

Overview



Input hub

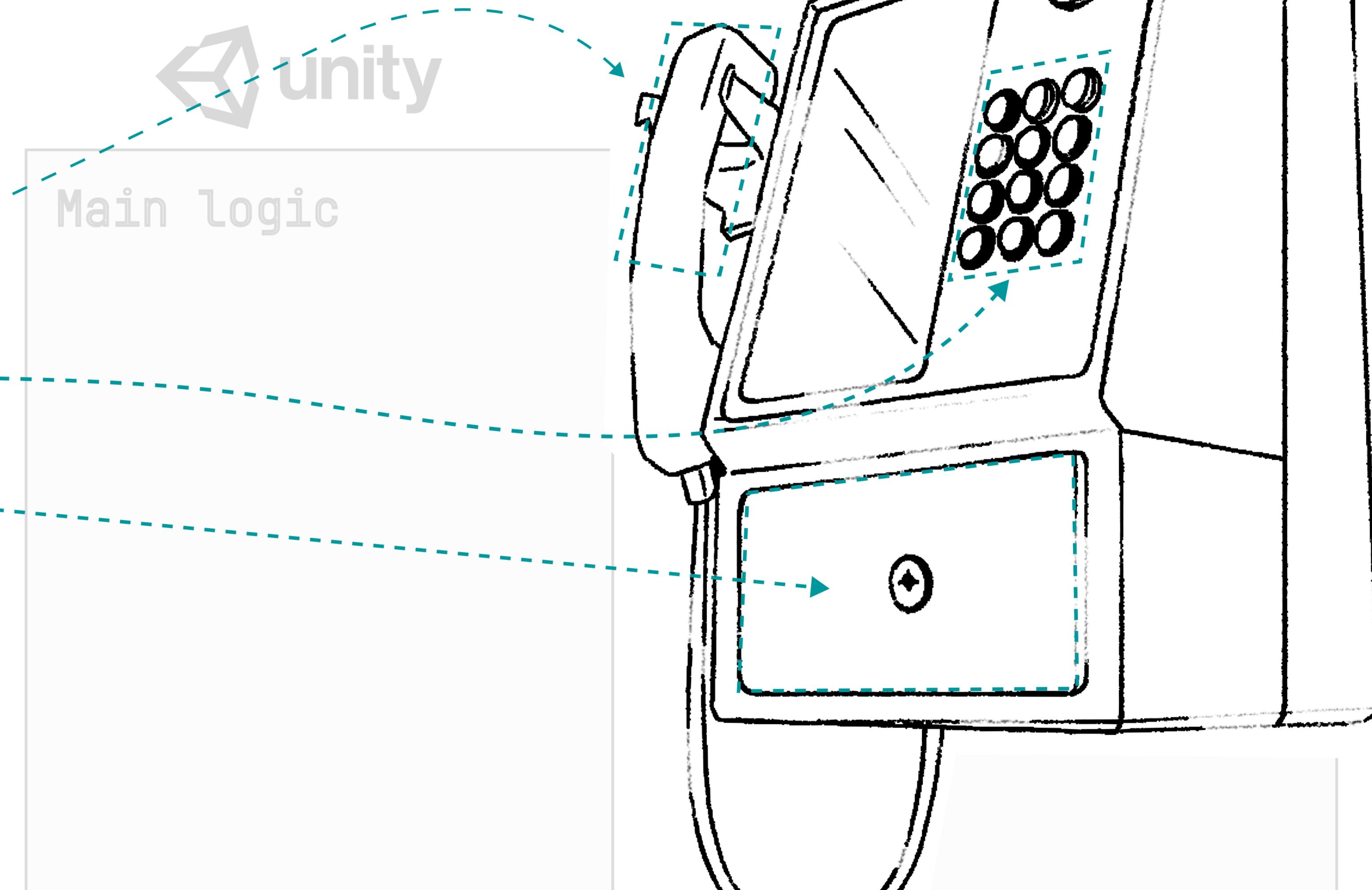
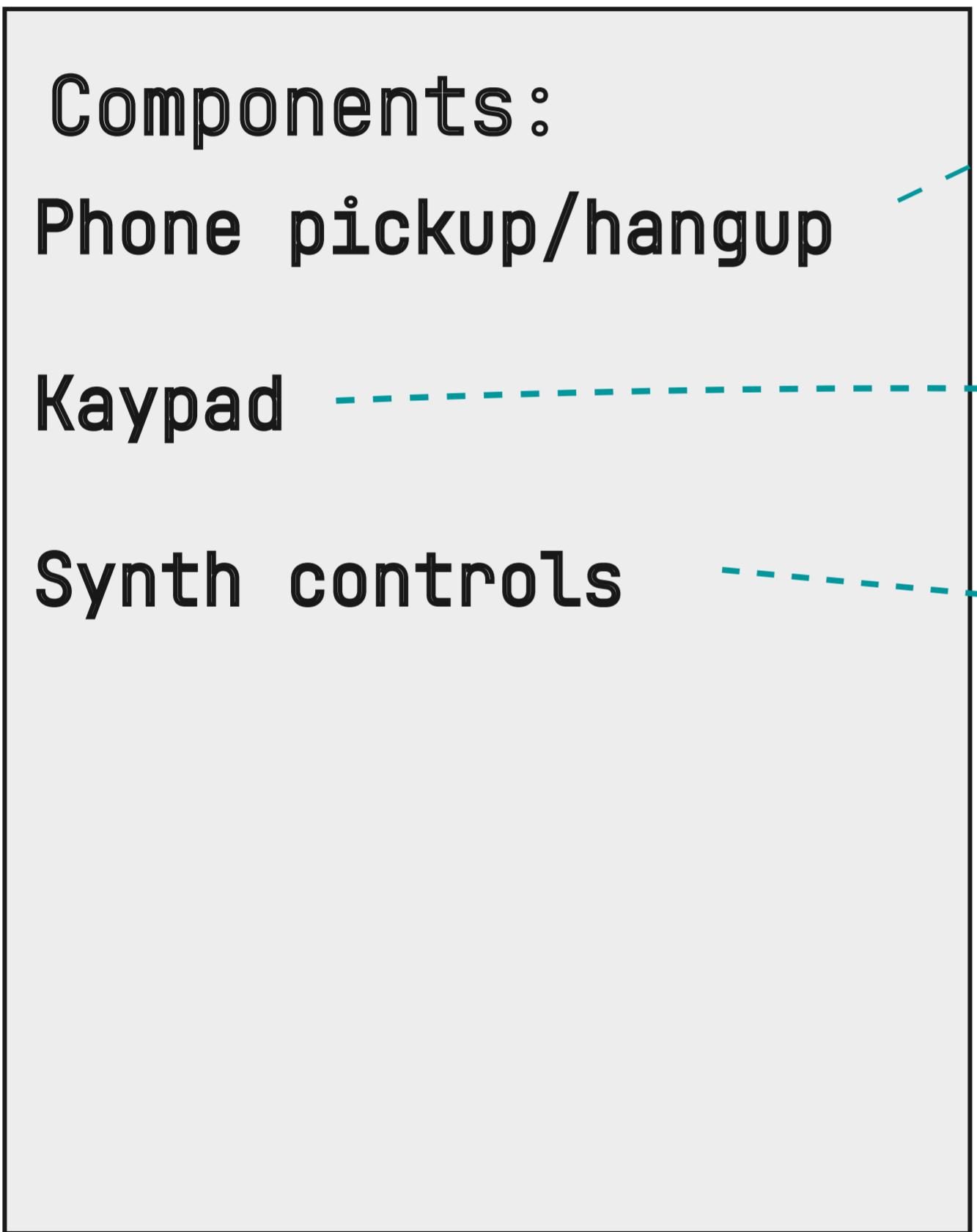
Main logic

Sound Engine

Architecture



Arduino



CTRL Panel

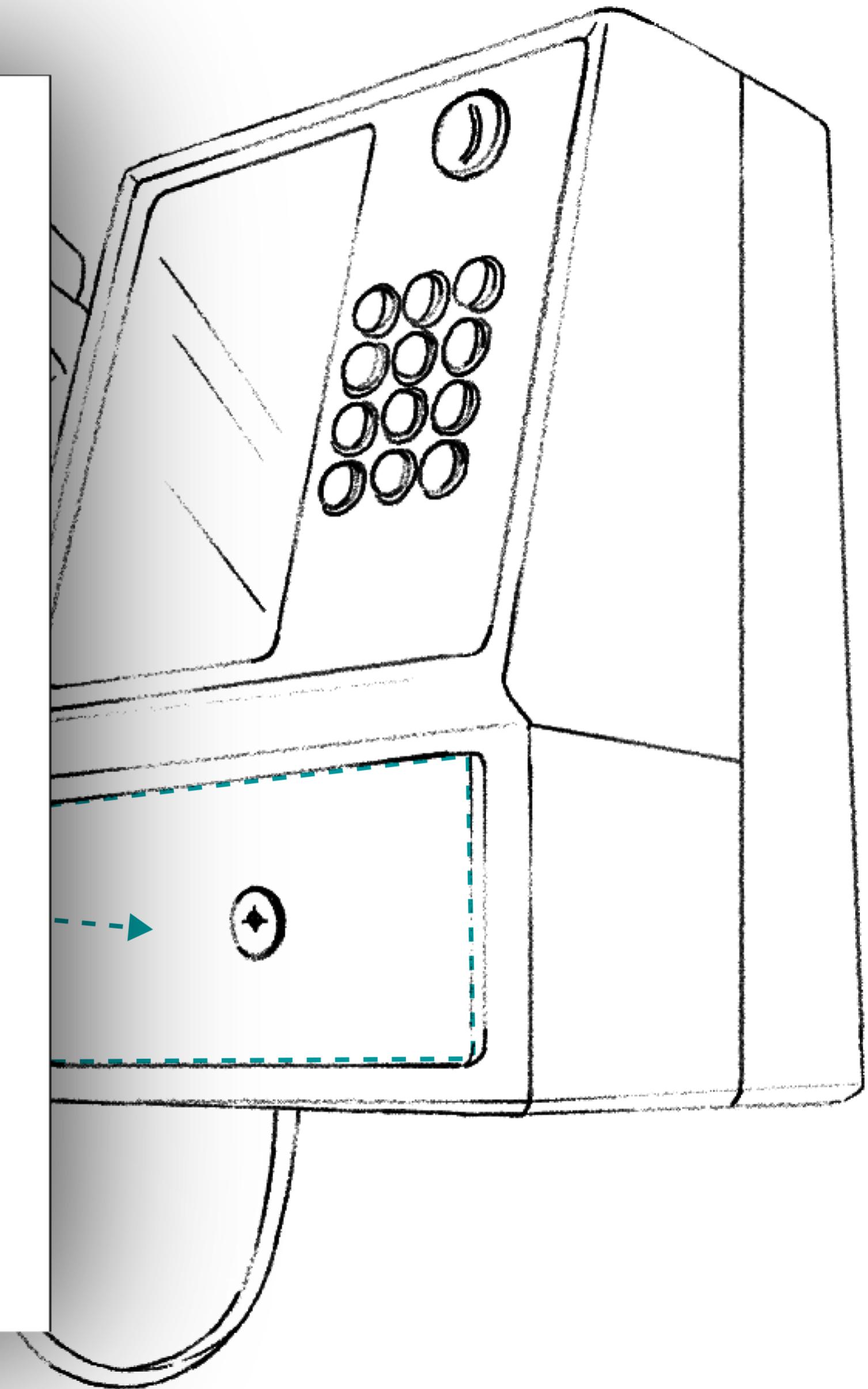
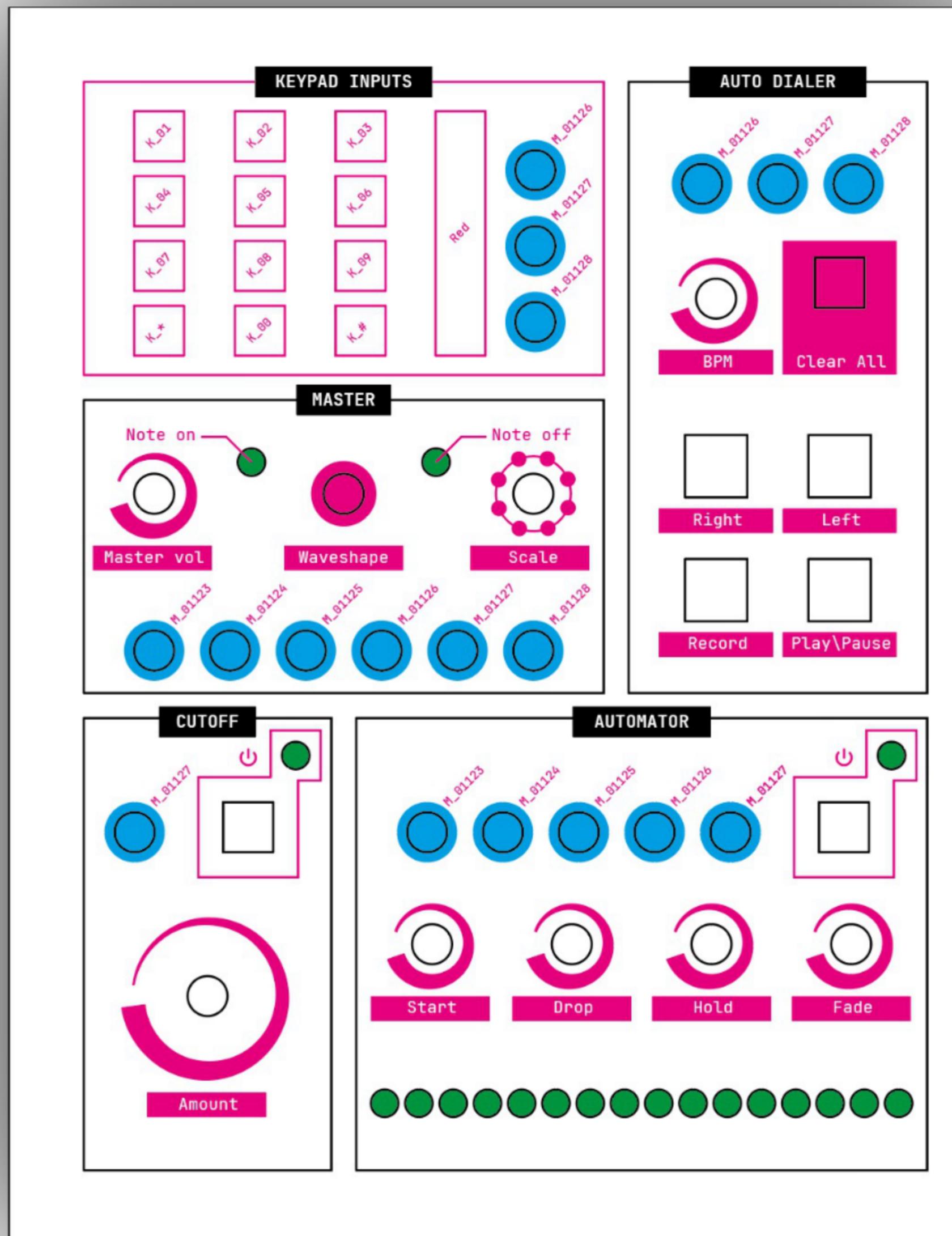


Input hub:

Phone pickup/hangup

Keypad

Synth controls



CTRL Panel



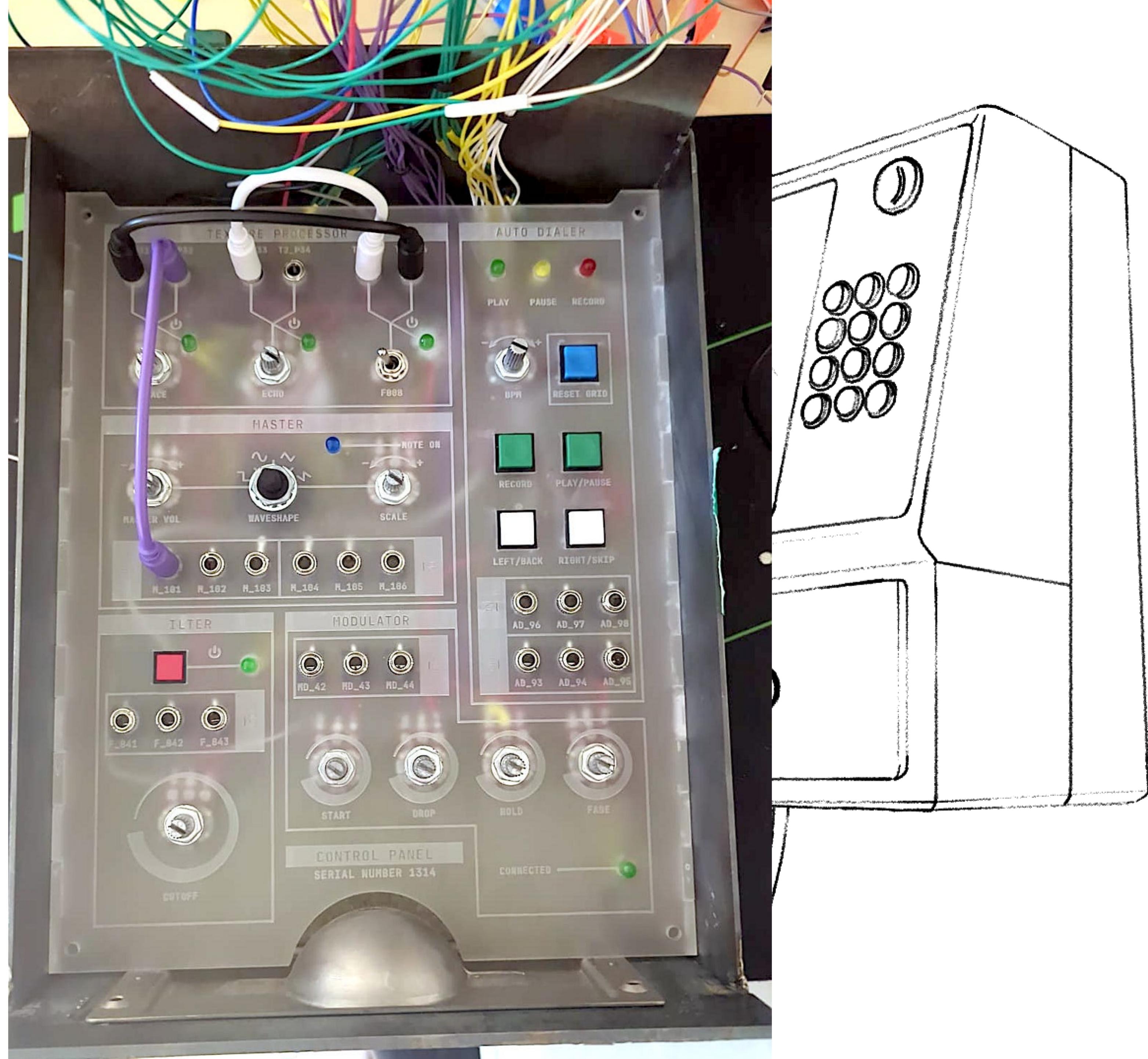
Input hub:

Phone pickup/hangup

Kypad

Synth controls

- 11 Potentiometers
- 6 Pushbuttons
- 6 CV Sensors
- 9 LEDs



Overview



Input hub

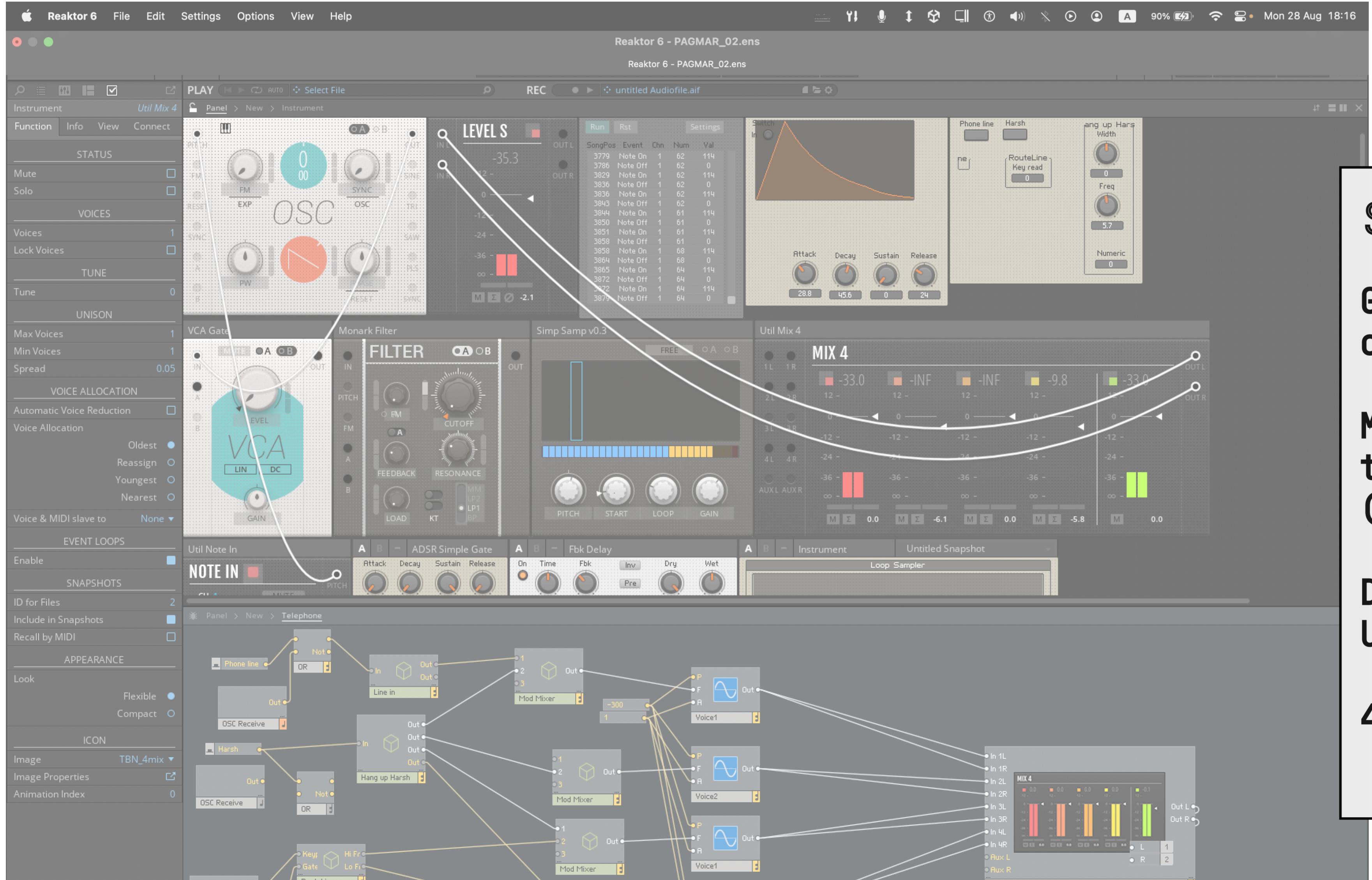


Main logic



Sound Engine

Features



REAKTOR 6

Sound Engine

Generative Synth engine
controlled by Unity

Makes Traditional
telephone sounds
(beeps & boops)

Delivers Data back to
Unity

45ms roundtrip latency

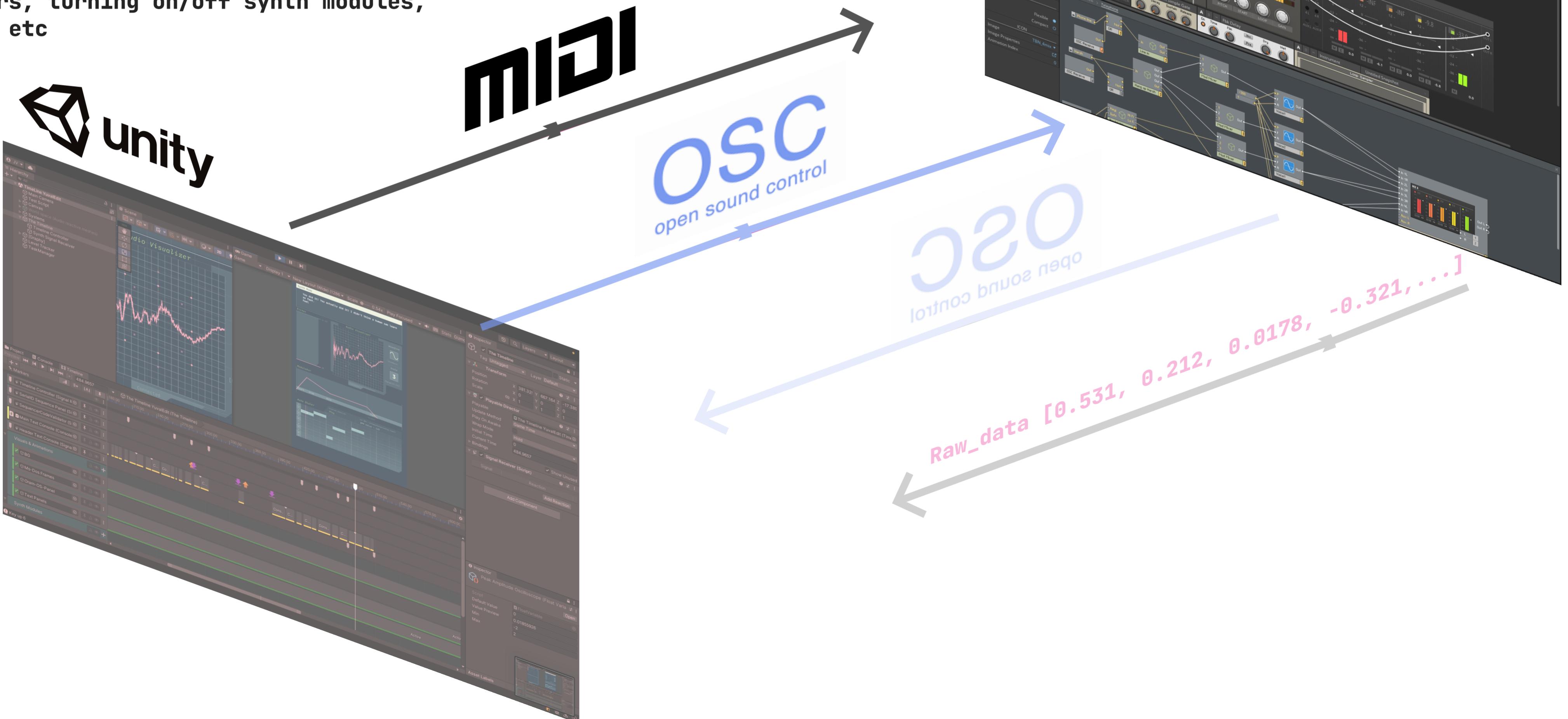
Inputs

Midi Chromatic Notes

Note-ON & Off events sent from the Step-Sequencer in Unity

Updating parameters via OSC

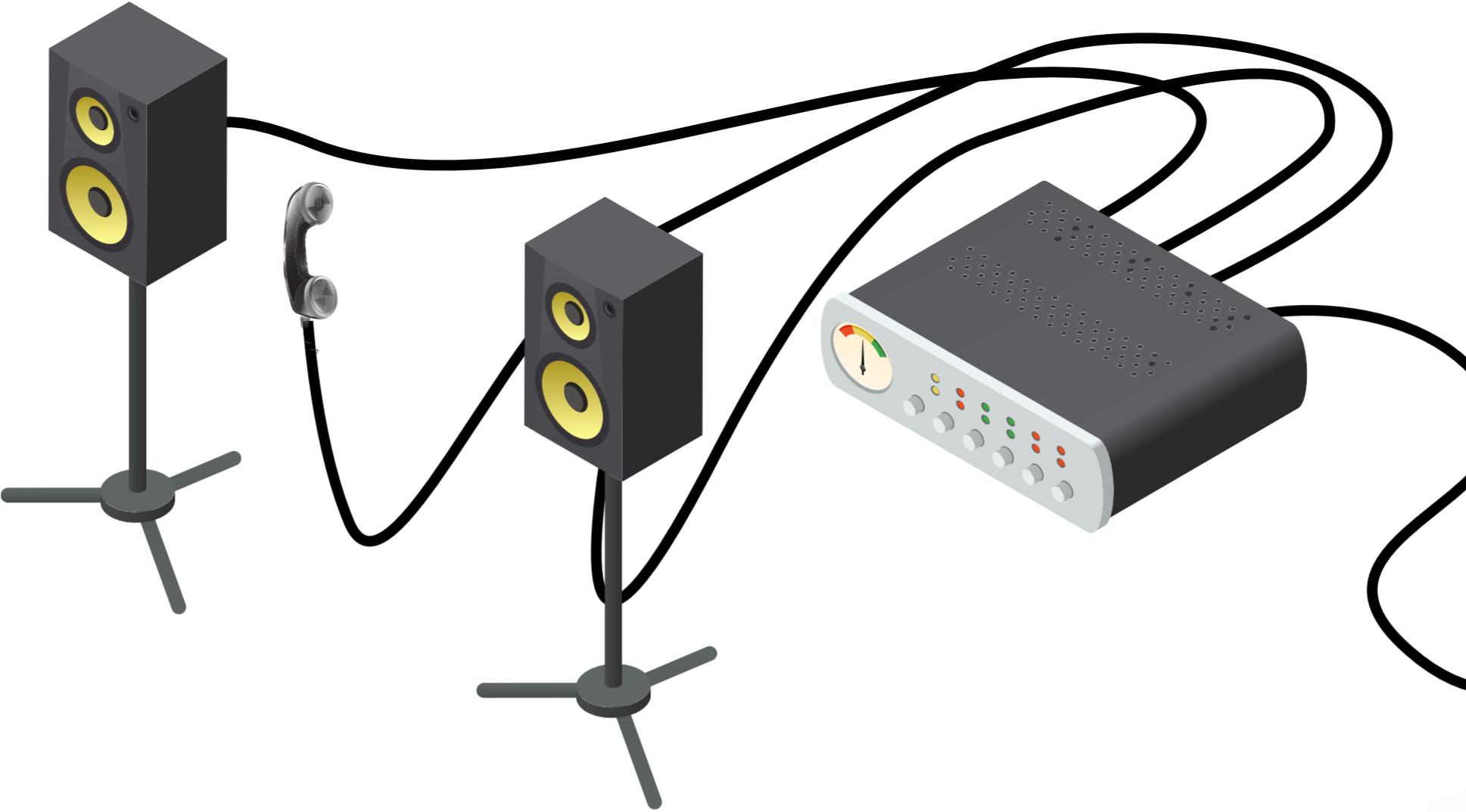
adjusting parameters, turning on/off synth modules,
Resetting to Init, etc



Outputs

Studio-Quality Synth Engine

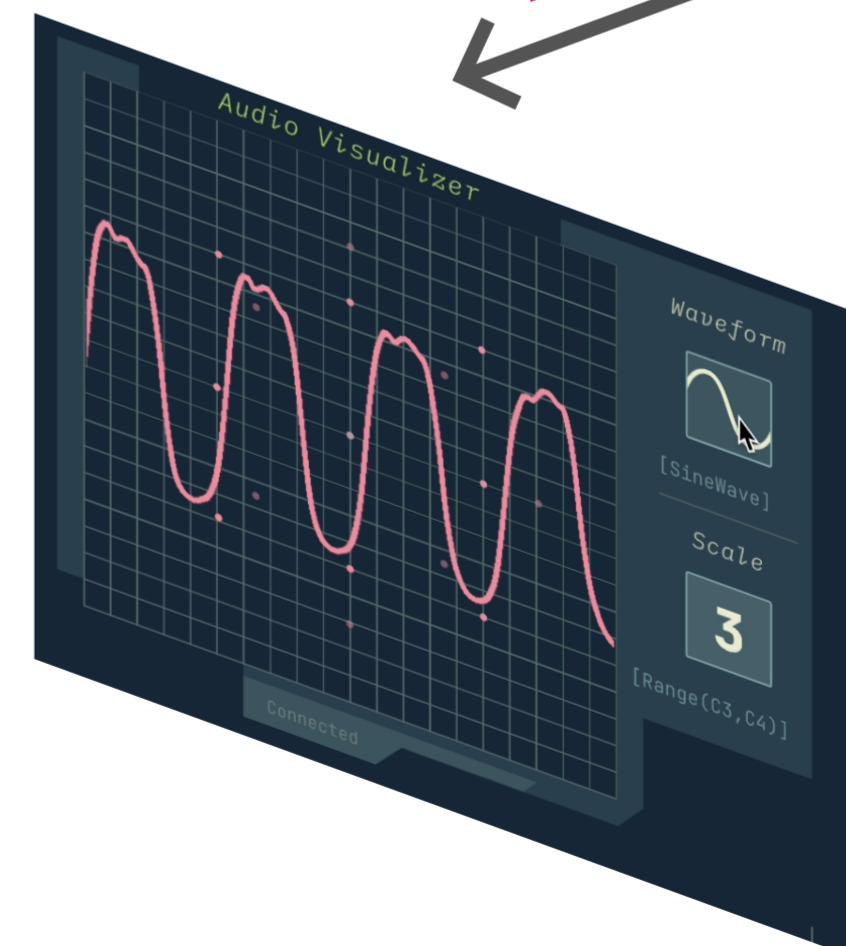
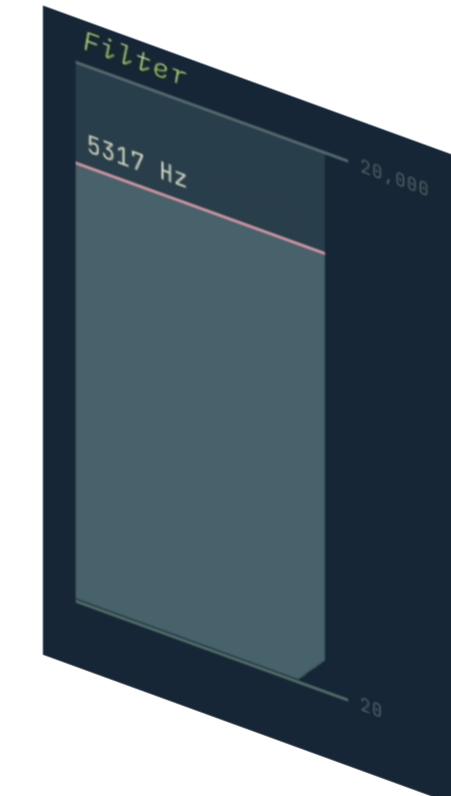
Generates 44.1khz/32bit audio output
in real-time with impreceivable latency



Procedural Animations via OSC

OSC (Open Sound Control) refreshes UI parameters up-to 50 times/sec.

Provides an authentic feedback for the ADSR curve simulation,
and the filter's-cut-off animation.



osc
open sound control

Raw_data [0.531, 0.212, 0.0178, -0.321, ...]

Oscilloscope shader

Raw audio data is fetched, processed and transmitted
to a compute-shader in every fixed-update.

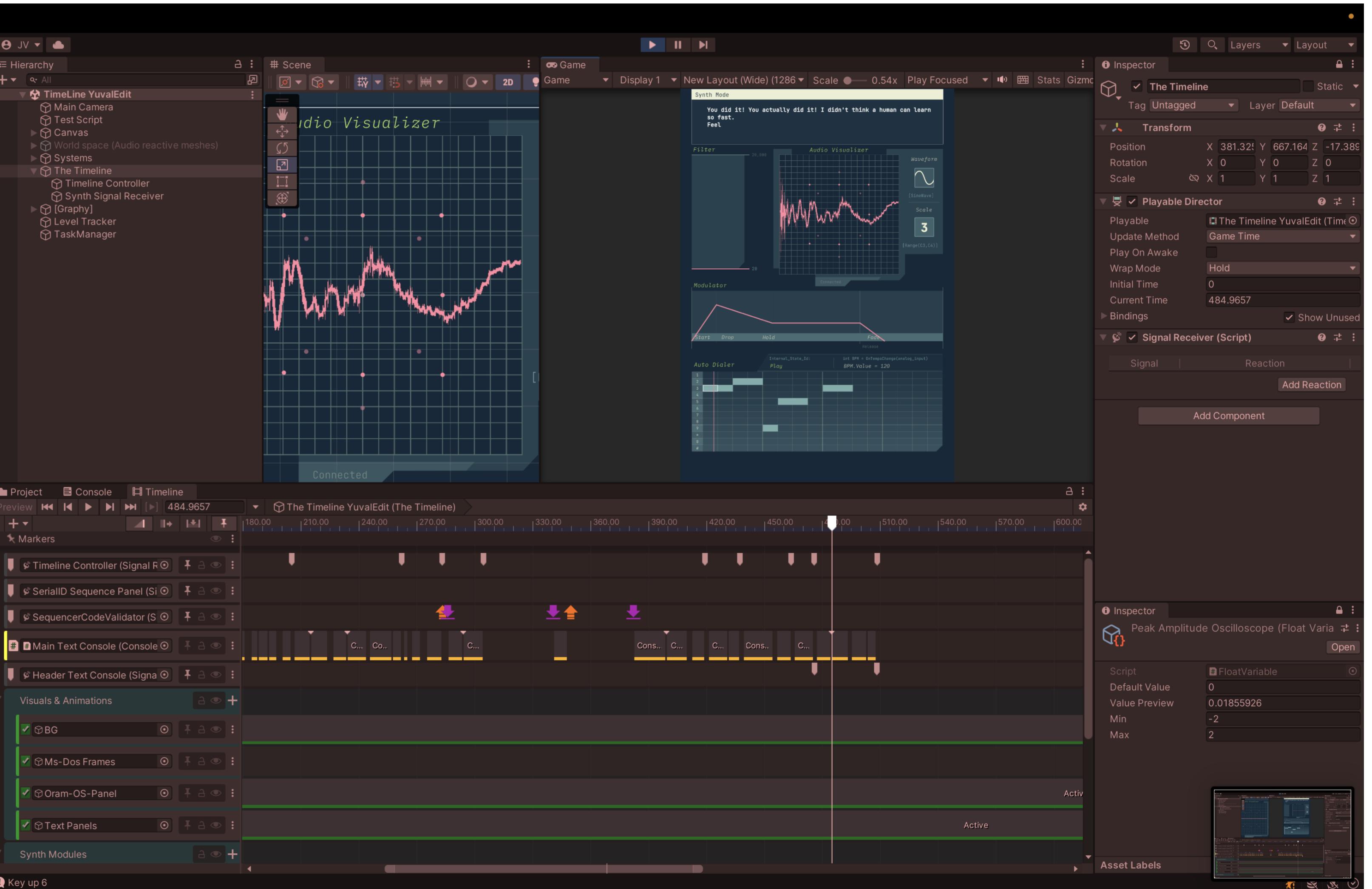
Creating an oscilloscope audio visualisation.

Overview

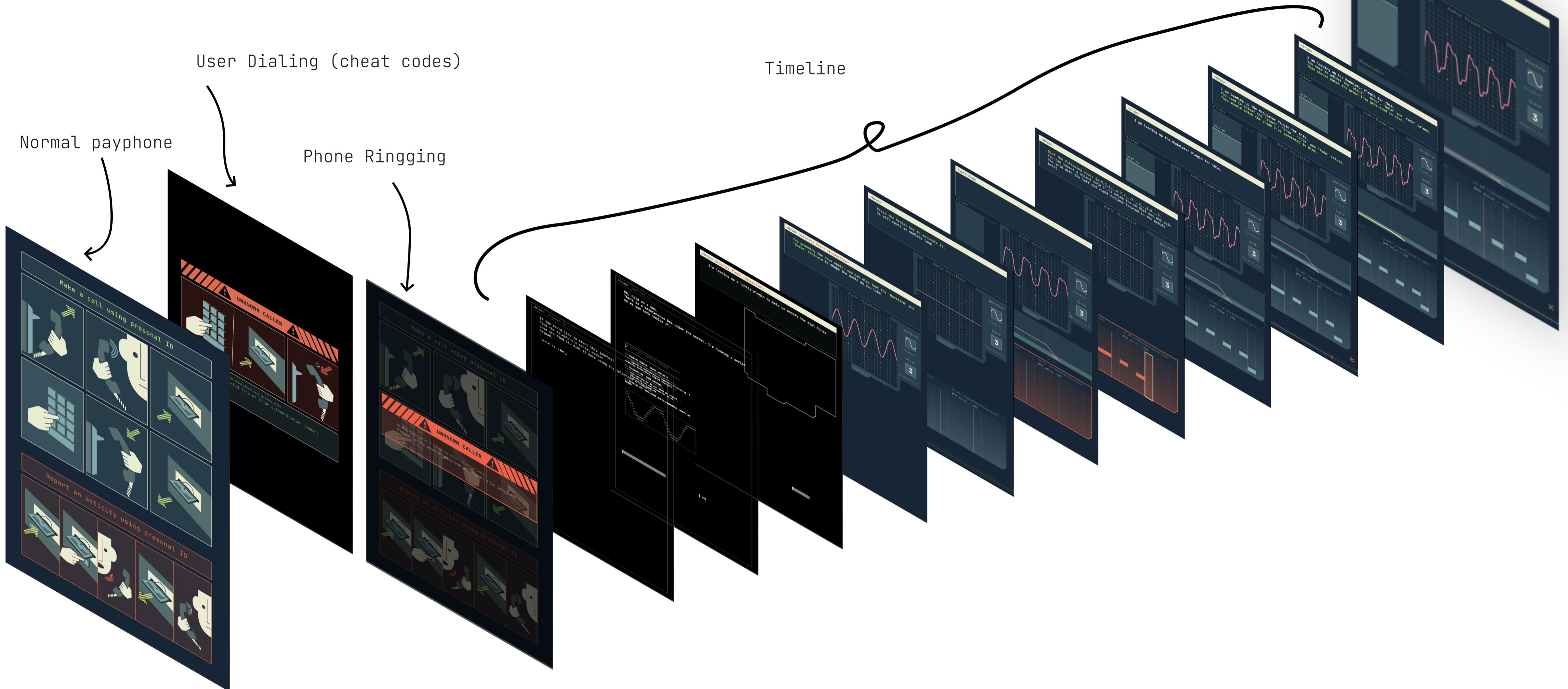


Main logic

- * Main State-machine
- * Timeline Interaction
- * Terminal 'Command-Line'
- * Synth GUI
- * Game Loop
- * Soft references bindings
- * Midi Step-sequencer
- * Arduino serial-interpreter
- * Reaktor OSC Controller
- * Custom jump-signals
- * Ascii procedural animations
- * LEDs variable objects



State machine



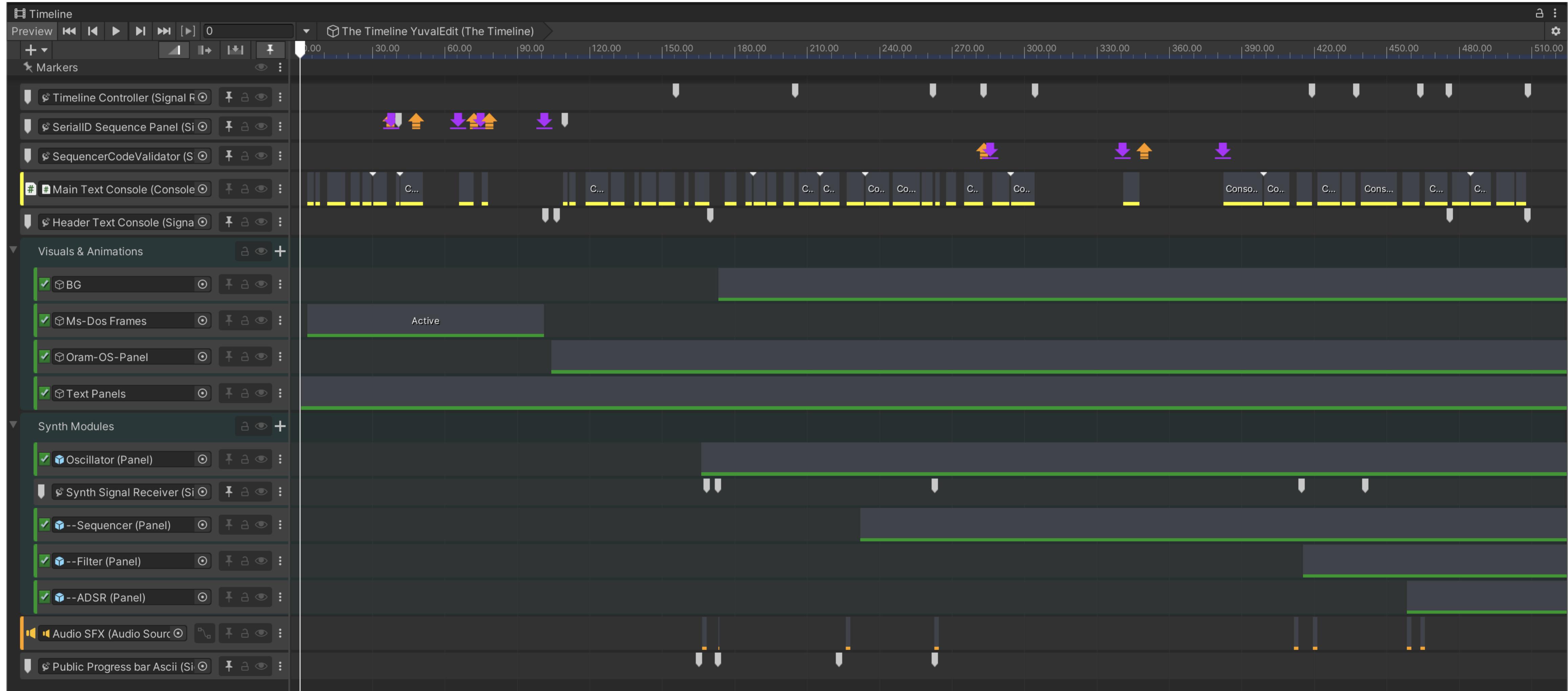
Timeline

Yellow Clips - Terminal text clips are revealed letter by letter

Green Clips - Show/Hide Objects

Grey Markers - Emitting Commands to various mechanics

Orange Purple Markers - Conditional Jump-to (according to user input)



Overview



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Sound Engine