CHANCE ENGINE

MANUAL + USER GUIDE

Chance Engine

Obligatory Legal Stuff

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Thank you for purchasing this creative Max for Live MIDI effect!

License Agreement:

Chance Engine

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Change Log

v1.7

- Added Scale Awareness for Live 12
- Updated GUI

v1.6

- Added a new base rate divider, calculated after the multiplier, for a wide range of tupletted and other polyrhythmic timings
- Improved support for included presets

v1.5

- Added a new randomization mode, Decide, similar to the recently added mode in Pattern Engine, wherein pitch randomizations will be selected between two possible note-relative values specified by the minimum and maximum pitch randomization sliders
- Added a new timing section consisting of:
    - Swing quantization chooser (None, 8n, 16n, 32n)
    - Swing intensity slider (only active with a swing quantization value other than None selected)
    - Swing chance dial (only active with a swing quantization value other than None selected and a swing intensity value above zero) - this allows you to randomize whether eligible notes will be swung on a per-note basis
    - Humanize slider to add additional, short, randomized delays, with higher values increasing both probability of notes being delayed and the maximum delay length, up to 100ms
- Bug fixes and performance optimizations

v1.4

- Bug fixes and optimizations

v1.3

- Bug fixes and optimizations

v1.2

- Added Cycle Reset option to reset pulse generation cycles at intervals measured in bars3
- Added bundled Global Hub compatibility, with local pin option to ignore Global Hub settings
- Added Live 11 scales
- Bug fixes and optimizations

v1.1

- Bug fixes and optimizations

Chance Engine

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Important Info

Chance Engine is a MIDI effect, which means it *cannot* be used on audio tracks, and *must* be placed *before* instruments.

It also does not generate MIDI notes in default Process mode, so be sure to trigger a MIDI clip on the MIDI track where you've placed it — or switch to Generate mode to produce MIDI notes using nothing but Chance Engine itself.

Finally, this device requires Live Suite with Max for Live installed. We strongly recommend Live 10.1.x or higher with Max 8.1.x or higher.

Chance Engine

Installation Instructions

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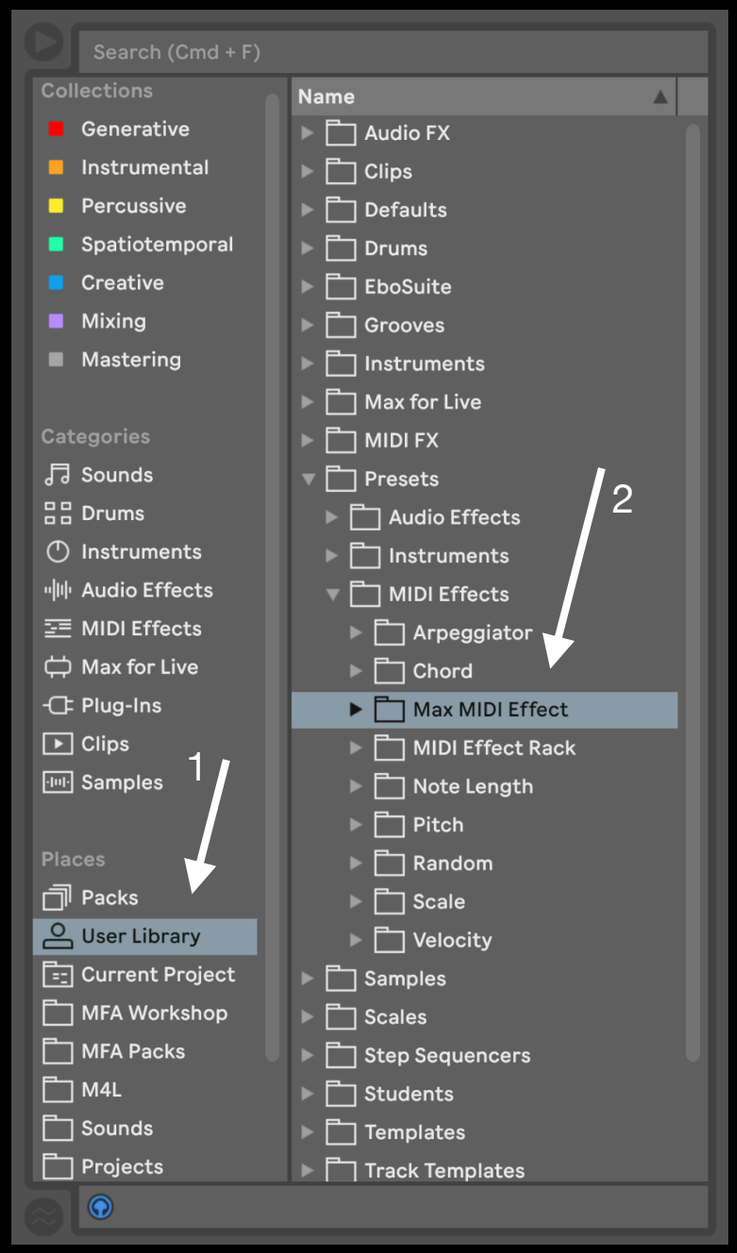

To install Chance Engine, first double-click to uncompress the ZIP archive it arrived in. Presumably you've already done this, because you're reading the manual, also included in said ZIP — good job!

Now you just have to drag the subfolder (named *MFA Chance Engine*) containing the actual .amxd file along with included .adv presets from Finder (Mac) or Explorer (Windows) to the User Library of Live's Browser (Arrow 1 at left). This will copy the required files to your User Library.

We recommend dragging it to the specific folder pictured here: User Library → Presets → MIDI Effects → Max MIDI Effects (Arrow 2 at left). From that point, we might humbly suggest adding it to an appropriate Browser Collection, if applicable.

Chance Engine

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Device Overview

Variety is the spice of life: change it up with the power of chance.

Chance Engine adds random fluctuations to the most important parameters of incoming MIDI drums, melodies, and harmonies in real-time. Create musical variations by adjusting the probability incoming notes will play, be held, or change in velocity, octave, timing, and pitch.

Velocity, octave, and pitch ranges are easily specified, while the resulting output can be transposed, all within a selected key and scale. Note pitch can be randomized with each new note-on message or at specific rhythmic intervals, with three modes of note randomization to choose from: pure Chance, stumbling Drunk, binary Decide, or a Fluid mode based on quantum modelling of particle motion in liquid that results in uniquely lyrical output.

Switching from default Process mode to Generate allows Chance Engine to produce its own MIDI notes internally. Adjust your base MIDI note manually in the default Internal mode, or set it to Receive mode to adjust base note transposition via MIDI input. Then select a rhythm by combining a metrical base rate with a multiplier, along with optional offset — or go freestyle using millisecond timing instead. Generated output is then probabilistically processed by the randomization controls just as described in Process mode above.

Experiment, have fun, and capture your results to new MIDI or Audio Clips by recording them to other tracks in Live.

Chance Engine

Visual Guide: Process Mode

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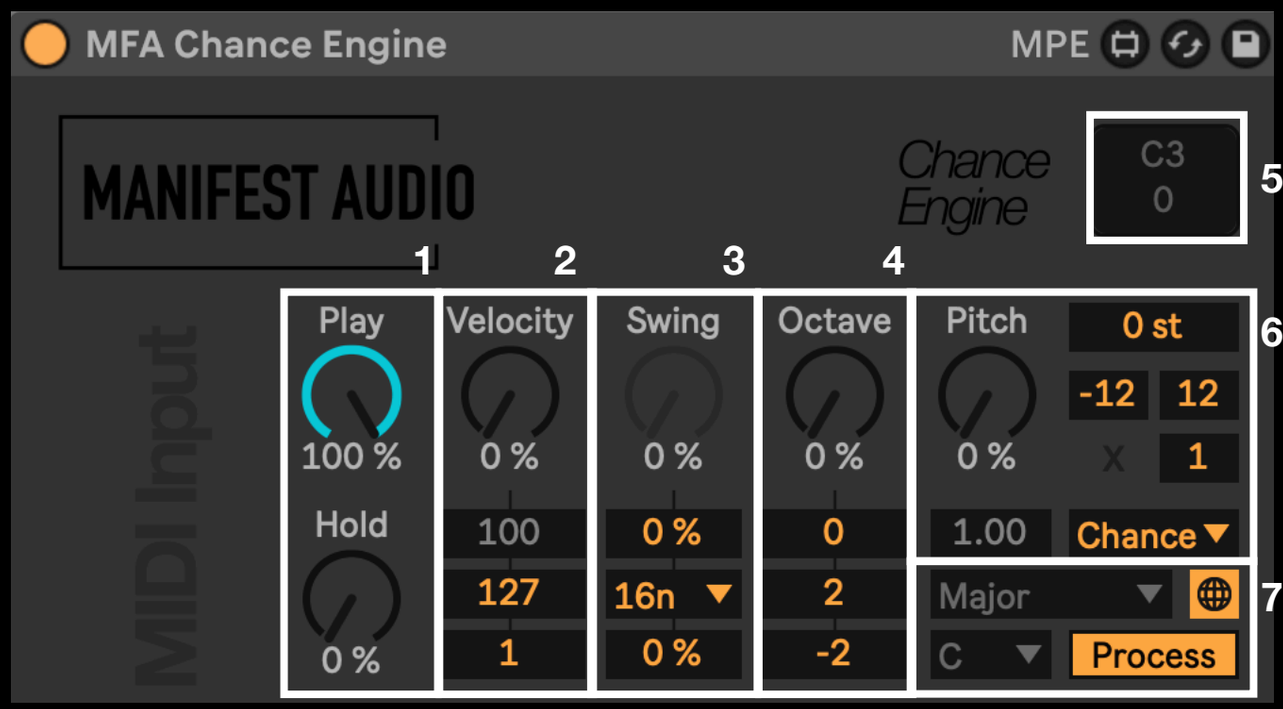

1 · Top dial determines the chance incoming notes will be sent to the output; 100% means they will always play, 0% means they never play. Bottom dial determines the chance notes will be sustained - perfect for adding note tie glides to monophonic instruments with portamento.

2 · The dial up top determines the chance incoming note velocity will be randomized within the range determined by the minimum velocity output slider at bottom, and the maximum velocity output slider just above that.

3 · The top dial determines not the amount of swing, but the chance that notes will be swung as per the settings below. The slider below the dial is the degree of swing, while the the chooser below determines which rhythmic intervals are eligible for swing; with the top slider set to 0% and/or no rhythmic interval selected, the swing chance dial will be inactive. The bottom humanization slider allows for short randomized delays to note timing.

4 · This dial determines the chance that the octave of incoming notes will be randomized, with the slider directly below setting the base octave, and the sliders below that adjusting the maximum and minimum octave range.

5 · This display shows the outgoing MIDI note value and velocity; click here to flush stuck notes.

6 · The main dial determines the chance of incoming note pitches being randomized. The slider at top right transposes all note output together; the two sliders below that determine the range within which notes will be randomized above and below their incoming pitch values. The multiplier determines how often notes will be randomized; at the default x 1, each note will trigger a random value, but you can change this to a multiple of 16th notes with, for example, pitches only randomizing every 1/2 bar at 16n x 8. The mode menu determines whether notes are randomized according to pure Chance, using a Drunk random walk algorithm, or using brownian motion to emulate the random fluctuation of particles in a Fluid state.

7 · Select the scale and key to which all outgoing note pitches will conform. With the default Global mode enabled, Chance Engine will receive the scale and key from Live 12 or an instance of Global Hub added to the set; click the globe icon to pin the scale and key locally to the device - particularly important for saving presets where the scale and key are relevant. Click the Process button to toggle into Generate mode and vice versa.

Chance Engine

Visual Guide: Generate Mode

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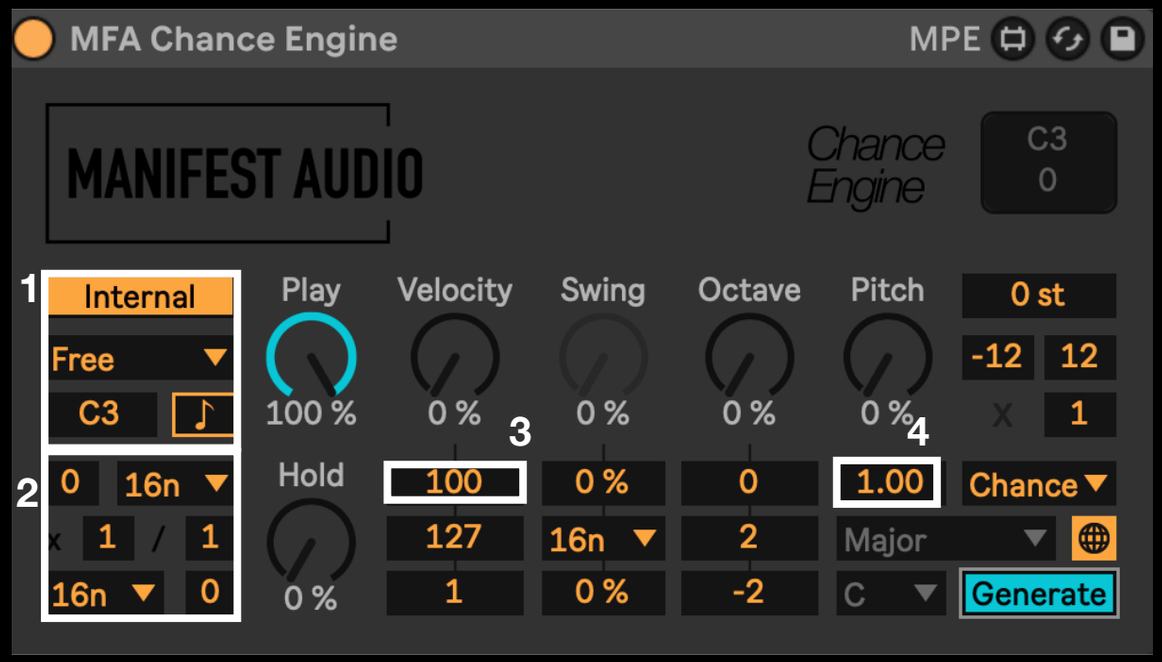

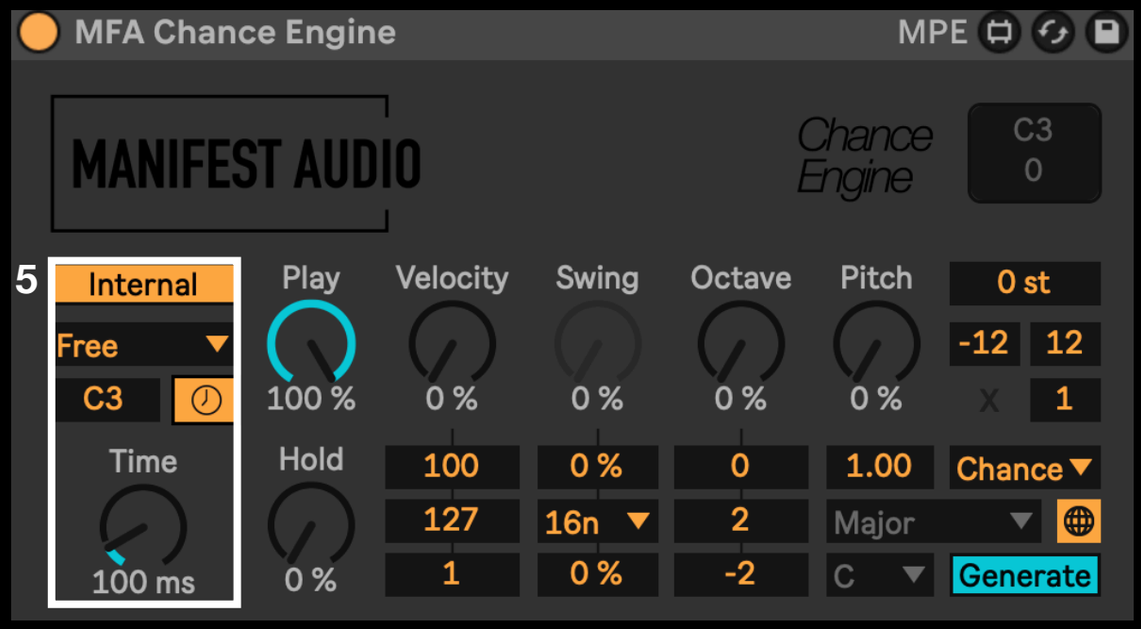

1 · After switching to Generate mode, pulse pitch settings appear here. With Internal mode, base note pitches are determined via the slider that reads C3; in Receive mode, base note pitch is transposed by incoming MIDI. In Free mode, note generation continues freely, Gate mode only generates while receiving MIDI input, and Side mode only generates when there is no MIDI input. The note symbol toggles sync mode off and on.

2 · The chooser up top determines the base rate of generated pulses, the slider below left determines the multiplier, and right of that the divider; 16n with a multiplier of 3 and divider of 1 will generate a pulse ever three sixteenth notes. Similarly, the menu at bottom determines the base offset: if you don't want pulses to begin on the first downbeat of your transport, you can select an offset rate here, with an offset multiplier in the slider at bottom right. The very top left slider resets the pattern in bars, with the default of 0 never resetting.

3 · In Generate mode, the new slider that appears below the Velocity dial determines the base velocity of generated pulses prior to randomization.

4 · The new slider that appears below the pitch dial determines the note duration as a factor of the base rate; a base rate of 16n with a duration multiplier of 0.50 will generate note pulses with a length of thirty-second notes.

5 · Toggling out of sync mode generates notes at millisecond intervals adjusted by the Time dial that appears; the Time dial inherits timing from the sync mode — and vice versa — for seamless performative transitions between both modes. Prior to receiving clock information from Live's transport, the default value will be 100 milliseconds.

Chance Engine

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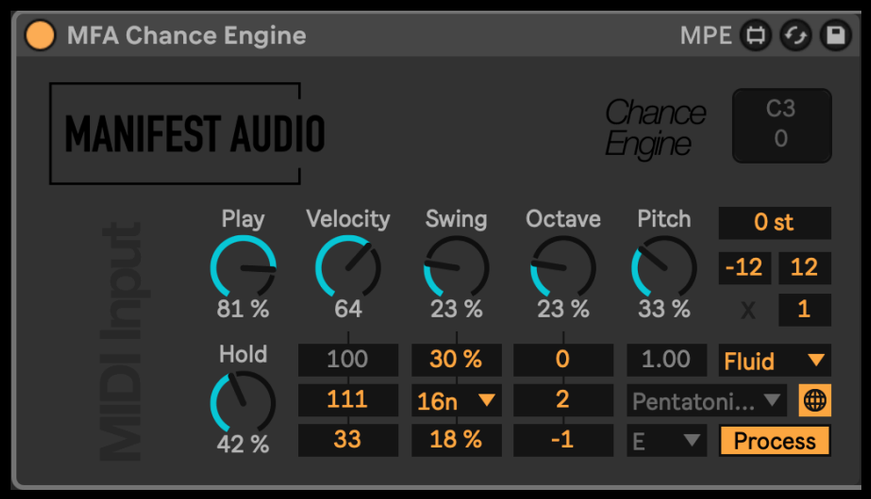
Advanced Usage

All Chance Engine parameters are annotated in the Info View, mapped to banks for control via Push, and available for MIDI or Key mapping and automation. Automate the Play amount to express musical intensity by increasing musical density— or assign this to a MIDI controller to adjust this property real-time in a Live set.

By default, note pitch is randomized with each note on, but by adjusting the randomization multiplier, randomization can occur at specific intervals by multiplying the base rate in Generate mode, or sixteenth notes in Process mode. For example, in Process mode with the default of 16n, a multiplier of 32 would randomize note pitch values every two bars.

In Generate mode, the playback mode chooser is set to Free, so notes will be produced regardless of MIDI note-on or note-off messages. In Gate mode, Chance Engine only generates notes so long as incoming MIDI notes are held; in contrast, Side mode only produces notes during rests, when no MIDI notes are being received. Try Gate or Side modes for call-and-response musical conversations based on MIDI input triggers — and try using Receive mode to simultaneously transpose base pitch according to the same MIDI input.

Explore the included 16 presets, grouped by Process or Generate mode, to get a feel for its potential.



← In this instance, incoming MIDI notes will play 81% of the time with a 42% chance of being sustained. Velocity will be randomized 64% of the time within a range of 33 as the minimum and 111 as the maximum. 23% of 16th notes will be swung to 30% with 18% humanisation applied. Note Octave will be randomized 23% of the time, going no lower than -1 or higher than 2. Pitch will be randomized with each note on message according to Fluid randomization 33% of the time. This will all be transposed down by 12 semitones and expressed through a Pentatonic mode in the key of E.

Chance Engine

Example Configurations

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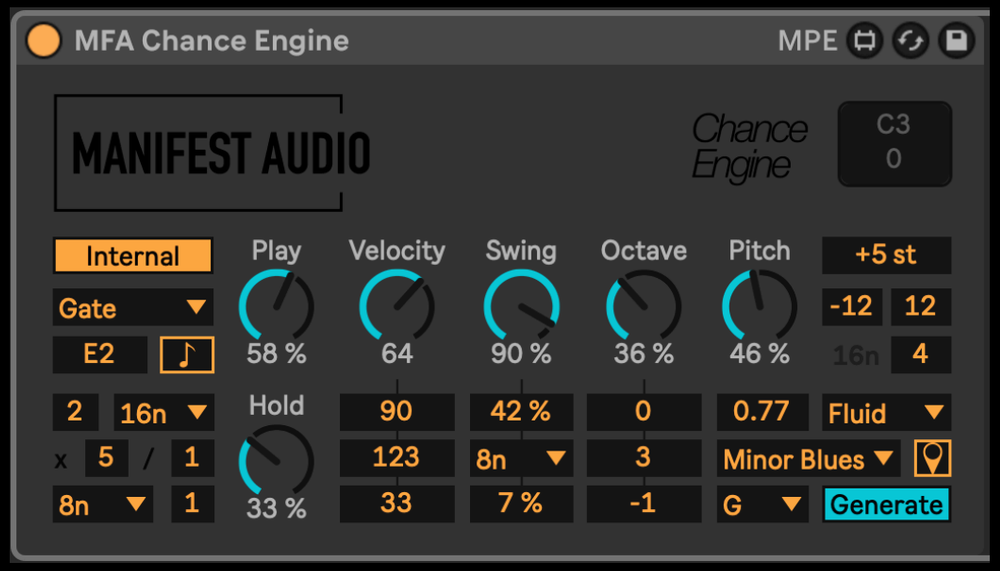
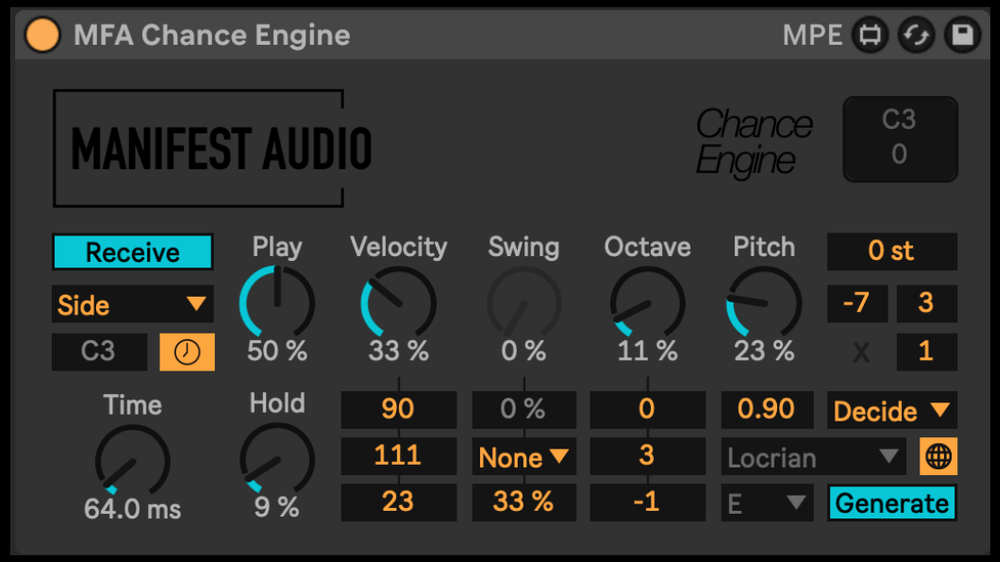


← In this scenario, notes are produced internally every fifth 16th note with a base pitch value of E2. The transport start point is offset by an eighth note. Overall, this rhythmic pattern will reset every two bars. Set to Gate mode, pulses will only be generated while incoming MIDI notes are held. There's a 58% chance generated pulses will actually play, and a 33% chance they'll be held. The base velocity value is set to 90, with a 64% chance of randomization between a minimum velocity of 64 and a maximum velocity of 123. 90% of the time, 1/8th notes will be swung to 42%, with just a touch of humanization at 7%. Note octaves will randomize 36% of the time, trending a bit higher than E2 with the minimum octave set to -1 and the maximum set to 3. Notes will be 77% (0.77) of a sixteenth note in length, and randomize every quarter note (16n x 4) within a standard range of -12 to 12 in a Fluid randomization mode. All this will be transposed 5 semitones up within a Blues scale in the key of G, pinned locally to the device.



← This is an example of Receive mode: Chance Engine will transpose and display generated base note values according to incoming MIDI. In Time mode, these pulses will be triggered every 64 milliseconds, with a 50% chance of playback and a 9% chance of sustain. Because it's in Side mode, these pulses will only be generated between incoming MIDI notes, though those MIDI notes, when received, will still determine the base pitch value. Generated pulse velocity is set to 90 but will randomize 33% of the time between a minimum of 23 and a maximum of 111. No swing will be applied, but 33% humanization will provide some timing variance. Octave is set to randomize 11% of the time between -1 and 3, while note pitch will randomize to either -7 or +5 of the current pitch 23% of generated pulses, with the duration set to 90% (0.90) of 260 milliseconds. Resulting output will be expressed through a Locrian mode in the key of E.

Chance Engine

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FAQ

Chance Engine isn't doing anything — what's wrong?

Chance Engine's default Process mode does not generate MIDI, it only processes MIDI, so be sure MIDI is being fed into it from a Clip or a generative MIDI effect. Make sure the device is on, receiving MIDI, and the Play chance dial is above 0% — or switch to Generate mode to produce MIDI internally; in Generate mode, make sure the Playback chooser is set to Free.

Notes aren't randomizing with each new note input — why?

Make sure the note randomization multiplier is set to 1 or else randomization will occur at multiples of your base rate in Generate mode, or 16n in Play mode. Turn the Pitch randomization dial up to increase the chance of random values being generated.

Randomized note values are barely changing even with the Pitch randomization at a high value — what gives?

Make sure the random mode is set to Chance or Fluid, not Drunk — even at 100%, Drunk mode will only randomize to adjacent note values.

Output sounds super, well, random — not musical at all — what can I do?

Make sure to select a musical scale that is not simply Chromatic; it's best to select the same scale and key for all the devices and clips in your set to maintain harmonic coherence.

MIDI notes are getting stuck for some reason — what should I do?

The MIDI note output display in the upper right of Chance Engine's GUI doubles as a MIDI flush button — in the rare case of emergency, just click there.

I don't want Chance Engine to conform to Live 12 or Global Hub's scale and key — is this possible?

Any device that can be impacted by Global Hub has a Global toggle; click this to pin the scale and key to Local Chance Engine settings. Toggling from Local back to Global mode will automatically force the device to inherit Live 12 or Global Hub settings.

Chance Engine scale and key are not saved with my Live set or presets — what's wrong?

For device scale and key to be stored locally with a set in versions older than Live 12 without an instance of Global Hub, or with a preset, the scale and key Global mode must be toggled to pin the scale and key to Local Chance Engine settings first. Toggling from Local back to Global mode will automatically force the device to inherit Global Hub or Live 12 scale settings.

Thank you for supporting us by purchasing this device — we hope it inspires your creativity!

For more information, video tutorials, and other devices, please visit us online at: **manifest.audio**

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