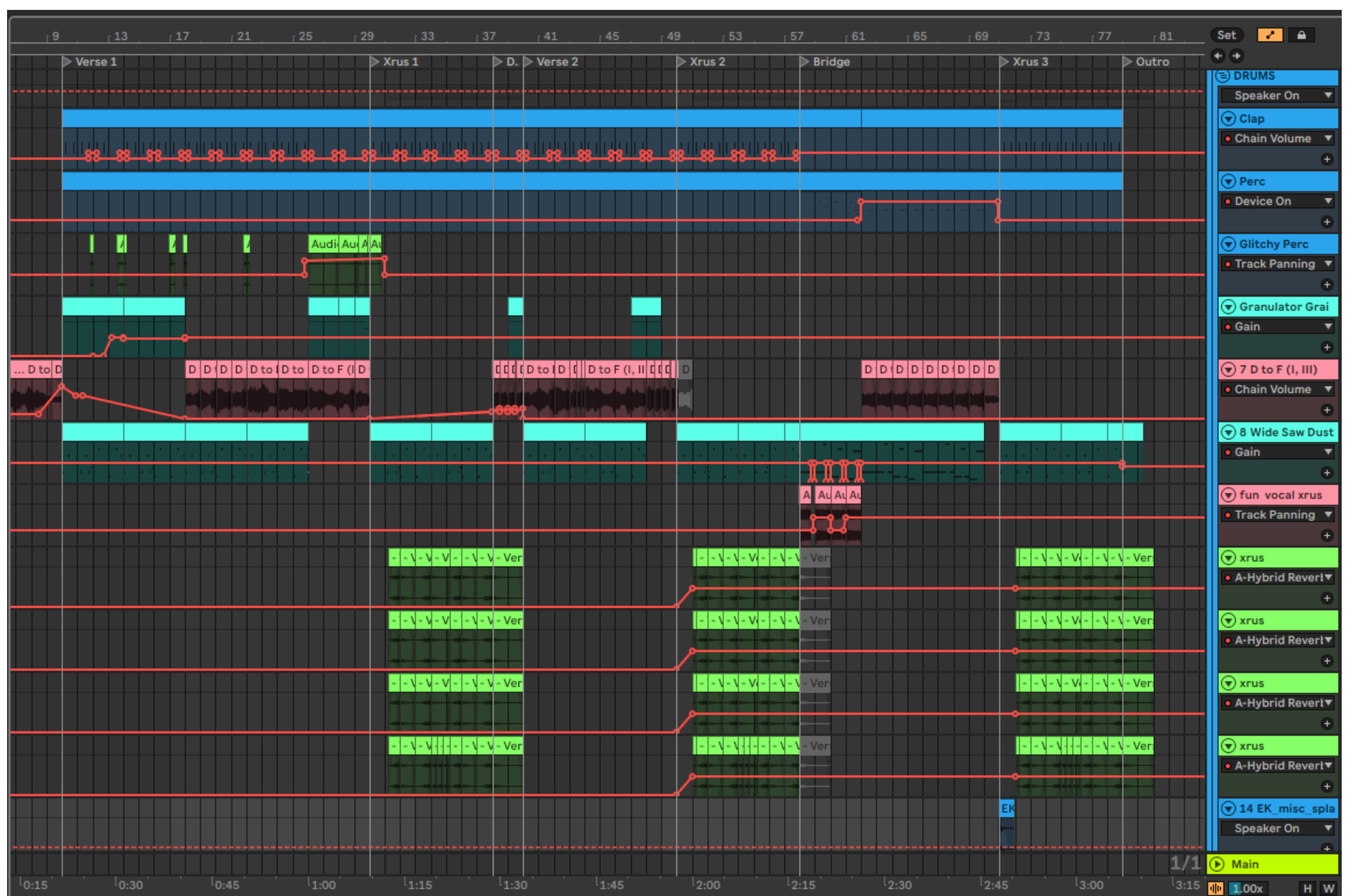


MASTERING MOVEMENT

by Lillian Frances

HEY, WHAT'S THE BIG IDEA?!

- Movement is one of the biggest differences that separates a demo from a polished track
- Movement helps us tell a story with our song
 - It's how we build up and break down the energy, tie different sections together, and guide the listener through the story of the song



Automation view.

THE TOOLS OF MOVEMENT

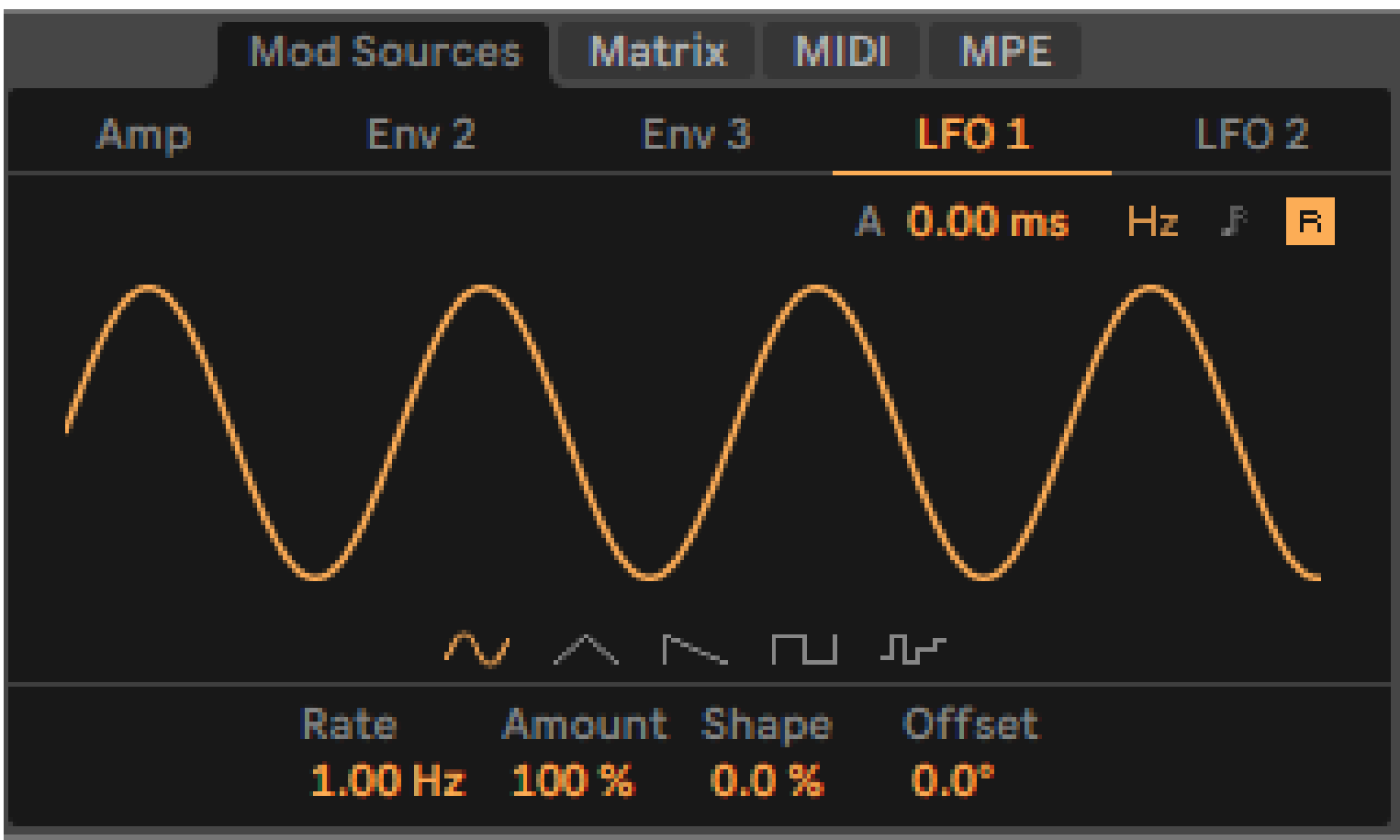
- The main tools of movement are:
 - LFOs
 - Sidechaining
 - Auto Pan
 - Automation

LFO

- An LFO is a Low Frequency Oscillator
 - LFOs are waveforms (oscillations) that's aren't meant to be heard, rather they are assigned to a parameter to move that parameter over time
 - You can think of it like a hand turning a knob back and forth automatically
 - LFOs can be sine waves (creating a smooth ciclical movement), saw waves, square waves, random, or really anything in between
- You can control almost any parameter with an LFO, but common uses include:
 - Filtler, cutoff, volume, panning, pitch
- How to use an LFO:
 - All LFOs are "same same but different"
 - You can find LFOs in most synths (including Ableton's Simpler and Sampler)
 - Ableton's LFO audio effect can be used to assign an LFO to most effects' parameters in your track
 - To use Ableton's LFO, you will need to hit "Map" and then click the parameter you want to assign the LFO to
 - To get the LFO working the way you want it to, adjust the rate (switch between Hz and Beat), waveform, and speed

 **Hot tip:** Try applying an LFO to a synth's pitch to create some lo-fi pitch wobles.

 **Hot tip:** With programmed drums, apply a small pitch LFO to the snare or hi hat within its Simpler device to create some subtle variation to the hits.



Wavetable's LFO



LFO Audio Effect



Simpler's LFO

SIDECHAINING

- Sidechaining is a process by which an audio effect is triggered by an input other than the track that it's on
- It allows you to use one sound to control the volume of another, and can create groove and space, allowing sounds to dance around each other

Sidechain Compression

- When one sound (like a kick) plays, another sound (like a bass) gets quieter
- How to do it:
 - Put a compressor on a pad, bass, or other sound
 - Engage the sidechain and select the kick (or whatever other sound you want it to bounce with)
 - Lower the threshold until it ducks
 - Adjust the threshold, ratio, attack and release to taste

🔥 **Hot tip:** Sidechain compress percussive loops to the kick to get lots of bounce in your drums.

Sidechain Gate

- Sound only plays when triggered by another sound
- How to do it:
 - Put a gate on a sustained sound
 - Sidechain it to a rhythmic source
 - Adjust the threshold so it opens and closes rhythmically

🔥 **Hot Tip:** Sidechain gate a pad to your kick to get it to bounce in time with the kick.



Sidechain compressing to the kick

AUTO PAN

- Auto Pan is a handy audio effect to automatically pan the sound left and right
- Adds stereo movement and interest to sounds
- Fun fact, an Auto Pan is just two LFOs – one on the left, one on the right – moving in opposition and controlling volume
- How to use it:
 - Put it on your track and adjust to taste the:
 - Rate (in Hz or Beat)
 - Amount
 - Shape of the LFO
 - Phase of the LFO

🔥 **Hot Tip:** For short, percussive sounds like hi hats and try a fast rate. For slower, more sustained sounds, try a longer rate.

🔥 **Hot Tip:** Set the phase of the LFO to 0 or 360 to turn it into a tremolo device. Switch the LFO shape to Saw Up or Saw Down to create a rising or choppy sound.

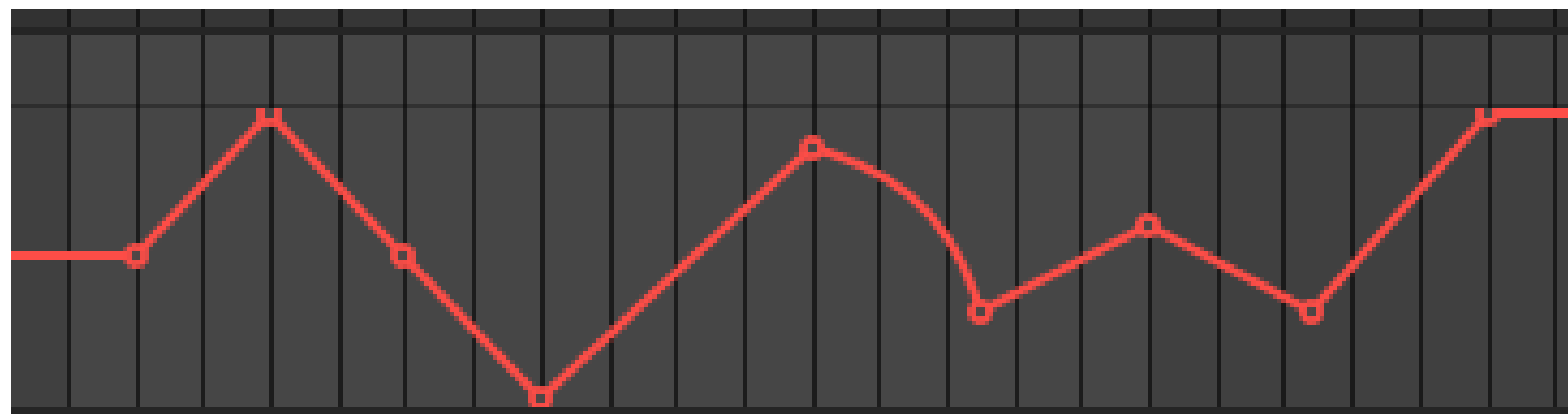
🔥 **Hot Tip:** Place the same LFO on two similar sounds (say, two pads playing simultaneously) and hit “invert” on one so they move opposite each other.

AUTOMATION

- Automation refers to manually changing the value of a parameter over time
- This is HUGEY important to creating movement in your tracks, as it allows you to move basically any parameter however you want!

Track Automation

- To draw in track automation, right click a parameter and select “show automation”
 - Your automation view will appear, and you will see the tracks become slightly greyed out with dotted red lines going across the track.
 - Hit “A” to turn on and off automation (just make sure your MIDI keyboard (M) is turned off!)
- To automate:
 - Click the dotted red line in the correct track to create a breakpoint
 - Once a breakpoint is created, the red line will become solid... you have officially automated your track! Continue to add breakpoints to shape your automation envelope
 - To delete automation, select it and hit delete, or click the breakpoint
 - Hold down Opt to create a curve

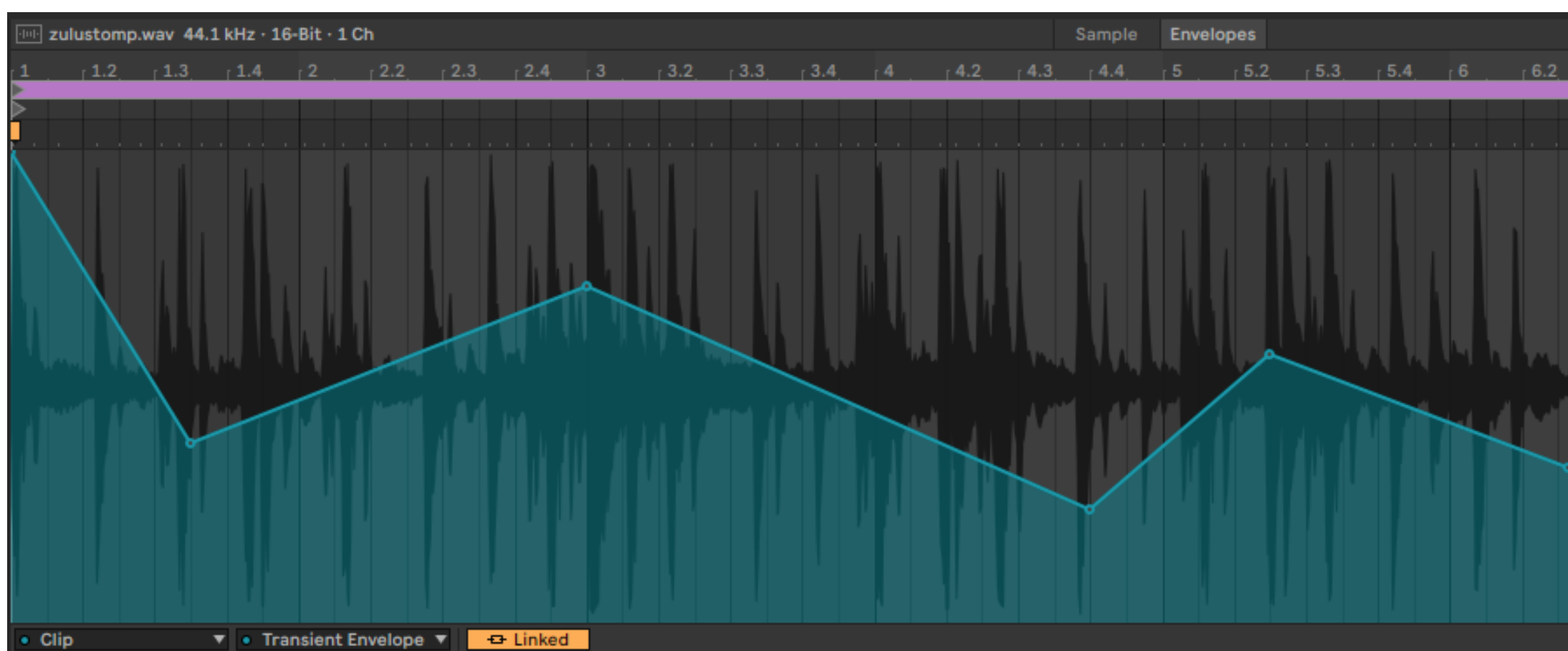


🔥 **Hot Tip:** If you're ever automating volume, *never automate the volume of track itself*; if you do this, you'll likely want to change the overall volume of the track at some point, and this will override your automation! Instead, automate the gain on a Utility effect on the track.

🔥 **Hot Tip:** Try automating a filter to slowly open, then close suddenly right before the drop for a powerful transition.

Clip Automation

- You may also automate on the clip level
- Use this method if you're automating in Session View, or automating a parameter that doesn't allow track automation (audio clip box parameters like Pitch and Transient Envelope, for example)
- To automate:
 - In your clip view, select the "Envelopes" option at the top
 - Choose your parameter in the bottom left
 - Draw in your automation

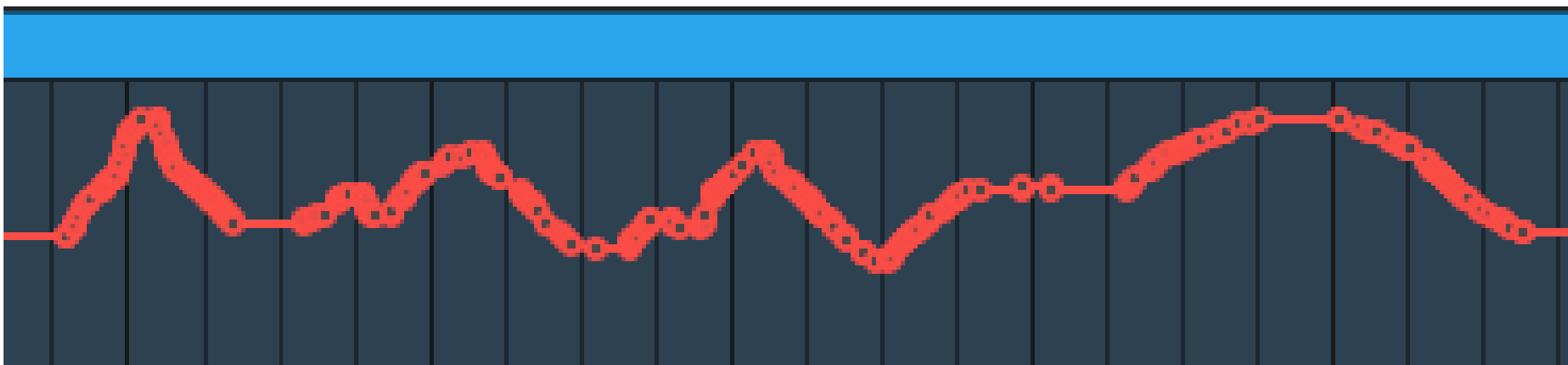


🔥 **Hot Tip:** Clip automation is very powerful for live performance in Session View; you can load up any clip with the automation you want, and it will be triggered when the clip is triggered.

🔥 **Hot Tip:** Try creating pitch bends for your bass this way.

Recording Automation

- You can easily record in your own automation if you want a more tactile experience
- To record in automation:
 - Turn on your Automation Arm button in the global controls bar
 - I'd also recommend keeping your MIDI Arrangement Overdub button (also in the global controls bar)
 - This ensures that as you're recording you won't record over MIDI information that's already there
 - Hit record and move your knobs and sliders in real time

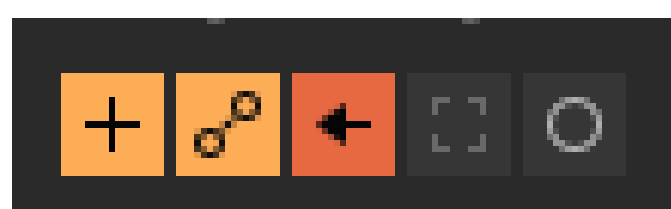


🔥 **Hot tip:** Too many breakpoints after recording? Select your breakpoints and choose "Simplify Envelope."

Beware! When a parameter is automated, you'll see a little red dot next to it; if this dot becomes grey it means you've overridden the automation and it's disabled. To re-enable your automation, click the "re-enable automation" button at the top of the screen in your global controls bar.



Disabled automation



Re-Enable Automation button