UNIVERSITY OF MICHIGAN

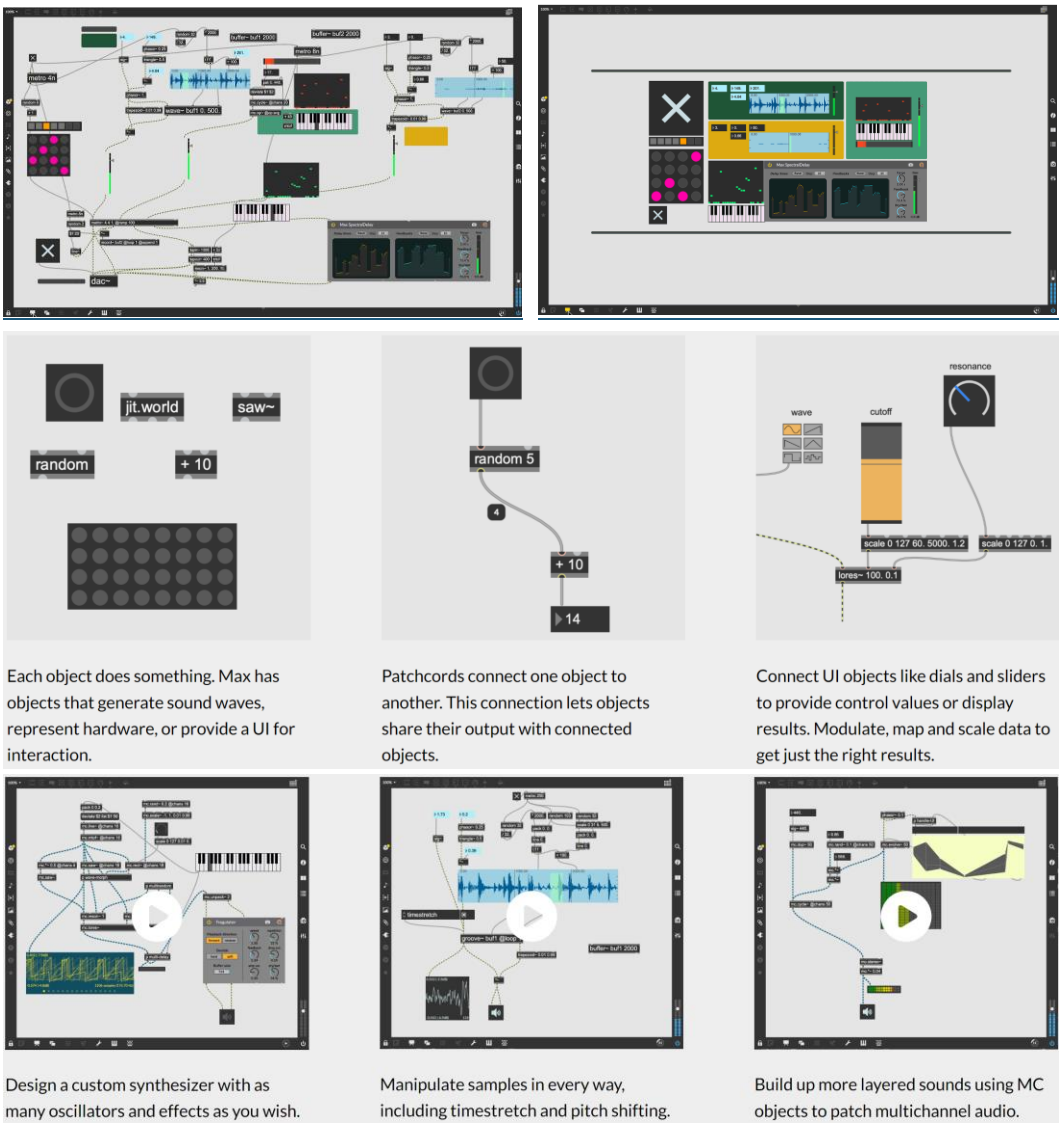
Creative Coding (PAT 204/504, Fall 2026)

Lecture 12: Intro to Max

Instructor: Hao-Wen (Herman) Dong

What is Max?

- cycling74.com/products/max



(Source: cycling74.com/products/max)

- Follow the analog synthesizer design (patch & cords)



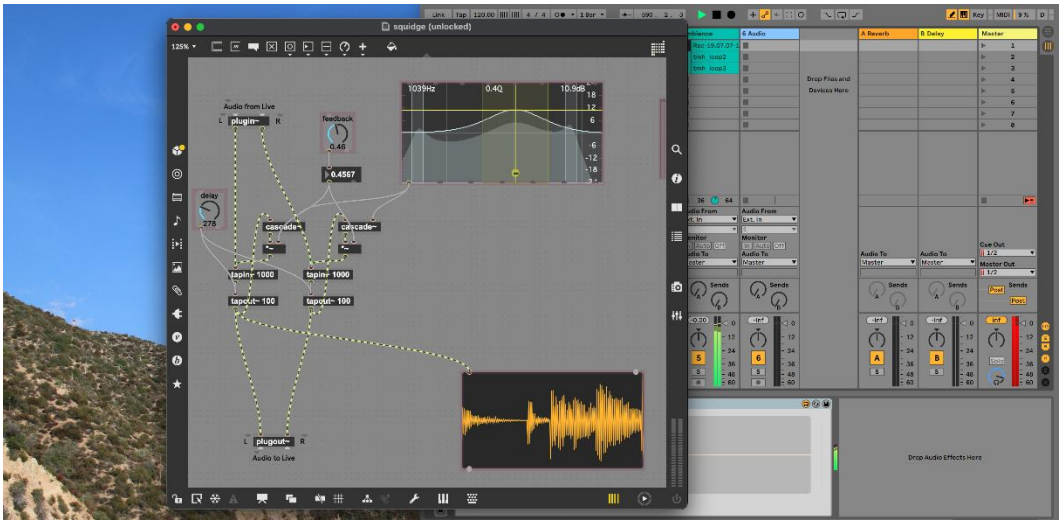
(Source: Pete Brown from Gambrills, MD, USA via Wikimedia)

- Jitter – Visuals for Max – cycling74.com/products/jitter



(Source: cycling74.com/products/max)

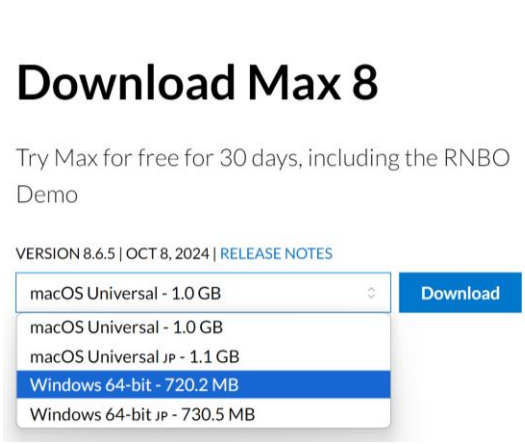
- Live for Max – Run Max in Ableton Live – cycling74.com/products/maxforlive & ableton.com/en/live/max-for-live

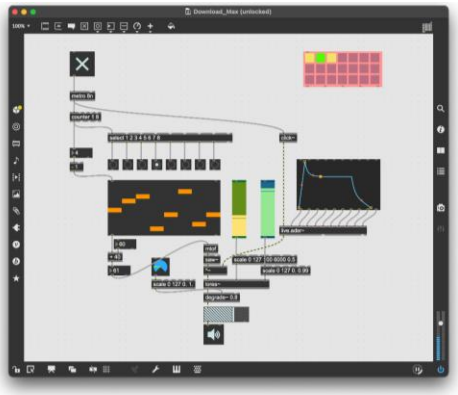


(Source: cycling74.com/products/maxforlive)

- JavaScript, NodeJS, C/C++, Java in Max – cycling74.com/products/extend-max

- Download Max at cycling74.com/downloads



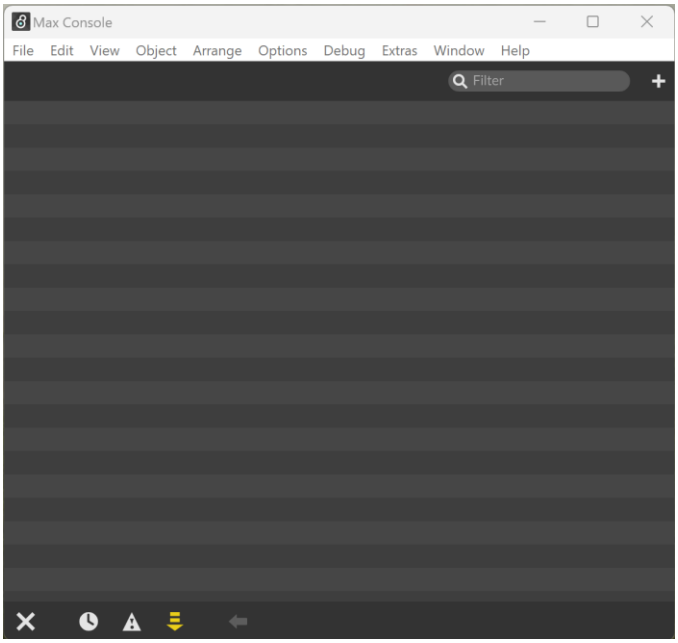


(Source: cycling74.com/downloads)

- Written in **C++** using **JUCE** (a cross-platform application framework)
- Supports only macOS and Windows
- **30-day free license** → Better save it for your final project!

Example 1: Getting Started ("1_basics.maxpat")

- Create a new patch (Ctrl-N)
- Max console: the "backend" of Max



- Lock/unlock (**Ctrl-E**) (button at the bottom left)

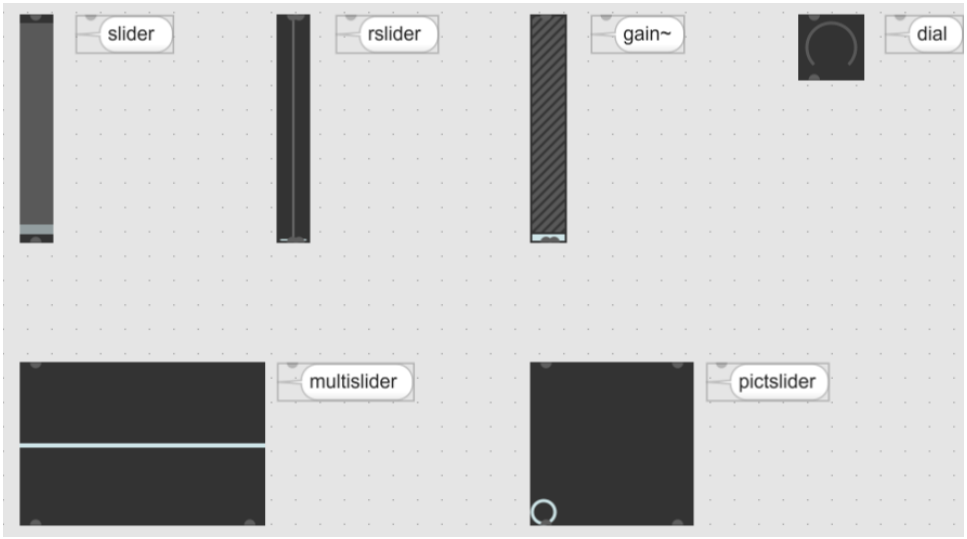


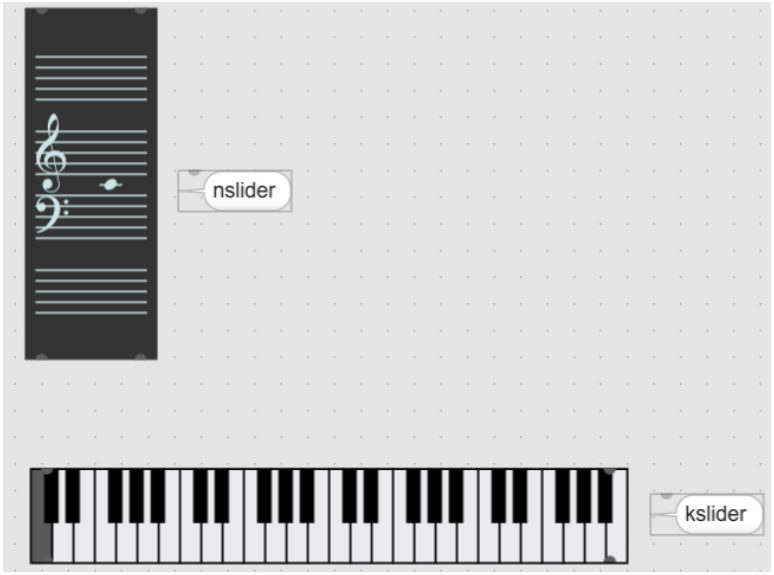
- Top navigation bar
  - Object (**n**) 

    Message (**m**) 

    Comment (**c**) 

  - Toggle (**t**) 
    Button (**b**) 
    Number (**i**, **f**) 

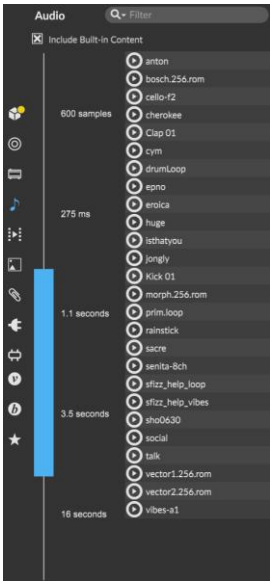
  - Sliders:


  - Advanced sliders


- **Ctrl-Shift-H** for help!
- **Ctrl-Shift-R** for reference
- **Ctrl-Shift-A** to auto align

Example 2: Playlist (“2_playlist.maxpat”)

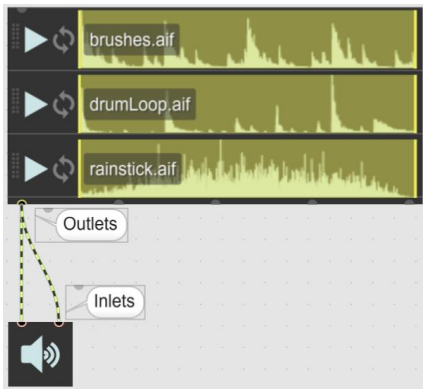
- Example audio



- “ezdac~” object



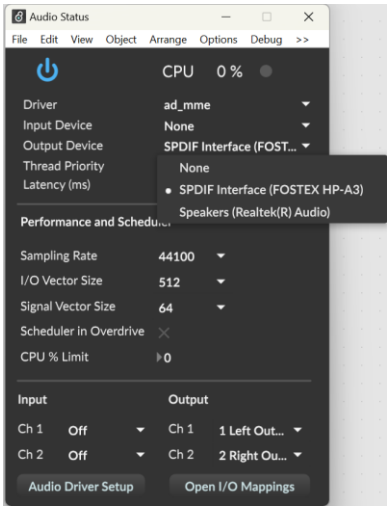
- Inlets & outlets



- Audio on/off toggle & meter/gain (at the bottom right)



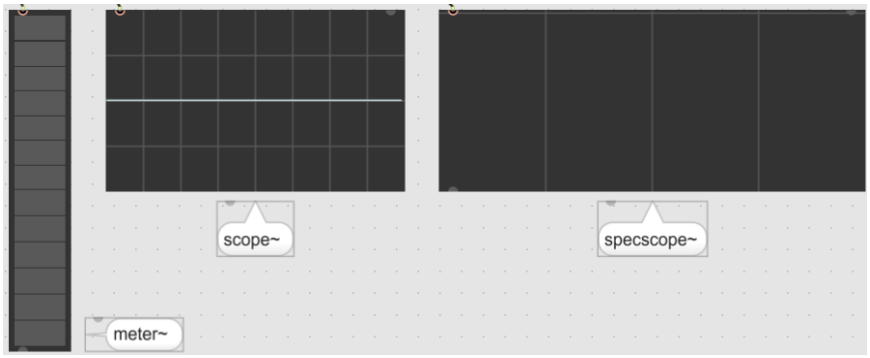
- Audio I/O setup (“Options >> Audio Status”)



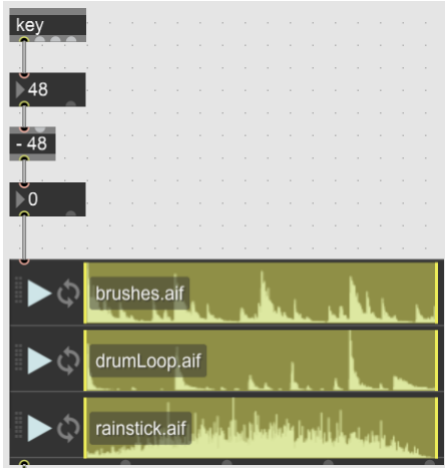
- “gain” object



- “meter~”, “scope~” and “specscope~” objects



- Control the playlist by the number keys



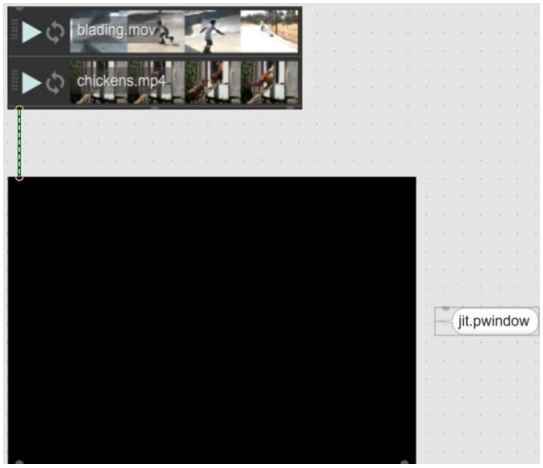
- Cord types
  - Gray cords are “**values**” or “**messages**”
  - Yellow cords are “**signals**”

Example 3: Video with jitter (“3_video.maxpat”)

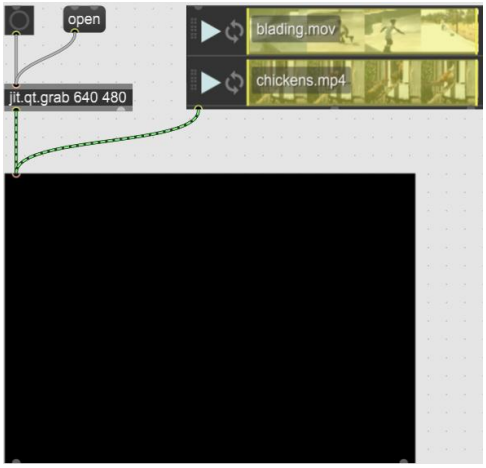
- Example videos



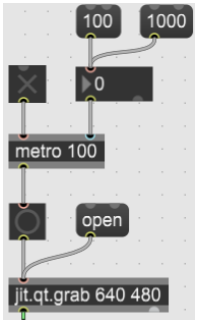
- jit.pwindow object



jit.qt.grab object

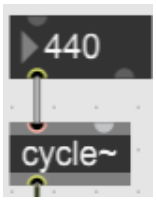


- Green cords are “**video signals**”
- Bang message
- “open” message
- “metro” object

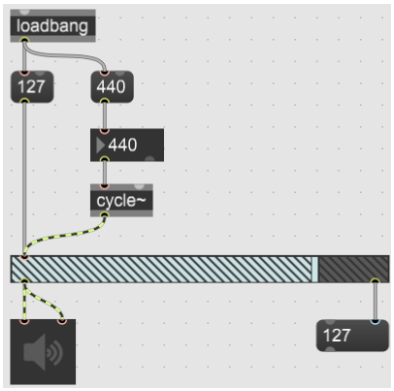


Example 4: Pictslider (“4_pictslider.maxpat”)

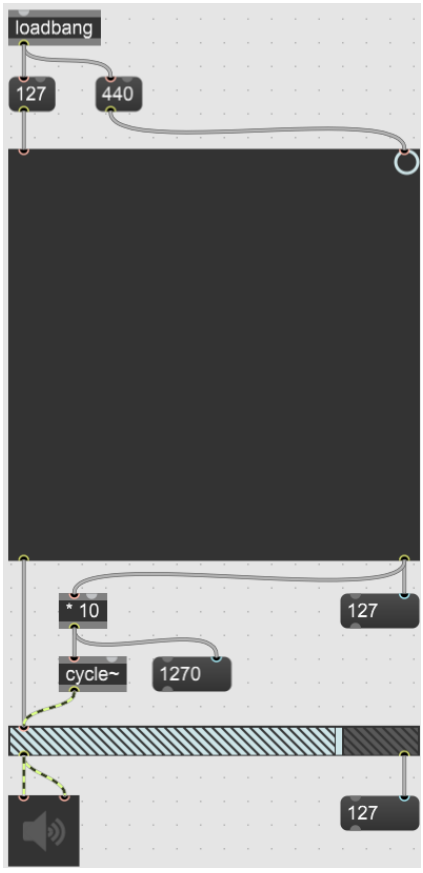
- “cycle~” & number object



- “loadbang” object



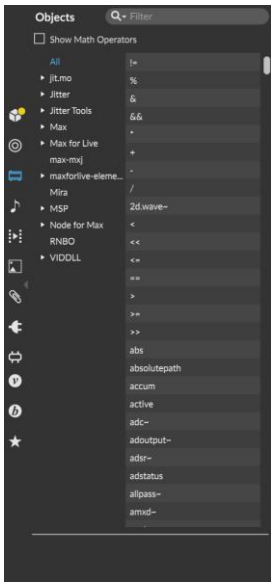
- “pictslider” object



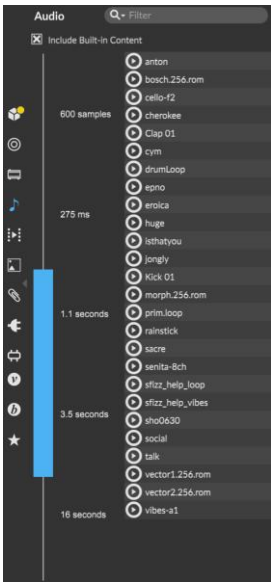
- “* N” object

More on the interface

- Right navigation bar
  - Search
  - Documentation
  - Inspector
  - Max console
  - Audio output
- Left navigation bar
  - Objects



Audio



Video



Images

