

# Meyer Devices MIDI Tools

Stages Pitches Patterns

Num. Stages 4

Vel. Ramp ▾ 100 100 Swap

Pattern Pitch Velocity

0.82 [0.50] Jitter ▾ - 0 %

Duration 100 % Notes 8 [Q]

Register ●●●●●●●●

Advance Length

0 1 R 8

R x Length Clear

Pitch

Weights Range

Offset

Div 2 [Q] Proportional

1/16 1/4

Pitch Velocity

0.0 0.5 [Res]

Range +0 : +1

Retrigs Time Velocity

Sliders 1 ←→ Dir. →

Interval 1/16 ▾ Quantize

Pitch Velocity Chance

[Res] [Rand] [Abs] C3 ±12

Pattern

Mode Note Every 1

Density 5 Variant

Algo Eucl.

Modifier

Mute ▾

+Sd	Len.	Den.	Var.	Vel.
5	16	0		100
4	16	0		100
3	16	0		100
2	11	1		80
1	9	2		60
0	16	3		100

Note Algo Distribution

C1 [Eucl.] Fill ▾

Sliders 4 Quantize

Pitch Velocity

1.00 0.52 [Res]

Range +0 : [+5]

Version 2, November 2024

[meyer-devices.com](http://meyer-devices.com)

# Philip Meyer MIDI Tools

## Polyrhythm

Thanks for downloading my MIDI Tools. I hope that lots of crazy music will be made with these devices, and would love to see what *you* make with them. See the next page of this document for info on how to get in touch.

Also, I respectfully ask that you not share the tool files directly to others without my consent. If you have a friend who would like to trial the tools before buying, let me know and I'd be happy to help make that possible

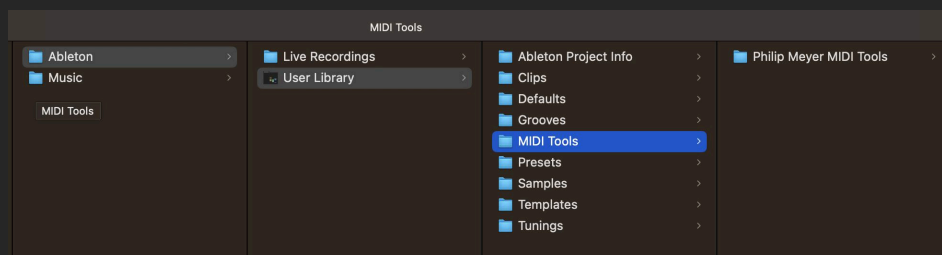
## Polyrhythm

Ableton Live 12 Suite or Ableton Live 12 with a separate Max for Live license are required to use these devices.

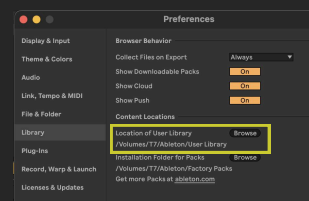
## Polyrhythm

To install MIDI Tools, simply drag the AMXD files into the MIDI Tools folder of your Ableton User Library. If there is no MIDI Tools folder, create one!

**Note:** Make sure that the Library you're using is the same one you've specified in your Live preferences, especially if your Library lives on an external drive.



Place the MIDI Tools in a folder called MIDI Tools inside your User Library



Make sure your Live Preferences are pointed at the correct User Library

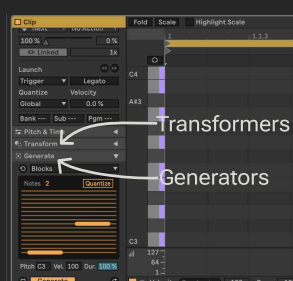
## Polyrhythm

To use these devices, create a new MIDI clip or select an existing one. The devices will be visible in the MIDI clip tools panel.

Note that Transformers and Generators live in separate tabs.



Create a new MIDI clip or select an existing one to see MIDI Tools



MIDI clip tools panel with the Blocks Generators (vertical view)



MIDI tools panel with the Blocks Generators (horizontal view)

# Philip Meyer MIDI Tools

## Polyrhythm

Some Mac users who used the Live 12 Beta reported issues with getting the MIDI Tools to appear in Live, even though the devices were in the User Library. If this is you, you can try following the steps below.

**Note:** do this only if you know that your User Library settings are correct (see previous page)

Steps:

- Delete the files in ~/Library/Application Support/Ableton, but **not** the folder itself
- Delete the files in ~/Library/Preferences/Ableton, but **not** the folder itself

## Polyrhythm

Email me : [philip@inter-modal.com](mailto:philip@inter-modal.com)


Join Rhizomic Sequencing server on Discord: <https://bit.ly/rhizomic>

Follow me on Instagram: [https://www.instagram.com/p\\_\\_meyer/](https://www.instagram.com/p__meyer/)

YouTube: [https://www.youtube.com/@p\\_\\_meyer](https://www.youtube.com/@p__meyer)

# Bass + Lead Transformer

Generate a bass line or lead melody from a chord progression



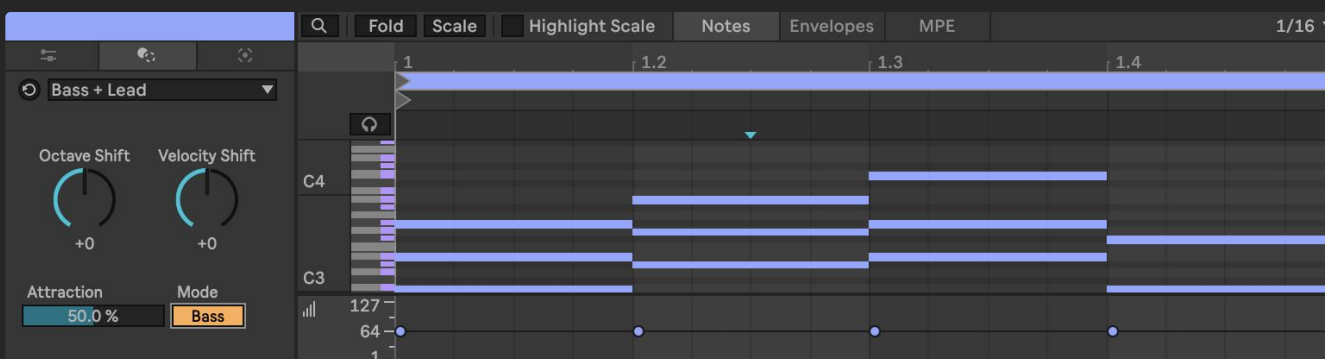
**Octave Shift** → Transposes the notes by octaves.

**Velocity Shift** ← Offsets the velocity of the kept notes.

**Attraction** ← This parameter controls this device's chord detection algorithm. A higher value means that notes are more likely to be grouped together, resulting in fewer chords.

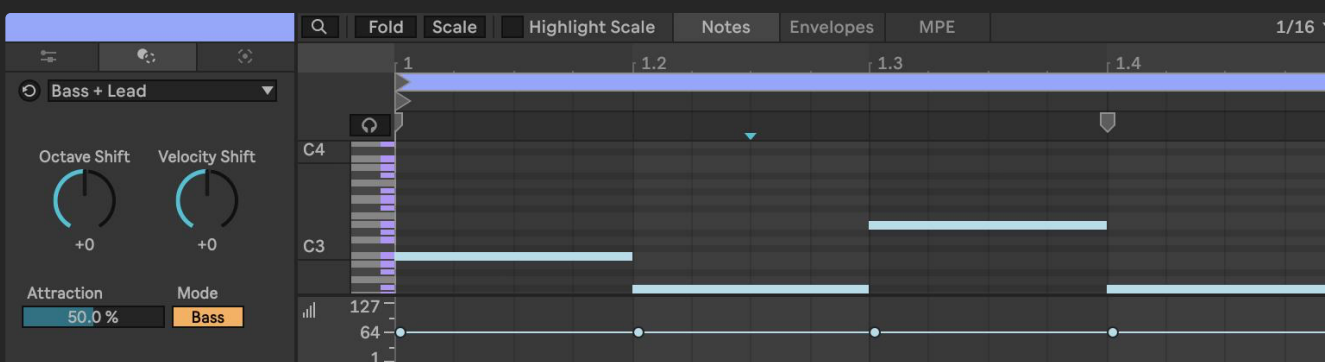
**Mode** ← "Bass" keeps the lowest note in each chord, while "Lead" keeps the highest note.

The control panel features a dropdown menu set to "Bass + Lead", two knobs for "Octave Shift" and "Velocity Shift" both at "+0", a slider for "Attraction" at "50.0%", and a button for "Mode" set to "Bass".



The original chord, untransformed

The piano roll shows a chord progression over four measures (1, 1.2, 1.3, 1.4). The notes are spread across multiple octaves, with some notes in the C4 and C3 ranges. The control panel on the left is identical to the one in the previous image.



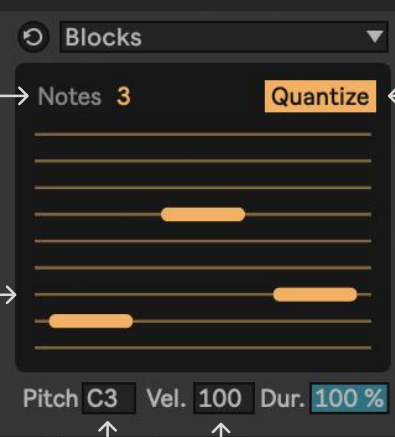
Using the Bass Mode removes all but the lowest note in each chord

The piano roll shows the same chord progression as above, but in "Bass Mode". Only the lowest note of each chord is present, creating a bass line. The control panel on the left is identical to the one in the previous image.



# Blocks Generator

A generator proportionally divides a clip to make nested rhythms.



**Number of Notes**  
The number of notes that will be created. This changes the number of Blocks sliders

**Quantize**  
Quantizes the start position of the notes to the MIDI clip's grid

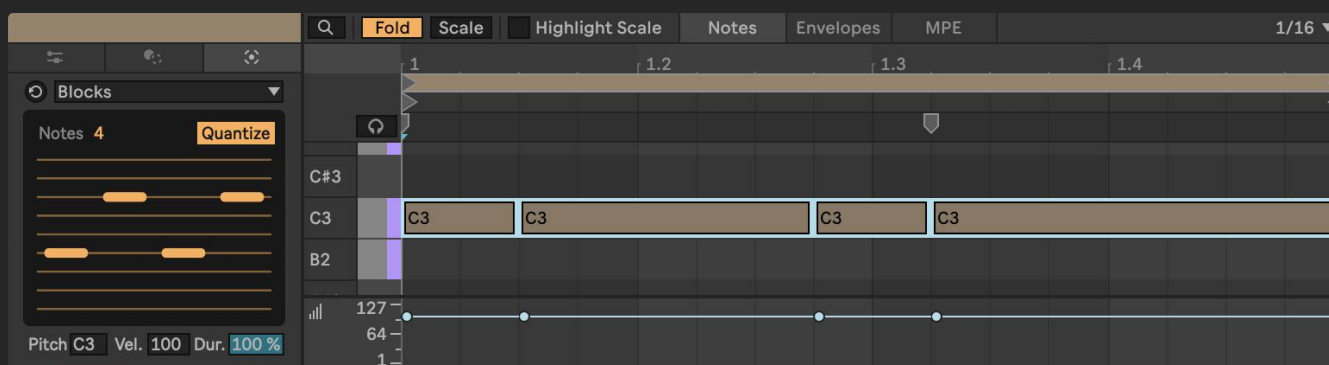
**Blocks**  
Sets the lengths of the notes that will be created. The notes will fill the selected range of the clip, and the lengths are set proportionally depending on the slider values.

**Pitch**  
The pitch of the notes that will be generated.

**Velocity**  
The pitch of the notes that will be generated.

**Duration**  
Shifts the generated pitches up and down.

The screenshot shows a control panel for the 'Blocks' generator. It features a 'Notes' field set to 3, a 'Quantize' button, and three horizontal sliders for note lengths. At the bottom, there are fields for 'Pitch' (C3), 'Vel.' (100), and 'Dur.' (100%).

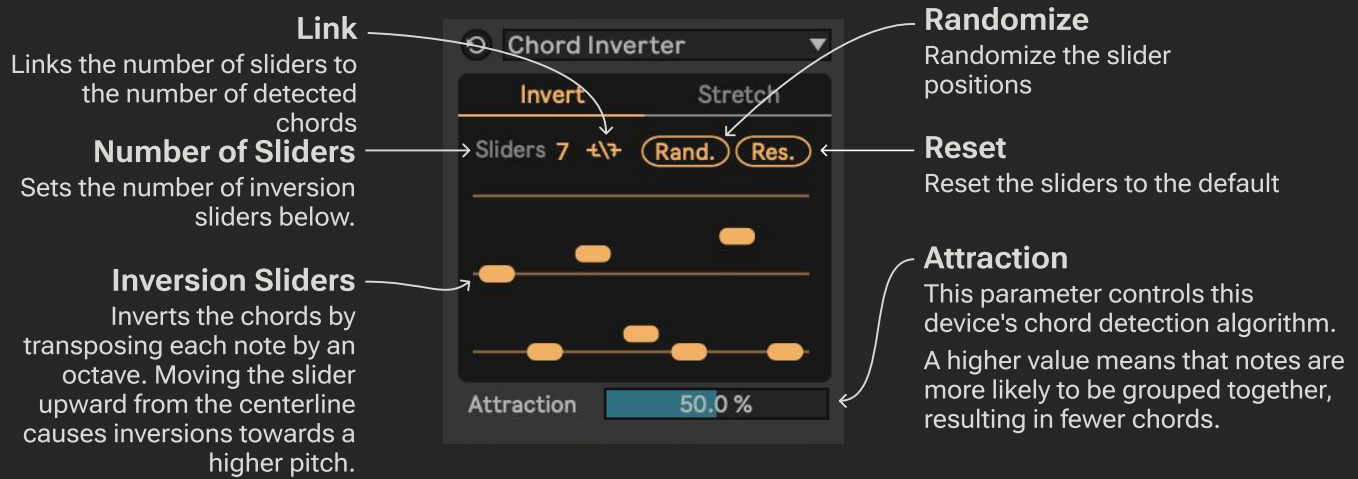


The screenshot shows a MIDI piano roll with a 'Blocks' generator control panel on the left. The piano roll has a grid with time markers at 1, 1.2, 1.3, and 1.4. The piano roll shows four notes on the C3 pitch line, each with a duration of 0.25. The piano roll also shows a velocity line with a value of 127. The piano roll is labeled 'C#3', 'C3', and 'B2'.

Moving the sliders in Blocks changes the relative spacing of the notes in the MIDI clip.

# Chord Inverter Transformer

Quick and painless chord manipulation



**Link**  
Links the number of sliders to the number of detected chords

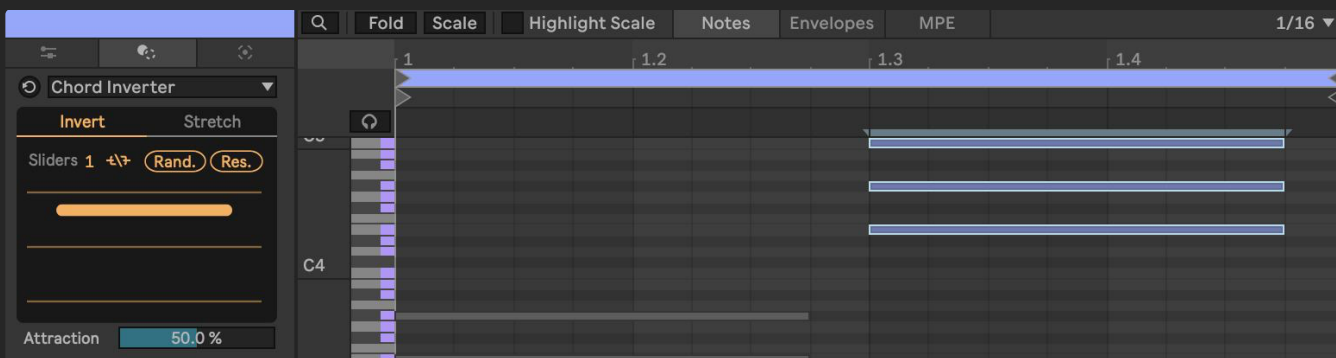
**Number of Sliders**  
Sets the number of inversion sliders below.

**Inversion Sliders**  
Inverts the chords by transposing each note by an octave. Moving the slider upward from the centerline causes inversions towards a higher pitch.

**Randomize**  
Randomize the slider positions

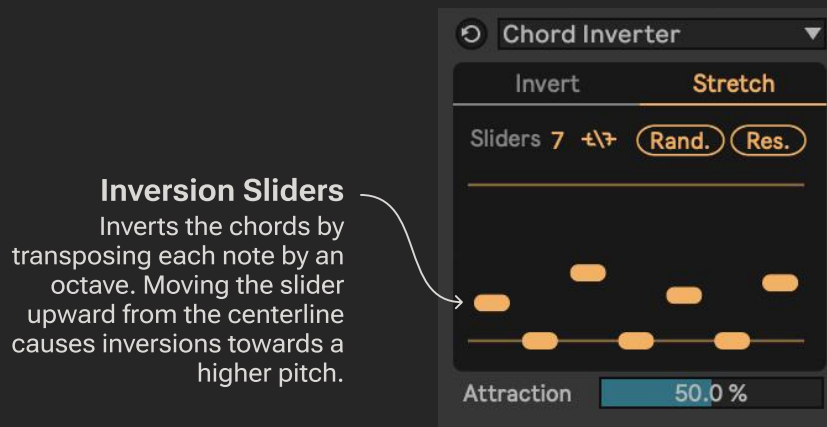
**Reset**  
Reset the sliders to the default

**Attraction**  
This parameter controls this device's chord detection algorithm. A higher value means that notes are more likely to be grouped together, resulting in fewer chords.

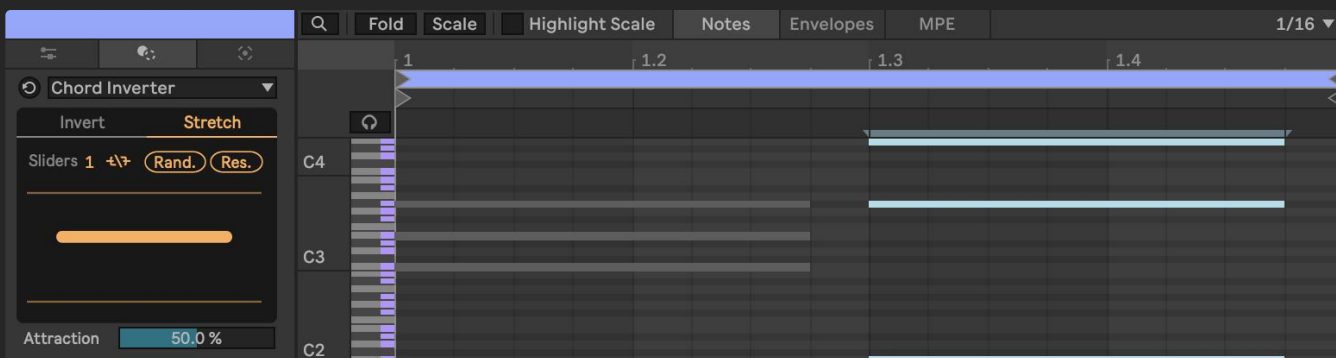


The screenshot shows a MIDI piano roll with a blue clip on a track. The Chord Inverter Transformer interface is visible on the left, with 'Sliders 1' and 'Attraction 50.0%'. The piano roll shows a chord on a clip, and the interface is used to invert it.

Inverting the chord allows it to “roll” up or down the clip.



**Inversion Sliders**  
Inverts the chords by transposing each note by an octave. Moving the slider upward from the centerline causes inversions towards a higher pitch.



The screenshot shows a MIDI piano roll with a blue clip on a track. The Chord Inverter Transformer interface is visible on the left, with 'Sliders 1' and 'Attraction 50.0%'. The piano roll shows a chord on a clip, and the interface is used to stretch it.

Stretch spreads the pitches in both directions.

# Condition Transform Transformer

A multi-function transformer that modifies certain notes according to a rule.

**Attribute**  
The attribute to be analyzed.

**Histogram**  
The graph shows the distribution of values across the selected attribute. Click and drag to highlight specific values and select notes to be transformed.

**Number of Values (View Only)**  
Total number of unique values in the range

**Modifier**  
The algorithm that will be used to transform the selected notes

In this example, we've used the Pitch attribute to select all of the notes that have the two highest pitches. Then, we subdivided them by 4.

## Modifiers

### Increment Modifiers

Adds or subtracts from the selected notes' pitch, velocity, or chance.

**Accumulate**  
When enabled, adds Increment to a running total before adding to the attribute value

**Increment**  
Amount to add

**Iterations**  
Number of times to add to the accumulation total before clipping, wrapping, or folding.

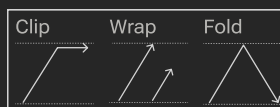
**Overflow Mode**  
Controls how values that cross the maximum or minimum are handled.

### Polarity

Sets the maximum and minimum for the accumulation value.\*

- Uni : 0 ↔ Iterations x Increment
- Bi : -Iterations x Increment ↔ Iterations x Increment

\* When Accumulate is enabled and the Overflow Mode is Wrap or Fold.



### Divide Modifier

Divides the selected notes.

**Divisions**  
Number of notes to divide the selected note into

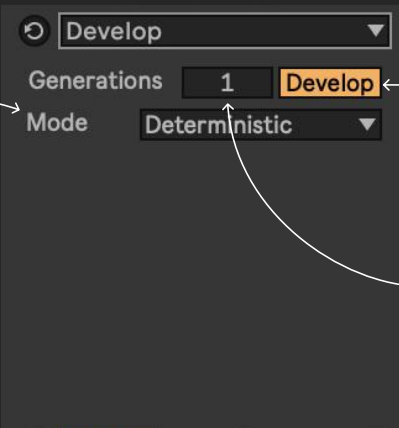
**Quantize**  
Quantizes the start position of the divisions to the MIDI clip's grid

### Mute Modifier

Deletes the selected notes.

# Develop Transformer

A transformer that can make a pattern gradually appear or fade away.



**Mode**

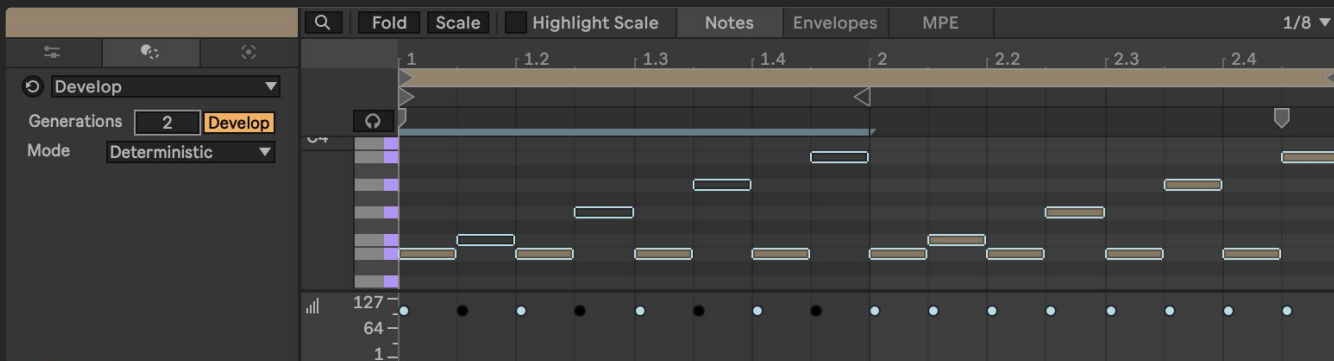
- Deterministic: Develops or degrades the pattern in a predictable fashion, using an evenly-spaced Euclidean algorithm and note muting.
- Probabilistic: Uses the chance attribute of notes to develop or degrade the pattern.

**Build Direction**

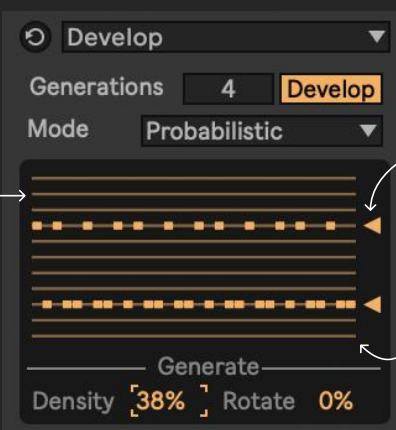
Develop starts with a sparse pattern and builds to the complete one. Degrade is the opposite.

**Generations**

The number of loops of the pattern over which the development/degradation occurs.



Deterministic mode. The second bar is the original pattern, which has been duplicated to the first bar, and every other note in the first bar has been muted.



**Probabilities**

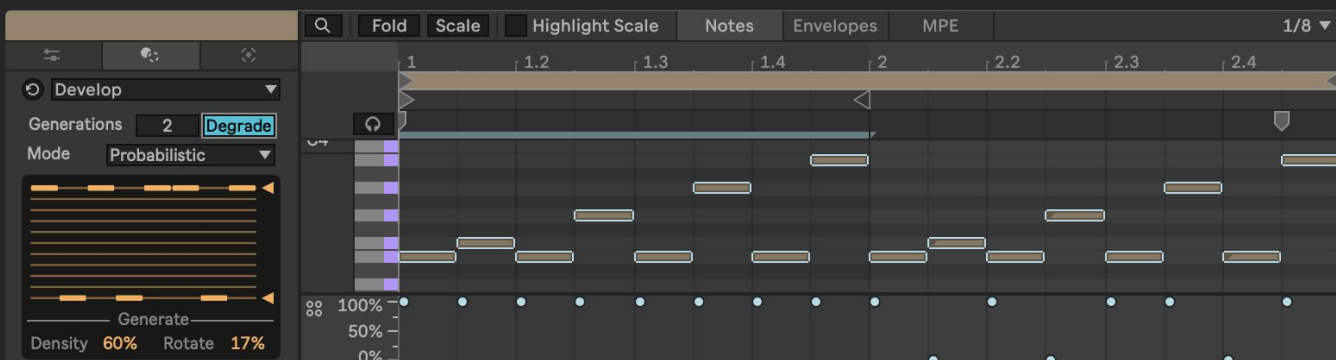
Sets the chance for each note at the 'most sparse' state, depending on the Build Direction. At the pattern's 'least sparse' state, the chance will be 100% for all notes.

**Range Control**

Adjusts the maximum and minimum range by clipping the slider values.

**Generate Sliders**

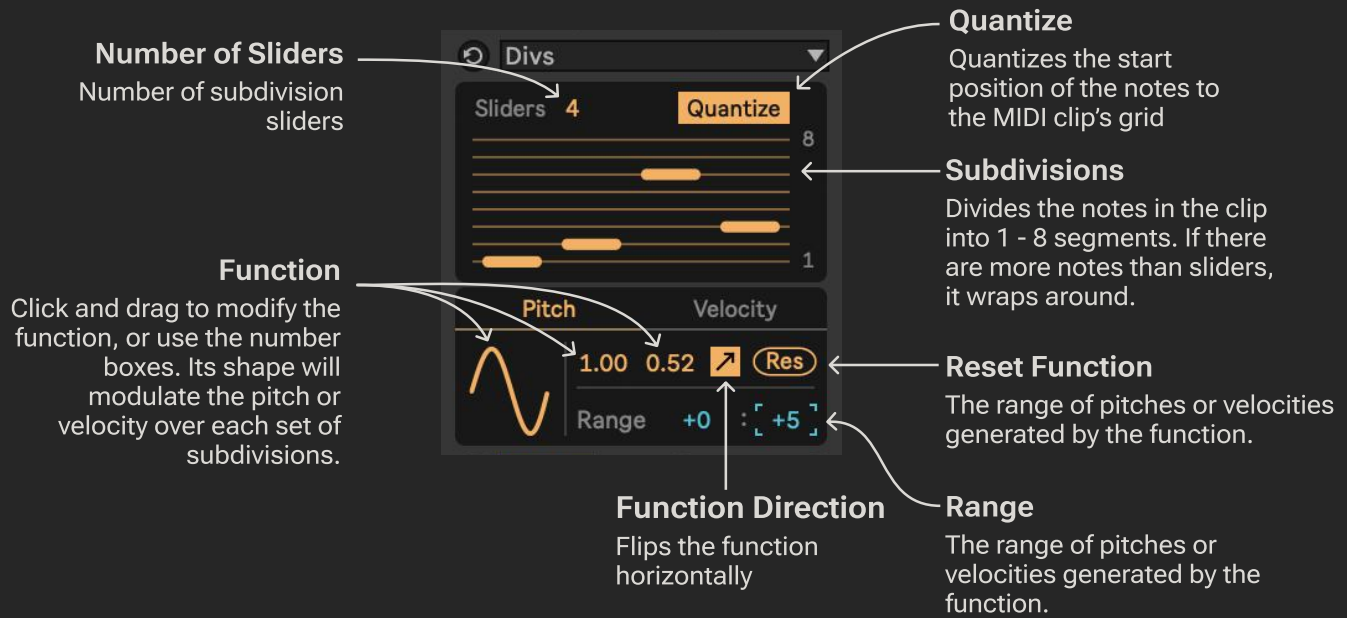
Modifying these parameter overwrites the slides with a Euclidean pattern



**Probabilistic mode.** Because the build direction is Degrade, the full pattern is the starting point, and the ending point is the same pattern with chance set by the sliders in the Develop device.

# Divs Transformer

Subdivide a list of notes. Designed to be used in conjunction with Blocks to make nested rhythms.



**Number of Sliders**  
Number of subdivision sliders

**Function**  
Click and drag to modify the function, or use the number boxes. Its shape will modulate the pitch or velocity over each set of subdivisions.

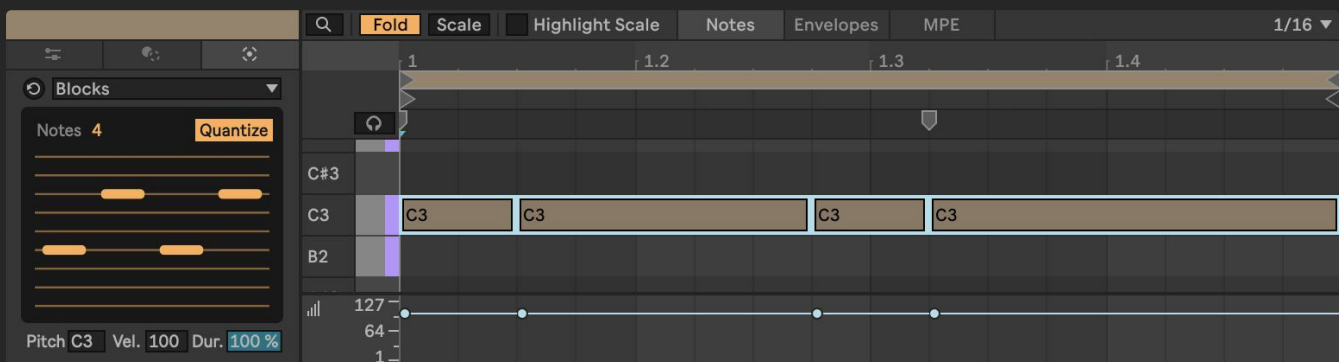
**Quantize**  
Quantizes the start position of the notes to the MIDI clip's grid

**Subdivisions**  
Divides the notes in the clip into 1 - 8 segments. If there are more notes than sliders, it wraps around.

**Reset Function**  
The range of pitches or velocities generated by the function.

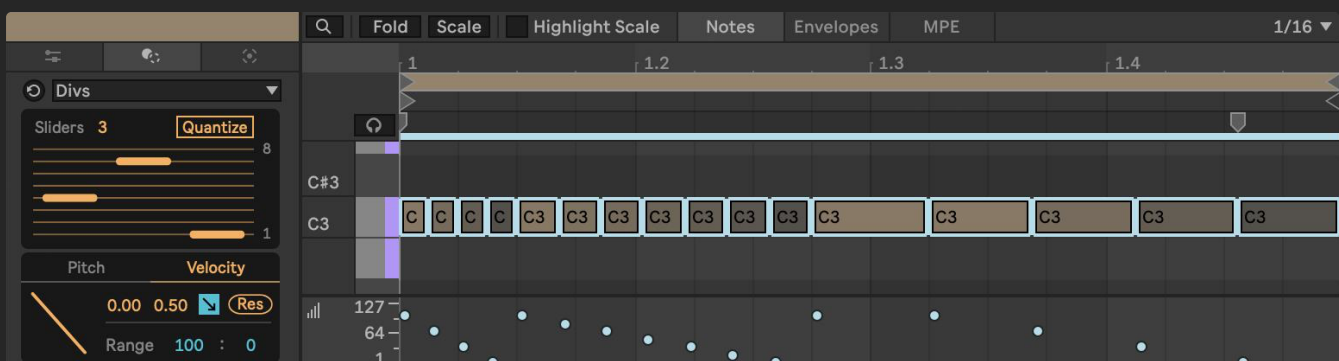
**Function Direction**  
Flips the function horizontally

**Range**  
The range of pitches or velocities generated by the function.



The screenshot shows the Ableton Live interface with a MIDI clip containing four notes. The notes are on the C3 pitch line and have a duration of 100%. The piano roll shows the notes starting at 1.0, 1.2, 1.3, and 1.4 seconds.

We'll start with a pattern generated by blocks.

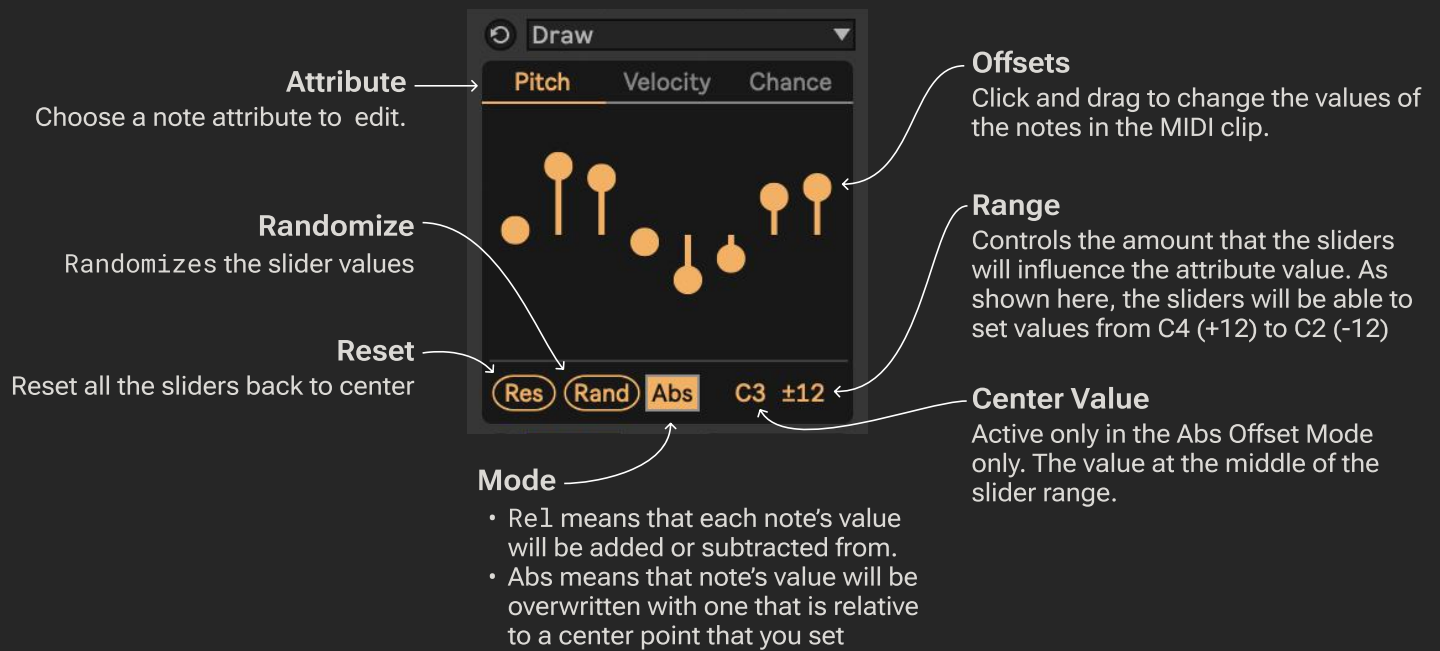


The screenshot shows the same MIDI clip with the Divs Transformer applied. The 'Sliders' are set to 3, and the 'Function' is set to Velocity. The piano roll shows the first, second, and fourth notes subdivided into smaller segments, while the third note remains as a single segment. The velocity of the subdivided notes is shown as a falling curve.

Next, we'll use three dividers to divide the first, second, and fourth note with a falling velocity. The third note is not divided because the third slider's value is 1.

# Draw Transformer

Quickly manually edit note pitch, velocity, and chance.



**Attribute**  
Choose a note attribute to edit.

**Randomize**  
Randomizes the slider values

**Reset**  
Reset all the sliders back to center

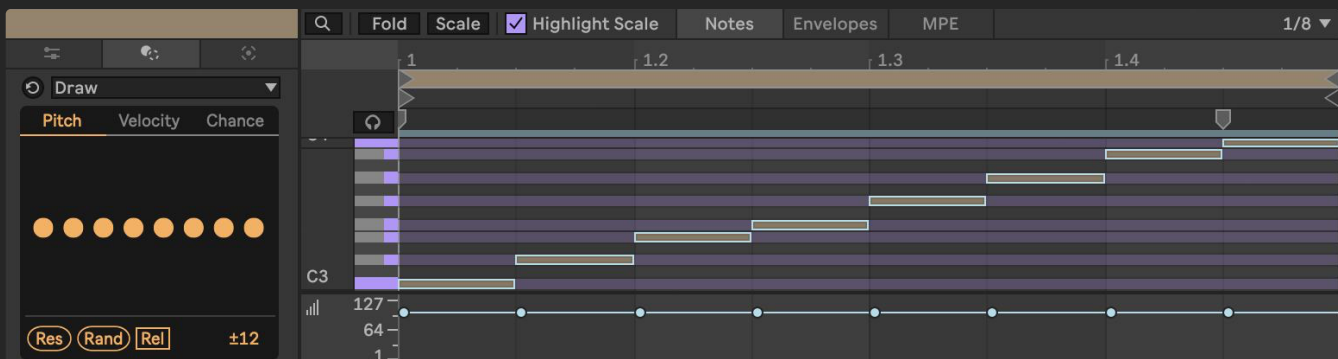
**Mode**

- Rel means that each note's value will be added or subtracted from.
- Abs means that note's value will be overwritten with one that is relative to a center point that you set

**Offsets**  
Click and drag to change the values of the notes in the MIDI clip.

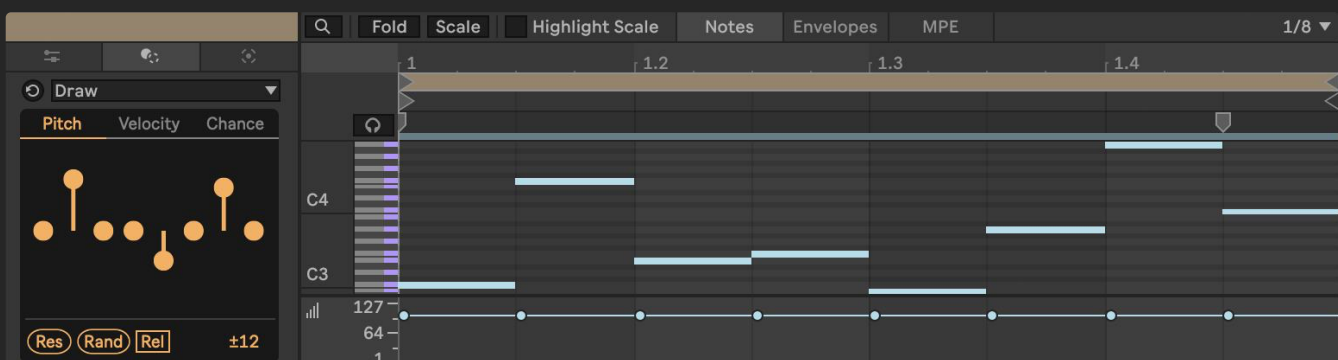
**Range**  
Controls the amount that the sliders will influence the attribute value. As shown here, the sliders will be able to set values from C4 (+12) to C2 (-12)

**Center Value**  
Active only in the Abs Offset Mode only. The value at the middle of the slider range.



The screenshot shows the Draw Transformer interface in Rel mode. The 'Pitch' attribute is selected, and the 'Rel' mode button is active. The center value is set to C3. The MIDI clip shows a simple rising pitch sequence of notes. The Draw interface shows seven sliders, each with a vertical line indicating the current value for that note.

To start, we have a clip with a simple rising pitch. Next, we'll transform it with Draw.



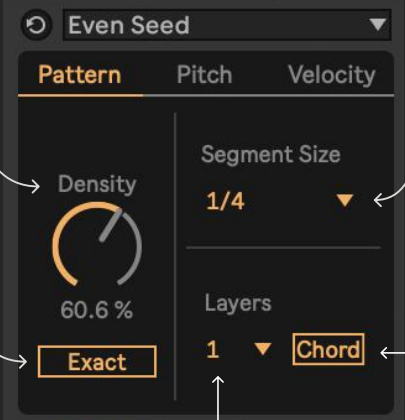
The screenshot shows the Draw Transformer interface in Rel mode after transformation. The 'Pitch' attribute is still selected, and the 'Rel' mode button is active. The center value is still C3. The MIDI clip now shows a more complex, irregular pitch sequence. The Draw interface shows seven sliders, each with a vertical line indicating the current value for that note, which are now offset relative to their original positions.

Adjusting the sliders in Draw in Rel mode offsets the pitches of the notes relative to their original position.



# Even Seed Generator

A better approach to random



**Density**  
Determines the number of notes per segment to create based on the Segment Size and the MIDI Clip grid interval.

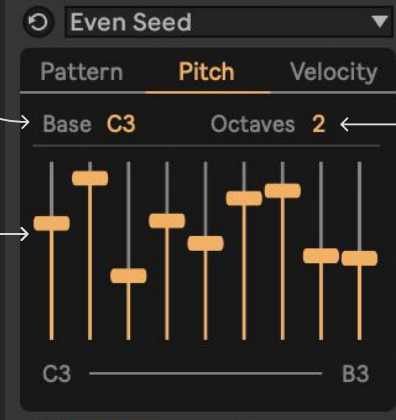
**Exact**  
Because the density is probabilistic, it won't always create the same number of notes in each segment. Enable Exact to force the device to create the same number of notes in each segment.

**Segment Size**  
The length of each of the slices that the clip will be divided into before generating notes. Smaller slices results in even distribution of notes across the MIDI clip.

**Layers**  
This effectively multiplies the density, creating new notes at new pitches and allowing chords to be created.

**Chord**  
When enabled, layers will create notes at the same positions, resulting in chords.

The screenshot shows the 'Even Seed' interface with the following settings: Density at 60.6%, Exact checked, Segment Size set to 1/4, Layers set to 1, and Chord checked.

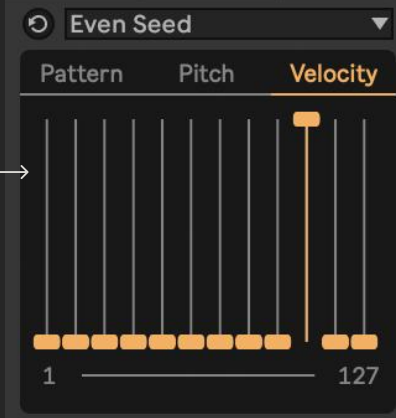


**Base Pitch**  
The lowest pitch that can be generated and the start of the distribution below

**Pitch Distribution**  
The sliders set the probability that each note within the octave will be generated. When a scale is enabled, the number of sliders will adjust to reflect the number of notes in the scale

**Octaves**  
The number of octaves over which notes will be randomly generated.

The screenshot shows the 'Pitch' tab with Base Pitch set to C3, Octaves set to 2, and a Pitch Distribution section with 12 sliders for notes between C3 and B3.



**Velocity Distribution**  
The sliders determine the velocity of the generated notes using a probability distribution. The distribution is grouped into 12 buckets to represent the MIDI velocity range of 0 - 127.

The screenshot shows the 'Velocity' tab with 12 sliders representing the MIDI velocity range from 1 to 127.



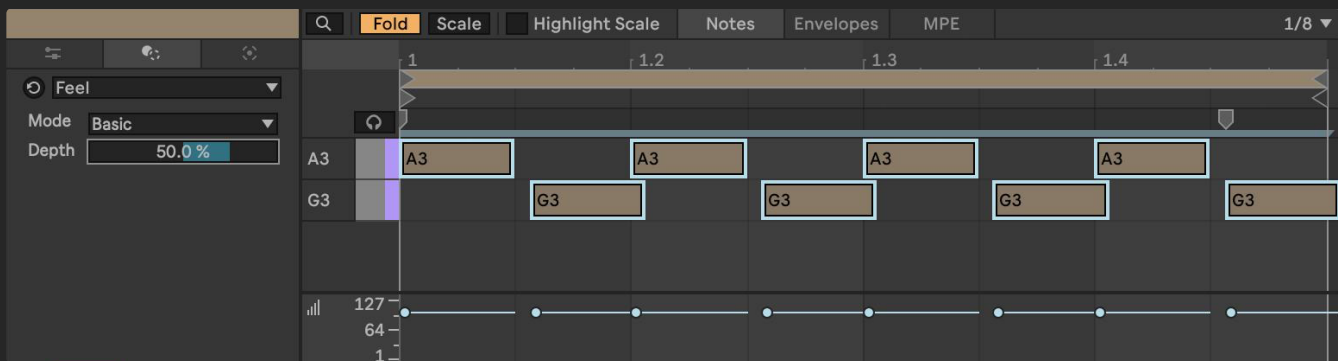
# Feel Transformer

A transformer for creating swing, grooves, and microtiming

**Swing Depth** → Amount of swing to apply to the pattern. Swing is applied using the clip's grid. Positive values shift every second note back, negative values shift them forward

**Mode** →

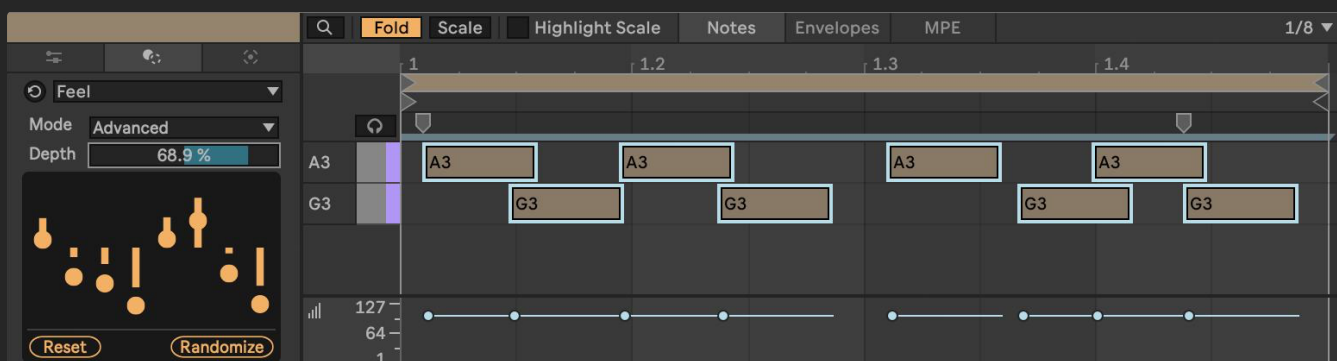
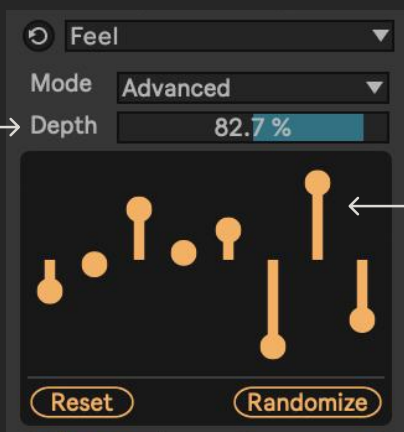
- Basic is the typical swing we all know and love.
- Advanced allows you to fine-tune the timing for each step in the grid independently.



Basic swing

**Depth** → Controls the extent to which the sliders shift the notes.

**Microtiming** → There's one slider for each grid line in the MIDI clip. Dragging the slider in the positive direction (upward) shifts the note back (to the right). The highlighted bars show the actual adjustment, after normalizing and applying Depth



Microtiming with advanced mode

# Mask Pattern Generator

Idiosyncratic polyrhythmic pattern generator

**Distribution**  
Higher values shift the allocation of notes toward patterns A and B, lower values shift notes toward patterns C and D.

**Mask Length**  
Controls, along with Masks, the allocation of notes between patterns A and B and between patterns C and D. Higher values generally give more notes to Patterns A and C compared to Patterns B and D.

**Enable Patterns A - D**  
Enables and disables note generation for each pattern

Pattern	Pitch	Velocity
A	C1	100
B	+1	100
C	+2	100
D	+3	100

**Number of Masks**  
Controls, along with Mask Len., the allocation of notes between A and B and between C and D. Higher values will result in a note allocation that alternates more frequently between patterns.

**Rotation**  
Rotates the four patterns in different directions and at differing speeds, changing the alignment of the patterns within their polymetric relationship.

**Velocity**  
The velocity of each pattern

**Pitch**  
Sets the pitch for each pattern. Pattern A's pitch is set absolutely, while the pitch of Patterns B - D are set as a transposition of Pattern A's pitch.

1 1.2 1.3 1.4

C1 127 64 1

D#1 D#1 E1 E1 D#1 D#1 E1 E1

C1 C1 C1 C1 C1 C1

# Pattern Transform Transformer

A multi-function transformer that uses a pattern to choose which notes to modify.

**Advance Mode**  
Determines whether the pattern's steps are determined by a count of notes (Note) or an interval the clip's grid (Grid)

**Pattern Density**  
Percentage of the steps in the pattern that are active

**Pattern Algorithm**  
Determines how the pattern is generated. Eucl. always distributes the events evenly. Omni is a more flexible algorithm.

**Every**  
Determines whether the pattern's steps are determined by a count of notes (Note) or an interval the clip's grid (Grid)

**Variant**  
Eucl. mode: rotates the pattern.  
Omni mode: selects from among all possible patterns for the density.

**Modifier**  
The algorithm that will be used to transform the selected notes

Here, we started with a 8th notes at a constant pitch of C3. Using Pattern Transform, we applied a Euclidean pattern and increased the pitch by 1 scale degree of any notes that fall into the active steps of the pattern.

## Modifiers

### Increment Modifiers

Adds or subtracts from the selected notes' pitch, velocity, or chance.

#### Accumulate

When enabled, adds Increment to a running total before adding to the attribute value

#### Increment

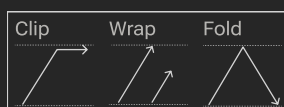
Amount to add

#### Iterations

Number of times to add to the accumulation total before clipping, wrapping, or folding.

#### Overflow Mode

Controls how values that cross the maximum or minimum are handled.



#### Polarity

Sets the maximum and minimum for the accumulation value.\*

- Uni : 0 ↔ Iterations x Increment
- Bi : -Iterations x Increment ↔ Iterations x Increment

\* When Accumulate is enabled and the Overflow Mode is Wrap or Fold.

### Mute Modifier

Deletes the selected notes.

### Fuse Modifier

Joins the selected notes that fall within the pattern step

### Divide Modifier

Divides the selected notes.

#### Divisions

Number of notes to divide the selected note into

#### Quantize

Quantizes the start position of the divisions to the MIDI clip's grid

# Phase Pattern Generator

A generator that creates rhythms by bending time.

This device is available through a free Ableton Pack.

**Function**  
Click and drag to modify the function, or use the number boxes. Its shape will control the note position. Where the curve is more steep, the note spacing will be wider.

**Aux Function**  
Jitter adds randomness to note position  
Iterations Loops the function over the length of the clip

**Duration**  
Scales the duration of the notes without changing their starting positions

**Number of Notes**  
The number of notes to generate

**Quantize**  
Quantizes the note start positions to the MIDI clip's grid.

The screenshot shows the Phase Pattern generator in a MIDI editor. The function curve is logarithmic, starting steep and then flattening out. The resulting notes are C3, with durations that shorten as the pattern progresses. The interface shows a duration of 100% and 8 notes.

A logarithmic curve creates a “bouncing ball” rhythm whose note durations shorten over the course of the pattern.

**Function Direction**  
Flips the function horizontally

**Iterations**  
The number of times the pattern should loop over the course of the notes.

**Range**  
The range of pitches or velocities generated by the function

**Lock Range**  
Link the upper and lower bounds of the range, creating a static value

The screenshot shows the Phase Pattern generator in a MIDI editor. The function curve is a sine wave. The resulting notes are A3, G3, F3, E3, D3, and C3, with durations that vary according to the sine wave's shape. The interface shows a duration of 0.98 and 0.50, and 6.32 iterations.

The pitch follows the shape you've created. Iter sets the number of times the function repeats over the course of the notes.

# Polyrhythm Generator

A multi-track generator for creating polymetric and polyrhythmic patterns.

*This device is available through a free Ableton Pack.*

**Length**  
Length of the pattern in steps

**Track Transposition**  
Sets the pitch of each track by offsetting Base Pitch. If Scale is enabled for the MIDI clip, the offset is in scale degrees. If Scale is disabled, the offset is in semitones

**Base Pitch**  
The pitch from which each track will be transposed.

**Algorithm**  
The algorithm used to generate the rhythms.

- Euclidean creates patterns that evenly distribute the activated steps across the pattern.
- Omni allows you to choose any possible pattern with just three parameters.

**Density**  
Number of notes in the pattern

**Variant**  
Changes the pattern while keeping Steps and Duration constant.

**Velocity**  
Velocity of the notes in the track.

**Enable Track**  
When disabled, notes for this track won't be generated

**Distribution**  
Decides how the pattern is distributed within the MIDI clip. This setting allows you to toggle between polymetric and polyrhythmic patterns.

- Hug and Fill creates polymeters
- Stretch creates polyrhythms.
- Fit is like Fill, but it causes the clip length to be resized to prevent the pattern from being truncated

+Sd	Len.	Den.	Var.	Vel.
5	16	0		100
4	16	0		100
3	16	0		100
2	11	1		80
1	9	2		60
0	16	3		100

Note: C1  
Algo: Eucl.  
Distribution: Fill

The screenshot shows the Polyrhythm generator interface with the 'Fill' distribution selected. The MIDI piano roll displays a pattern where notes are evenly distributed across the clip length for each track. The tracks are labeled G1, F#1, F1, E1, D#1, D1, C#1, and C1. The distribution is set to 'Fill'.

A polymetric pattern using the Fill distribution.

The screenshot shows the Polyrhythm generator interface with the 'Stretch' distribution selected. The MIDI piano roll displays a pattern where the clip length is stretched to fit the pattern, resulting in notes that are not evenly distributed across the clip length. The tracks are labeled G1, F#1, F1, E1, D#1, D1, C#1, and C1. The distribution is set to 'Stretch'.

A polyrhythmic pattern using the Stretch distribution.



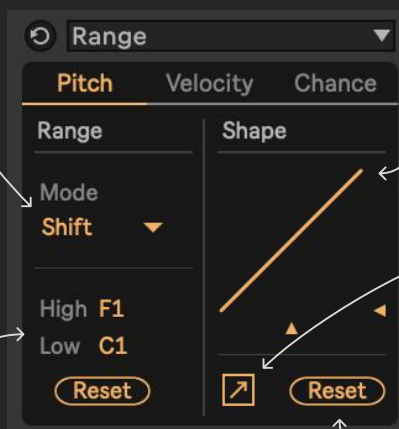
# Range Transformer

Stretch, compress, and shift the range of pitch, velocity and chance.

## Mode

Changes how the High and Low parameters transform the range of values in the MIDI clip.

- **Shift:** The difference between High and Low remains fixed, and the entire range is shifted.
- **Stretch:** The range of values is stretched or compressed
- **Wrap:** Reduces the range and wrap the overflow
- **Fold:** Reduces the range and folds the overflow
- **Clip:** Reduces the range and clips the overflow



## Range High and Low

Sets the new upper and lower bound of the range of pitch, velocity, or chance values. The Reset button resets High and Low to the original state of the clip

## Shaping Function

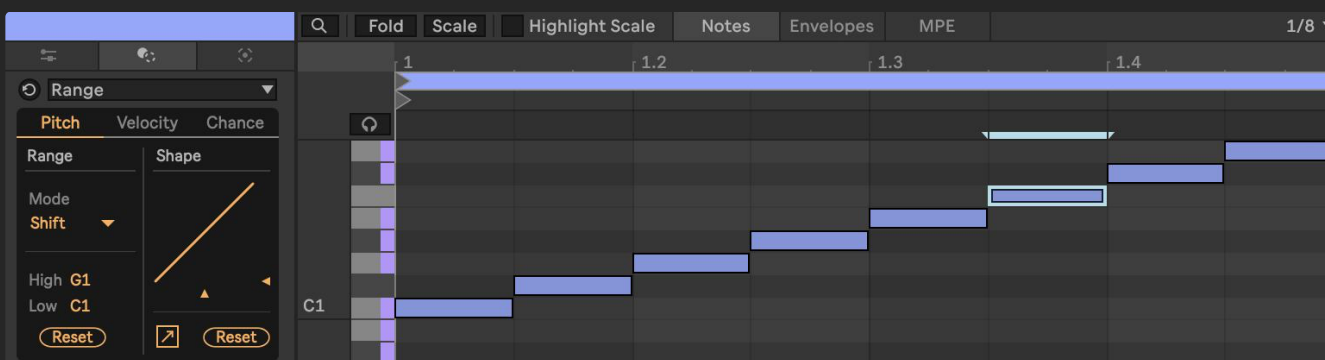
Re-maps the values according to the function shown. Click and drag or use the sliders to modify the function.

## Function Direction

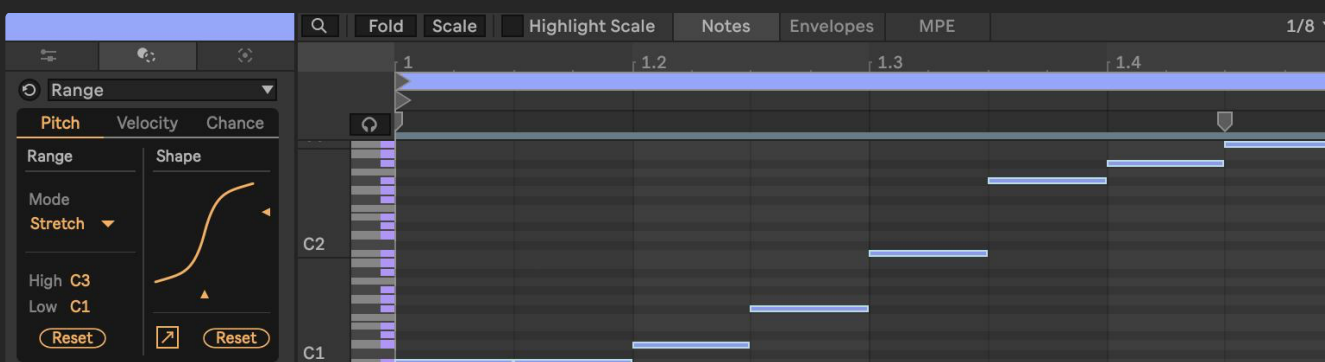
This parameter controls this device's chord detection algorithm. A higher value means that notes are more likely to be grouped together, resulting in fewer chords.

## Function Reset

Resets the function to the default state.



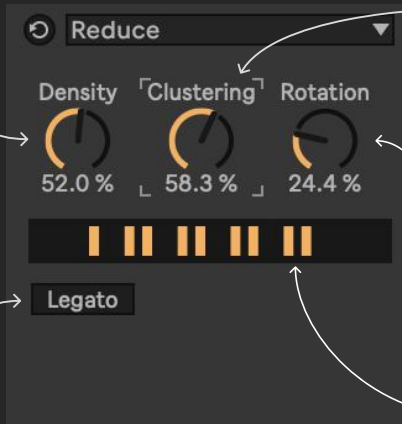
Starting with a simple staircase for the untransformed clip...



Then, stretch the clip by about an octave and apply an S-shaped curve.

# Reduce Transformer

Subtract notes from a clip



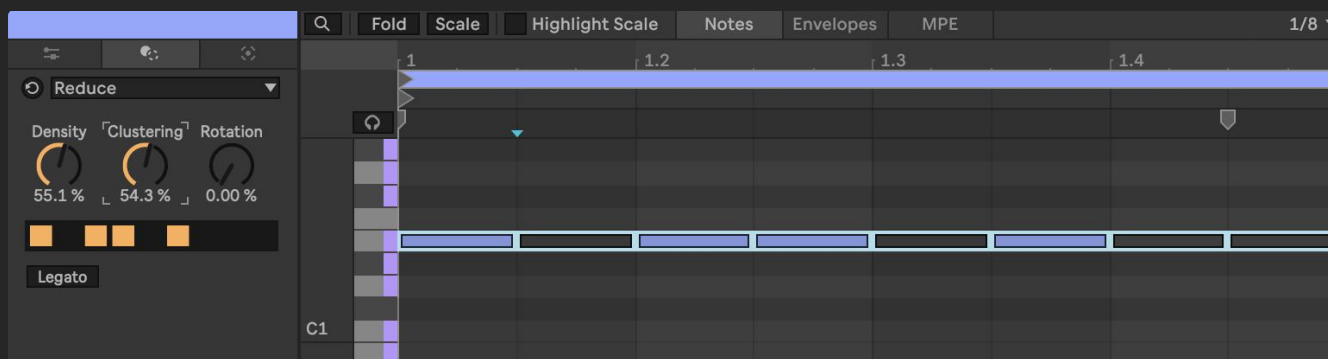
**Density**  
Determines the number of events in the masking pattern. The masking pattern will then be used to determine which notes are muted, and which aren't.

**Clustering**  
Lower values result in an evenly-distributed euclidean pattern. Higher values result in a pattern with events grouped together.

**Rotation**  
Shifts the events in the pattern left and right

**Masking Pattern (View Only)**  
Displays the masking pattern that results from the Density, Clustering, and Rotation dials. This pattern will decide which notes in the MIDI clip are muted.

**Legato**  
When enabled, the duration of unmuted notes will be extended (or, in unusual cases, shorted) to end when the next unmuted note begins.



The screenshot shows a MIDI piano roll with a clip on a staff. The Reduce Transformer control panel is visible on the left, with Density set to 55.1%, Clustering to 54.3%, and Rotation to 0.00%. The piano roll shows a sequence of notes, with the first few notes being significantly longer than the others, illustrating the effect of the Density and Clustering parameters.

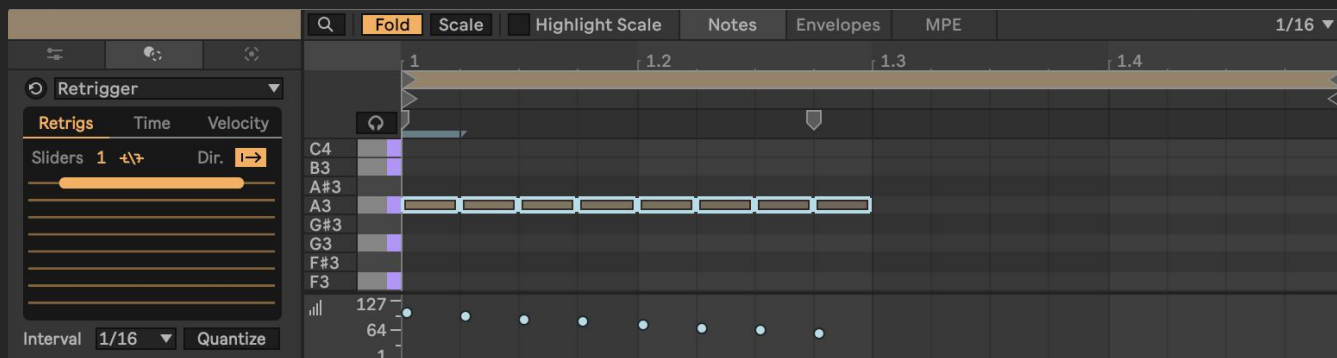
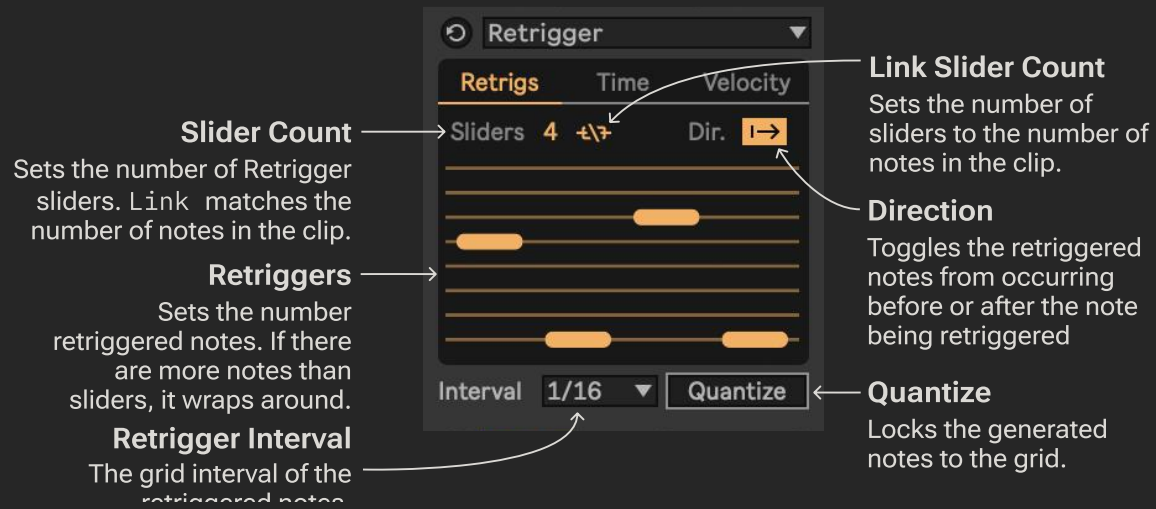
Density and clustering of about 50% keeps most of the notes toward the beginning of the clip.



# Retrigger Transformer

A transformer for repeating notes.

This device is available exclusively through a free Ableton Pack.



Retriggering a single note 8 times with a 16th-note retrigger interval and a falling velocity.

# Segment Transformer

Subdivide conditionally based on note duration.

**Subdivision**  
Number of notes to divide the selected notes into

**Histogram**  
The graph shows the distribution of note durations. Click and drag to highlight specific values and select notes to be transformed.

**Function**  
Click and drag to modify the function, or use the number boxes. Its shape will modulate the pitch or velocity over each set of subdivisions.

**Quantize**  
Quantizes the start position of the notes to the MIDI clip's grid

**Division Mode**  
By default (Proportional), Segment will divide each note into even segments. But sometimes, you want the resulting notes to all be the same length. Switch this to Fixed to do that!

**Range**  
The range of pitches or velocities generated by the function.

**Function Direction**  
Flips the function horizontally

The screenshot shows the Ableton Live interface with a MIDI clip selected. The 'Phase Pattern' transform is applied to the notes. The notes are C3, and the pitch is increasing over time. The 'Pattern' transform is set to 'Euclidean' and the 'Pitch' is set to 'Scale'.

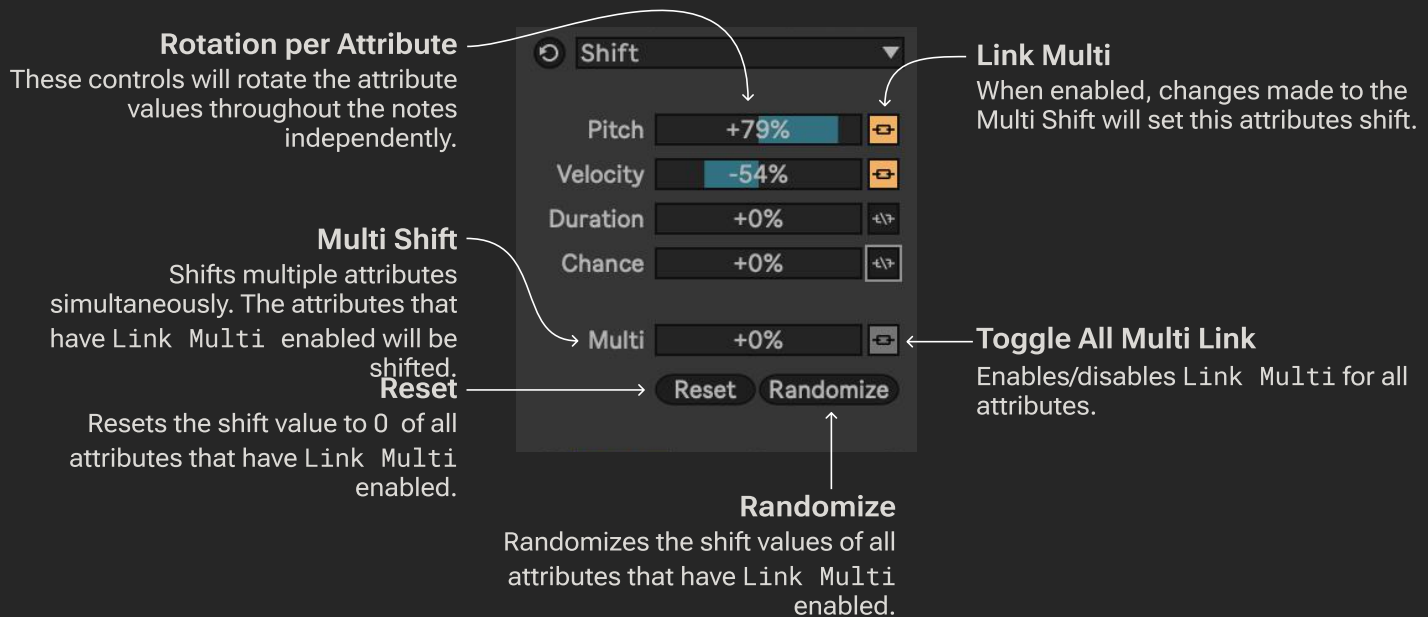
Here, we started with a 8th notes at a constant pitch of C3. Using Pattern Transform, we applied a Euclidean pattern and increased the pitch by 1 scale degree of any notes that fall into the active steps of the pattern.

The screenshot shows the Ableton Live interface with a MIDI clip selected. The 'Segment' transform is applied to a single long note. The note is divided into 8 segments with a declining velocity, creating an echo effect. The 'Segment' transform is set to 'Div 8' and 'Proportional'.

Then, we'll select the longest note by clicking on the histogram in Segment. Segment will divide only this note into 8 segments with a declining velocity, creating an echo effect.

# Shift Transformer

Create variation by shifting note attributes across notes.



**Rotation per Attribute**  
These controls will rotate the attribute values throughout the notes independently.

**Multi Shift**  
Shifts multiple attributes simultaneously. The attributes that have Link Multi enabled will be shifted.

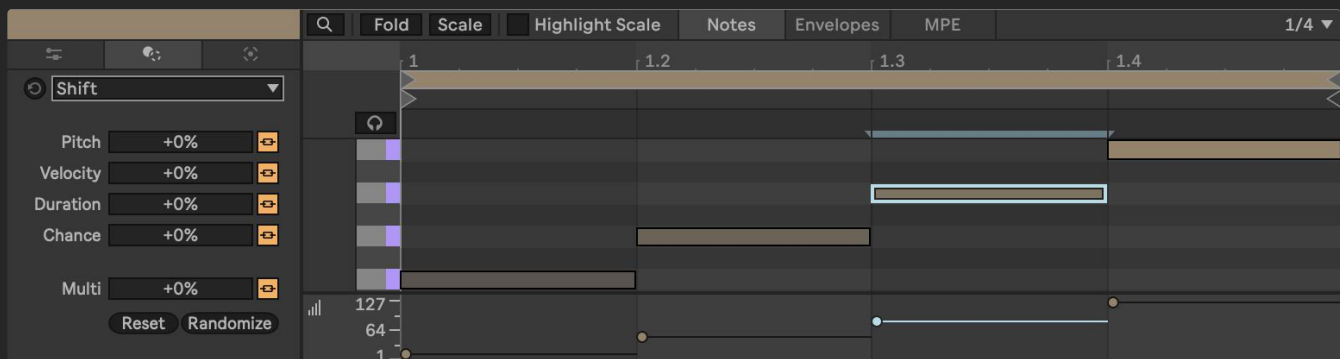
**Reset**  
Resets the shift value to 0 of all attributes that have Link Multi enabled.

**Randomize**  
Randomizes the shift values of all attributes that have Link Multi enabled.

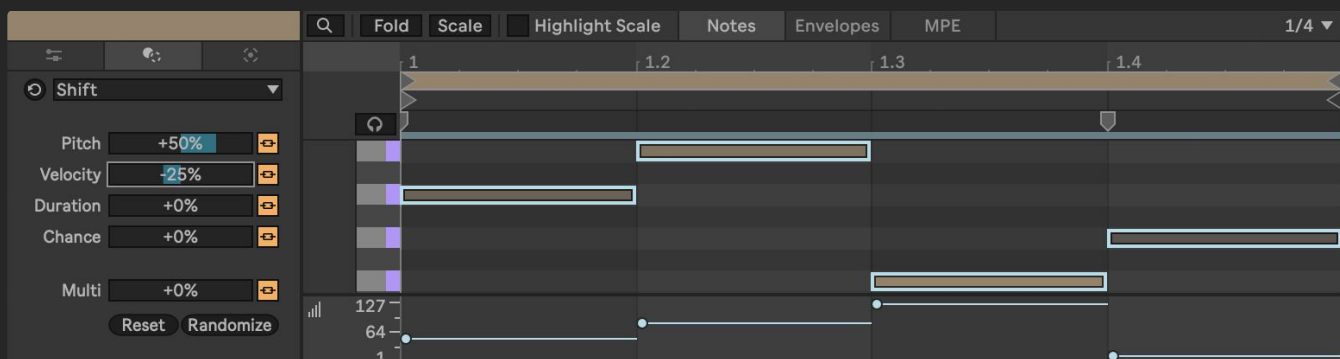
**Link Multi**  
When enabled, changes made to the Multi Shift will set this attributes shift.

**Toggle All Multi Link**  
Enables/disables Link Multi for all attributes.

The control panel shows a dropdown menu set to 'Shift', sliders for Pitch (+79%), Velocity (-54%), Duration (+0%), and Chance (+0%), a 'Multi' slider (+0%), and 'Reset' and 'Randomize' buttons.



In this original, untransformed clip, we have both a rising pitch and a rising velocity.

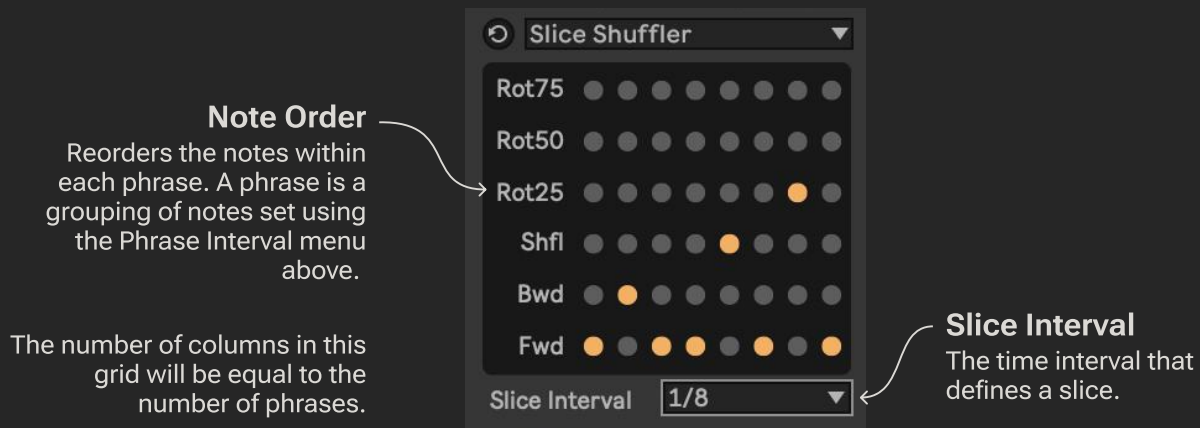


Here, with the Pitch Rotation set to 25%, the pitches have shifted rightward and wrapped around, but the velocities have not. This is because each attribute can be shifted independently of the other attributes.

# Slice Shuffler Transformer

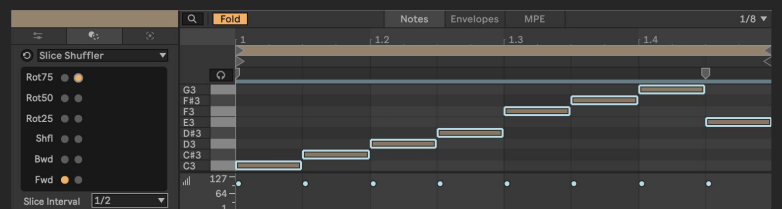
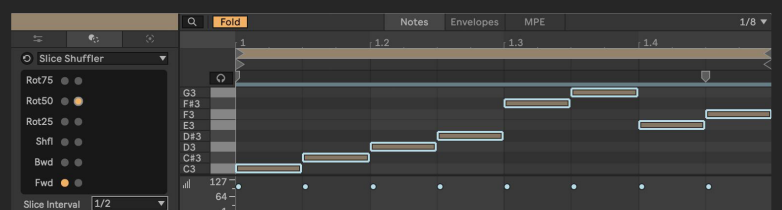
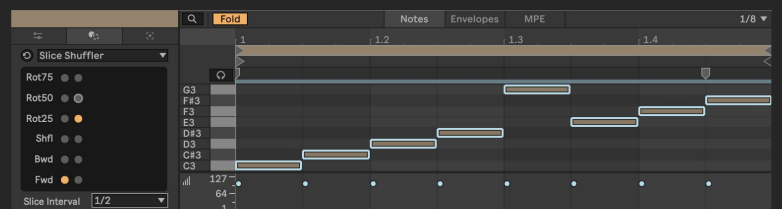
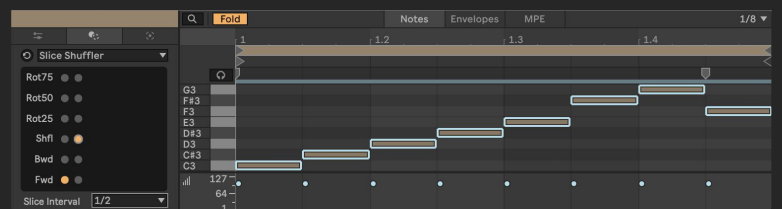
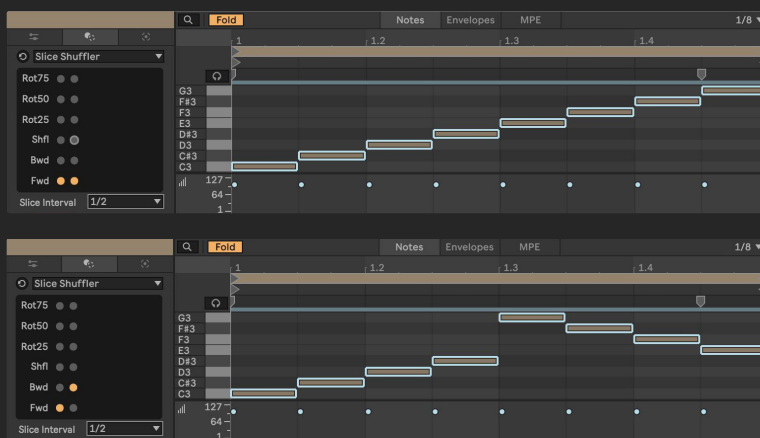
Create groupings of notes, then reorder the notes within each group.

*This device is available exclusively through a free Ableton Pack.*



## Note Orders

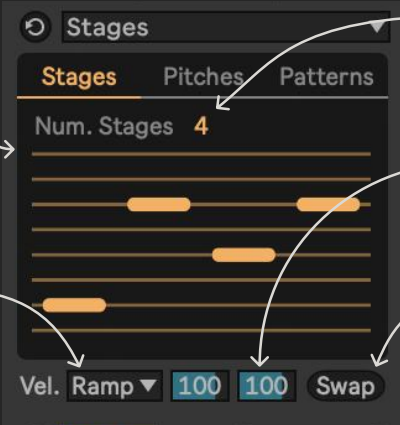
- **Fwd: Forward.** Won't reorder the notes
- **Bwd: Backward.** Reverses the note order
- **Shfl: Shuffle.** Randomized order
- **Rot25: Rotate 25%.** Shift rightward by 25%
- **Rot50: Rotate 50%.** Shift rightward by 50%
- **Rot75: Rotate 75%.** Shift rightward by 75%



# Stages Generator

A generator for punchy, Drexciyan beats and basslines

This device is available exclusively through a free Ableton Pack.



**Stage Lengths**  
The number of notes that will be created for each stage. The total clip length is also affected by these sliders


**Velocity Mode**  
The algorithm that generates velocity values for the notes. Ramp makes the velocity steadily increase or decrease over the length of the stage, while Rand . randomizes the velocity values.

**Number of Stages**  
Changes the number of Stages and the number of Stage Length sliders

**Velocity Range**  
The lower and upper bounds of the velocity range.

**Swap / Refresh**  
Depends upon Velocity Mode.

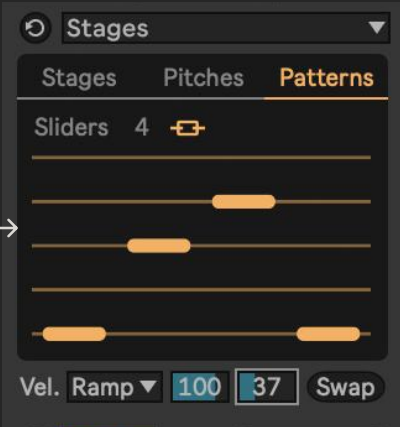
- In Ramp mode, this button swaps the upper and lower bound values.
- In Rand mode, this button regenerates velocities with new random values.



**Stages Pitches**  
Sets the pitch of each stage relative to the base pitch (+/- 1 octave)

**Link Slider Count**  
Links the number of sliders to the number of Stages

**Base Pitch**  
Sets the default stage pitch. The sliders offset each stage's pitch relative to this default.



**State Patterns**  
Chooses a rhythmic pattern for each stage.

# Turing Machine Generator

A generator based on the Music Thing Modular Turing Machine Eurorack sequencer module.

## Advance Section

Click these buttons to generate notes by adding one or more new bits to the shift register

- 0 adds an 'off' bit
- 1 adds an 'on' bit
- R adds a random bit (which is controlled by the Big Knob)
- R x Length is the same as clicking R Length number of times

## Big Knob

Determines how the new bits in the register are created. With the knob at the center 12 o'clock, the new bit's value will be random. Turning the knob right or left reduces the amount of randomness.

## Register Viewer

Displays the first 8 bits in the shift register. These are used to determine the pitch

## Length

The number of bits to loop within the shift register

## Clear

Clear the internal shift register and any notes that this device created

## Pitch Range

Scales the overall range of the generated pitches.

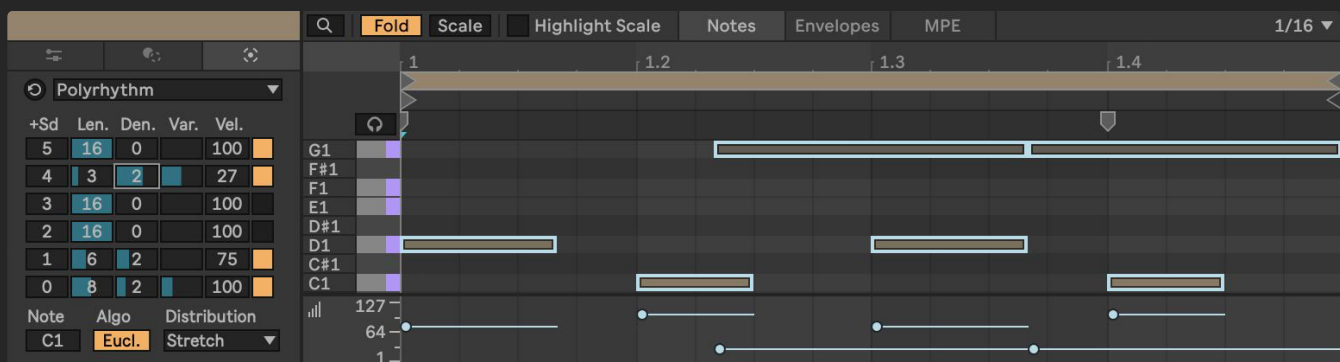


## Weights

Controls how the pitch is calculated from the bit values. In general, the greater the area under the sliders, the greater the pitch range will be.

## Pitch Offset

Shifts the generated pitches up and down.



Click the buttons in the Advance section to build the clip. Clicking 0, 1, or R will build the pattern 1 bit at a time. Clicking R x Length builds the entire pattern from Length bits.