

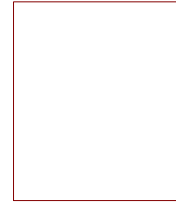
external signals coming in / going out

Terminal Strip in enclosure:
CLOCK – teensy and volca sync in
5V
GND

clock indicator

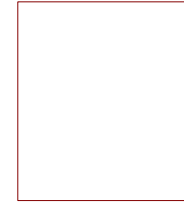


drum trigger land



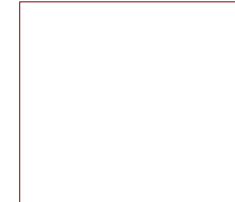
File: drum_triggers.kicad_sch

led_drivers



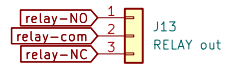
File: led_drivers.kicad_sch

power



File: power_world.kicad_sch

offboard...
need to mix VOLCA gated audio with
Teensy Audio

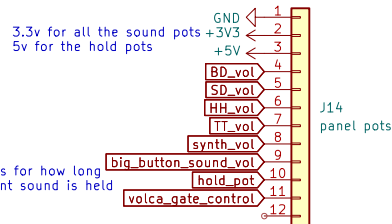


audio from teensy audio adaptor board

audio from volca **volca_audio** 1
gated audio from switches **volca_audio_gated** 2
big button triggers fun sound **big_button_trig** 3
volc audio in/out. button trig



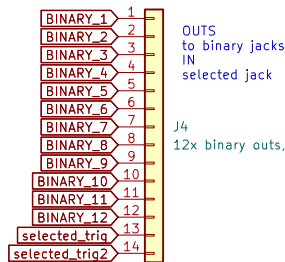
panel mount pots



hold pot is for how long
the ambient sound is held
25k

hold pot 1 – mid pin connected to 5v
other side here

ambient trigger

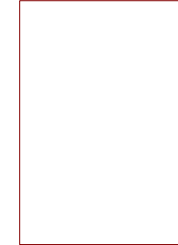


OUTS
to binary jacks
IN
selected jack

J4
12x binary outs, 2x ins

File: ambient_trigger.kicad_sch

teensy



File: teensy.kicad_sch

volca triggers

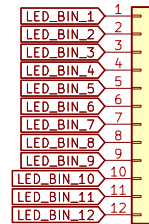


File: volca_triggers.kicad_sch

LED OUTS

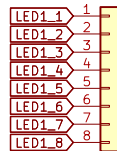
positive leg is the to connector,
negative leg is GND

OUTS
to binary LEDs



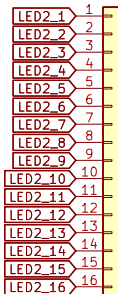
J8
LED_binary

OUTS
to drum machine leds



J5
LED_drums

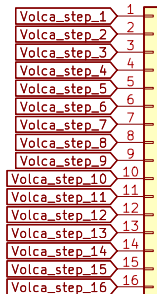
OUTS
to Volca leds



J10
LEDS_volca

VOLCA switches

OUTS
to Volca switches
IN
return from volca common



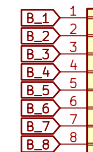
J7
Volca_steps

DRUM Switches

OUTS
to the drum machine switches



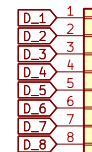
J1
Drum_SW_BD



J2
Drum_SW_SD



J3
Drum_sw_HH



J6
Drum_sw_TT

INS
returns from drum machine
switch commons



J11
Drum_Returns

Sheet: /
File: waterwheel_synth_v2.kicad_sch

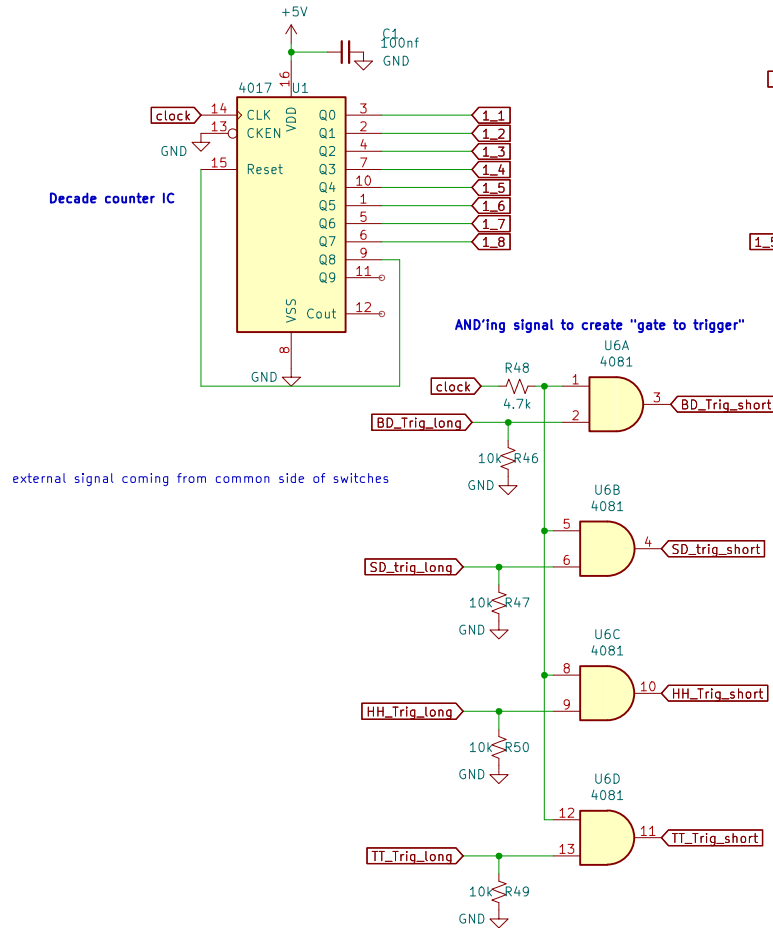
Title:

Size: A4
KiCad E.D.A. 9.0.4

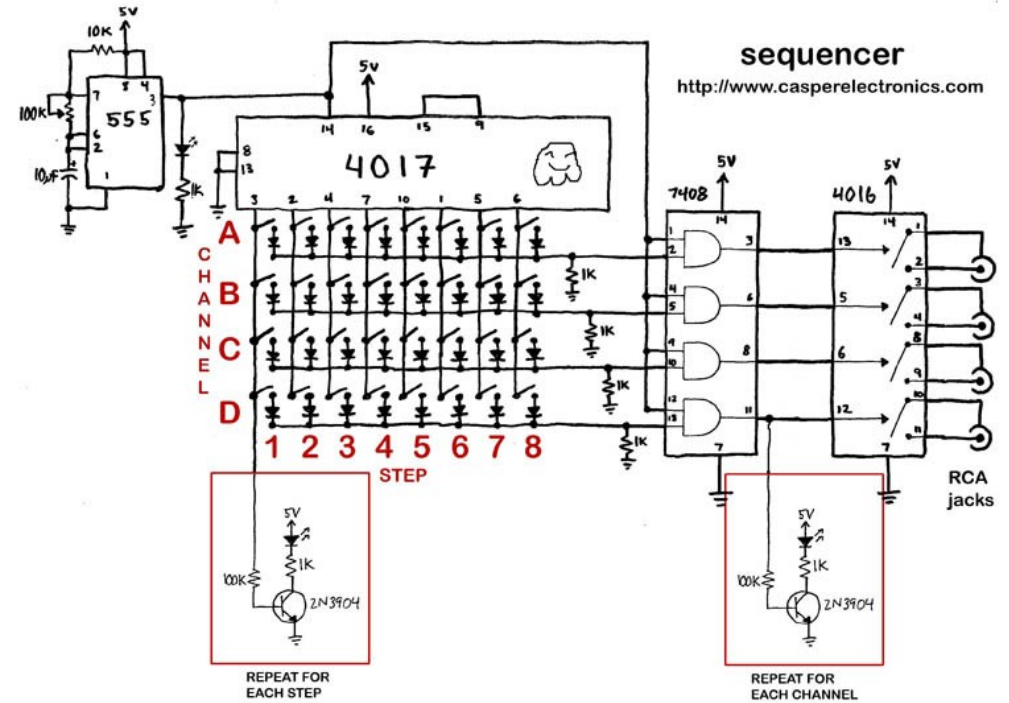
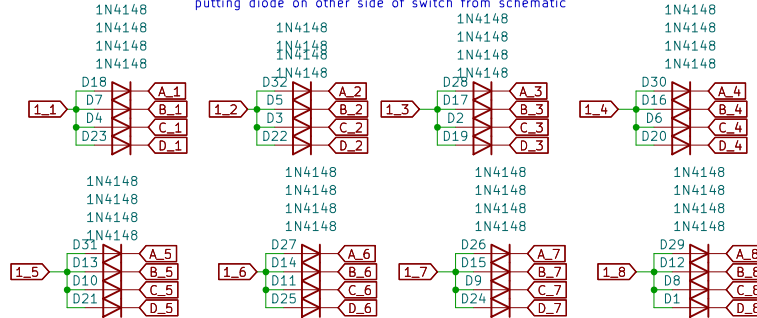
Date:

Rev:
Id: 1/7

8 STEP SEQUENCER with 4 drum sounds



all these header pins are going out to switches mounted on the panel putting diode on other side of switch from schematic



Drum trigger zone

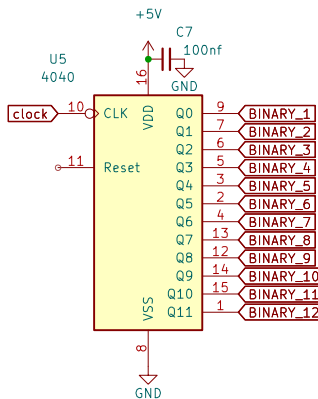
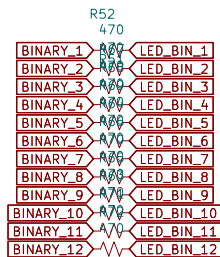
Sheet: /drum trigger land/
File: drum_triggers.kicad_sch

Title:

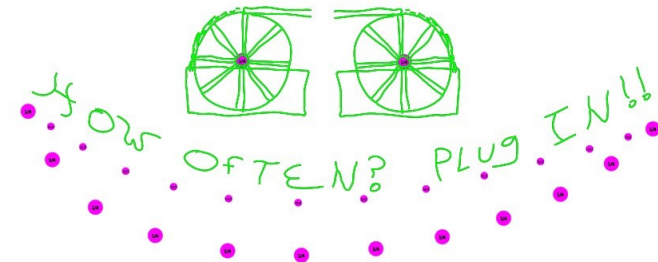
Size: A4
KiCad E.D.A. 9.0.4

Date:

Rev:
Id: 2/7

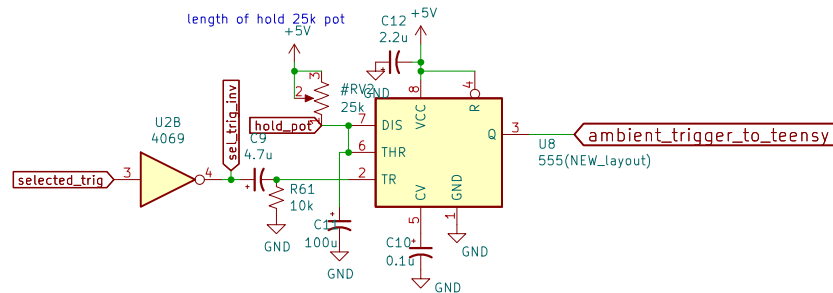


front panel!
these are all 1/4" jacks, patch cable
connects the wheel jack to one of the
binary counters.
selected_trig is the result of that patch

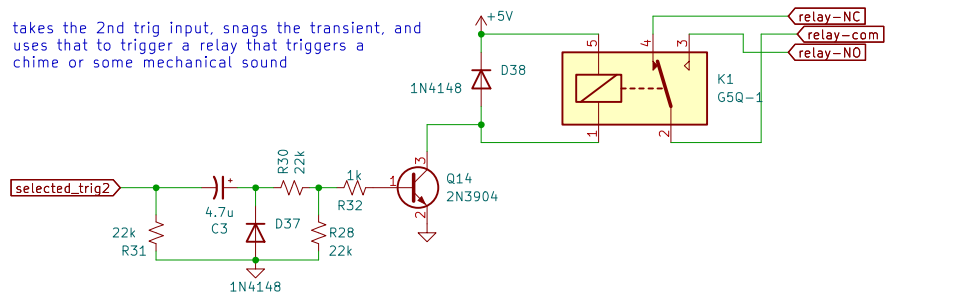


selected_trig = ambient sound on teensy
selected_trig2 = mechanical switch chime sound

555 circuit determines how long the sound will hold



takes the 2nd trig input, snags the transient, and
uses that to trigger a relay that triggers a
chime or some mechanical sound



Sheet: /ambient_trigger/
File: ambient_trigger.kicad_sch

Title:

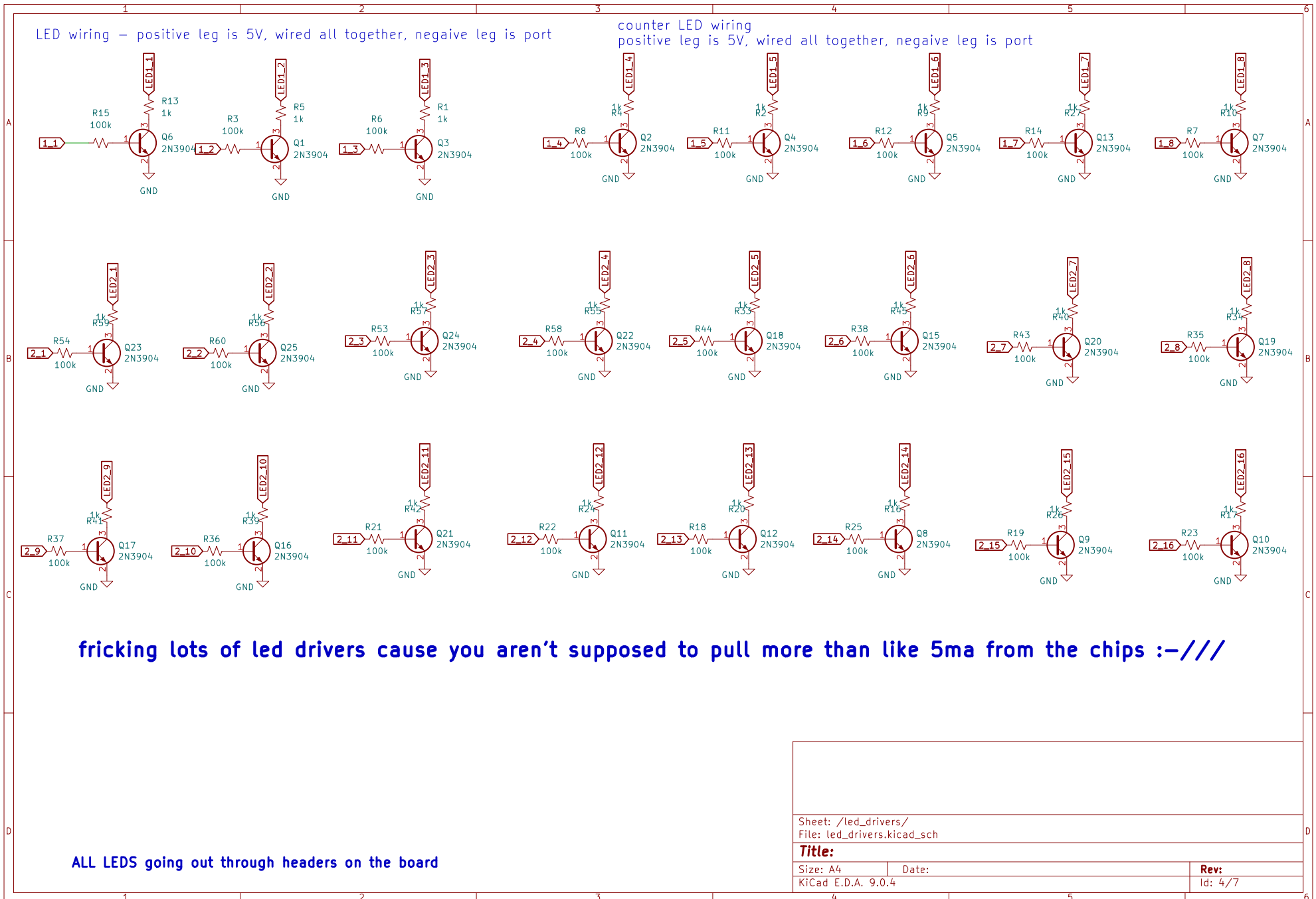
Size: A4
KiCad E.D.A. 9.0.4

Date:

Rev:
Id: 3/7

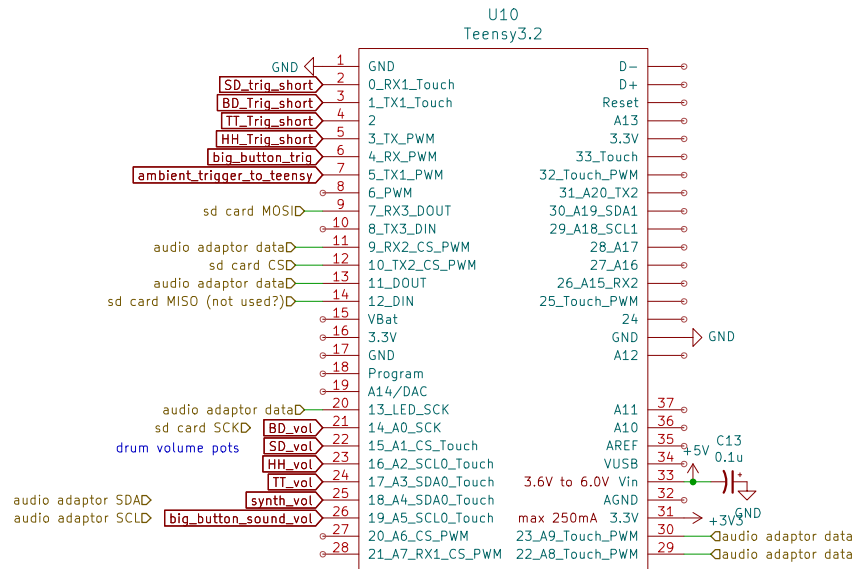
LED wiring – positive leg is 5V, wired all together, negative leg is port

counter LED wiring
positive leg is 5V, wired all together, negative leg is port



Using teensy to play drum samples, synth sounds,
and fun trigger sound with big button.

Using the Teensy Audio Shield for audio output.
Also SD card on audio shield will contain the samples.
Audio output is from 1/8" jack on audio shield



Sheet: /teensy/
File: teensy.kicad_sch

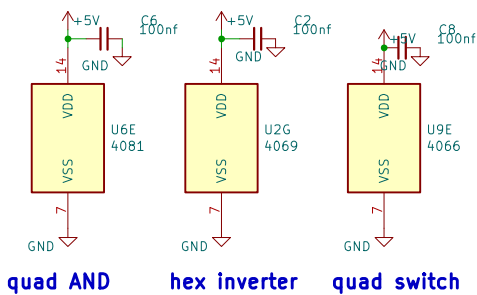
Title:

Size: A4
KiCad E.D.A. 9.0.4

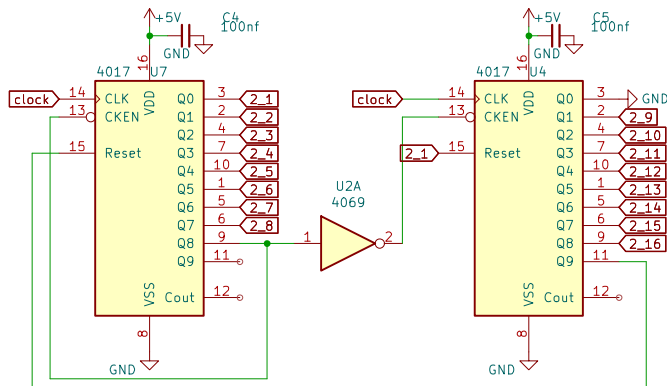
Date:

Rev:
Id: 5/7

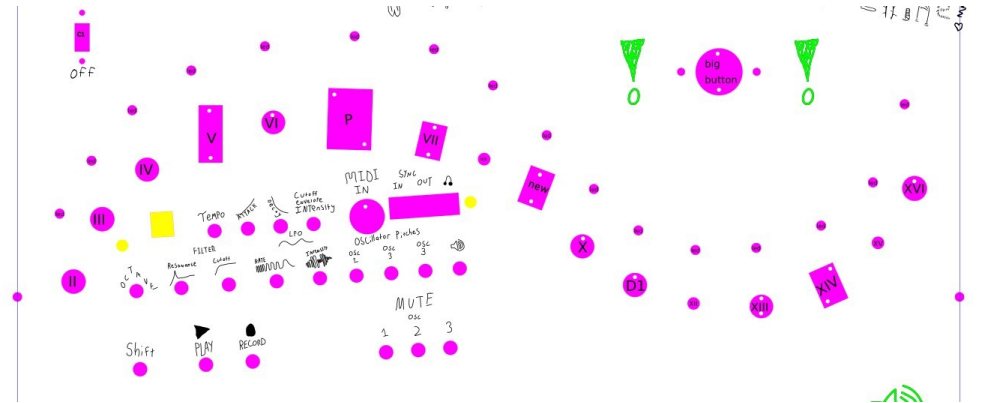
POWER for CHIPS



Sheet: /power/	
File: power_world.kicad_sch	
Title:	
Size: A4	Date:
KiCad E.D.A. 9.0.4	Rev: Id: 6/7

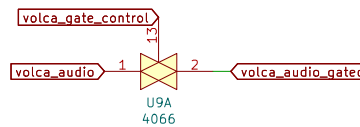


front panel of volca trigger.
16 switches trigger the step being on/off.



4066 – quad bilateral switch.
it gates the volca audio

2 1	D36	1N4148	Volca_step_1
2 2	D35	1N4148	Volca_step_2
2 3	D33	1N4148	Volca_step_3
2 4	D34	1N4148	Volca_step_4
2 5	D43	1N4148	Volca_step_5
2 6	D40	1N4148	Volca_step_6
2 7	D41	1N4148	Volca_step_7
2 8	D39	1N4148	Volca_step_8
2 9	D42	1N4148	Volca_step_9
2 10	D45	1N4148	Volca_step_10
2 11	D44	1N4148	Volca_step_11
2 12	D49	1N4148	Volca_step_12
2 13	D48	1N4148	Volca_step_13
2 14	D50	1N4148	Volca_step_14
2 15	D47	1N4148	Volca_step_15
2 16	D47	1N4148	Volca_step_16



Sheet: /volca triggers/
File: volca_triggers.kicad_sch

Title:

Size: A4
KiCad E.D.A. 9.0.4

Date:

Rev:
Id: 7/7