IMCA 221 Programming for Artists Winter 2025

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Class is on Zoom even in the classroom for sharing, find the details on Moodle

Download the slides!

MIDI Samples patch

Each midi note contains:

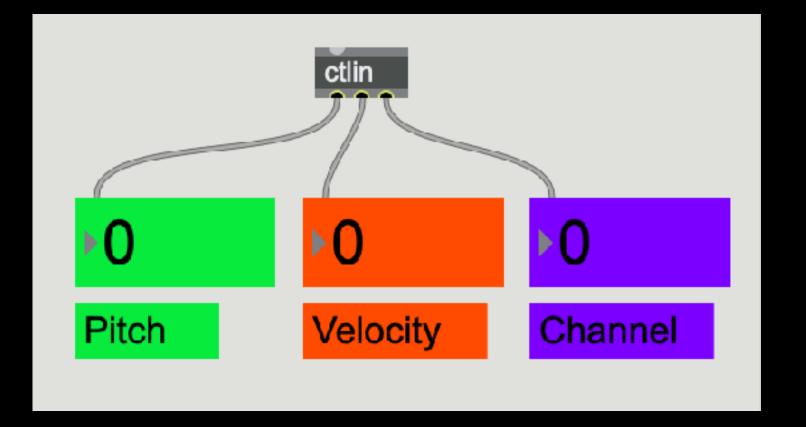
Pitch: key/note/value

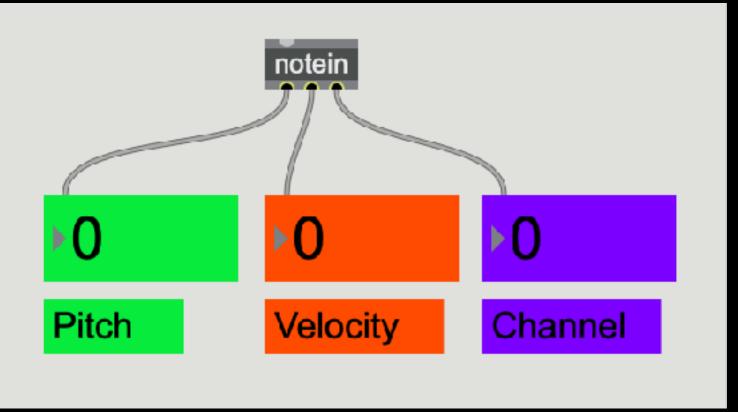
Velocity: intensity

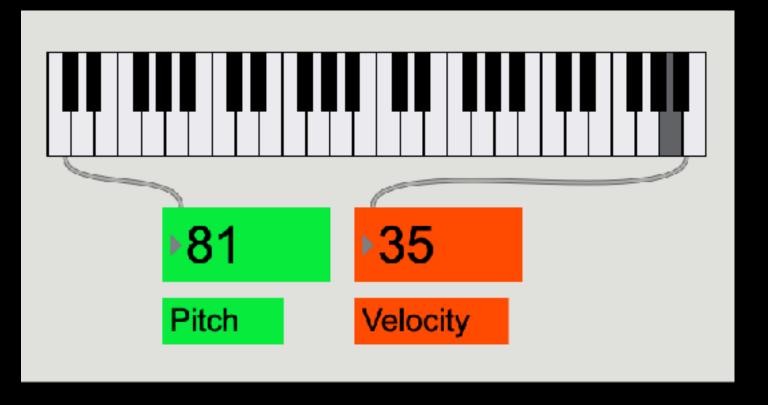
Channel: channel

You can use notein or ctln to get notes or control knobs

KSlide: This is just a UI. It can be numbers, it can be used to simulate your keyboard, but it is just a visual, nothing special. kslide uses velocity from the hight of the key press on a key

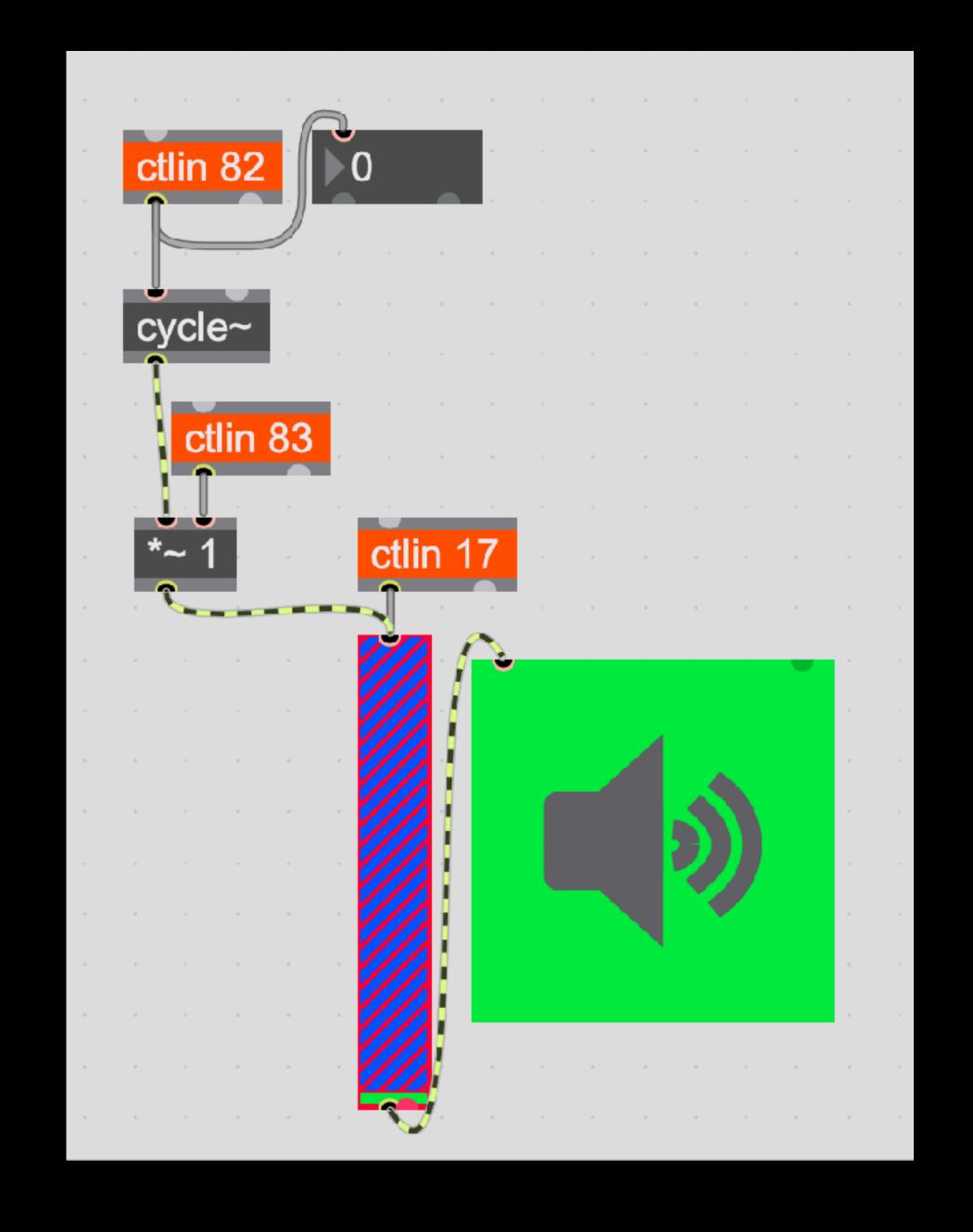






MIDI Samples patch

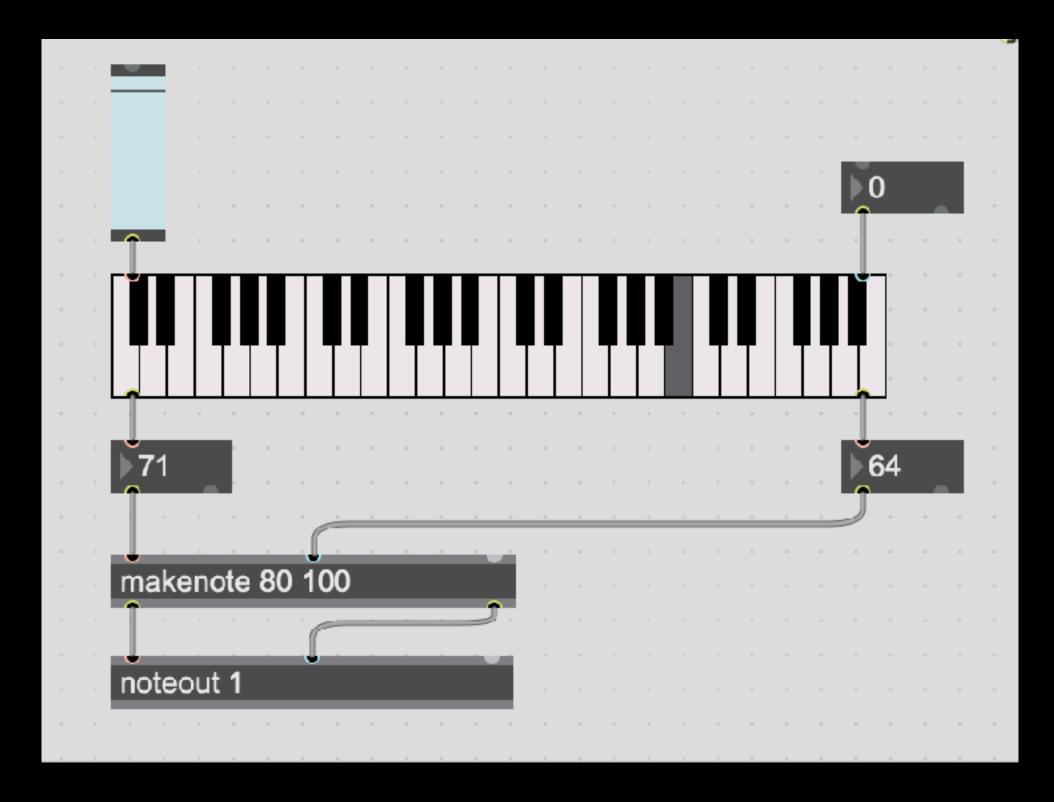
You can use ctlin to define a channel to listen for and control an oscillator with various knobs on your midi controller. This example uses various sliders on my controller to change the volume, amplitude and frequency of this cycle~

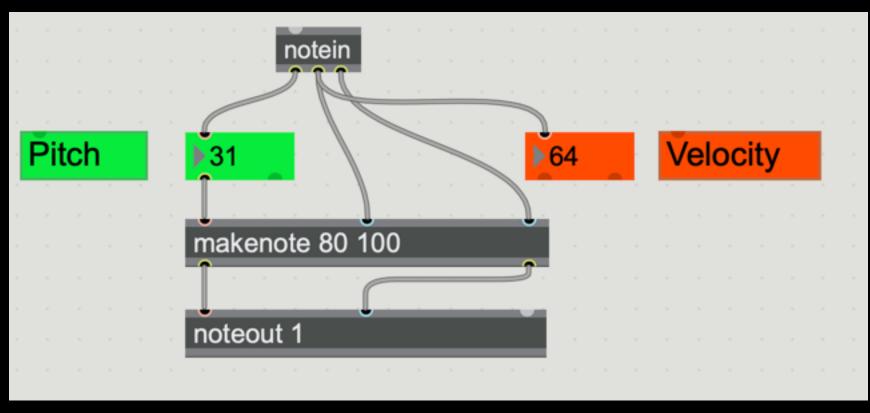


MIDI Samples patch

Notes only happen when you use makenote and noteout. You can use midi data to do anything, but if you want to produce a midi note you need to use these.

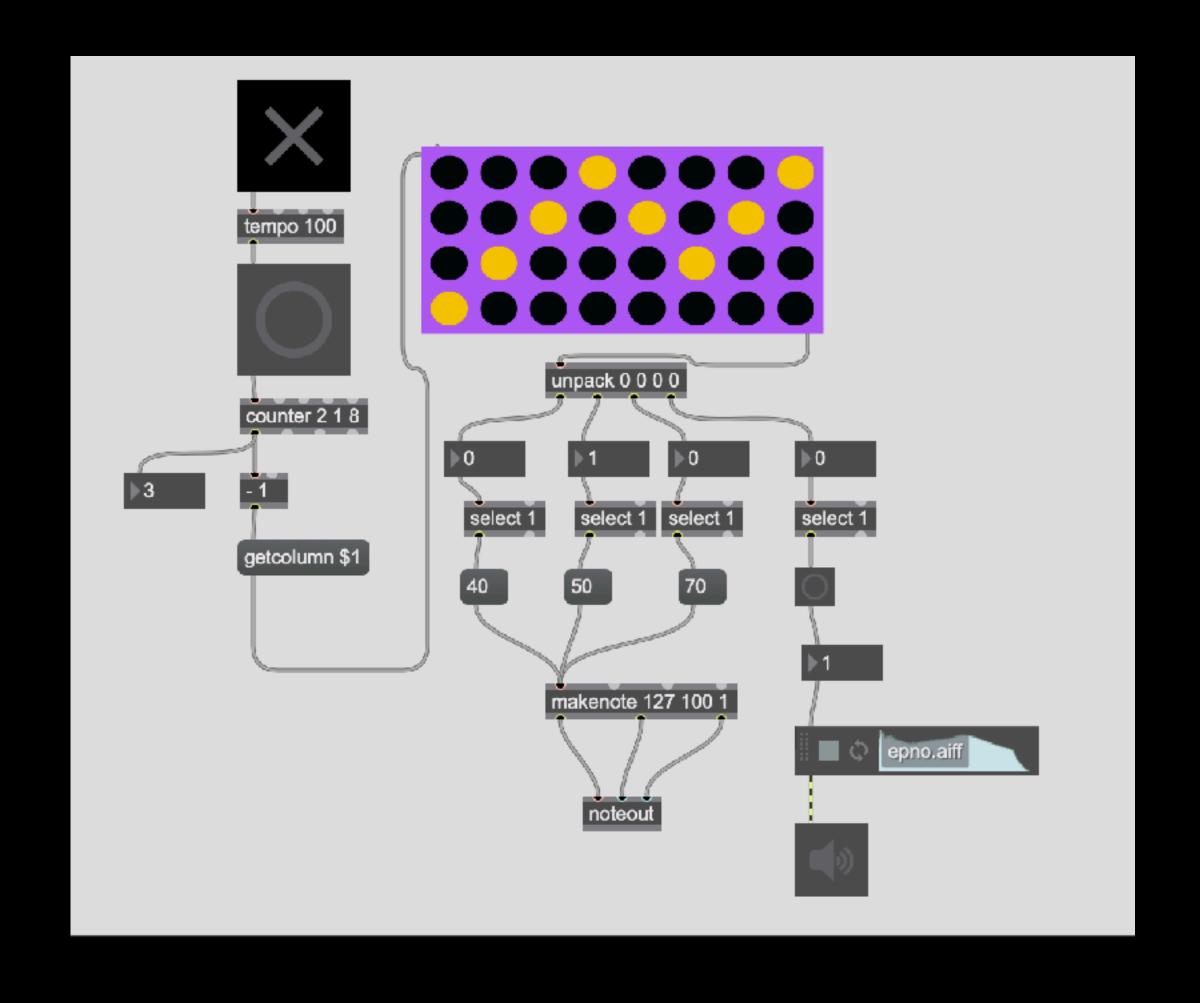
This is an example that uses the KSlide UI, and another that just uses the notein data.

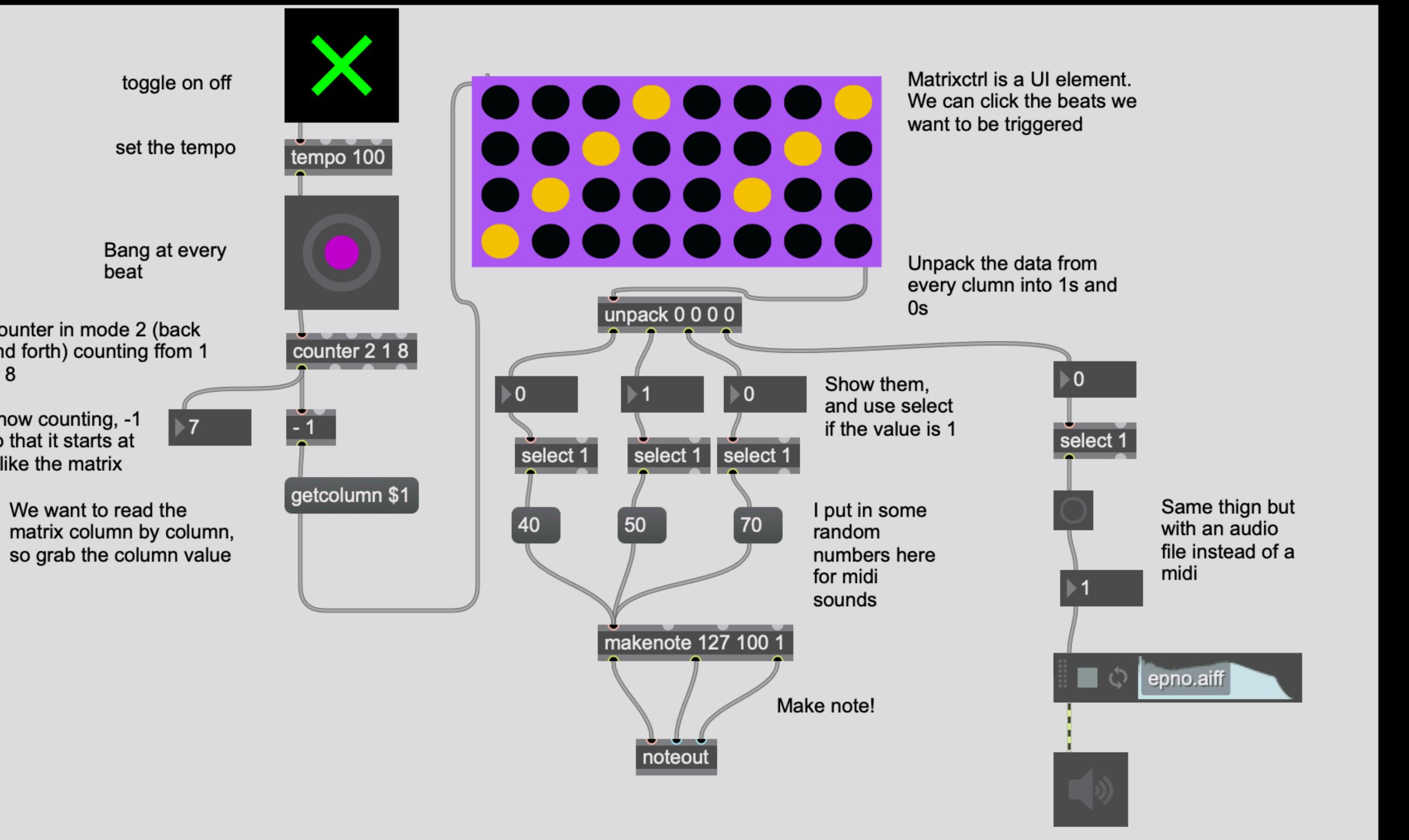




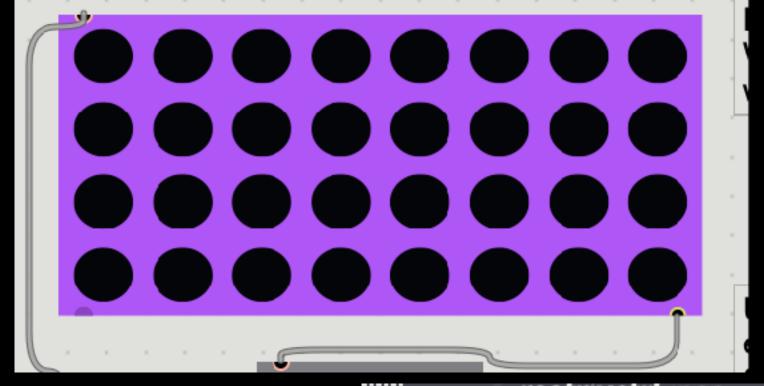
This is a basic sequencer. It uses a variety of tools:

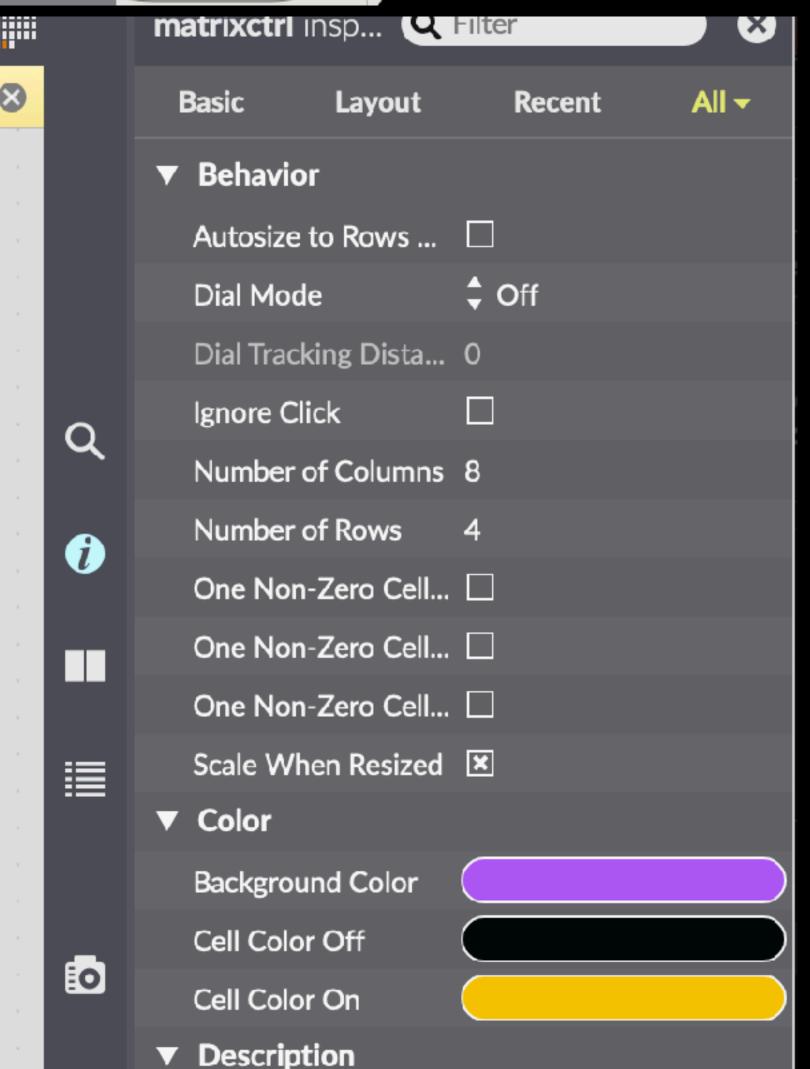
Tempo: Set the BPM
Counter: counts between a range in a variety of ways
Matrixctrl: A UI for control
Unpack: Shows complex
data from an output





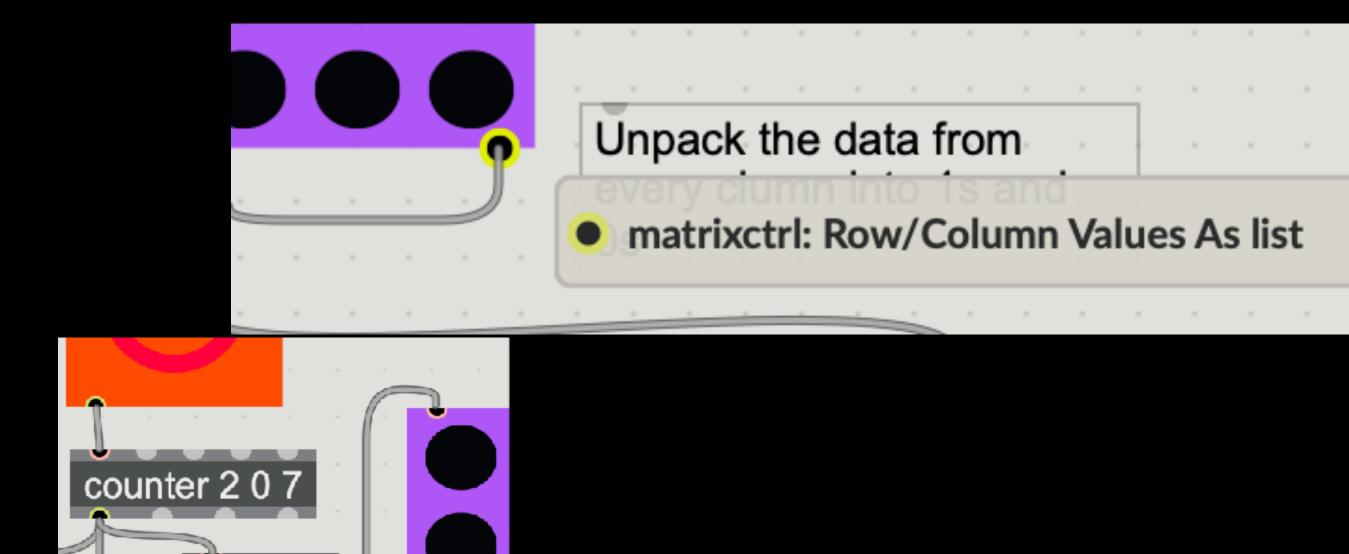
Matrixctrl object can be set to have rows and columns. In this example we are using a sequence of 8 and 4 notes. We are collecting the column data as we count through each column. You can set this in the inspector





The input sends a getcolumn message, and uses the number (\$1) output by the counter.

The output spits out a packed list that contains all the numbers (on or off, 0 or 1) for each column)



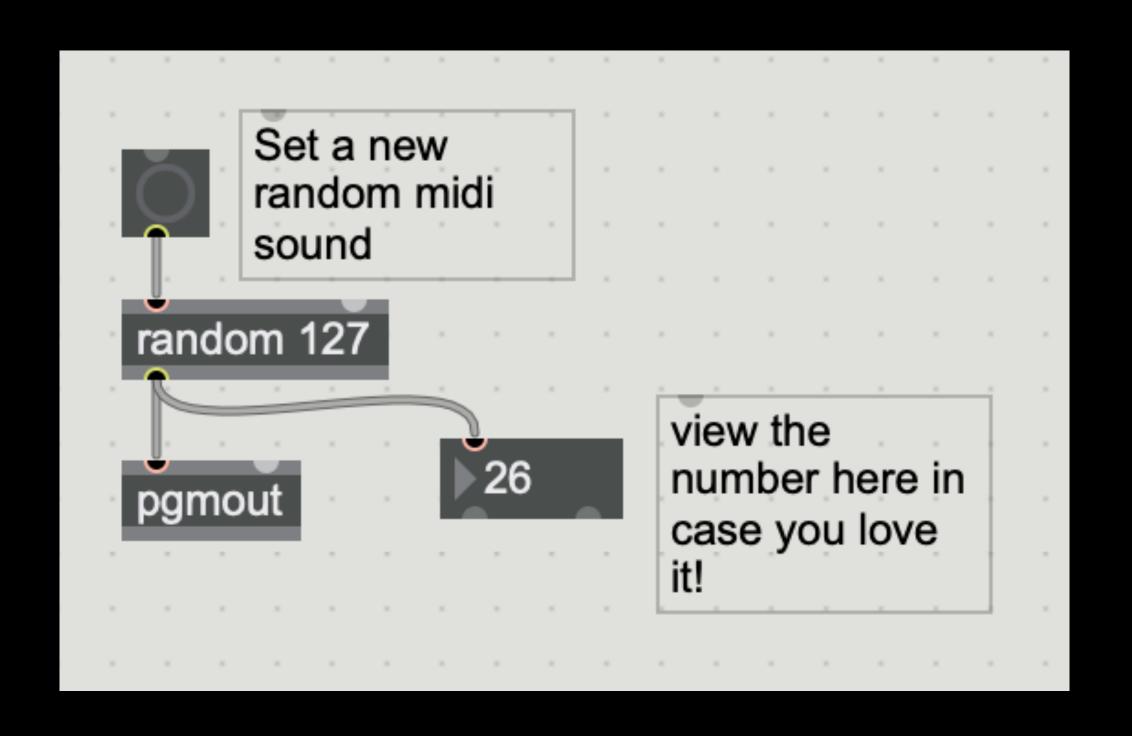
getcolumn \$1

The list needs to be unpacked. Each item of the unpacked list gets an output. The number of items on the list should reflect the number of items in the column.

The 0 or 1 is put into select, if select is 1 then perform the note task.



Pgmout sets a new random midi value, you can use this snippet to click the button and load a new one.



Download todays patch on Moodle

Handing in projects

Each project should include a .zip file that contains:

- A saved file (File > Save as Project) .maxpat
- A screen capture of your max patch
- A video or audio recording of your project working (can be a video or a link to a private video on YouTube, Vimeo or Google)
- A 50-100 word explanation of your project inside your maxpatch

Be sure to name files properly (no untitled-1.zip)

All files are expected to be cleaned up and arranged in a reasonable, legible way. Videos should be clear, well light and show your project working.

Homework:

Work on Audio Experiment (today at midnight)

Begin to form teams for mid term (2-4 people)