Connect the Creep Cluster to a mixer with a jack cable.
You should hear sound!

**Troubleshooting:**
If it does not work, don't panic :)
Did you bridge the Starve holes?
Check the orientation and order of the IC's, the polarised capacitors and the battery cable.
Check the solder connections and reheat them to correct any bad connections.

For more questions about the CreepCluster, mail me:
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