MODULAR SYNTHESIS

Automatonism & PureData

sadnoise – Waterworks 2024: Festival of Experimental Sound

Modular Synthesis

- Sound sources: oscillators, samplers
- Modifiers: filters, amplifiers, FX
- Control signals: envelopes, LFOs
- Sequencers, clock generators

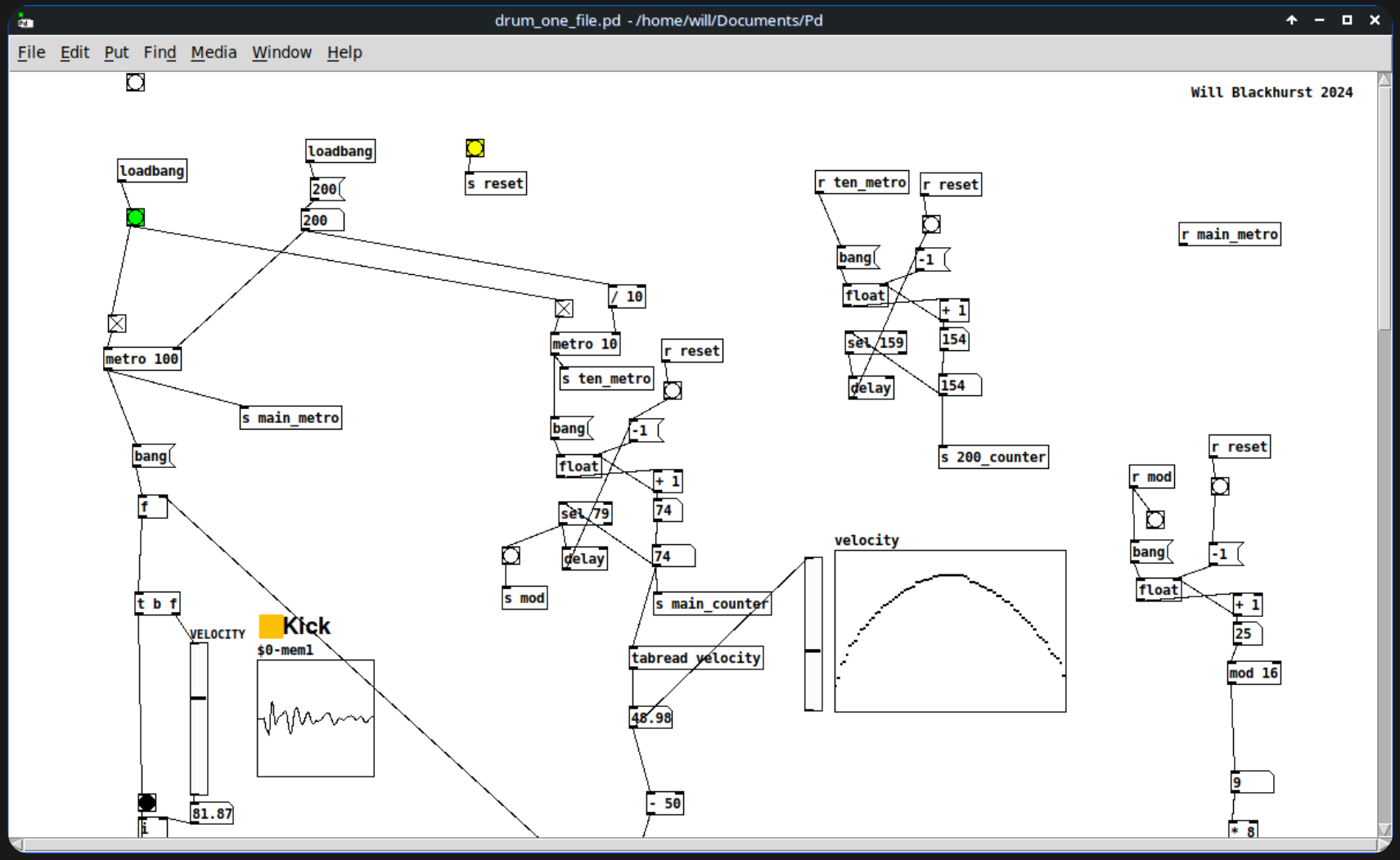
PureData

- visual programming language for music
- related to Max/MSP, Reaktor, and other music environments
- idiosyncratic, but we will basically ignore

Automatonism

- library built in Puredata
- super simple
- based on Eurorack modular concepts

PUREDATA


drum_one_file.pd - /home/will/Documents/Pd
File Edit Put Find Media Window Help
Will Blackhurst 2024
loadbang
loadbang
200
200
s reset
/ 10
metro 100
metro 10
s ten_metro
r reset
s main_metro
bang
f
bang
float
+ 1
sel 79
74
delay
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s mod
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VELOCITY
Kick
$0-mem1
s main_counter
tabread velocity
48.98
- 50
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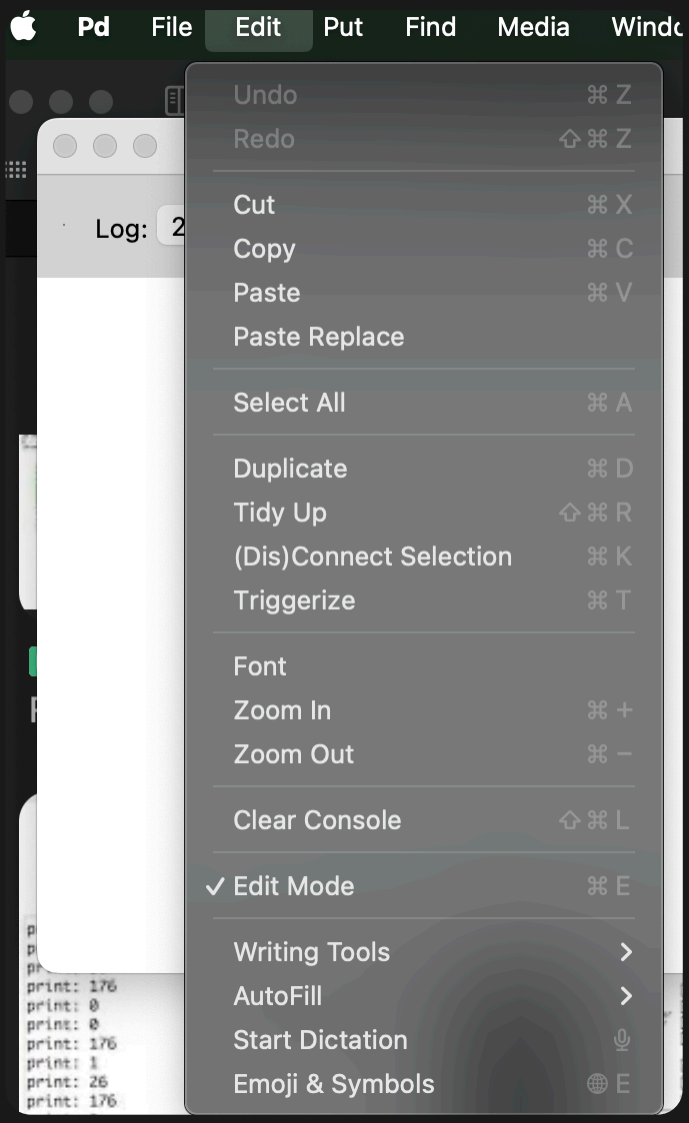
i
r ten_metro
r reset
bang
-1
float
+ 1
sel 159
154
delay
154
s 200_counter
velocity
r main_metro
r mod
r reset
bang
-1
float
+ 1
25
mod 16
9
* 8

PUREDATA

Essential:

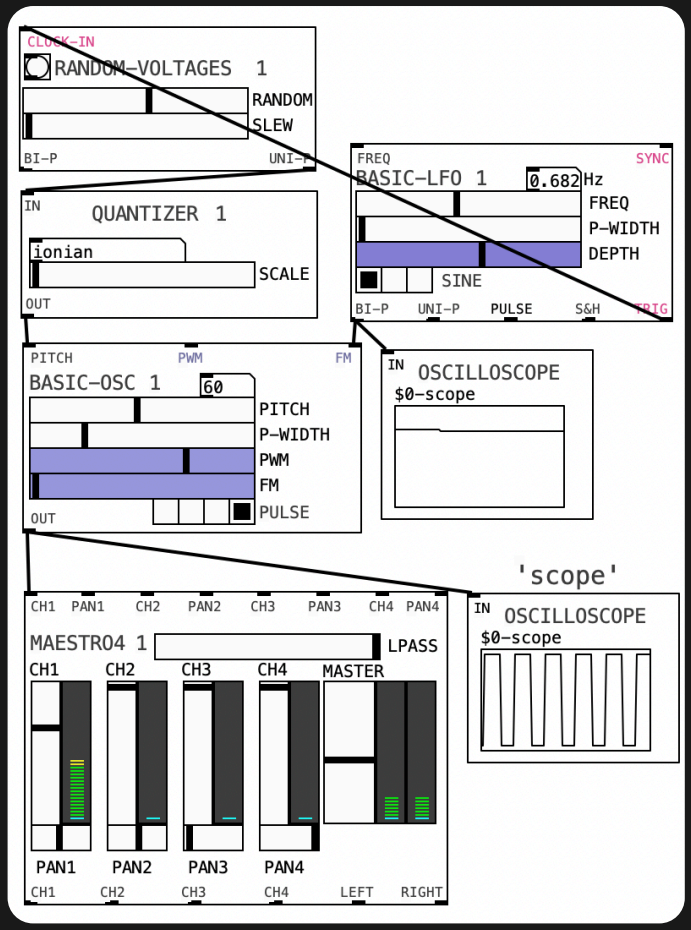
- Edit mode: allows for adding objects and connecting
- Filepath: PD ⇒ settings ⇒ path (will do later)
- Adding objects: in “Put” menu

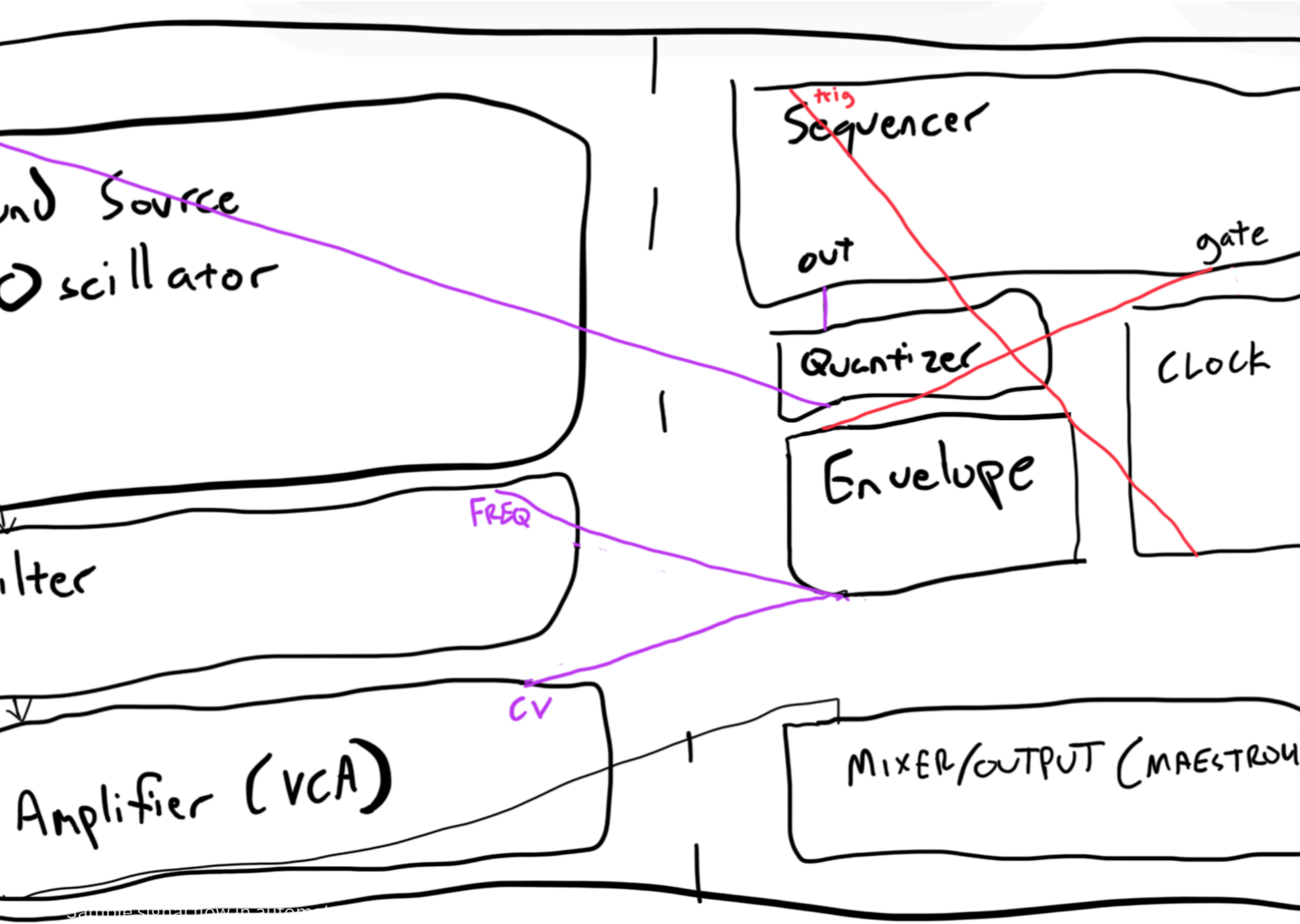


AUTOMATONISM

Modules:

- In on top, out on bottom
- Module parameters sliders are white
- Purple inputs are for control voltage
- Purple sliders attenuate CV input
- Red in/out is for sync/trigger




Sequencer
trig
out
gate
Quantizer
Clock
Envelope
FREQ
CV
Amplifier (VCA)
MIXER/OUTPUT (MAESTRO

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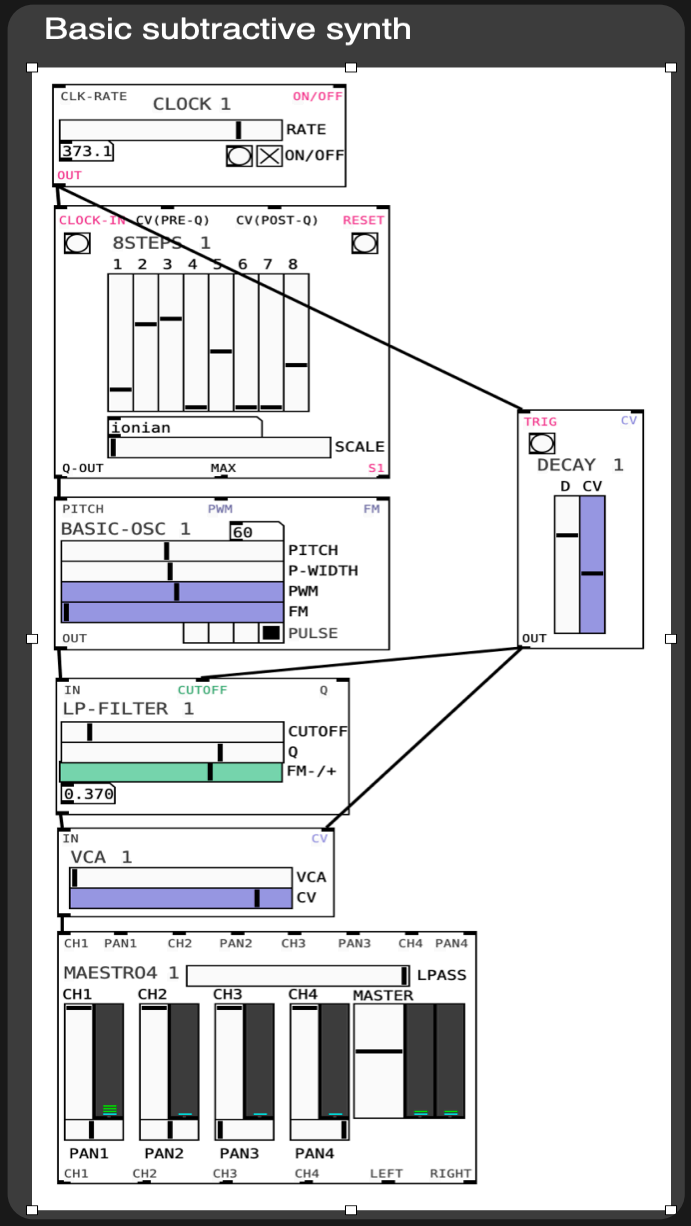
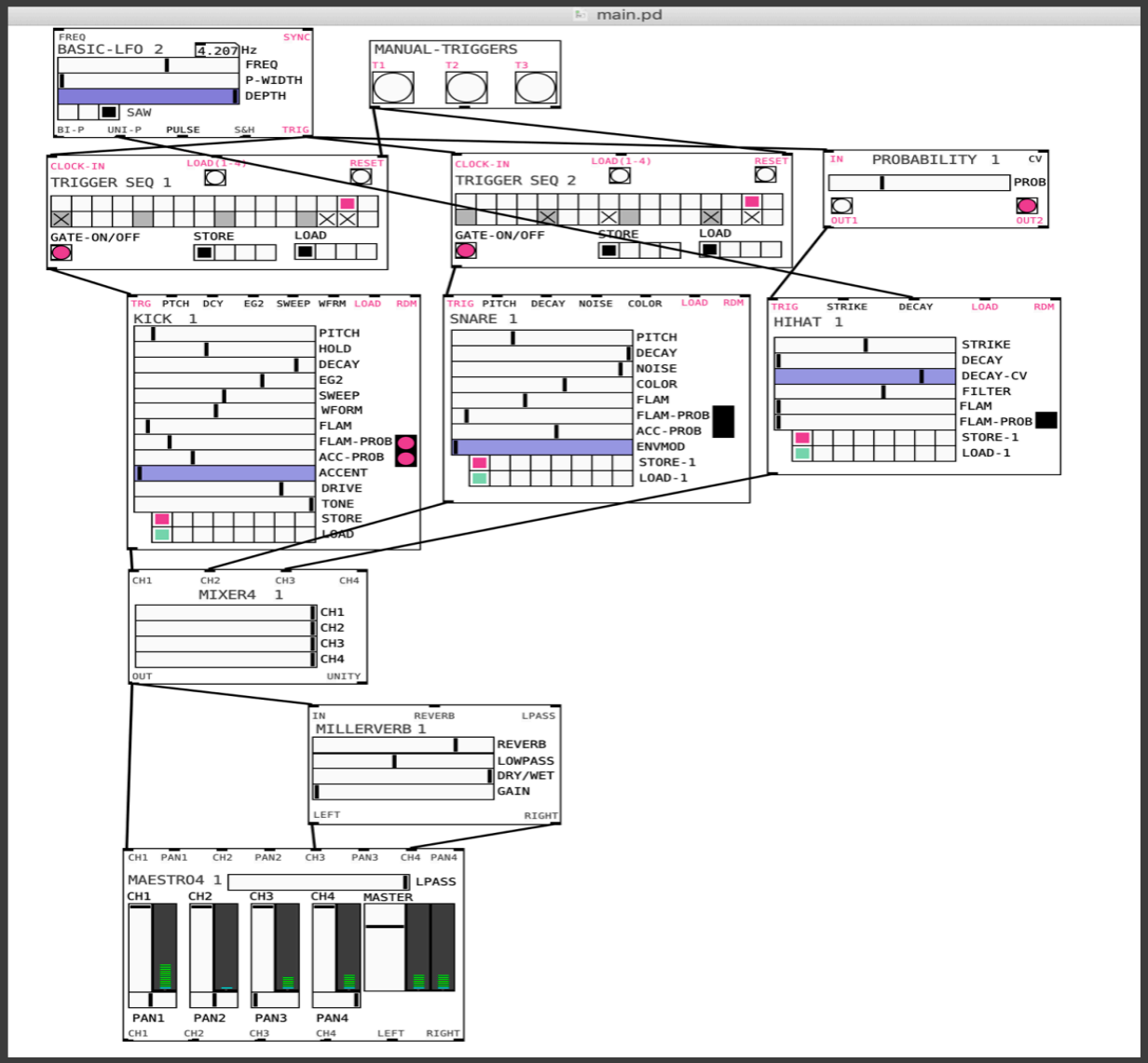


Drum sequencer



watch some videos automatonism automitonism class github

automatonism basics

- adding modules
  - name and instance number
- maestro output
- pd setting audio output

module types

- outputs / mixers
- sound sources
    - parameter names and ranges
        - we will address parameters with EXACTLY their name
        - instance numbers allows for targeting individual modules
    - CV and CV inputs
    - white sliders: standard parameter
    - blue slider: CV attenutator
    - green slider: bipolar CV attenuator
- control sources
- audio modifiers
- sequencers