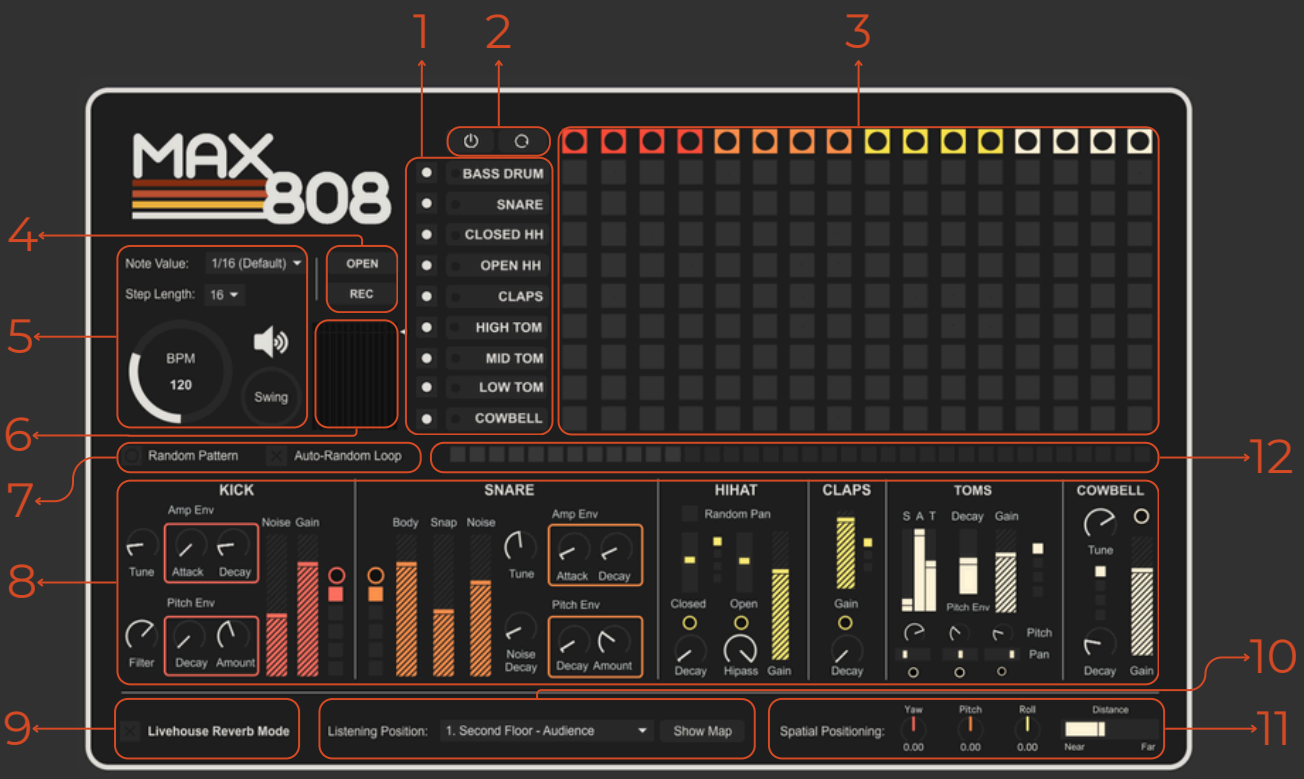
MAX808 USER GUIDE

Introduction

808Max is a modern, interactive drum machine inspired by the legendary Roland TR-808, fully developed in Max/MSP. It combines retro aesthetics with advanced features such as real-time synthesis, MIDI integration, random pattern generation, and spatialized reverb.

User Interface



Description

1. **Drum Tracks Panel:** The left dot controls activation / mute, and the right is the corresponding sequencer track
2. **Power & Reset Controls:** Left button starts the sequencer / switch output, right button resets all rhythm grids
3. **16-step Step Sequencer Grid:** Click the square to enable the rhythm, and the color indicates the activation intensity or beat position
4. **Recording:** OPEN creates a new file, REC enters recording mode
5. **Global BPM & Pattern Length & Swing Controls**
6. **Master Volume Visualization & Adjustment**
7. **Pattern Generator & Auto Loop**
8. **Drum Synth Module:** Each module has built-in synthesis parameters that are adjustable, such as pitch, envelope, filter, pan, random positioning, etc
9. **Livehouse Reverb Mode:** Turn on the Livehouse venue convolution reverb
10. **Listening position options & Pop-up Livehouse Floor Plan**
11. **Distance & Orientation Controls**
12. **Save Beat Patterns & Recall Presets:** Shift + Click to save drum patterns and reload previous presets for quick recall

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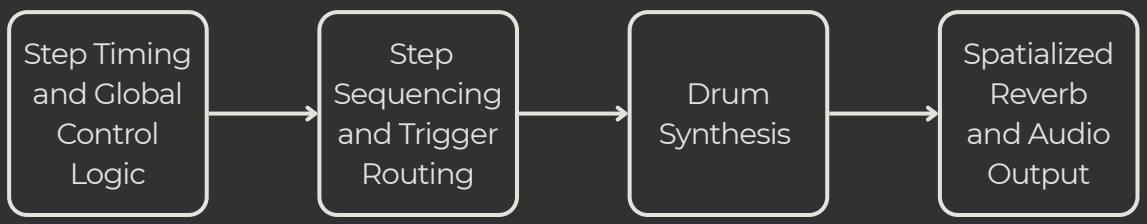
Basic Workflow

- Click on the label to **select a drum sound** or **plug in a MIDI device** to play
- **Program the rhythm** in the step grid (16 steps per instrument)
- **Adjust BPM, step length, swing,** etc. according to the rhythm style
- **Adjust Drum sound parameters** below(such as pitch, envelope, gain)
- **Enable Livehouse reverb mode** and select the listening position
- **Set distance** and **spatial orientation** (Yaw, Pitch, Roll)
- **Generate random patterns** and enable auto-loop if needed
- **Save a preset** or click **REC** to record your loop

System Overview

The signal flow of 808Max moves through four core stages. It begins with global timing logic, where BPM, step length, and swing settings generate a master clock. This drives the step sequencer, which routes triggers based on the pattern grid. Each active step sends a pulse to the drum synthesis modules, where sound is generated using envelopes, filters, and noise shaping. Finally, the audio passes through spatialized convolution reverb, simulating Livehouse acoustics, before being sent to the stereo output.



Troubleshooting

No audio output	Ensure [ezdac~] is on; Check mute status
MIDI controller not responding	Verify device connection and MIDI settings
Reverb not working or sounds unnatural	Check IR file loaded; Restart the system
Unable to record	Confirm file permissions and click 'OPEN' first
Random pattern not changing	Increase probabilities; Enable auto loop
Some steps don't trigger	Verify toggle is enabled; Check step grid state

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