

Ohmboyz Infinity

User Manual v1.1.2



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The Quick Note (aka TL;DR)

Ohmboyz Infinity is a multi-FX delay designed both for general-purpose delay use and pushing boundaries for creative use - especially regarding modulation and live play.

As a general-purpose delay, it brings you all of the common delay modes in one package, namely:

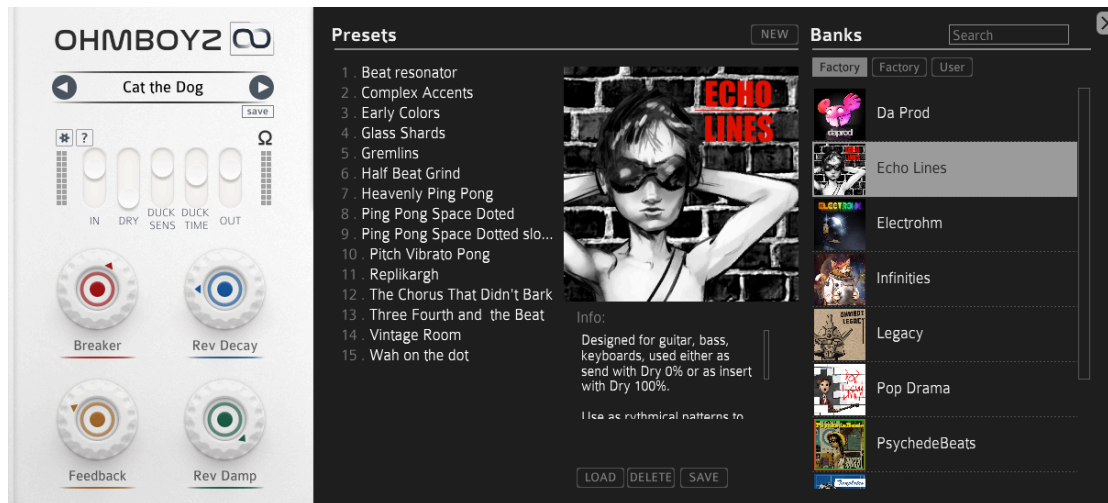
- up to 8 taps
- 2 stereo delay lines, supporting tape emulation as well as digital delay and ducking
- FXs in the routing, including filters, reverb, distortion, and frequency shifter
- lots of gain & EQ at key points in the routing for fine control at the mixing stage.
- extensive modulation system, including a step modulator
- and an engaging preset browser featuring carefully designed presets for more than just demos

As a vehicle for your inspiration and creativity, it also brings some unique features to the table:

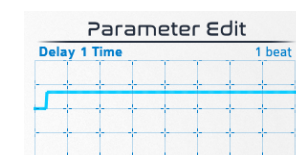
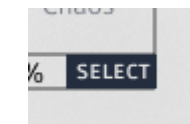
- [Macros²](#): four knobs for live fun or quick production adjustment that gives you immediately the relevant controls for a patch with unprecedented accuracy and responsiveness. This is achieved by extensive control of ranges of assignation and response curves
- Modulate the modulation: create rich modulations by using one to modulate another
- lots of pitch controls
- Fine control over modulation range through min/max boxes allows you to stick to the beat easily

You obviously can fire up Ohmboyz Infinity and use it like any other plugin. That being said, here are a few recommendations that will significantly improve your experience:

- **adjust input and ducking threshold once and for all** depending on what's your dry sound. Presets that you load will likely sound better that way



- **Start by browsing presets through the browser.** They contain descriptions that will help you make the best use of them. **Always tweak the four macros²** to fully explore them
- like any other Ohm Force plugin **parameters are selected once you click them.** The selected parameter, as indicated in the main edit, is the one to which modulation in the right column will apply. If you want to select a modulation parameter in the main edit, use the special select push button bottom right.



If you're familiar with delays in general you can pause or stop reading here. The rest of this manual references the User Interface and basic usage guidelines. Checking it out on a "need-to-know" basis should be enough.

Presets

We took great care of the preset experience in Ohmboyz Infinity. In our view creativity dictates that plugins, no matter how complex, have to be able to accelerate your process when composing. To balance the amount of detail control our whole DSP UI strives to provide it was clear to us that presets should be fun and easy to browse, carefully organized, and offer a level of “cut to the chase” controls that would allow users to make them their own through finetuning and live play without having to understand the specific quirks of the patch.

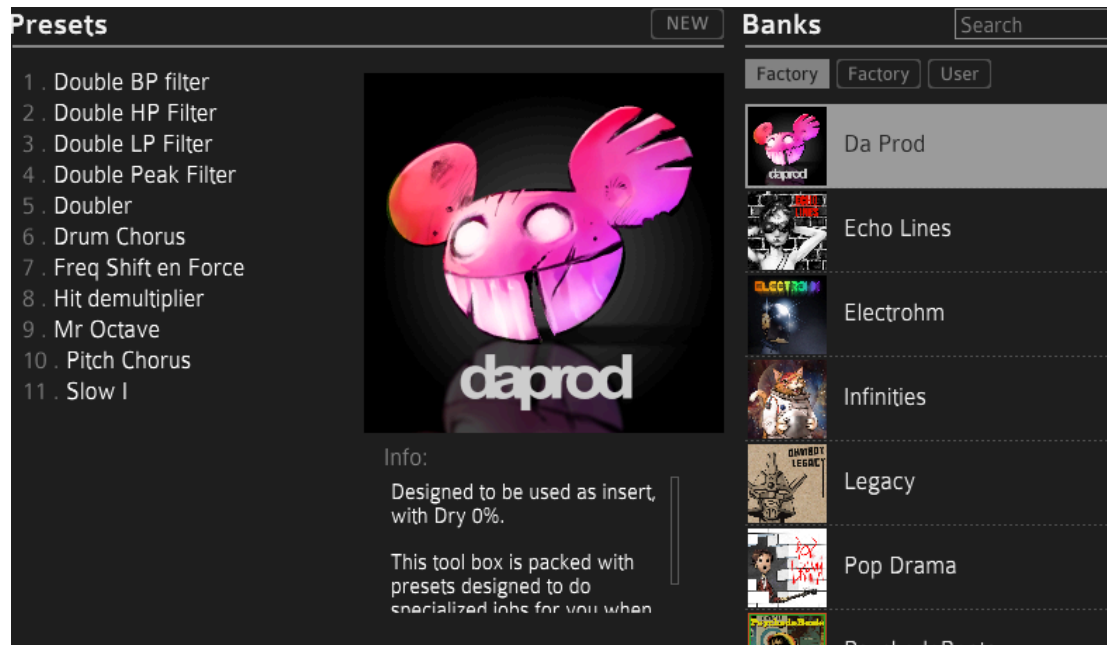


Cue in the [macros²](#) & Preset browser team. While you can browser preset with the arrows, clicking the preset name will open the browser (and close it afterward, or you can use the X button)

Overview



By default presets will open with the factory list in alphabetical order. While this is fine to browse randomly or use the search box, browsing by banks will be more convenient once you're not just toying with Ohmboyz Infinity but actually using it in your projects.

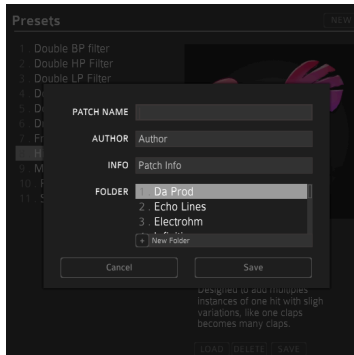


Banks are organized by type of need. They have an iconic picture to help you remember which is for what but also a description to tell you their role unambiguously. Some are for bread and butter production tools, some are designed in the strict logic of guitar delays, etc. While most of those can find a use outside of their original purpose it will save you time to know at least what to expect before browsing. Also while most are to be used with Dry 0, there's one bank that's designed to be used with Dry 100%. It tells you that in the description too.



When loading a preset (double click or load) note that the [macros²](#) label and position change. It's time to play with those big knobs. Those are not just shortcuts to some smaller knobs in the DSP area. They're painstakingly programmed in fine detail and offer considerably more control over what a preset does than any single control in the DSP area. (see [macros²](#) programming to see how)

Creating your own presets



When saving your preset you'll have the opportunity to document it similarly via the info box. Note that you can also create your own bank. All of these will appear in the User tab on the right with a default picture

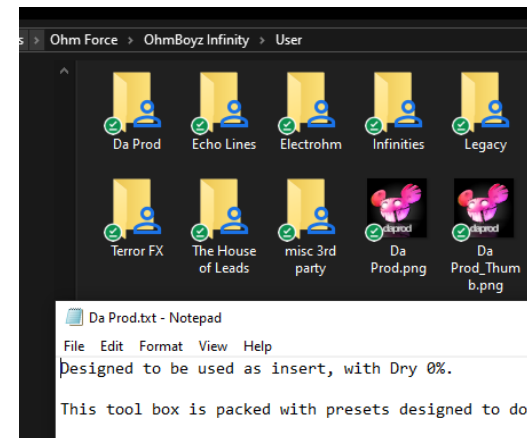
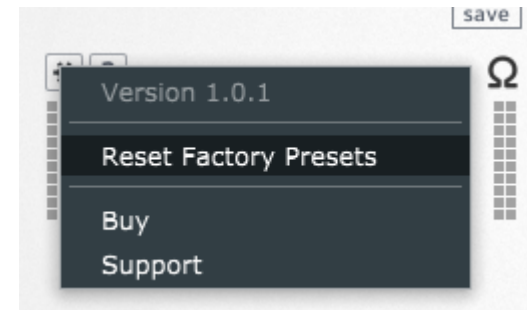
It will never be written over the factory presets. If those get damaged in any way you can always reset them through the option menu

You can also put your own image and description for the bank.

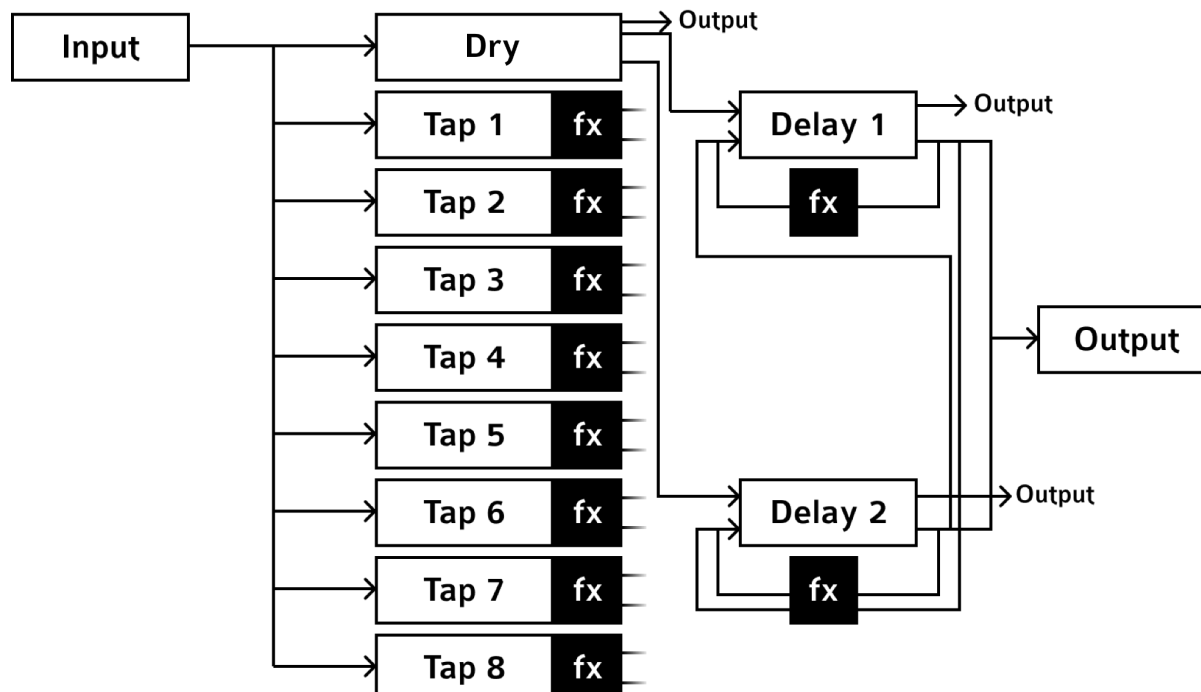
On Windows: Documents\Ohm Force\Ohmboyz Infinity\User

On MacOS: Library\audio\presets\Ohm Force\Ohmboyz Infinity\User

You'll find the presets (fxp files) in the folders of the banks they're filed in. If you create a .txt file with the same name as a folder, it will be displayed as the description for it. Similarly, if you put a 512*512 .png image with the same name it will become it will be displayed in the browser for that bank.

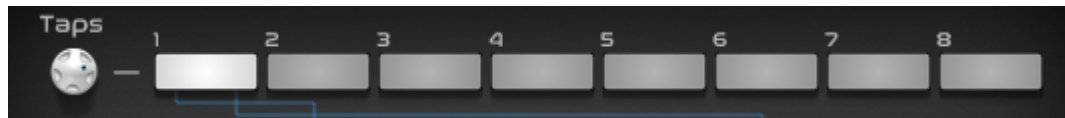


Audio Processing



Dry is the input signal that you can mix with the “Wet” (processed by the plugin) signal. You can only control its strength and how much of it you want to be processed in the delay lines. Dry follows a logic that is common for guitar delays - all guitar presets are designed in that logic but every other skips it as using Tap 1 with no delay instead allows for greater control and FX.





Taps are single repetitions of the original signal delayed in time. In Ohmboyz Infinity they can also have their layer of audio processing - pitch shifting, EQ, and other effects. Each of them can be individually panned and individually routed to delay lines (as opposed to the original Ohmboyz where the two were linked). Taps are **stereo**.



Delay lines delay the signal and can apply several treatments to it, then send it to
 > output
 > feedback lines

The later reinject the delayed sound at the input of the Delay lines (it can be routed to Delay 1 or 2 so that Delay lines can be in series, parallel or a mix of both)

Think of Delay lines as what creates the “echo” effect.

(Note: technically the reverb is only applied once before the feedback loop)

When the signal comes in, it first is affected by the global **Input** parameter - set that one to a minimal value and the plugin will be muted unless the feedback loop has some signal in it (in which case depending on the parameters it may last until the end of the universe).



Then the dry parameter decides how much of the input we hear versus how much of the output. The plugin will be effectively silenced in 100% wet while taps and delays are muted (although there are simpler methods to achieve this result).

It then goes to taps. **Even if delay lines are off, those will be heard in the output unless nullified.** Delay lines are one way to create an echo but if you want a set number of repetitions, separate stereo for each of those and/or processing and/or modulation Taps will offer you all of that fine control.

It then goes into the delay lines. Even if all Taps are muted the signal can come in there and generate an output, either from the Dry in or from an audio signal already trapped in the feedback loop (for instance in “Infinity” mode).

All **FX** are processed in series within their section, which means in the case of the delay lines those effects and processing are reapplied on each repetition of the echo. This creates a very distinctive sound compared to applying the same effects before Ohmboyz Infinity in your insert chain or even within the Taps.

Finally, delay lines are **mono**. This means that if you want to keep the stereo of your signal as such in the delay you need to use both lines panned to left and right respectively.

Time Units

A lot of audio processing in a delay is time-dependent and very often perfect synchronization is needed. Ohmboyz Infinity lets you choose each time-related parameter if you want it to stay in sync with your project tempo and bars through the BPM mode. BPM mode expressed time in beats and fractions of beats. BPM mode includes all the musically relevant fractions in one go. You can try quickly a $\frac{1}{3}$ of a beat delay compared to $\frac{1}{2}$ beat one by just moving the knob.

If you rather want your value to be independent of the tempo and fixed, pick the ms (for millisecond) ones. That unit will be familiar if you've ever worked with guitar delays, chorus etc.

User Interface

META COLUMN

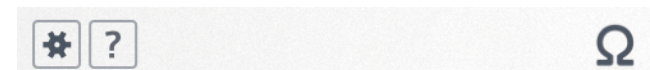
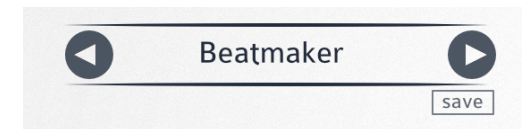
This column regroups parameters that apply at a global level. They're typically adjusted depending on the incoming sound rather than what happens within the effect. For this reason, while their state is saved in your project, it is not saved in presets (except for [Macros²](#)). These parameters are the only ones that can't be modulated.

Quick Preset Browser

This is where you browse your preset. Click the arrows to go to previous/next preset. Use save button to quickly save a preset in your custom ones (it will overwrite previous save with similar name).

Preferences

This cog menu allows you to Reset Factory Presets, contact support and buy the plugin if you're using the demo version.



Help

Open this very documentation

Update/Feedback

If your plugin needs an update, this button will display “Update” and allow you to directly download the latest version.

Ohm Force links

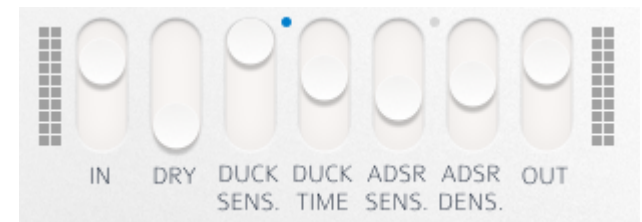
This menu allows you to quickly access to product information

Meta settings

Left VU meter monitors the input signal, right VU meter the output. You typically want to have both using half or more but not all of their vertical space. The IN and OUT faders are the ones you need to use to that end. If you notice you have a big difference between the input and the output it may be a good idea to check out the DSP column for parameters in need of extra adjustment (typically Gain ones).

DRY/WET is usually set at either one of two values.

- at 0 it's only a wet signal, which is the normal setup if you use the effect as a send
- at 1 it's DRY, the normal setup if you use the effect as an insert.



DUCK SENS and DUCK TIME

Ducking is an effect that removes the wet signal when it detects the dry signal is above a defined level. It's most typically used on vocal tracks to get the benefits of spectacular delays when the vocal stops without turning them to "shower singing" when there are actual lyrics. But it can also be relevant to all sorts of instruments.

The blue dot tells you when ducking is inactive. It will dim when 1) the ducking probe tells it to AND 2) there's a non zero amount of ducking in the DSP.

DUCK SENS lets you define the level of input volume at which you want ducking to be triggered. Use the input VU meter on the left to adjust where you want it to kick in. Each time the VU meter goes above the DUCK SENS fader, it will trigger ducking. A classic setting is to have it happen each time something happens on the track. It can be very low on virtual instrument tracks, and pretty high on an acoustic Hi Hat track with a lot of background noise.

DUCK TIME is to adjust how long ducking occurs once triggered, in milliseconds. While ducking is happening it doesn't retrigger, like most compressors. You want this value typically medium to high on a vocal track, or low on a percussive track.

Note that if you have just touched those two parameters, you still have no ducking happening at all in your effect. To get any you need to adjust DUCKING AMOUNT in the Delay lines of the DSP column (or use a preset that does that).

Macros²

As you can guess from their size those buttons are designed to be a large part of your experience with Ohmboyz Infinity

Macros are “alias” controls used in many plugins and DAW to enable you to control one (or sometimes several) parameters within one single controller.

Macros² is our gimmick to describe the fact that we added an unprecedented level of control on your plugin, making Macros² that much more useful up - to the point they reach a deeper purpose.

- First, you control what range of your Macros² knob course affects what range of each of the mapped parameter(s). This allows you for instance to have the first quarter of a Macros² knob control the gain of the first tap from $-\infty$ to 0dB (and not more), then the second quarter of the knob's course, the gain of the second tap similarly and so on,... to end up with one simple, intuitive knob that adds up taps along its course without ever having one too loud.
- Second, each of those mappings can have its response curve. While the linear one is your go-to option, some situation calls for a curve that will make the parameter change slowly and then accelerate, or the opposite.
- Each factory preset comes with its own set of highly customized Macros² and you don't know half of what a preset does if you don't play with those four knobs after loading it. Their general purpose is documented in the preset description.



Double-click on a [Macros²](#) name to change it.

Some [Macros²](#) work with a neutral point at 12 AM, some at 8 AM, and some have no neutral point anyway. Again see the preset's description for more information.

Macros² values are stored in presets.

Infinity Mode

Push the infinity symbol button to launch “Infinity Mode”. In that mode all inputs are muted and delay lines feedback is set to 100%, immediately creating an endless loop that will constantly morph if any effect is active in it. Spectacular, fun, and well-suited for live use!



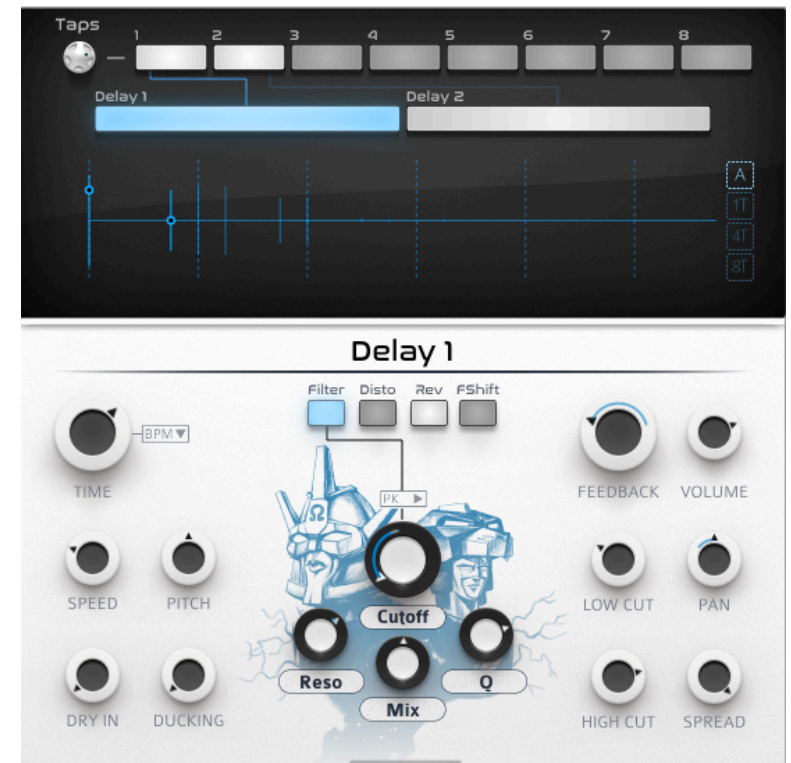
CENTRAL COLUMN: DIGITAL SIGNAL PROCESSING

This column covers every parameter of the effect. The top part allows you to navigate quickly amongst parameters by clicking Taps & Delays to pick the one displayed in the bottom part. In that part, you can tweak any of the sub-parameters, which will also select it. Selected parameters can then be modulated in the Right Column.

As you can see the top area also gives you feedback on the state of the routing and what taps and delays are currently displayed in the bottom area (blue), active (white), or inactive (greyed out).

You'll also notice a timeline that indicates where the taps and echos will happen after the original signal. You can pick each taps and move them in time (horizontal scale) and gain (vertical) directly there. Right buttons allow you to change the vertical scale to 1 beat, 4 beats, 8 beats, or Automatic (in which case it will depend on your longest delay for a tap).

Note: in the following parameters description, affinity for modulation also means affinity for Macro² control.



Tap

Time is how much delay is applied to the signal in that specific tap. It can be defined in musical units (beats or milliseconds). Time can be modulated in sync for some scratch effect (if using anything but square modulation), rhythmic pattern variation (square modulation), or even some form of synthesis if the period of modulation is very small.

A lot of efforts have been made so that Time modulation never adds clicks but some extreme modulation can make that happen.

Pitch allows you to change the note of the tap. Keep in mind though that Pitch Shifted sounds, while retaining some musical quality, will not replace an arpeggiator on a synth. Pitch is measured in semiton (st), with 12 st being an octave. The range goes from -12 to +12 st (so yes, two octaves).

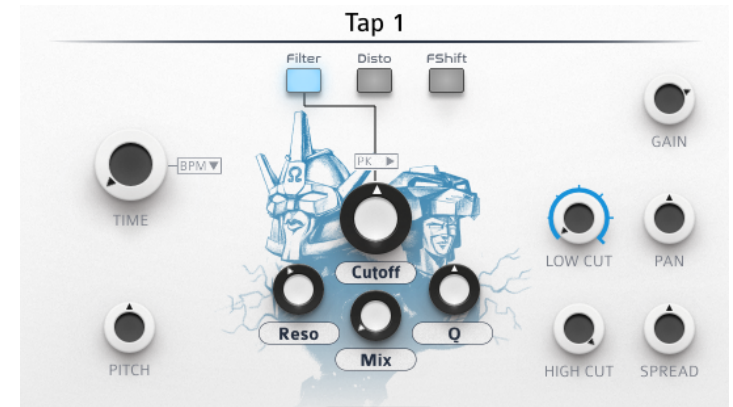
Pitch modulation is a great place to get creative. Square modulation can allow you to create tone variation, while others will create pitch sweeps. Don't expect it to allow for a full replacement of a MIDI arpeggiator though, as it's dealing with audio, not note.

Ducking is how much ducking is applied to that tap.

Low Cut removes frequencies from your tap from the bass to the treble. This will typically be used to clarify the sound.

High Cut removes frequencies from your tap from the treble to the bass. This will typically be used to smooth the sound and its brilliance, making attacks less distinct.

You generally have a low cut value significantly below your high cut one (if you use any).



Output value of the tap: at minimal value, the tap is effectively silenced and will neither be heard in the general output nor within the delay lines. Can be modulated for rhythmic purposes (especially with step sequence) or fade effects.

Pan is the stereo pan for that tap. You typically want all of your pans to have a different value here. Modulation of the panning is extremely frequent.

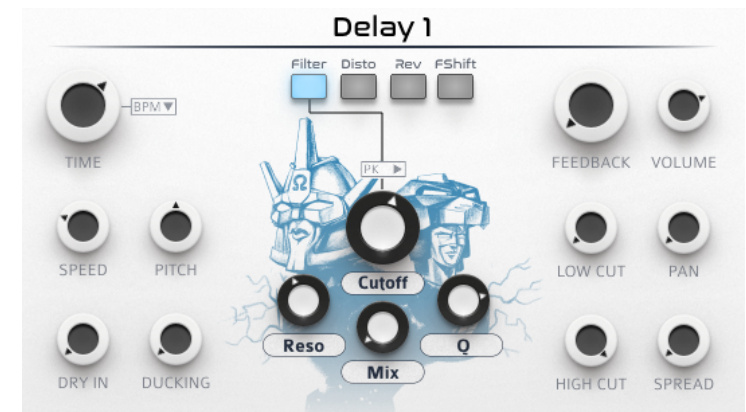
Spread affects the balance between delays one and two in the same way Pan works for the left and right channels. Modulation there is also easily rewarding..

Delay Lines

Time is how much delay is applied to the signal in that specific delay line. It can be defined in musical units (beats or milliseconds). Time can be modulated in sync but keep in mind that as opposed to taps, those modulation will then be echoed and reapplied on themselves. We suggest you compare Time, Speed, and Pitch modulations to see what does what. You rarely want more than one of those to be modulated at a time.

A lot of efforts have been made so that Time modulation never adds clicks but some extreme modulation can make that happen, especially if used in conjunction with speed and/or pitch action.

Speed emulates the behavior of analog tape delays. Note that it impacts your actual BPM sync. For instance, a one beat delay at 200%speed is effectively a half-beat delay as the delay plays twice as fast. While at first, it may seem Speed accomplishes the same thing as Time (accelerating or slowing echo rate) it does sound very different, especially in motion.



Modulation is a classic on that one. Small chaotic modulation will accentuate the similarities with an old tape delay.

Pitch changes the pitch of the sound but as opposed to taps, this time the pitch shift constantly reapplies upon itself with each feedback loop. This guarantees some tones out of your current scale; on the plus side it can create great eery effects reminiscent of horror movies. Modulation can be interesting but keep in mind that by the very nature of pitch shifting in a feedback loop, lack of modulation will already produce a pitch sweep, constantly getting higher or lower depending on the positive or negative value of the pitch shifting. Modulation here can be a way to even out one move with the other.

Dry In lets you decide how much of the dry signal enters the delay line. If set to 0 only taps will feed the delay lines. This one depends on what a preset aims to do. If taps are crucial to the overall effects dry-in will generally be set to 0. If taps are designed to work complementary to the original signal, Dry In will typically be set to 0dB (ie 100%). Modulation can have some occasional use but isn't common.

Ducking lets you decide how much ducking is applied to the delay line after the feedback loop. As seen above, when and for how long ducking happens is set up in the first column globally.

Feedback

A core parameter in any delay, Feedback defines how much signal is reinjected in the delay line through the feedback loop. At 100% the delay line becomes effectively a looper, constantly looping the same signal without any decay. Anything below 100% will fade out, from very slowly to very fast. Warning though, some parameter within the fx (especially resonance of the filter) will increase the signal too, which in conjunction with a high feedback value can create a constant volume increase, resulting in a very unpleasant Larsen-like effect, similar to what happens when a microphone is pointing at the speakers. Or worse. Or better if

used expertly.

Modulation can be used for a lot of things in feedback, from rhythmic effects to cleaning the beginning or the end of a bar.

Gain

The volume of the delay lines in the global output. Modulate to apply to mute or fade the delay periodically.

Spread affects the balance between how much of the feedback loop is sent to the current delay or the other one. It allows you to effectively route your delays any way you see fit- in series, parallel, or a mix of both.

Modulation there is also a classic.

Stereo Pan is self-explanatory. Pan can be left untouched if taps or input bring an already interesting stereo image but just as easily either modulation of two opposite pans for the two delay lines (ping pong delay) will be used.

Low Cut removes frequencies from your delay lines from the bass to the treble. This will typically be used to clarify the sound.

High Cut removes frequencies from your tap from the treble to the bass. This will typically be used to smooth the sound and make it sound warmer.

You generally have a low cut value significantly below your high cut one (if you use any).

FX: Filter

Filter impact frequency in a way that's not entirely different from an EQ but with a more pronounced and musical effect. Whereas EQs are used in production to change the color of sound without changing its general identity, Filters are designed to affect both.

Filter within the feedback loop works in a very special way as each repetition reapplies the filter to itself. Each echo while less loud will have the resonance reapply on itself (to the point that resonance can replace feedback up to a point, and shall always be balanced with it to avoid positive feedback loops).

This situation is worth thinking through. If a filter is set to bandpass and its frequency modulated, on the first repetition it will remove all but that frequency, then move that frequency, so that on the second repetition it will retain only a frequency that was already removed in the first pass, effectively producing silence unless some fresh signal is also feeding the delay lines (or the mix parameter is used). This can produce some nice taming echoes but also cut the delay sound earlier than expected.

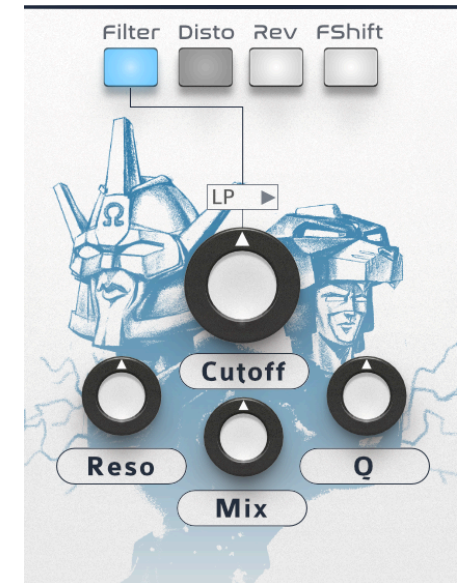
Filter mode lets you pick what filter you want to use.

Low Pass: your go-to vintage synth/electro filter. Neutral position at max cutoff. Removes the high frequencies from your echoes.

High Pass: the other typical electro filter. Neutral position at min cutoff. Removes the low frequency from your echoes.

Bandpass: works like a wah pedal by filtering all but a band of frequencies

Peak: Similar to bandpass but keep all frequencies and instead peak on a band. If you modulate your delay's cutoff this mode has the advantage of avoiding starving the feedback loop in frequencies as it doesn't cut anything.



Cutoff is the frequency at which your filter operates. This is the expression parameter by definition, and electronic music's most signature move is built upon tweaking or modulating that parameter.

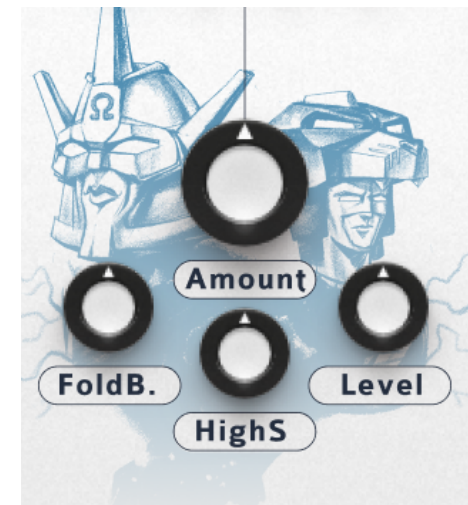
Resonance impacts the intensity of what happens at the cutoff value. A typical setting is a small, positive resonance but negative resonance can yield interesting results as well. Key warning though: avoid setting moderate to high resonance and high feedback simultaneously to avoid a positive feedback loop. Especially likely if you're using the Infinity Mode! Resonance also impacts greatly how distortion will play out. Resonance's typical use of modulation would be to create evolving textures in the sound.

Q is the slope of the filter around the cutoff value in Band Pass and Peak modes. Small settings focus the filtering exactly on the cutoff value while large settings expand the broadness of the affected frequencies, resulting in a louder but also more natural sound. Q typical use of modulation would also be to create evolving textures in the sound.

Mix does a simple yet useful operation: it's a dry/wet control for the filter which allows to retain frequencies all along the spectrum with all filter types so that reiteration of said filters in the feedback process will still find some material to process. Lower it if you feel like your echoes dry out too fast for your taste. As you can expect at lower value the filter is bypassed.

FX: Distortion

Distortion is where you'll animate the audio texture of your echoes. In that regard, keep in mind distortion tends to add action in the upper harmonic frequencies which is typically harsh. That's why you'll want to tame them with the High Shelf.



Amount Simply how much of the distortion is applied. The more, the louder and the grainier. Modulate for a lot of spectacular effects.

Foldback Morph between two waveshapes to let you change the texture.

HighS lets you pick the frequency at which you want to start cleaning harmonics

Level lets you pick how much you want to clean harmonics.

Null level or max HighS will both nullify any High Shelf effect.

FX: Reverb

This simple reverb is pretty classic except that, because of its position in the routing and the conjunction of subsequent filters, distortions, and feedback loops within the environment of a Tap delay it turns Ohmboyz Infinity into a highly rich, musical, and controllable reverb solution.

Mix - basically how much reverb do you want?

Decay - how long the reverberation lasts, or in other words, how big the emulated space, from restrooms to a valley.

Dampening - How quick to fade out the reverb sound. You can keep the “big” feel of a long decay yet dampen it to a shorter sound that will still feel big but be less invasive to your mix

All of those can be modulated creatively to create crazy audio-evolving landscapes.



FX: Freq Shifter

Frequency Shifting is one trick pony, but it's a cool trick (and a cute pony).

It shifts frequency in a different way than pitch shifters do. The tone goes wild even with low value but it can sound very pleasing in its own way, especially on percussive sounds. Very small values and micro-modulation can be rewarding, and so do extreme settings.



RIGHT COLUMN – PARAMETER EDIT AND MODULATION

Each time you click a parameter in the central column it gets selected (blue circle) which means the parameter edited and modulated in that column changes to that one.

This is where you can enter exact values for parameters by double-clicking that value in the first line.

The graph below shows you both the setting value of the parameter and its actual value in real-time as affected by modulations and [Macros²](#). This is the same as the ring meter appearing in the knobs but in a way that's easier to monitor over time.

Below is the modulation matrix for that parameter. That's where you add modulations and [Macros²](#) modifier to that parameter. Each fader also works as a tab selector for that modulator.

A single parameter can have up to eight modulators at a time plus four macros (although you're very unlikely to need nearly as much). **Each modulator can be applied with a factor from 100% to -100%, with 100% being the whole range of the parameter.** So keep in mind a 50% modulation of a pan that's set as centered will modulate it exactly from full left to full right. Higher values will "saturate" the modulation resulting in a good deal of its course capped full left then full right, with no movement while there.



Modulation area

Modulation Type

This menu lets you pick what type of modulator is operating. Some share similar parameters, some are unique.

Most of those are Low-Frequency Oscillators (LFO) - curve-based movements applied to the parameter that while sometimes fast for human ears remains slow compared to the same pattern used as oscillators for synths.

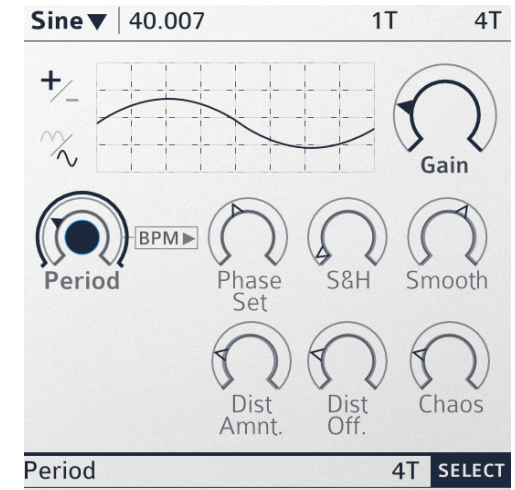
Sine and triangle are typically used for regular back-and-forth movements.

Saw induces a more aggressive pattern moving progressively and then instantly coming back.

Square is typically used as a switcher for two values for a parameter.

Parabola is also a back-and-forth movement where the movement around peak value is very progressive while the movement around minimal value is very fast. Were you to stand next to a paddle ball player with a noisy ball, the ball's noise pan would follow such a modulation.

Bi-phase and N-Phase create a movement based on the constant switching between two or more sine. It creates a smooth move animated with regular jumps that can be synched to the rhythm or not.



Varislope can morph between square, triangle, and saw. Modulating this one's parameter can result in very rich evolving modulation.

Noise FLT1&2 are two noise generators that will create two very distinct types of random moves to your signal. FLT1 has the wildest move while FLT2 is always progressive, like a random trajectory. The period for those works differently from other modulators as they don't repeat a pattern and change constantly, but you're guaranteed to go back to the initial value on the period. The period will also affect how quickly their variations happen.

Values

The first number is how much modulation is applied from -100 to +100, with 0 being an inactive modulator attribution. You can change that value with the modulation vertical fader or directly with your numeric keys by double-clicking that figure.

The min and max figures indicate what minimal and maximal value the resulting modulation of the parameter will reach, depending on the above modulation amount but also the current value of the parameter. A handy option is to edit those values by double-clicking them.

Ohmboyz Infinity will automatically change the modulation amount and parameter value so that it can stay true to those minimal and maximal values. It's especially useful when you want a parameter to jump between two specific time or pitch-related values.

▶ | 40.007 min 1T max 4T 🐾

Sign

Switch between a positive and negative polarity, effectively inverting the curve. Useful to decide whether the lowest part starts or ends the cycle



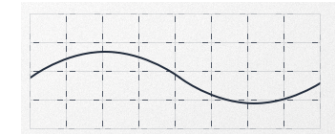
Polarity

Switch between unipolar where all the modulation happens above (or below, depending on the sign) the modulated parameter, and bipolar, where the parameter is at the middle value of the modulation.



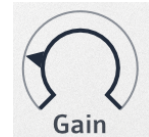
Modulator Shape

This graph simulates the LFO loop depending on the settings. The moving dot follows what part of the LFO is currently happening.



Gain

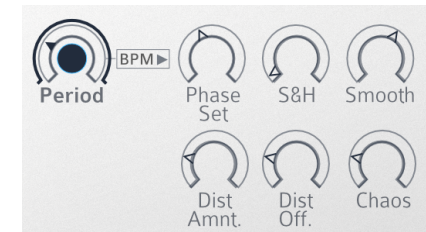
While this may look similar to what modulation amount does, changing the amount of modulation here applies that change to the modulator itself, hence impacting all of the parameters modulated at once. Moreover, this one can be selected and modulated.



Period defines the period of the modulation. Typically set in BPM. A classic target for modulations.

Phase lets you define the origin of the oscillator's loop. For instance, if you have a sine you may want to have it start at the maximum peak, the minimum one or any of the two points where it crosses zero. That is where you'll do that.

Also great potential for modulation



S&H (sample and hold) transforms your base curve into a “pixelated” one, which turns any smooth movement into a series of jumpy ones.

Smooth does the opposite, softening every move. Both are often used together.

Distortion Amount controls the symmetry of your modulation pattern. At default value (50%) your curve is split between equal positive and negative phases. At 25% the first is now three times shorter than the later (25 to 75 ratio).

Distortion Phase changes the location of the short and the long phase during the loop. Does nothing if the Distortion amount is at 50%

Chaos adds more randomness to the play head movement on the curve. It auto-compensates so that the time parameter for the loop is always respected but adds some random accelerations and decelerations at a rate that depends on how much chaos you ask for.

Time (Bi and Nphase)

Control the period of a back and forth between the phase composing the final LFO

Shape (Bi and Nphase)

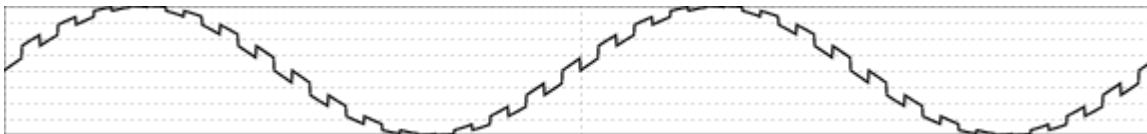
Control how much delay between the different curves composing the final LFO

Some examples:

Biphase:



Time : 50% Shape : 25%

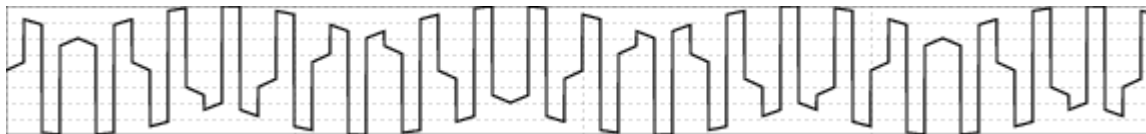


Time : 75% Shape : 3%

N-Phase



Time: 62.5% Shape : 0%



Time: 50% Shape: 12.5%

Step Sequencer

Divisions let you pick how much division you want on your sequence, which factored with your time setting will define the duration of each of those divisions. For instance, a time value of 16 beats with 32 divisions will mean that each division in the graph lasts half a beat.

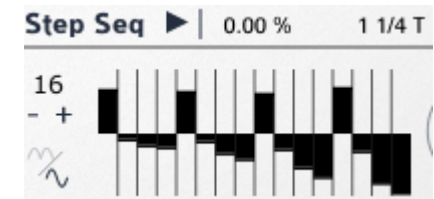
Simply hold-click on the graph to set each division's value. Believe it or not but each of those can be modulated as well...

Polarity

Switch between unipolar where all the steps add to the modulated parameter, and bipolar, where the parameter is at the middle value and steps can add or subtract from it.

Modulator edit

This area behaves like the parameter edit except only for modulation parameters. Select those by clicking them then edit their value by double-clicking it in the box. Additionally, the select



button will select the parameter in the main edit which will allow in turn to attribute its own modulation sources.

Envelope Follower

An envelope follower will simply follow the volume envelope of the sound it processes. If there is no **Attack, Hold or Release** to smooth it it will result in something very grainy - which can be desired but generally is not.

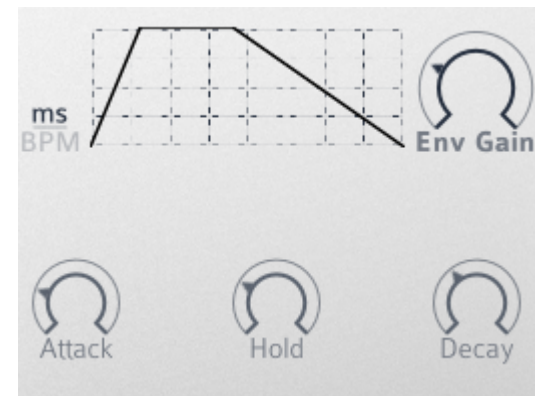
Those three settings will instead apply a lag into how fast the change driven by the envelope results in an actual modulation. Those are most typically designed in ms although a fixed tempo relevant value, especially on hold can produce some rewarding effects.

ADSR

ADSR refers to “**Attack Decay Sustain Release**” which is how acoustic sounding envelopes are emulated in synthesis both for volume and filters. That being said they can be interesting for many other parameters which is why they’re included here (as Ohmboyz Infinity is many things, but not an instrument emulation).

ADSR while reacting to the signal behaves in very different way than Envelope Follower. ADSR are triggered by “events” as detected by the plugin - the blue dot bleeping between **ADSR SENSITIVITY** and **ADSR DENSITY** in your META parameters. Sensitivity defines what threshold level the signal needs to cross to trigger an event, and density the minimum time before the next event.

Attack, Decay, Sustain, Sustain Level and Release will shape the envelope triggered by the event as shown by the graph. As opposed to synth it’s frequent to use only a fraction of those settings at non null value. BPM works in a straightforward way like LFO.



Macro² settings

The last four colored faders/tabs of the matrix let you map the selected parameter to the [Macro²](#) of your liking. One parameter can be used in several [Macro²](#) at once. This can have some use although most of the time you'll want them on one controller only. More commonly, one [Macro²](#) can be mapped to as many parameters as you want. As you hopefully guessed the color here matches the one of the [Macro²](#) controller affected in the left column.

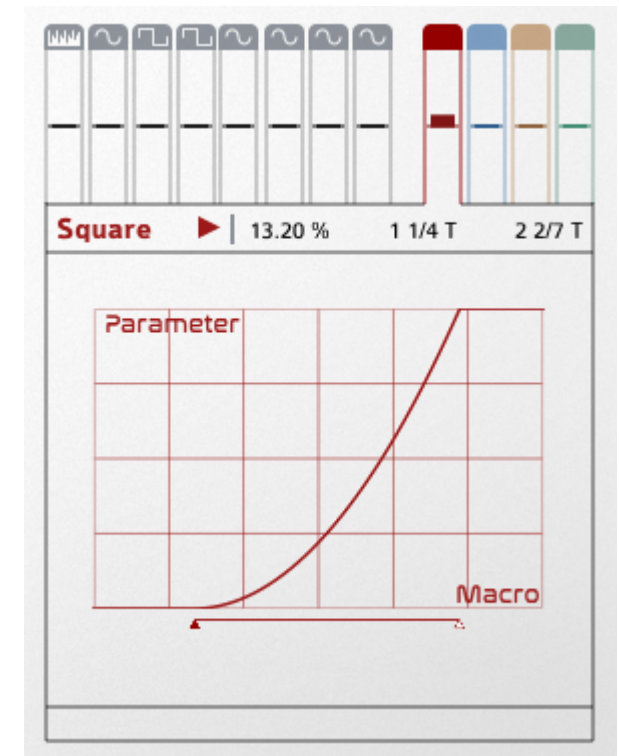
Mapping amount is defined exactly like the modulators - from -100 to 100% of the parameter's full range, with the same caveat that you can hit the parameter's range cap easily. Negative mapping will actually lower the parameter as you increase its range. The min/max value works the same way too.

The shape menu lets you use several response curves for the mapping.

Linear is the most common use and will have the same response on the [Macro²](#) knob as on the mapped parameter

All the others are parabolics. **Square** (and its amplified version, **Cubic**) will move the parameter subtly first and dramatically at the end of the mapped area. **Square Inverse** and its amplified version, **Cubic Inverse**, do the opposite. The extra layer of control those response curves provide comes in handy when dealing with sensitive parameters regarding gain like resonance, distortion amount, or feedback, or when you want some transformation to become very quickly noticeable while retaining some room for accentuation.

Use the two triangles around the red knob scheme to define the range of the knob that will modify the selected parameter value. [Macro²](#) knob at min range value or below will let the



parameter unmodified. Max range and above will stick on the parameter setting multiplied by affectation.

If you click the parameter name in this [Macro²](#) area a menu will let you select any other parameter already affected by that [Macro²](#).

To review the style and correct errors while keeping the tone intact, I would need to access the document's content. Unfortunately, I don't currently know what the document says. You can use the option to let me fetch the document so that I can analyze and improve it for you.