

VectoMelt₂

MODULATION VECTOR MULTI-FX

VST3/AU Plugin for Windows & Mac

VHS Vibes **SAVE**

MELT VECTOR

LOAD SAVE !?!

WOW **FREQ** [RNDM] **FREQ** **FLUTTER**

SPEED MIX

WOW DEPTH FLUTTER DEPTH

PITCH AMP PHLTR **CUTOFF** ECHO

SPREAD **MASTER CONTROLS** DEPTH

AUTOMOD

BPM LOAD SAVE !?!

8	6	4	3	2	1 1/2
1	.1/2	1/2	1/2T	.1/4	1/4

SPEED DIAL DEPTH

CHORUS

LOAD SAVE !?!

RATE RANGE FDBK SPREAD DEPTH

Y-AXIS

PHLTR

LOAD SAVE !?!

PEAKS WIDTH RESO LP HP CUT

Y-AXIS Y-AXIS

ECHO

LOAD SAVE !?!

BPM SYNC MODE .1/8 LEFT RIGHT .1/8

PINGPONG OFFSET

FDBK DAMP MIX INPUT

LOOP FILTER Y-AXIS

DRY/WET VOLUME LO-FI

VectoMelt₂

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Introduction to VectoMelt2

VectoMelt2 is a multi-FX modulation plugin that brings your sounds to life with tonal variations, spatial drifting, and lush atmosphere. A dub-friendly environment for sonic exploration, VectoMelt2 uses an XY Melt Vector that can be set on auto-pilot for pitch glitches, resonant blips and filter swirls. The onboard effects provide additional dimension and movement, and a dedicated Lo-Fi knob adds just the right amount of satisfying crunch.

VectoMelt2 has quite a bit going on, and there will be lots to cover. The following pages will detail each stage of VectoMelt's signal chain, it's modulation capabilities and will highlight the key features.

Installation

To install VectoMelt2, simply double-click on the installer file and follow the on-screen prompts. If you just want to try out a demo version, download the correct installer from the [VectoMelt2 page](#). The demo version is fully functional with the exception of occasional sound dropouts.

System Requirements:

Windows: VST3, Windows 7 or higher, 64-bit

Mac: VST3/AU, OSX 10.11 or higher, 64-bit

The installer will install the plugin into your chosen plugin folder, a copy of this user manual and two folders for presets. These preset folders are installed into the following location based on your OS:

Windows: C:/Users/Public/Public Documents/VectoMelt2/

Mac: Users/Shared/VectoMelt2/

In order for the plugin to load presets properly, the preset files must be saved to the correct locations. Your main presets should be saved to the 'Presets' folder, sub-presets for each fx section should be saved to the 'SubPresets' folder. This will allow you to access your presets directly from the plugin's interface via dropdown lists. For more info about the Preset system, [see this section](#).

The Signal Chain

When sound enters VectoMelt2, it passes through a series of effects. Modulation occurs throughout the plugin, which is detailed below.

The Effect Chain

Input Signal > Melt Vector > Chorus > Phltr (8 Stage Peak Phaser > Low/High/Band Pass Filter) > Echo > LoFi (Splitter > Saturation > Damping Filter) > Output Gain > Dry/Wet Mix

The input signal first passes through the Melt Vector. This modulation effect alters the pitch and amplitude of the signal with two different modulators for wow & flutter effects. Other aspects of the plugin, such as Phltr and Echo can also be modulated with the Melt functions on the Vector. The Melt effect uses a Spread control to divide the stereo signal to give the sound depth, dimension and width. For more about the Melt Vector, [see this section](#).

The resulting sound, after being melted, then enters the Chorus effect. The Chorus uses it's own simple modulation, and has it's own Spread control. Read more about the Chorus [here](#).

The sound is then passed into what is called the Phltr, an 8-stage peak phaser and filter combo. Both the Phltr's Peak and Cutoff frequencies can be modulated by the Melt Vector. Learn all about this unique effect [here](#).

The filtered signal then enters the Echo delay unit. This delayed signal can also be modulated by the Melt Vector using the Echo Melt controls. More about the Echo [here](#).

Everything is then passed through a saturator and damping filter that are controlled with a single LoFi knob. There's actually quite a bit happening under the hood here. Read more about how LoFi works [here](#).

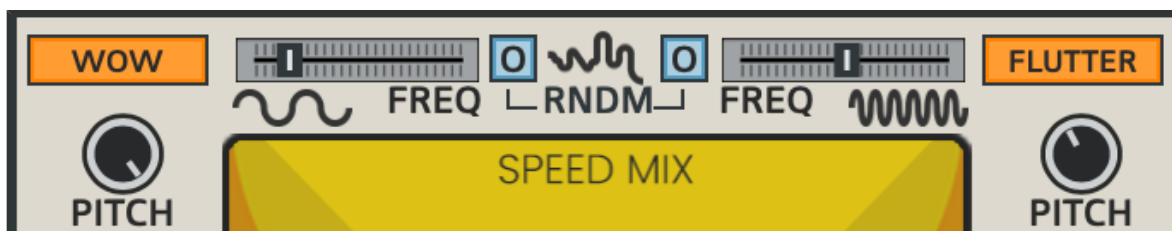
Finally the Master Volume controls the overall output signal, and the resulting sound of all applied effects can be mixed with the original dry signal using the Dry/Wet control at the bottom of the interface. Note- Master Volume controls the Wet signal, leaving the Dry signal unaffected.

Melt Vector Panel Overview



The Melt Vector is the main center of modulation, which is comprised of Wow and Flutter for creating pitch drifting, instability and degradation, reminiscent of the character of analog tape and VHS. The nature of this effect is unpredictable, and is meant for adding subtle character, but can easily be pushed to extremes.

Wow & Flutter



The Wow and Flutter modulators each have their own sets of controls on each side of

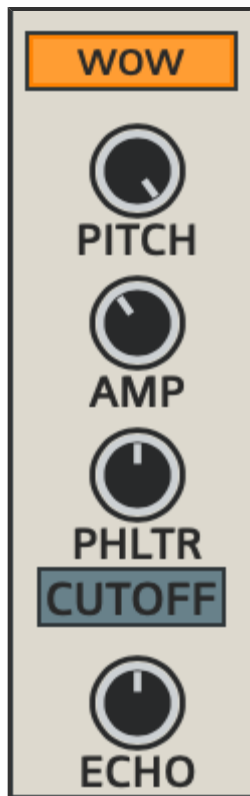
the Vector panel, with activation switches in the top corners to turn each modulator on or off.

The two **Freq** sliders next to each activation switches control the rates of modulation. Wow has a slower range (0.20-4hz), while Flutter has a faster range (4.25-8hz).

The 'R' buttons on either side of each Freq slider will add randomization to the waveform when activated. This creates a more unpredictable Melt modulation. When an 'R' button is deactivated, the Melt modulation behaves as a simple sinewave.

The X-Axis of the Vector mixes between the two modulators, while the Y-Axis acts as the overall depth of modulation for both. Move the X-Axis towards the Wow column (left) for more Wow modulation, and towards the Flutter column (right) for more Flutter modulation. When the Axis is centered, there will be an even mix of the two, based on the settings of their respective Depth controls. Move the Y-Axis up to increase the depth of modulation overall, and down to decrease it. If Y is all the way down, there will be no modulation. Moving the axis to center can act as a default position with an even balance of Wow and Flutter, and a centered depth range. This axis point can be set to auto-modulation by using the controls in the [AutoMod](#) section.

Melt Level Controls



On each side of the Vector Pad are columns of Melt Level controls. The left column is for Wow, right for Flutter. These are for increasing the depth of modulation for the specified targets, which are Pitch, Amp, Phltr(Peak/Cutoff) and Echo(timing). If these controls are set to 0, then there is no modulation of that target. Increasing these controls to 100% will result in full modulation.

Pitch

Modulates the overall pitch.

Amp

Modulates the amplitude, or volume.

Phltr

Modulates the frequency of the Phltr. If the Cutoff switches are active, both the Peak Phaser and the Cutoff Filter are modulated, otherwise,

only the Peak Phaser's frequency is affected.

Echo

Sends Melt modulation to the Echo's delay time. The amplitude of the delayed signal is also modulated, and can be controlled with the Amp controls.

Main Melt Controls



At the bottom of the Melt Vector panel are the Main Controls, Spread and Depth.

Spread will add dimension and stereo width to the sound. When increased, the stereo channels begin to separate, widening the sound. When set to 50%, it can sound like a speaker rotation. When set at 100%, the modulation will fully move between left and right channels.

The Depth knob sets the overall depth of the entire Melt effect.

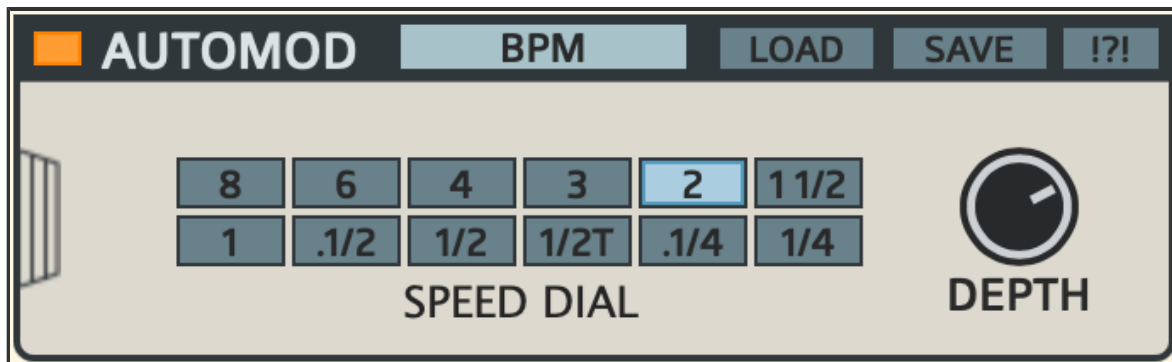
Presets



The Melt Vector can load and save its own presets by using the **Load** and **Save** switches in the top right of the panel. These are included with each individual section for quickly saving segments of the plugin, and loading them up whenever needed. For more info about Sub-Presets, [see this section](#).

The parameters on this panel can be randomized by clicking the **!?!** switch. The only parameters that are not randomized are the Main Depth and Wow/Flutter activation buttons.

AutoMod Panel Overview



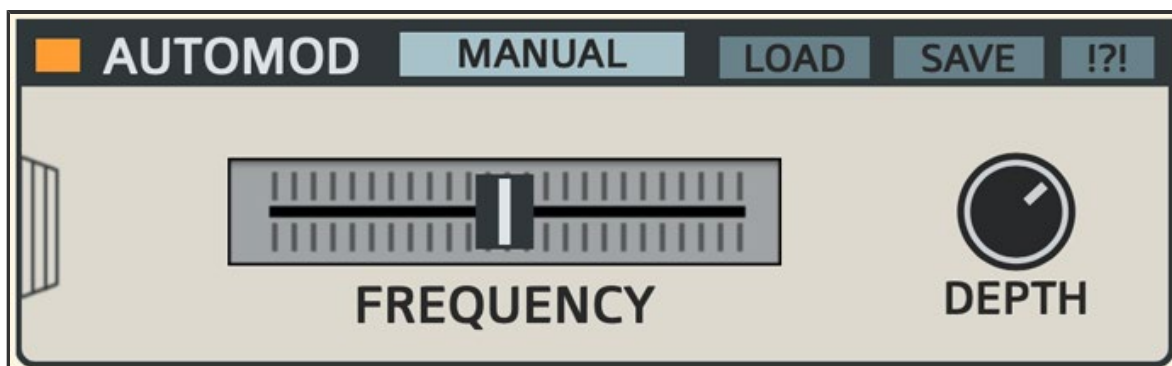
The AutoMod is an additional modulator that allows the Axis of the Melt Vector to move on auto-pilot. When the Depth is increased, the Axis point on the Vector will begin to move, causing rhythmic fluctuations between Wow and Flutter and their levels of modulation. The speed of this movement can be adjusted with the Speed Dial (BPM), or Speed slider (Manual). Under the hood, there are several hidden controls for fine-tuning this movement, such as orbiting, jumping, x/y phase and shape changes.

Main Panel Controls

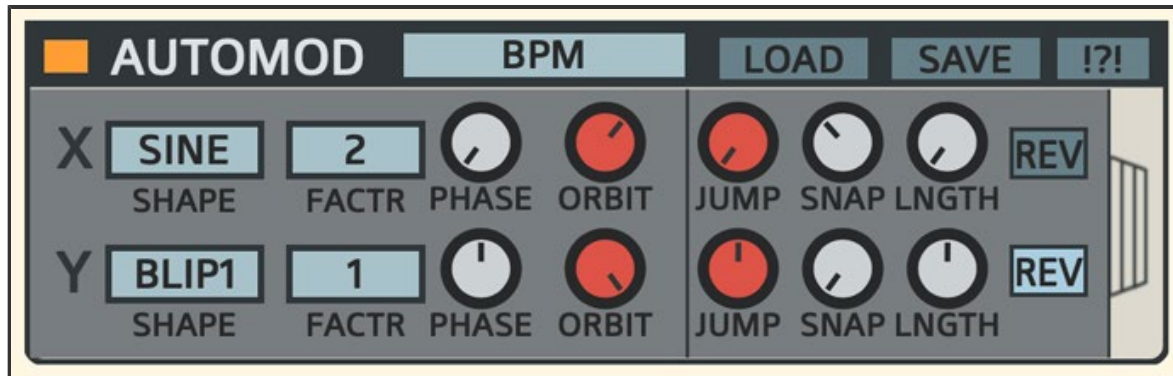
The main panel provides quick access to the overall Speed and Depth of the AutoMod, with an option to set the mode of operation.

Sync Mode

AutoMod has two main modes of operation, BPM Sync or Manual Control. If set to BPM, the modulation follows host tempo and position, and the rate of modulation can be selected using a Speed Dial. If set to Manual, the host info is ignored and the modulation speed is controlled with a single frequency slider, ranging from 0.01Hz to 1Hz.



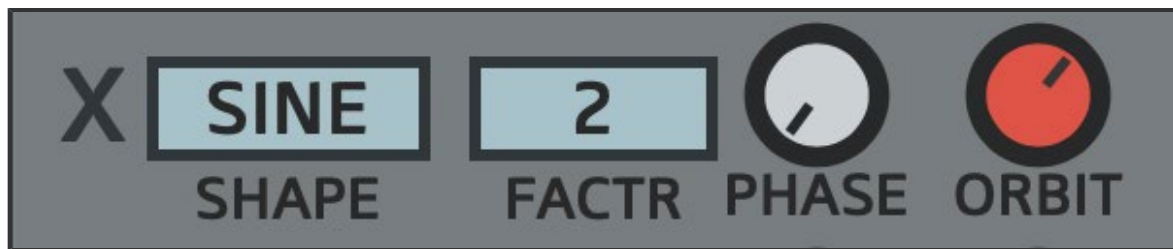
Hidden Panel Controls



To the left of the main panel is a small 'grip' that will slide open the panel to reveal a set of hidden controls for more advanced AutoMod functionality. These controls are split into two rows, one for the X-Axis and one for the Y-Axis.

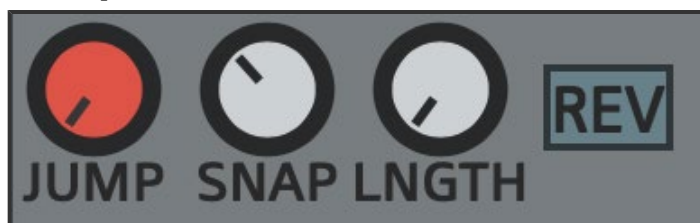
Within each row are two stages of Auto Modulation: Orbit and Jump.

Orbit



The Orbit stage modulates around the Axis point based on the chosen **Shape**, just like an LFO. The **Factor** multiplies the main Rate or Frequency (depending on Sync Mode), so it's possible to slow or speed the X and Y modulation independently. The **Phase** control determines the starting position of the Orbit path, so adjusting the two X/Y phases differently will modify the Orbit path. The orange **Orbit** knob controls the depth of this modulation.

Jump



The controls to the right of these are for the **Jump** stage. When Jump is enabled, it will

force the axis point out of orbit, causing occasional 'jumps'. The resulting sound is like a glitch in the signal path. The Jump modulator follows the speed of the Orbit.

The orange Jump knob will increase the depth of the Jump stage, causing the axis point to jump out of orbit. If set to 0, modulation will remain in orbit.

Snap & Length

These two controls work together to shape the movement of the Jump as it leaves and returns to it's center. Snap is the curve of the path to and from the axis point. Move the control left for a fast snap outward and slow return, move it to the right for the opposite effect. Set Snap at 50% for an even movement. Note that the Snap control is fully dependent on the Length control, so if there is no Length (0%), there will also be no Snap curve, and the Jump will fully follow the AutoMod rate. Setting the Length higher will result in a slower Jump, because it determines how long the Axis is outside of it's orbit, so the Snap setting will become more apparent.

The **Rev** buttons will reverse the jump, for example, if Jumps are happening along the Y-Axis from the center to the top, this will reverse that so the Jump moves from the center to the bottom.

To return to the main controls, click on the grip handle on the right side to close the panel.

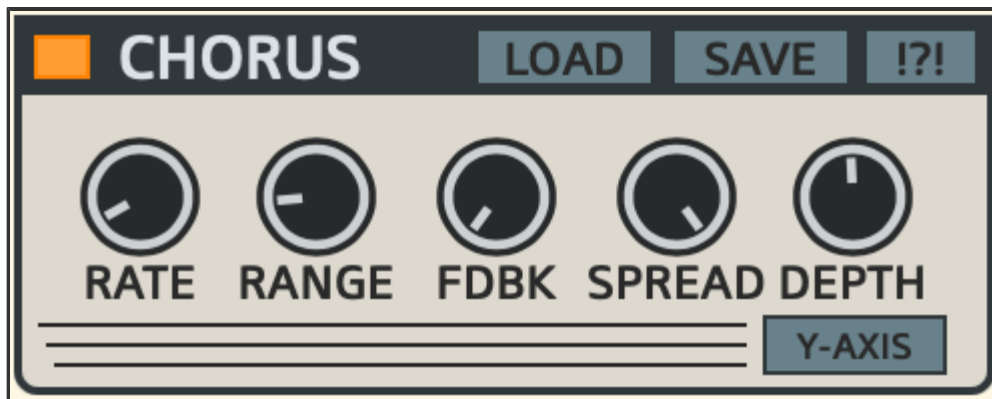
Activation and Presets



The AutoMod section can load and save it's own presets by using the **Load** and **Save** switches in the top right of the panel. These are included with each individual section for quickly saving segments of the plugin, and loading them up whenever needed. For more info about Sub-Presets, [see this section](#).

The parameters on this panel can be randomized by clicking the **!?!** switch. The only parameter not randomized is the Sync Mode option.

Chorus Panel Overview



The Chorus is an additional effect for adding width and dimension, giving the sound a lush character and spacious feel. While geared toward more traditional applications, the Chorus has a considerable range that can be used to get more interesting and unusual results. The Feedback control takes things a little further, giving the effect a more aggressive sound. The strength of this effect though, lies with the Spread control, which can create rich, spatialized effects.

Rate

This sets the speed of Chorus modulation, ranging from 0.05Hz - 5Hz.

Range

Increases the range of modulation in milliseconds, from 0.1 - 10ms.

Feedback

The FDBK control applies feedback to the Chorus. This can create a flanger-like sound.

Spread

Divides the signal into multiple voices positioned in quadrature across the stereo spectrum.

Depth

When the Depth is increased, a modulated signal is mixed with the original to create a chorusing effect.

Y-Axis

When this button is activated, it will allow the Chorus Depth to be controlled by the Y position of the Vector Axis. For example: when activated, move Y Axis up for more Depth, down to reduce Depth. The actual Depth knob will then act as a max setting for this Y control. If the Y-Axis button is off, Chorus Depth acts independently.

***Note:** There are 4 Y-Axis buttons beneath various controls throughout the plugin, which all act in a similar way as described above.

Activation and Presets



The Chorus can load and save it's own presets by using the **Load** and **Save** switches in the top right of the panel. These are included with each individual section for quickly saving segments of the plugin, and loading them up whenever needed. For more info about Sub-Presets, [see this section](#).

The parameters on this panel can be randomized by clicking the **!?!** switch. The only parameter that is not randomized is the Y-Axis button.

The entire effect can be switched on or off with the small orange power button at the top left.

Phltr Panel Overview



The Phltr is a unique Phaser/Filter combo unit. It uses an 8-stage peak filter which can be modulated by the Melt Vector to create a Phaser sound. This is accompanied by an additional filter stage that can be set to Low, High or Band pass. Both Peaks and Cutoff can be controlled by the Vector when their corresponding Y-Axis buttons are activated.

Peak Phaser



The Peak Phaser is a series of 8 peak filters that use a filter separation technique to create a distinct phaser/formant sound.

Peaks

The Peaks control has two functions: it increases the height of the filter peaks, while at the same time separates these peaks from one another across the frequency spectrum. This peak separation will create a formant sound that can become phaser-like when modulation is applied to the Phltr using the Melt Vector. The base frequency of this filter can be set using the Cutoff knob.

Width

When this control is increased, it will narrow the peak bands for a more distinct sound.

Resonance

Adding resonance will heighten the peaks even further for a more extreme formant/phaser sound. This will also work as filter resonance for the Cutoff Filter described below.

Cutoff Filter



A simple Cutoff Filter that can be set to Low, High or Band Pass.

Cut

This sets both the Cutoff frequency ranging from 30hz to 20,000hz. This control also acts as the base frequency for the Peak filter.

LP

Activates Low-Pass mode. Reduce the Cutoff from it's highest point to begin filtering out the higher frequencies.

HP

Activates HighPass mode. Raising the Cutoff above it's lowest point will start to filter out the low frequencies.

BandPass

When both LP and HP are activated, it creates a bandpass filter. Set the Cutoff closer to the center and increase the Resonance to hear the full BandPass effect. If both LP and HP buttons are off, the Cutoff Filter is completely bypassed and only the Peak Filter will be heard.

Y-Axis Buttons

Both the Peaks and the Cutoff parameters can be controlled by the Y position of the Vector Axis. For Peaks, the Y-Axis will control everything this parameter does, so that's a combination of increasing peak height and filter separation. For Cutoff, the Y-Axis will control the filter frequencies for both Peak and Cutoff filters. As an example: when Cutoff Y-Axis is activated, move the Y Axis up along the Vector to open the filter, move it down to reduce the filter frequency and close the filter. When Y-Axis is activated, the Cutoff knob will act as the max frequency. So as another example, if Cutoff is set to 800Hz, the Y Axis on the Vector will range from 30Hz (Y at 0%) to 800Hz (Y at 100%). If the Y-Axis button is off, the Cutoff knob behaves normally.

***Note:** There are 4 Y-Axis buttons beneath various controls throughout the plugin, which all act in a similar way as described above.

Activation and Presets



The Phltr section can load and save it's own presets by using the **Load** and **Save** switches in the top right of the panel. These are included with each individual effect for quickly saving segments of the plugin, and loading them up whenever needed. For more info about Sub-Presets, [see this section](#).

The parameters on this panel can be randomized by clicking the **!?!** switch. The only parameters that are not randomized are the Y-Axis buttons and the LP/HP Mode buttons.

The entire effect can be switched on or off with the small orange power button at the top left.

Echo Panel Overview



The Echo unit features a dual timing system that can be set to BPM-synced or manual control. There are many interesting features to explore such as ping-pong mode, feedback looping, delay time modulation and Vector control of the input volume.

Dual Timing System



Sync Mode

Chooses between Manual or BPM-synced timing.

Manual Timing

When in Manual mode, the timing of the Left and Right channels can be adjusted

individually using knobs that range from 0.5 - 1000 milliseconds.

BPM Rate

When in BPM mode, the rate of the Left and Right channels can be set individually. Whole, dotted and triplet notes are provided, ranging from 1 to 1/16 of a beat.

Rate/Time Link

When the Link switch is activated, the Right channel's rate will follow the Left channel. When Link is enabled, switching either rate will apply to the other. When disabled, the Left and Right timings can be controlled independently.

Offset

This will offset the timing of the right channel from that of the left. This can be used to widen the sound by slightly de-tuning one channel from the other.

Ping-Pong Mode

When Ping-Pong Mode is activated, the delays will bounce back and forth, from right to left.

Feedback and Looping



Feedback

The FDBK control adjusts the delay Feedback ranging from 0% - 120%. If set above 100%, the feedback will continue to increase. However, a limiter is in place, which will help prevent this feedback from clipping, instead driving it into saturation.

Loop

When Loop is activated, the delay is forced into infinite looping. The feedback control is ignored and the delay will continue indefinitely. Melting is still possible in Loop mode

however, so if the Echo is being modulated while in Loop mode, the delay will change based on the Melt Vector. It can be interesting to send small amounts of Melt into the delay loop occasionally to slightly alter the sound.

Filter Damping



Damp

Within the feedback path, the echoes can be colored using a series of Low-Pass and High-Pass filters. These 2-pole filters will damp the low and high frequencies as the echoes feed back. This can help to tame extreme feedback volumes. As the Damp control is increased, both low and high frequencies are filtered. At 0% there is no damping, increase for a nice balance of highpass/lowpass filtering to taper off the feedback trail.

Filter Button

This button will activate or deactivate the two filters. Turning the filters off can be useful while the delay is in Loop mode, for an uninterrupted delay loop.

Input Volume and Mixing



Input

This controls the input level entering into the Echo.

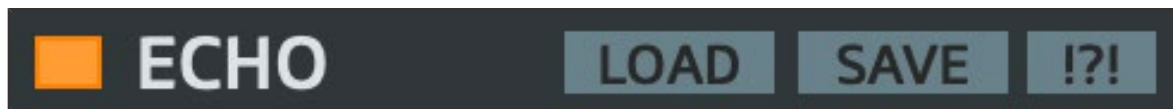
Y-AXIS

When this is activated, the Echo's input volume will be dependent on the position of the Y-Axis. This can be really fun for sending occasional fragments of sound into the Echo using the Y-Axis of the Vector. Combined with AutoMod, this can be a useful technique for delaying beat-specific portions of a drum loop.

Dry/Wet Mix

The Mix control will combine the dry and wet signals. Turn left for dry (no delay), right for wet (delayed signal only). Keep in mind that there is still another Main Mix control for the overall effect, so check this control when adjusting the Echo Mix to get the correct desired settings.

Activation and Presets

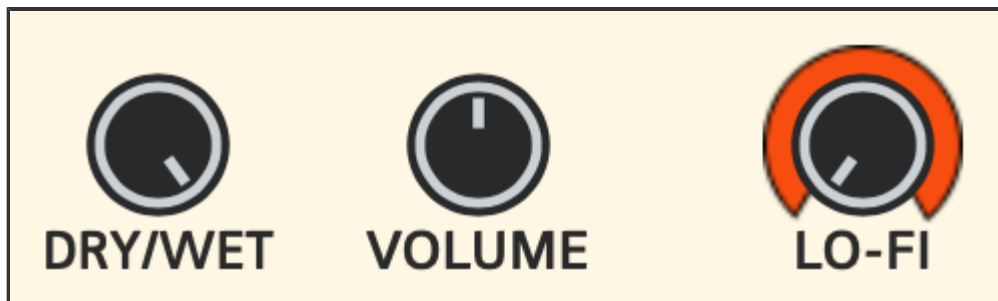


The Echo section can load and save it's own presets by using the **Load** and **Save** switches in the top right of the panel. These are included with each individual effect for quickly saving segments of the plugin, and loading them up whenever needed. For more info about Sub-Presets, [see this section](#).

The parameters on this panel can be randomized by clicking the **!?!** switch. The only parameters not affected by the randomizer are the Loop, Filter and Y-Axis buttons.

The entire effect can be switched on or off with the small orange power button at the top left.

Master Panel Overview



These controls apply to the entire effect as a whole.

Dry/Wet Mix

This is the main dry-wet mix control. If set to 0% (left), only the dry signal is heard. If set to 100% (fully right), the fully effected signal will be heard.

Volume

This is the main volume control. This will increase the volume of the wet signal without affecting the dry signal.

Lo-Fi

This is a feature that is dedicated to adding a "lo-fi" aspect to the sound overall. Increase the knob to set the amount of lo-fi character applied to the signal.

When the level is increased, the following happens:

Frequency Splitter: The signal is split into high and low bands.

Saturation: Saturation is mixed into the signal for a harmonic boost. The high frequencies will have more of a crunch, while the lower frequencies will not be as distorted, resulting in a more pleasant crunchiness.

Damping Filter: A final shelving filter is applied to slightly dampen high frequencies post saturation.

Patch Management



VectoMelt2 has an easy to use patch management system. Users can load/save their own presets which are recalled directly from a preset folder. Users can even create a default preset that loads at startup. To load a preset, click on the display bar at the top of the GUI with the preset name. This will open a dropdown selector. Click on the name of the preset to load it. For saving presets, click on the **Save** button in the top left corner of the interface. When this button is clicked, it will display a dropdown list of saving options which are explained in more detail below.

Preset Menu



Loading Presets

Loading presets is very straightforward. Just click on the top display bar with the preset name. This will open a dropdown list of available presets. If any presets are located in sub-folders, these will be shown here as well. Simply hover the mouse over any sub-folder to show the list of available presets.

Saving Presets

To save a preset, click on the 'Save' button left of the display bar. This will open a dropdown list with a few options. These are explained below:

New Folder: Select this to create a new sub-folder for saving presets to. After creating the folder, hover over it to choose the 'Save As' function in order to save into that folder.

Save As: This will save a new preset into whichever folder you are currently working from.

Overwriting presets: Below the above options will be a list displaying all available presets that can be overwritten. To overwrite a preset, just click on it's name and a prompt will confirm the overwrite with a 'Yes' or 'No'. You can also hover over sub folders to overwrite presets within them.

In order for the preset system to function properly, presets should be saved in their corresponding folders, which can be found in the following location:

Windows: the folders are located in **C:/Users/Public/Public Documents/VectoMelt2/Presets/**

Mac: the folders are located in **Users/Shared/VectoMelt2/Presets/**

***NOTE-** Presets should always be saved to the '**Presets**' folder. This will ensure that they can be pulled up in a list on the plugin's interface. Sub-folders should only be created within the Presets folder as well.

A useful feature that may come in handy is being able to double-click each control to reset it to it's default position. This can be useful for quickly initializing a parameter.

Aside from saving presets for the entire effect, each section has the ability to save and load their own sub-presets. These are presets for small groups of parameters in specific panels of the plugin. Sub-Presets are covered in more detail below.

Sub Presets

LOAD

SAVE

!?!

Sub-Presets are a way to save and recall specific groups of parameters within the plugin. This applies to each of the panels on the VectoMelt2 interface. Sub-Presets should be saved directly into the 'SubPresets' folder. This ensures that they can be pulled up in a list directly from the plugin's interface when clicking the 'Load' button. The SubPresets folder is located here:

Windows: C:/Users/Public/Public Documents/VectoMelt2/SubPresets/

Mac: /Users/Shared/VectoMelt2/SubPresets/

Click the **Load** button on each effect's title bar to pull up a list of all existing presets for that section.

To save your presets, click on the **Save** button. If you wish to save your preset as a new file, choose the 'Save-As' option, otherwise you can overwrite an existing preset by simply clicking on it from within the Save menu. If you wish to save your preset into a sub-folder, click the 'New Folder' option. After creating the folder, hover over it to choose the 'Save As' function in order to save into that folder.

Load ECHO Sub Preset

-INIT-

Basement

Bassline Echo

Cathedral

Dotted Eighth

Looping Delay

Ping Pong Delay

Slapback

Spacer Echo

Subtle Ambience

Super Dub (Y-Axis Input)

Super Dub

Trailing Off

Useful Features

Here are some useful features that you might have not noticed.

Numerical Readouts



Hover over the name of each parameter and it will display the numerical readout of that parameter. Double-click this readout to edit it by typing in values manually. This can be very useful for inputting specific values that would otherwise be too difficult to get by fine tuning. This can be especially helpful with Filter controls when specific frequencies are required.

Parameter Adjustments

For making fine-tune adjustments, hold Ctrl/Cmd while adjusting knobs and sliders to slow down control movements, making them more precise.

Also worth noting is the Double-click Reset feature. This can be very handy to reset a control to it's default position.

GUI Window Sizing

The GUI size can be adjusted by clicking and dragging from the bottom right corner. This allows resizing for up to 4x the original size. The last size set will be saved with each project/song. Alternatively, you can save a Default preset with the size you want so that it remains your default size each time the plugin is loaded.

Credits

Concept, Design and Programming by Jack Resweber ([Psychic Modulation](#))

Additional programming by [Chris Kerry](#)

VST Plugin Technology by Steinberg

Support Information

Email: support@psychicmodulation.com

[Visit the official KVR support forum](#)