

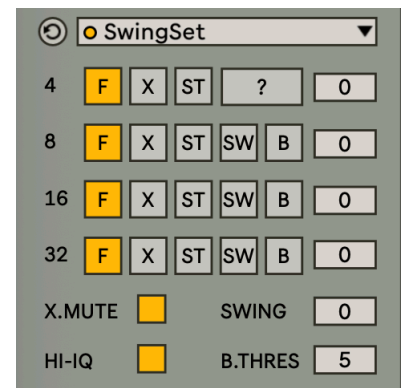
SwingSet

Intelligent Swing Quantization for Ableton Live

INTRODUCTION

SwingSet is a Max For Live MIDI Transformation device. It runs exclusively inside Ableton Live, requires Max For Live, and operates only on MIDI clips. Because it is a transformation device, SwingSet appears in the MIDI Clip Transform panel rather than in the Device View of a track.

At its core, SwingSet is an intelligent swing quantizer: it moves MIDI notes to precise timeline locations according to your settings. It can act as a standard (non-swing) quantizer that snaps notes to grid locations, as a swing quantizer that places notes at off-grid swing positions, or - crucially - both at the same time. Its defining strength is the ability to identify each note's "home base" - the rhythmic position the note musically belongs to - even when that note is floating freely in off-grid space. This ability allows SwingSet to remove and/or reapply swing to notes that already have it.



AT A GLANCE

Type	Max For Live MIDI Transformation device
Host	Ableton Live with Max For Live
Operates on	MIDI clips only
Location in Live	MIDI Clip Transformation panel
File format	.amxd

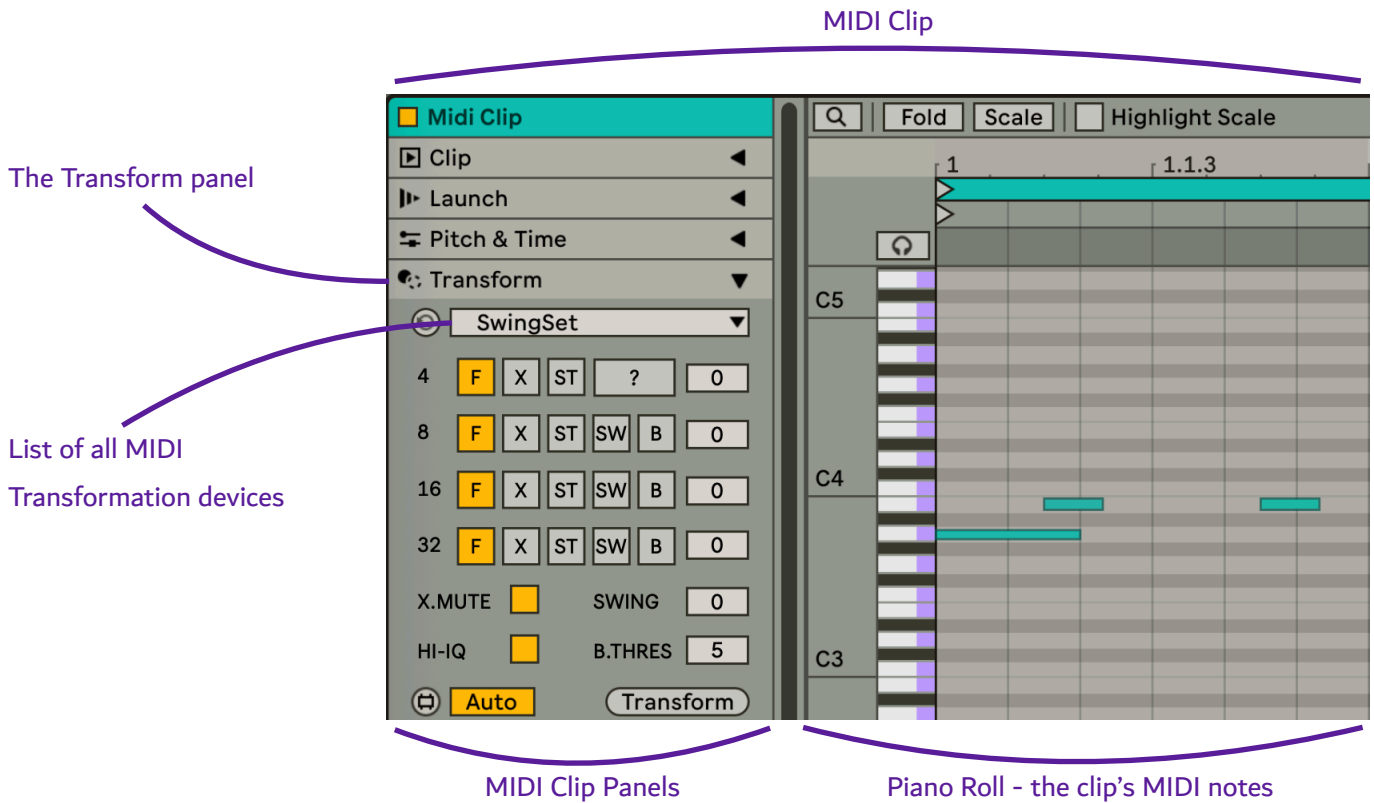
INSTALLATION

SwingSet is bundled as a single .amxd file. Because it's technically a MIDI Transformation device rather than a plug-in, it will not appear in Ableton's Plug-Ins folder, nor will it show up in the Device View of any track.

To install SwingSet:

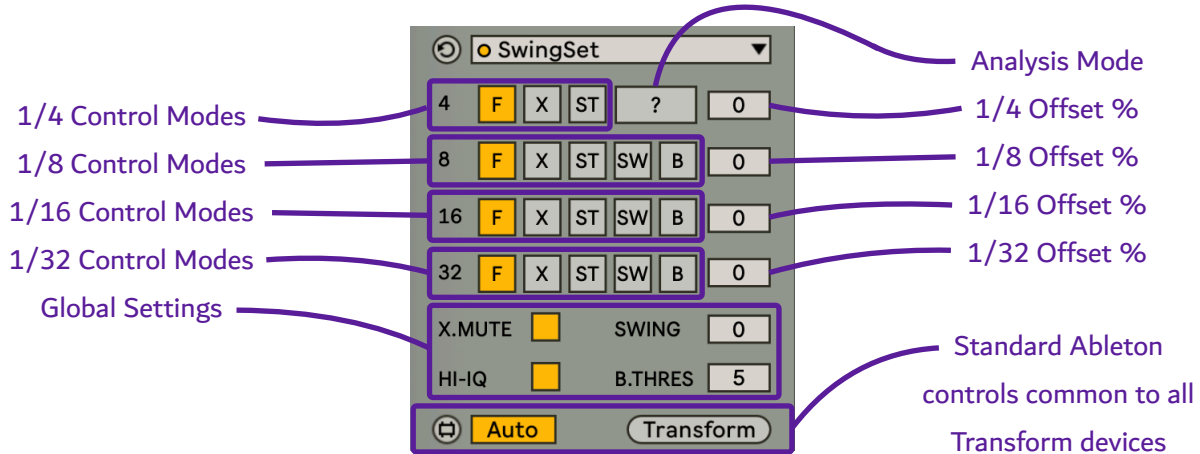
1. Move the .amxd file into a folder that is visible to Ableton (any folder shown in the Ableton browser).
2. Open the .amxd file from the Ableton browser.

Once installed, SwingSet will appear as an option in the Clip Transform panel of every MIDI clip. Unfortunately, like all Max For Live MIDI Transformation devices, the device settings have no permanence.



USER INTERFACE

SwingSet's user interface presents independent controls for four note divisions: 1/4 notes, 1/8 notes, 1/16 notes, and 1/32 notes. Each division and its controls occupy a single row.



Note: Unlike sheet music, note divisions in SwingSet are defined in a simple, absolute sense: notes aligning with the metronome are 1/4 notes, notes halfway between those are 1/8 notes, and so on.

CONTROL MODES

Mode	Label	Behavior
Free	F	Notes are not modified
Off	X	Notes are disabled in a manner controlled by X.MUTE
Straight	ST	Notes are moved to their on-grid location
Swing	SW	Notes are moved to their swing location
Both	B	Notes are moved to either their on-grid or swing location, depending on the note's initial position and the B.THRES setting

Each division has its own independent Control Mode. The 1/4 division offers only Free, Off, and Straight. The other divisions offer all five Control Modes. You choose one Control Mode per division. When SwingSet loads, all Control Modes are set to Free.

GLOBAL SETTINGS

Setting	Description
SWING	SWING is a 0-90% number. When SWING is set above 0% and a division's mode is Swing or Both, notes are moved accordingly. 0% swing is the same as straight - notes are placed on the grid (at their home base). 100% places the note halfway to its next instance, which coincides with the grid location of the next finer division. In other words, an 1/8 note swung 100% lands on the same position as the on-grid 1/16 following it.
B.THRES	B.THRES is the threshold for Both mode, expressed as a swing percent. In Both mode, notes are categorized as either straight or swung based on their initial position. Once categorized, they are processed according to the settings. If a note's initial swing % is less than B.THRES, it is processed as straight; otherwise it is processed as swung.
X.MUTE	X.MUTE controls how notes behave in Off mode. When activated, notes in Off mode are muted. When deactivated, notes in Off mode are instead moved to the nearest valid base note (if there is one) and processed according to that division's settings.
HI-IQ	HI-IQ enables SwingSet's intelligent base-note recognition. When deactivated, SwingSet employs a simple nearest-note recognition algorithm. Disabling HI-IQ is sometimes useful - for example, when you are intentionally using SWING to push a note from one division into another.

OFFSET

Each division has an Offset setting. In the 1/4 division, the Offset range is -10% to +10%. In the other divisions, the range is -10% to 15%.

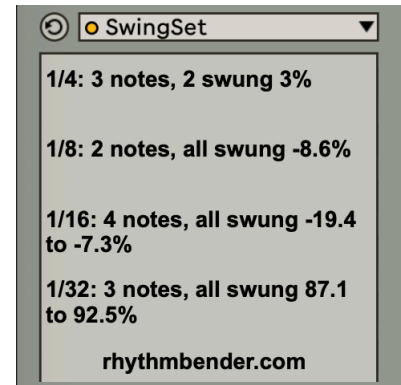
Control Mode	Effect of Offset
Straight	Offset influences note locations
Swing	Offset influences note locations <u>cumulatively</u> with the global SWING setting
Both	Offset affects only the straight notes

***Note:** SwingSet's intelligent base-note recognition is generally reliable for notes with a pre-existing swing of -20% to 90%. Because the global SWING setting (0-90%) and the per-division Offset are cumulative, it is possible to push a note outside this range and confuse base-note recognition. For this reason, it is recommended to use Offset modestly.*

ANALYSIS MODE

The [?] button launches Analysis Mode. When triggered, a pop-up is displayed and SwingSet's note-modification abilities are suspended. Clicking Transform analyzes the clip (or any preselected notes) and displays the resulting swing recipe. Click the pop-up to exit Analysis Mode.

Analysis Mode is useful if you want to reproduce the swing recipe from one clip in another. It's also useful because all MIDI Transformation devices in Ableton reset frequently during normal use - Analysis Mode allows you to see the previously applied swing recipe.



Each unmuted note is assigned to a division and categorized as either straight or swung. B.THRES controls the cutoff for the straight/swung categorization - if B.THRES is set to 6%, then notes with a pre-existing swing between -6% to +6% will be categorized as straight.

To see which notes in the piano roll belong to a division, set that division to Off with X.MUTE active, and click Transform - the notes in that division will become muted. You can restore the previous state by setting the Control Mode to Free while the notes are still selected.

BEST PRACTICES

The UI includes Ableton's default control buttons - Auto and Transform. Auto will instantly apply the settings on any selected notes when a parameter is changed. The Transform button acts as a manual trigger, and it also acts as a select-all shortcut if none are already selected. Every MIDI transformation action, including anything SwingSet does, starts with note selection and ends with note deselection. Clicking into whitespace deselects the notes and finalizes the transformation.

A sensible workflow is to leave the Auto toggle enabled and trigger SwingSet with the Transform button. The transformation will be applied and the notes will still be selected. From there, you can either click into whitespace to commit the change or continue to adjust the settings. Once you have a division's notes where you want them, you can set the Control Mode to Free.