

INTRODUCTION



A novel MIDI plugin for Ableton Live that is equal parts creative assistant, compositional tool, real-time music generator, AND old-school style Pong game all-in-one!

Unleash a playful new dimension of MIDI generation within Ableton Live with 4 Chamber Sound's Pink Pong Generator – a revolutionary Max for Live MIDI device that, inspired by cyclical movement of the classic Pong arcade game, creates dynamic, expressive musical patterns. Dive into an intuitive world where two digital balls bounce between virtual paddles, generating notes every time they connect. The height of impact dictates pitch, while configurable "gates" between the paddles trigger rhythmic subdivisions, allowing for addictingly compelling loops, brilliantly evolving musical patterns, and everything in between.

Building on the innovative legacy of the "PinkAI Generative Composer" and "PinkAI HarmonAlzer," Pink Pong Generator offers a fresh, interactive approach to generative music. Whether you're seeking instant inspiration or deep sonic exploration, its unique gameplay mechanics translate directly into captivating MIDI output.

Take a quick break from your composing by starting an impromptu game of musical Pong by entering into Pink Pong Generator's Game tab. Pick a score to play to, set your AI opponent's difficulty level, and hear the music unfold while you use your assigned MIDI controller knob to control your paddle.

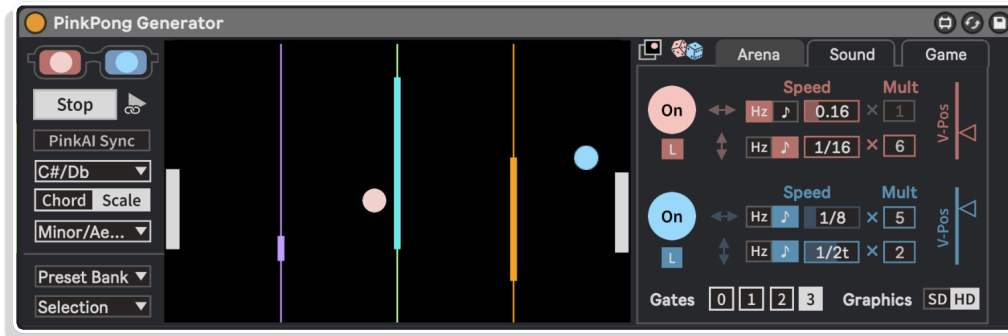
Use Pink Pong Generator as a standalone MIDI device with built-in chord and scale collections, or synchronize output to PinkAI Generative Composer's automated chord sequencing.

You're in control of your creative flow. Whether you prefer the immediate gratification of a standalone setup, leveraging Pink Pong Generator's extensive built-in chord and scale collections for instant harmonic context, or crave the deeper integration with the PinkAI ecosystem, the choice is yours. Seamlessly synchronize Pink Pong Generator's dynamic output to the sophisticated automated chord sequencing of PinkAI Generative Composer, unlocking a powerful synergy that transforms playful pong ball physics into complex, evolving harmonic landscapes. This intelligent connectivity allows for unparalleled exploration, letting you focus on playing while PinkAI handles the underlying harmonic progression.

Pink Pong Generator blends nostalgic visuals with cutting-edge MIDI generation. From evolving melodic lines and lush harmonies to deep bass riffs, complex polyrhythms, and even unpredictable chaotic textures, discover how this unique device offers an intuitive and inspiring approach to music creation. Whether you're crafting repetitive loops or exploring generative soundscapes, Pink Pong Generator offers a wide range of controls and features to fine-tune your musical creations and hear the results in real-time:

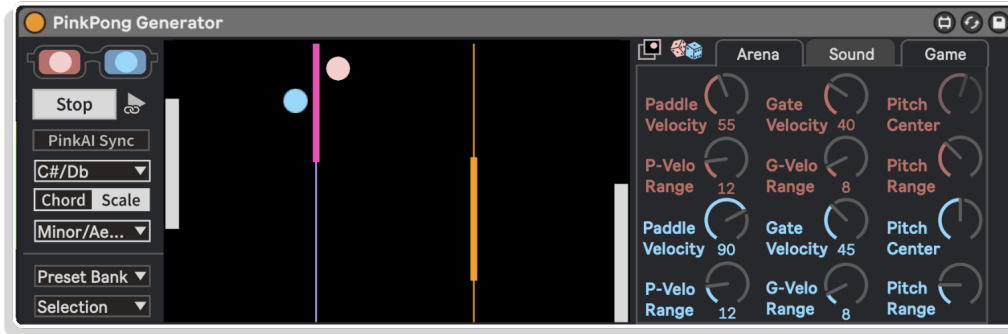
Pink Pong Global Controls:

- **PinkAI Sync:** Enabling PinkAI Sync causes the PinkPong module to synchronize output to the current chord on the PinkAI Conductor module. Disabling PinkAI Sync causes the PinkPong module to operate as a standalone MIDI effect, generating MIDI according to the selected Root and Chord or Scale Types from the PinkPong module.
- **Transport Synchronization (Sync to Transport Button):** In the Active/Default state, Pink Pong Generator automatically plays every time Live's transport starts. This integrates its generative patterns seamlessly with the rest of your Live set. In the deactivated state, Pink Pong Generator will start and stop independently of Live's transport. This is useful for auditioning patterns on a single track without hearing the entire set, or when you don't want Pink Pong active continuously. It can then be seamlessly integrated back into the full track by starting Live's transport.
- **Root Note Selection:** A dropdown menu allows control over the root note of the selected chord or scale.
- **Chord/Scale Toggle:** A dedicated button switches between a list of scales and a list of chords, allowing users to instantly change the harmonic output.



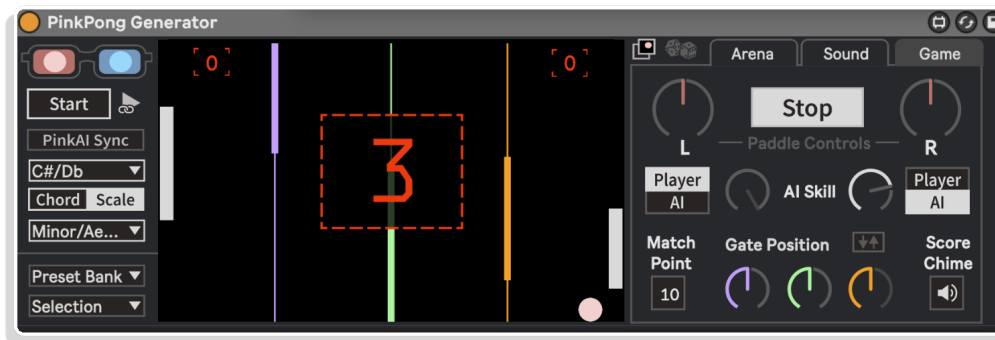
Pink Pong Arena Window and Tab Controls:

- **Popout Arena Window:** A dedicated button allows users to open a floating window that displays the entire Pink Pong Generator "game." This window can be scaled to any size, offering a clear view of the balls and paddles, and is especially useful when highlighting multiple tracks simultaneously (e.g., for video demos or performance).
- **Paddles:** Adjust the size/height of the left and right paddles, which simultaneously determine the probability and number of available notes that may be used upon hitting the ball. A larger paddle corresponds to a greater number of possible notes within the selected pitch range. Users can use various click and drag functions to resize, move, and adjust the boundaries of the paddles. MIDI Map paddles to a MIDI controller knob to turn your MIDI controller into a game controller.
- **Gates:** Like when a ball hits a paddle, a note is also generated when passing through 1 of 3 gates (selectable in subdivisions of 0, 1, 2 and 3). Click controls are identical to that of the Paddles.
- **Blue Ball On/Off:** Toggles the visibility and activity of the blue ball. When turned off, it no longer generates MIDI notes.
- **Pink Ball On/Off:** Toggles the visibility and activity of the pink ball. When turned off, it no longer generates MIDI notes.
- **Pink/Blue Horizontal Sync/Hz functions:** Toggles and changes the ball's horizontal movement from synced to Live's tempo to a fixed number of times per second (Hz). Creating more long-form, non-repeating variations when unsynced and more repetitive loops when synced.
- **Pink/Blue Vertical Sync/Hz functions:** Controls the speed of vertical movement of the respective ball from bottom-to-top of the arena window, in other words, how quickly the ball will move from low-to-high pitches available as defined in the Sound Controls' tab "Pitch Range" dial
- **Vertical Start Position (Pink/Blue V-pos):** Controls the initial height of the ball when it's launched, influencing the starting pitch. (Ball position can only be seen when Live's transport is running.)
- **Pink/Blue Multipliers:** While in sync mode, the horizontal or vertical note length is multiplied by this number to create more variety of and longer possible note lengths.



Sound Tab Controls:

- Pink/Blue Paddle Velocity: Sets the median velocity for when the Pink or Blue ball strikes either paddle.
- Pink/Blue P-Velo Range: Expands the upper and lower bounds of the Paddle Velocity by the amount selected when struck by the Pink/Blue ball. A Paddle Velocity of 50 with a P-Velo Range of 10 will cause
- Paddle Velocity output between 40 and 60 (50 +/- 10) when struck by the respective ball. Movement from one sequential note to the next is smartly randomized within a smaller subset of this range.
- Pink/Blue Gate Velocity: Sets the median velocity for when the Pink ball strikes any gate.
- Pink/Blue G-Velo Range: Expands the upper and lower bounds of the Gate Velocity by the amount selected when struck by the Pink/Blue ball. A Gate Velocity of 50 with a G-Velo Range of 10 will cause
- Gate Velocity output between 40 and 60 (50 +/- 10) when struck by the respective ball. Movement from one sequential note to the next is smartly randomized within a smaller subset of this range.
- Pink/Blue Pitch Center: Sets the center (median) pitch output by the paddles and gates struck by the Pink/Blue ball.
- Pink/Blue Pitch Range: Sets the range of pitches output by the paddles and gates struck by the Pink/Blue ball.



Game

Tab Controls:

- **Play!**: Click to start a game of Pink Pong! Clicking Play starts a 10 second countdown that will activate Live's transport and start a game. 5 second countdowns will occur after each point is scored before restarting transport. The game (and toggle) will automatically switch off after the Match Point is reached by either side.
- **Player/AI Toggles** (for L/R Paddles): Toggles between manual control ("Player") and automated movement ("AI") of the respective paddle. In "AI" mode, the paddle will automatically track the motion of the pink ball only, with the likelihood of triggering a note dependent upon the Difficulty setting for the respective paddle.
- **L/R Paddle Control Dials**: Controls the motion of the left paddle. Map this to any knob or fader on your MIDI controller to control paddles while in full screen gameplay!
- **Gate 1/2/3 Control Dials**: Controls the motion of the 3 gates. Map this to any knob or fader on your MIDI controller to control gate movement while in full screen gameplay!
- **AI Skill Dial**: Determines the skill level of the respective paddle when Movement Mode (Player/AI toggle) is set to AI. Fully clockwise results in greatest probability of the paddle striking the pink ball. Fully counter-clockwise results in lowest probability of the paddle striking the pink ball.
- **Gate Auto Movement**: Enabling this toggle causes the automatic movement of the gates. The movement pattern cycles consecutively through 5 different presets: 1) Wave; 2) Random; 3) Up; 4) Down; 5) Binary
- **Score Chime**: Enabling this toggle causes chord/scale-based sound effects to play whenever a point is scored or a game is finished in Gameplay Mode.
- **Match Point**: Sets the score needed to win a game in Gameplay Mode. When one side reaches this score, Gameplay will automatically be stopped.

Preset Banks

The device comes with 8 different quick-change preset banks, totaling 94 presets, which can be cycled through instantaneously without gaps in playback.

- **Melodic Loops:** Synchronizes horizontal and vertical ball movement to Live's tempo, crafting repeated single-voice melodies. Discover patterns like "Forehand Phrasing" and "Ping Pong Pentatonics."
- **Harmonic Loops:** Generates repeated multi-voice melodies and harmonies, with all ball movements synchronized to tempo. Experience presets like "Double Bounce Chords" and "Two-Ball Tango."
- **Bass Riffs:** A collection of variable-length melodic loops designed for the lower pitch ranges, grounding your tracks with grooves like "Baseline Thump" and "Paddle Footwork Groove."
- **Rise and Fall:** Create captivating arpeggios and up/down patterns, alluding to the vertical movement of the game with presets such as "Arpeggio Arc" and "Pixel Pitch Climb."
- **Ambient:** Features settings for sparse, non-repeating note generation, ranging from subtle drones to single or two-note harmonies. Explore atmospheric soundscapes like "Courtroom Echoes" and "Net Drift."
- **Polyrhythms:** Utilizes distinct horizontal sync rates for both pink and blue balls to forge complex polyrhythmic patterns. Delve into "Pink & Blue Interlock" and "Asynchronous Volley."
- **Evolvers:** Creates 1- and 2-voice evolving loops that change ever-so-slightly over time by using Vertical Hz settings rather than Sync.
- **Chaotics:** Delivers unpredictable note generation through bizarre, hectic ball movement. Expect musically surprising (or delightfully discordant) results with presets like "Glitchy Ricochet" and "Unstable Paddle Fluctuation."

Use Pink Pong Generator with the Generative Composer's Conductor module to unlock new levels of generative creativity and pure fun than accessible from any other MIDI Device:

- Enabling "PinkAI Sync" on the Pink Pong Generator will override the manual Chord/Scale selection and instead harmonize all outgoing MIDI to the Conductor Module's generated or user-programmed chords.
- Chain together your Pink Pong output with HarmonAlzer to create sophisticated audio delay loops, all harmonized to the changing chords on the Conductor.

Use Pink Pong Generator's Chord and Scale dropdowns to output your MIDI patterns into any of the following tonal colors, in any of the 12 musical keys:

- Chord Types/Qualities:
 - major
 - minor
 - dim
 - 7
 - maj7
 - maj6
 - m7
 - m7b5
 - aug
 - sus2
 - sus4
 - 7sus4
 - 5
 - dim7
 - m6
 - m9
 - 9
 - 13
 - 7b5
 - 7#5
 - 7b9
 - 7#9
 - mMaj7
 - maj9
 - Root only
- Scales:
 - Major/Ionian
 - Dorian
 - Phrygian
 - Lydian
 - Mixolydian
 - Minor/Aeolian
 - Locrian
 - Harmonic Minor
 - Locrian #13
 - Ionian #5
 - Dorian #11
 - Phrygian Dominant (Mixo b9 b13)
 - Lydian #9
 - Super Locrian

- Melodic Minor
- Dorian b9
- Lydian #5
- Lydian Dominant
- Mixolydian b13
- Aeolian b5
- Altered
- Major Pentatonic
- Suspended
- Yo
- Man Gong
- Minor Pentatonic
- Whole-Half Diminished
- Half-Whole Diminished
- Whole Tone
- Major Blues
- Minor Blues
- Chromatic