



Reik is an LFO for Ableton Live that wanders instead of going round. Each of its nine sources is a small simulation of something that moves on its own, and it can move any parameter in your set.

- 1 Drop Reik on any track. It is an audio effect that lets the sound through untouched.
- 2 Click the MAP square, then + A. Click the new row's MAP, then any parameter in Live: a filter's frequency, a pan, a send.
- 3 The parameter moves within the band on the row's slider. Drag the band's ends sideways to set how far.
- 4 Close the window with × at the top right and click the Source square for the next of the nine sources.
- 5 Drag Speed up or down for faster or slower motion, Smoothing for a softer one.



Most of the device is the scene: the source's simulation itself, drawn live. Along its bottom run its two outputs, A in orange and B in blue, over a dark zero line. Under it, one row of eight squares. The colours are those of the Plip Plop plugins, whatever theme Live is in.

Playing it

Drag Speed, Smoothing or a Depth up or down to change it. A click on Source moves on to the next source, a click on MAP opens the Map window, a click on the lock opens or closes it, and while the lock is open a click on the die draws a new seed.

Reading it

Point at a square and its name and value appear above it. Its dots follow the value: the lit dot of Source is the source playing, the rows of Speed grow denser, the zigzag of Smoothing straightens, the columns of Depth grow and MAP shows a dot for every target. The die is bright while the lock is open.

**SOURCE**

9 sources

Which simulation moves the LF0. Click the square for the next of the nine; after the last comes the first. Its lit dot shows which one plays.

**SPEED**

0.05-8×

How fast the simulation runs: a time scale, not synced to the tempo of the set. At 1× most sources change at about 0.05-0.3 Hz.

**SMOOTHING**

0-10 s

Extra smoothing of both outputs, from none to a long, slow glide. The first half of a drag covers the short times, up to 2.5 s.

**MAP**

16 targets

Opens the Map window, where you choose what Reik moves. Its dots count the targets of A (light) and B (blue).

**DEPTH A**

-100 to +100%

Scales output A for all its targets. At 0% they rest in the middle of their ranges; below zero the motion turns upside down.

**DEPTH B**

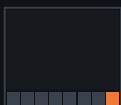
-100 to +100%

Scales output B, the second quantity of the same simulation, for all its targets.

**SEED**

1-255

The die. Which walk the source takes: the same seed gives the same motion at the same place in the song. With the lock open, click the die for a new walk; with the lock closed, the die is dark and rests.

**SEED MODE**

fixed / random

The lock, last in the row. Closed (fixed): the motion comes from Seed. Open (random): every Play and every click on the die set off from a new random seed. Closing the lock keeps the seed playing as Seed.

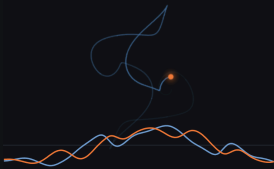
Automation

Every square, and every setting of every target, is a Live parameter: automate it in the arrangement, move it from a clip envelope, or map it to MIDI, a key, a macro or another LFO.

A target's settings are named after its number: T1 Output, T1 From, T1 To, T1 Curve, T1 Invert and T1 Mute, up to T16. The Map window shows the number under the parameter's name. Removing a target frees its number; a new target may take it with fresh settings, while the automation of that number stays.

A click on the Source square moves on to the next of the nine sources, in the order below; after the last comes the first. The lit dot of the square shows which one plays, and pointing at it shows its name.

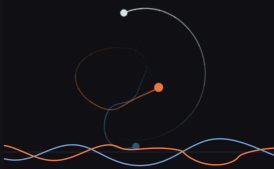
Each source is named after what it computes. Every one gives two outputs: A, its main motion, and B, a second quantity of the same scene, related to A but never the same.



Thomas attractor

A turning chaotic attractor: one smooth path through three dimensions that never closes.

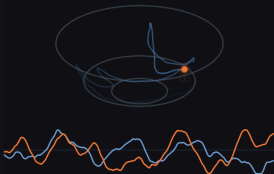
- A The path's x.
- B Its y.



Three-body problem

Three bodies pulling at each other in a weak field that keeps them together.

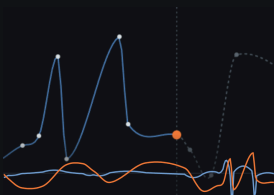
- A The first body, across.
- B The second body, across.



Langevin equation

A grain of pollen jittering in a bowl: it rides up the wall, its shadow stays on the bottom.

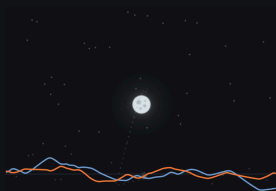
- A The grain's x.
- B Its y.



Catmull-Rom in Poisson time

A smooth curve through random points that come at random moments, about 1.7 s apart; you can see the next ones coming.

- A The curve.
- B Its slope: how fast it rises or falls.

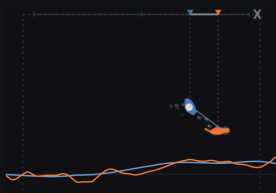


Levy flight

A moth at the moon: short flutters, then a sudden long flight.

A The moth's x.

B Its y.

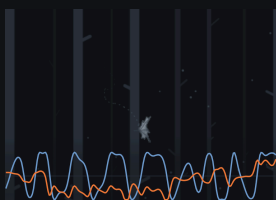


Spring on OU walk

A dog on a lead: the owner wanders, the dog follows on a spring and runs off to sniff now and then.

A The dog.

B The owner.



Andersen-Pesavento-Wang

A maple leaf falling through restless air.

A How fast it drifts sideways.

B How far it tilts.

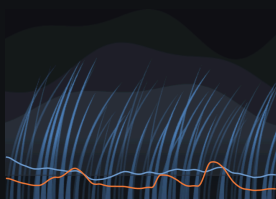


JONSWAP spectrum

The open sea, thirty waves of a JONSWAP spectrum, and a raft of seven logs rocking on it.

A The height of the sea under the raft.

B The groups of waves: the swell's envelope.



Ornstein-Uhlenbeck + gusts

Wind in tall grass under the mountains, with gusts at random moments, about every 8 s.

A The wind, gusts and all.

B Its calm turbulence, without the gusts.

Reik's motion is random, but not random every time you play. With Seed Mode on fixed it depends only on the source, the seed and the place in the song: the same bar always moves the same way, wherever you start playing, a loop repeats its motion every time round, and a render sounds exactly like playback.

When Live stands still the motion runs on freely. Press Play and it moves to the place in the song with a 10 ms glide. Speed scales the song's time, so at 2× each bar moves the way a bar twice as far into the song would at 1×.

If you automate Speed or the tempo, starting in the middle of the song lands close to, not exactly on, the motion you hear when playing from the start; playing from the start is always exact.

Random

Open the lock (Seed Mode on random) and every Play sets off on a new walk from a new random seed, from its beginning; jumps and loops do not bring the motion back, and a render draws a seed of its own. A click on the die draws a new walk at once. Seed keeps its value meanwhile.

When a walk sounds right, close the lock: the seed playing becomes Seed and the mode goes back to fixed, so the walk stays with the song and in the render. While the lock is closed the die is dark and does not react; Seed can still be automated.

The screenshot shows the REIK MAPPING interface. At the top, it says 'MAPPING' and '4 / 16'. Below this, there are four targets, each consisting of two lines. The first target is 'A Frequency T1 · Auto Filter' with a range bar and buttons 'lin', 'inv', and 'M'. The second target is 'B Width T2 · Utility' with buttons 'lin', 'inv', and 'M'. The third target is 'A Feedback T3 · Echo' with buttons 'exp', 'inv', and 'M'. The fourth target is 'B MAP' with buttons 'lin', 'inv', and 'M'. At the bottom, there is a bar with three buttons: '+ A', '+ B', and 'values'. On the right side, there are three icons: a blue dot, a blue square, and a blue 'X', with labels 'close', 'clone', and 'remove' respectively. A label 'lin/exp, inv, M' points to the buttons on the right of the targets.

Annotations in the image:

- A or B: points to the 'A' or 'B' label of a target.
- parameter: points to the parameter name (e.g., 'Frequency T1').
- range: points to the range bar of a target.
- MAP: points to the 'MAP' button in the fourth target.
- + A, + B: points to the '+ A' and '+ B' buttons at the bottom.
- close: points to the blue dot icon.
- clone: points to the blue square icon.
- remove: points to the blue 'X' icon.
- lin/exp, inv, M: points to the buttons on the right of the targets.

Each target takes two lines. On top: A or B, the parameter with its number and device, clone and ×. Below: its range, lin or exp, inv and M. At the top right: the count of targets and × to close the window; at the bottom: + A, + B and values.

- 1 Click the MAP square: the Map window covers the device.
- 2 Click + A or + B. A new row appears, with MAP in place of a name.
- 3 Click the row's MAP. It blinks while it waits: click any parameter in Live. later stops waiting.

Up to sixteen targets, from A and B in any mix. A parameter can be a target only once, and Reik's own parameters cannot be targets.

Range

The slider shows where the parameter goes: the band is its range, the white line its own value and the white dot where it is now. The dots above are its last four seconds, newest at the bottom. A new target starts at 25% either side of the parameter's value.

Drag an end of the band sideways to move it, or the band between to move both. values shows the ends as numbers instead, to type or to map.

Shape

lin or exp sets the curve, inv turns the motion upside down, and M mutes the target, holding the parameter at its own value.

A or B, clone, unmap

Click A or B at the start of a row to switch its output. The clone button copies the row's settings into a new row under it, which waits for its own MAP: a parameter has one modulator, so a clone needs a parameter of its own.

Point at a mapped parameter's name and it becomes UNMAP: a click frees the parameter and keeps the row and its settings. × removes the row and its mapping.

The parameter is Reik's

A mapped parameter turns grey in Live and moves within the range you set, even if it sat at zero. Its own value stays in the set and comes back when you unmap or remove the target. Targets and their settings are saved with the set.

More than four

The window shows four targets at a time. With more, a number at the top counts those above and a number at the bottom right those below: click one to scroll.

A few places to start.

Wind	Ornstein-Uhlenbeck + gusts on A to a filter's frequency: a calm sway, and now and then a gust opens it up.
One gesture	A to a pan and B to a reverb send from the same source: two parameters that move as one gesture, not two machines.
Twins	Clone a row and map the clone to a second filter: both follow the same motion, each in its own range.
Tide	JONSWAP spectrum at a low Speed with some Smoothing on the detune or volume of a pad: a slow swell with groups of bigger waves.

Reik is a Max for Live device: it needs Live 12 Suite, or Live 12 Standard with Max for Live, on Windows or macOS. It comes as a ZIP with the file Reik.amxd, the same file for both systems.

Windows

- 1 Extract the ZIP: right-click it and choose Extract All.
- 2 Copy Reik.amxd into your User Library, by default Documents\Ableton\User Library, for example into Presets\Audio Effects\Max Audio Effect\Plip Plop.

macOS

- 1 Double-click the ZIP to extract it.
- 2 Copy Reik.amxd into your User Library, by default Music/Ableton/User Library in your home folder, for example into Presets/Audio Effects/Max Audio Effect/Plip Plop.

In Live

Live lists Reik in the browser under User Library. Drag it onto any track, or drag Reik.amxd straight from its folder onto a track. If your User Library is somewhere else, Live shows where in Settings, under Library.

To update, replace Reik.amxd with the new file; your sets keep their targets and settings. To uninstall, delete the file.

Reik

version 0.2

Studio	Plip Plop
Website	plipplop.studio
Version	0.2 · Max for Live, Live 12
Built with	Max 9

Ableton and Max for Live are trademarks of Ableton AG. Max is a trademark of Cycling '74.