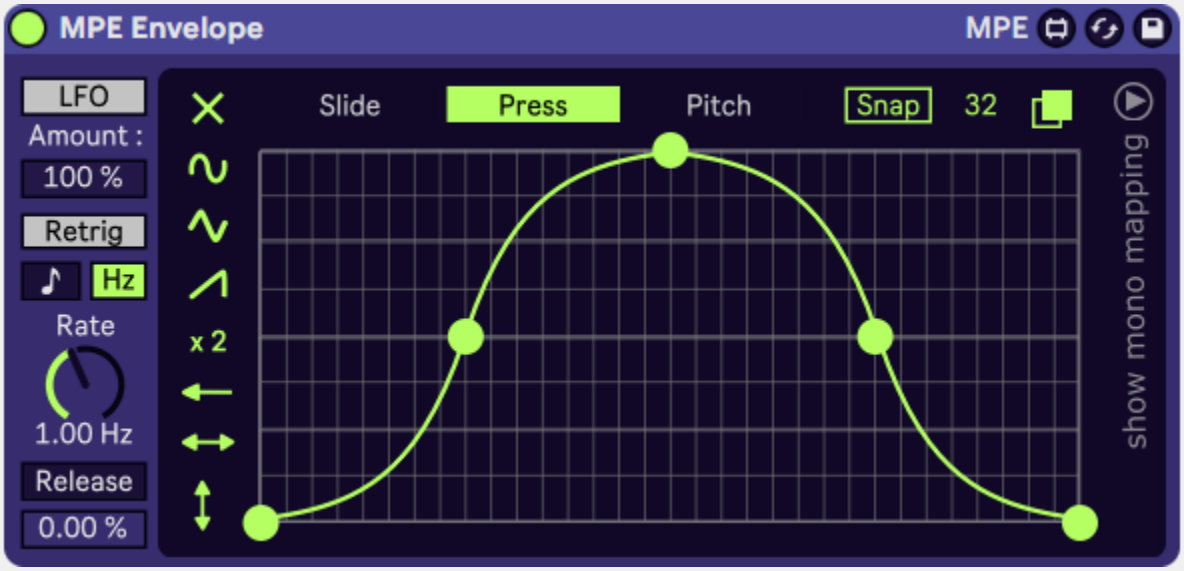
MPE ENVELOPE



MPE Envelope is a polyphonic modulation device which can be used with any MPE capable instrument or plugin. It features a user-experience focused overhaul of the standard Max for Live breakpoint editor.

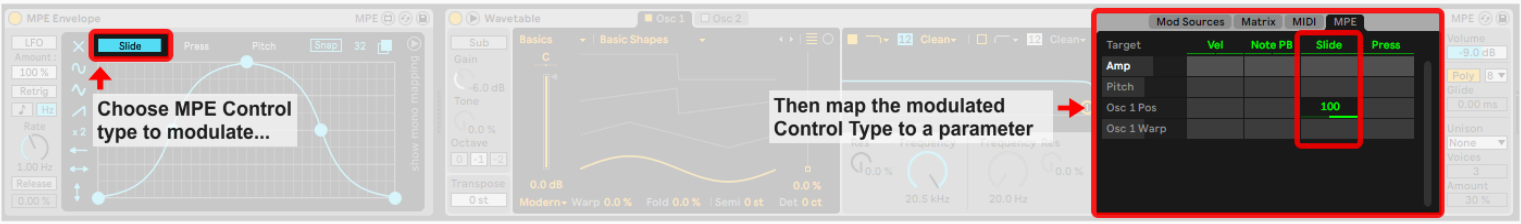
Its function is very similar to Ableton's Shaper, Envelope, and LFO devices. However, in addition to using the click-to-map system commonly found in Max for Live Modulation devices, MPE Envelope can also use an instrument's internal MPE modulation assignments. This allows for voice independent modulations which are not possible through the click-to-map process used by many modulation devices.

By leveraging MPE for external control over voice-independent parameters, MPE Envelope empowers users to quickly move complex rhythmic patterns between instruments and different sonic contexts... Similar to how one might loop a MIDI sequence while switching between presets.

MPE Envelope is great at creating synchronicity between instrument layers, and lets users move beyond internal modulator limitations in pursuit of their sonic vision. No MPE MIDI controller required!

USING MPE ENVELOPE

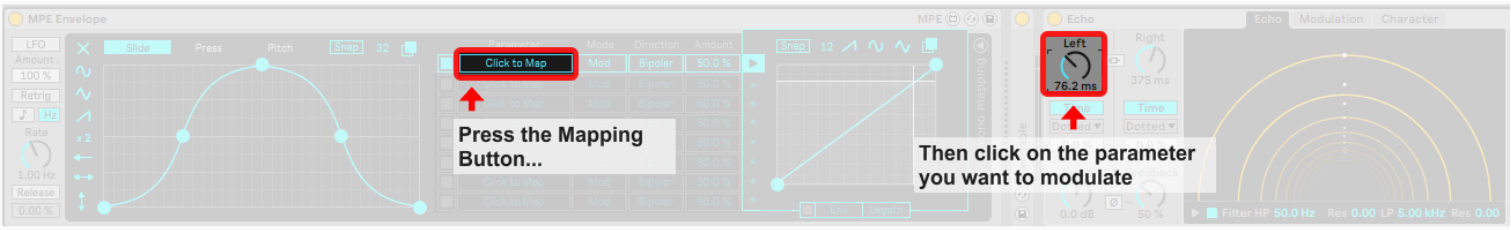
To apply polyphonic modulations to an MPE capable instrument…



1. Place the MPE Envelope in front of the instrument whose parameters you wish to modulate.
2. Make sure MPE is enabled by right clicking the instrument you wish to modulate, and selecting, “Enable MPE Mode”
3. Some plugins may require that an “MPE Mode” be enabled internally somewhere on the instrument’s user interface.
4. Using the instruments interface, map the MPE control type you wish to modulate to the parameters you wish to control.
5. Make sure that MPE Envelope is set to modulate that same MPE control type by selecting the associated tab along the top of the breakpoint editor.

MPE Envelope is now mapped to control a parameter in your instrument of choice. Play midi notes to trigger the modulations!

To apply monophonic modulations to any mappable parameter…

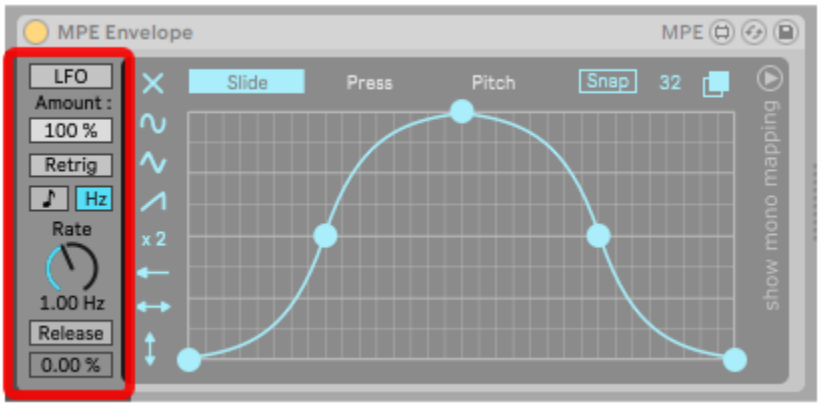


1. Reveal the “Monophonic Parameter Mapping” section of the device by clicking the text “show mono mappings” along the right side of the device.
2. Click on one of the buttons labeled “Click to map”
3. Inside of Live, navigate to the parameter you wish you modulate. Click on that parameter.
4. Back inside of MPE Envelope, fine-tune how the modulation pattern affects each specific parameter by adjusting the Parameter Mapping Mode, Modulation Amount/Range, Modulation Shape, and Modulation Retrigger Settings.
5. The “Advanced Settings Menu” to the right of the selected mapping gives you further control of Modulation Shape, Range, and Rettrigger settings on a “per parameter” basis.

MPE Envelope is now mapped to a parameter! Be aware that envelope/LFO retrigger behavior varies for mapped parameters due to their monophonic nature.

THE PARAMETERS

Section 1 - Modulator Settings



The "Modulation Mode" button
Choose between a looping “LFO” type modulation or a one-shot Envelope type modulation.

The "Modulation Amount" parameter
Sets the depth of unidirectional modulation going up from 0. The “modulation amount” parameter does not affect monophonic modulations applied through “parameter mapping”.

The "Retrigger mode" button
Enable/disable the use of a legato style retrigger mode.

The "Time Mode" & "Rate" parameters
Choose to set the LFO's rate in Hz or synced note durations. The frequency of modulation can be adjusted using the Rate Dial.

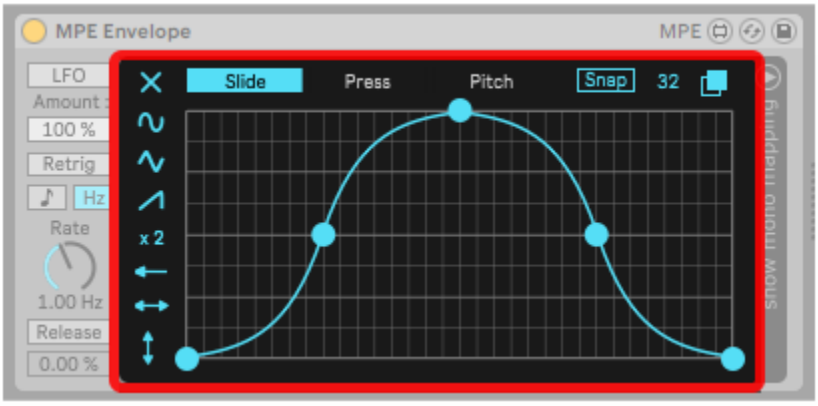
The "Release Mode" & "Release Amount" parameters
With "Release" enabled, midi note off events cause the modulated value to instantly change to a user defined value.

With "Release" disabled, the last position of the modulation envelope will function as the release value.

Set the value to which the modulation envelope will default when a MIDI note is released using the "Release Value"

These “Release parameters” do not affect monophonic modulations applied through “parameter mapping”

Section 2 - Shape and Target



The "Envelope Breakpoint Editor"
To use the breakpoint editor, click anywhere to add a breakpoint.

Shift + Click deletes existing breakpoints
Alt/Option + Drag curves a segment

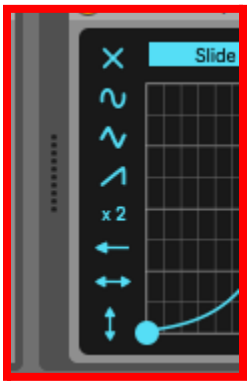
The “Pop-out Editor”
Click the “Pop-out Window**”** button to open the Pop-out Editor with a larger version of the breakpoint editor. Sometimes it is easier to make more precise adjustments to your modulation shapes using this bigger editor.

This popout window is resizable, so you can make the editor even bigger to get in close and make those fine adjustments. To change the size of the editor, click and drag on the edges or corner of the pop-out window. To close the pop-out window, click the “X” in the upper right hand corner.

The "Snap to Grid" & "Grid Size" parameters
Adjust the grid size using the number box to the right of the "snap" button. When the "snap" button is enabled, all breakpoints that you move/create get repositioned to align with the grid.

The "Modulation Target" tab
Choose an MPE control type for this device to modulate. Note that while “Slide” and “Press” are typically treated as unidirectional, pitch is bidirectional. For unidirectional control, the bottom of the breakpoint editor represents 0%. However for bidirectional control the middle of the breakpoint editor’s interface represents 0%.

Preset shapes
The buttons to the left of the breakpoint editor either load preset shapes into the breakpoint editor or transform the currently loaded shape. The “X” button clears all points from the breakpoint editor. And the three buttons beneath it load the waveform shape which they display.

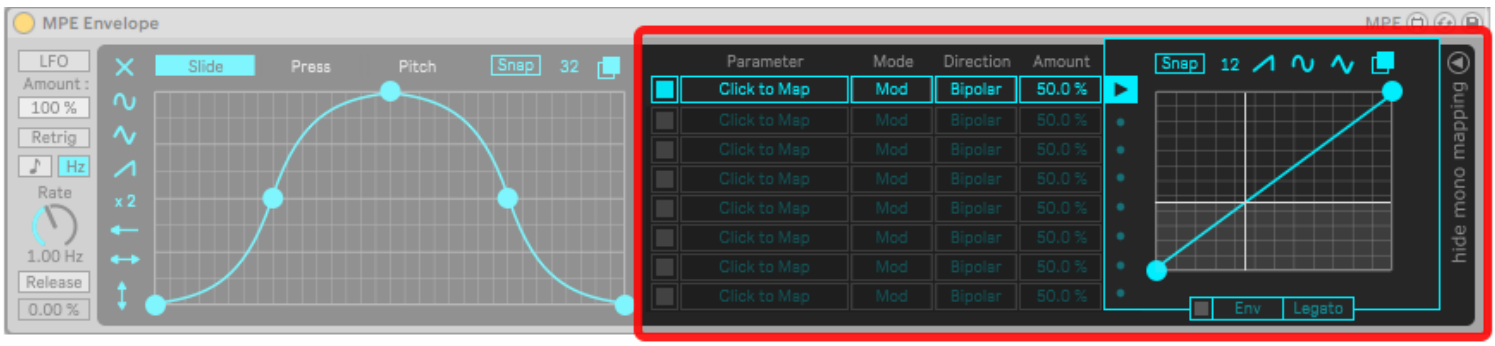


The "Double" transform button
Divides the current envelope shape into two identical forms. This is especially useful for quickly creating complex rhythmic modulations and sequences.

The "Shift Left" transform button
Shifts the envelope to the left. The first segment gets wrapped around to the end of the modulation curve. This allows you to adjust the initial trigger point of an LFO without altering its shape.

The "Flip X" & "Flip Y" transform buttons
Flips the modulation envelope over the X and Y axes

Section 3 - Monophonic Parameter Mapping



Show/hide parameter mapping
Reveal the “parameter mapping” section of the device, where you can apply monophonic versions of the polyphonic envelopes you generate to audio effects and other monophonic parameters.

Parameter mapping buttons
Press one of the “Click to Map” buttons and click on a parameter in Live to map that parameter for modulation. After a parameter is mapped, clicking the red “X” button to the right of the modulation button will remove the mapping, and the mapped parameter will return to its initial value.

Enable/Disable mapping buttons
Click the toggle button to the left of the mapping button to enable/disable the mapping… this allows you to quickly compare how something sounds before and after modulation.

Parameter Mapping Mode
Choose between traditional **“Remote”** style mappings used in Live 11 or the new **“Mod”** Style Mappings introduced in Live 12.

The **“Remote”** style mapping system overrides and deactivates the mapped parameter. Meaning once a parameter is mapped, the only way to change its value is from the controlling device. When in “Remote Mode”, users are able to set the range of modulation by using “Min” and “Max” parameters.

The **“Mod”** style mapping system leaves the mapped parameter active, meaning users can still adjust a parameter after it has been mapped. The modulation’s starting/center point is directly related to the mapped parameters currently displayed value. In other words, after mapping a parameter, users can adjust the mapped parameter thus changing the range of modulation.

Mapping Min/Max values
*(only available when in **Remote Mapping Mode**)*
Use these number boxes to adjust the range of modulation applied to the mapped parameter.

Polarity/Direction
*(only available when in **Mod Mapping Mode**)*
In “Bipolar Mode”, the modulation is bidirectional in relation to the mapped parameters current value. In other words, the mapped parameter's current value is the modulation's centerpoint, and the full range of modulation reaches both above and below the mapped parameter's current value.

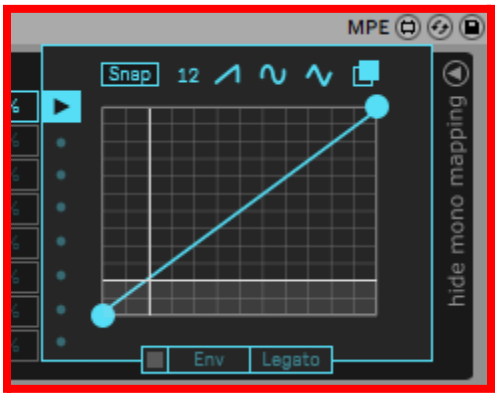
In “Unipolar Mode”, the modulation is unidirectional in relation to the mapped parameters current value. In other words, the modulation either goes up or down from the mapped parameters current value.Never both.

Mod Amount
*(only available when in **Mod Mapping Mode)***
Use this number box to adjust the scale of the modulation applied to the parameter. If the modulation goes beyond the range of the mapped parameter, it is clipped at that maximum or minimum value until the modulation returns back into the mapped parameters range.

Show/hide Advanced Settings
Click the “Adv” button to show/hide the Advanced Settings for each specific mapped parameter.

The “Function Breakpoint Editor”
To use the breakpoint editor, click anywhere to add a breakpoint.

Shift + Click deletes existing breakpoints
Alt/Option + Drag curves a segment



Preset buttons
Click on the preset button to load some basic shapes which may be helpful.

Function Poput Editor
Click the pop-out window button to open the pop-out editor with a larger version of the breakpoint editor. Sometimes it is easier to make more precise adjustments to your modulation shapes using this bigger editor. This popout window is resizable, so you can make the editor even bigger to get in close and make those fine adjustments.

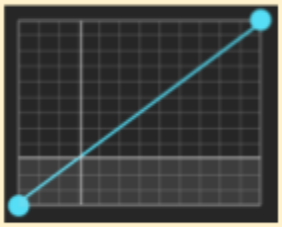
Use Custom Retrigger and Modulation Type
The on/off toggle button at the bottom of the Advanced Settings Menu enables the use of parameter specific retrigger and looping type settings. If the button is disabled, the mapped parameter will use the same modulation behaviors defined on the far left side of the device.

Custom Modulation Type
Each mapped parameter can be set to behave like a oneshot envelope or an LFO, independent of other mapped parameters and the modulated MPE MIDI data.

Custom Retrigger Mode
Each mapped parameter can be set to either retrigger with all new notes, or use a legato style retriggering.

Understanding the function editors

When modulations are active, in the background of the function editor you will see two moving lines.



Understanding the function editors continued…

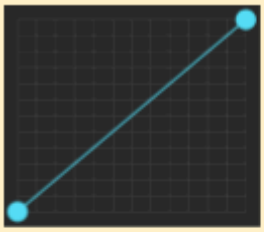
The vertical line moving across the x axis represents the modulated value going into the function.

Given an incoming value of **0%** → The vertical line will sit along the **left side** of the function editor
Given an incoming value of **100%** → The vertical line will sit along the **right side** of function editor

The horizontal line moving across the y axis represents the outgoing modulated value that will be applied to the mapped parameter.

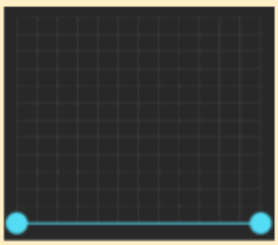
If the outgoing value is **0%** → The horizontal line will hit the **bottom** of the function editor
If the outgoing value is **100%** → The horizontal line will hit the **top** of the function editor

A straight diagonal line from bottom left to top right has no effect on the modulation shape.



A straight horizontal line across the top will always output 100% of the assigned modulation range

A straight horizontal line across the bottom will always output 0% of the assigned modulation range



THANK YOU!

Have any suggestions, questions or feedback? We would love to hear from you. Feel free to email us at info@windmakeswaves.com.

We have some really cool products in the works that we are super excited to share, so please watch this space!

If you're interested, we have a "New Product Release" mailing list which will send you an email with information on each new product when we release it.
https://www.windmakeswaves.com/mailinglist

Thank you for checking out MPE Envelope!
Craig