

Dedalus Delay

Audio Delay/Granulation/Distortion

User's Manual

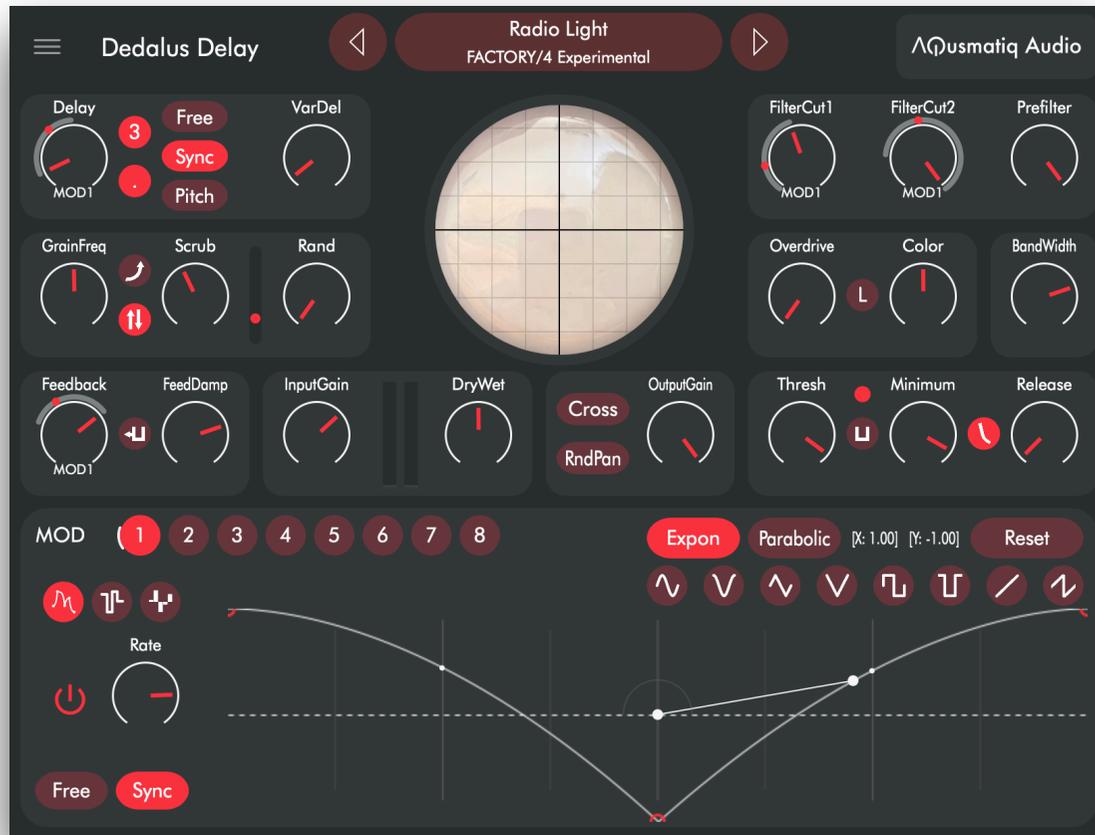
Version 1.1: for macOS and Windows

Αφυσματιq Audio

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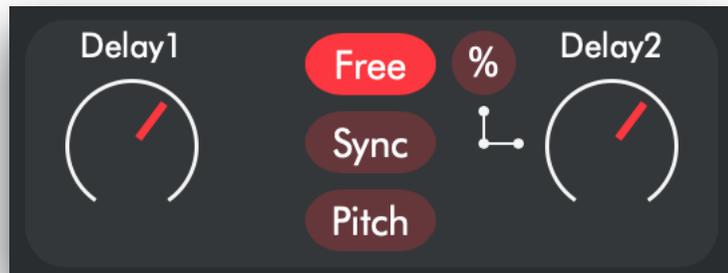
Dedalus Delay User's Manual



Dedalus Delay is a real-time audio "delay mangler." A network of delay lines is granulated and modulated, producing a labyrinth of echoes, which are further processed by filters, dynamic processors, and saturation modules. Dedalus can create a wide variety of effects, from reverb-like ambiances to evolving resonations, from rhythmic pulsation to chaotic layering, from subtle chorusing to pure noise.

Delay Section Panel

The plugin contains a complex network of variable delay lines. The actual delay time for each line continually varies between a minimum and a maximum value. The delay time can be specified in various formats (see below).

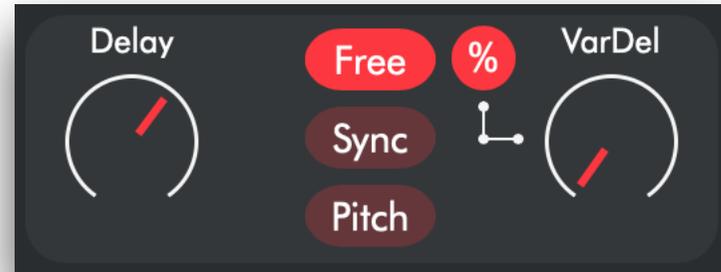


The upper left panel displays the Delay parameters. The three buttons in the middle are used to select the delay type; you can specify the delay time in three different ways:

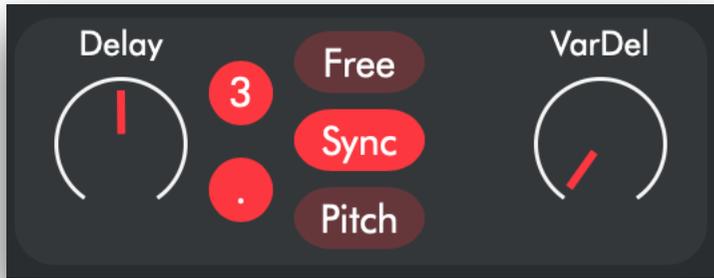
- Free = Milliseconds.
- Sync = Note durations.
- Pitch = As a pitch frequency.

Free Delay

When Free delay is selected, the two knobs, Delay1 and Delay2, set the minimum and maximum delay time in milliseconds. The delay will vary between this minimum and maximum according to the settings in the Delay Modulation Panel discussed below.



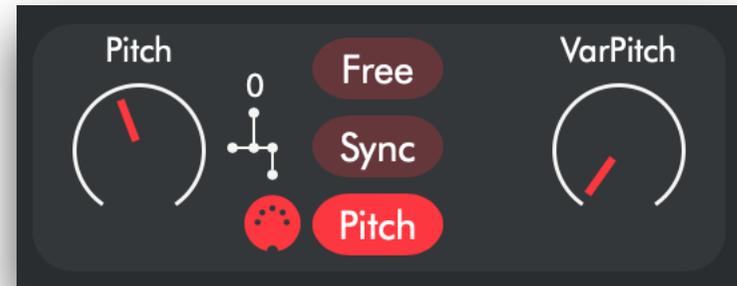
When the "%" button is activated, we switch to variation mode: in this mode, the Delay1 knob sets a delay time in milliseconds, while the VarDel knob sets a percentage of delay time variation. Again, the delay will vary according to the settings in the Delay Modulation Panel discussed below.



Sync Delay

In Sync mode, the Delay parameter sets the Note Duration base delay (1/4, 1/8, 1/16 etc.), and the VarDel parameter sets the percentage of variation of the delay (see also the Grain Freq and the Scrub Freq parameters on the Delay Modulation Panel below).

The two toggles containing "3" and "." respectively that appear when this mode is selected are used to activate/deactivate triplets and dotted values.



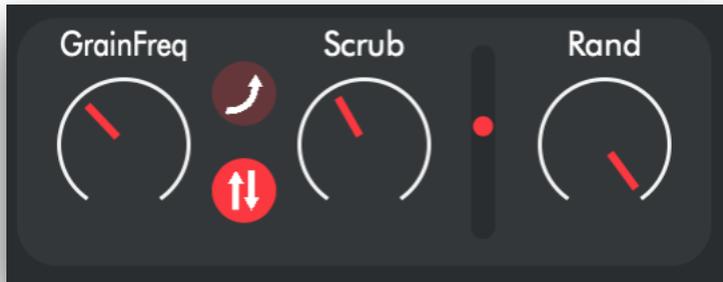
Pitch Delay

In Pitch mode, the Pitch parameter sets the delay time as a pitch period: for example, the A3 pitch (440 Hz) sets a delay of 1/440 second. The VarPitch parameter sets the percentage of variation of the delay (see also the Grain Freq and the Scrub Freq parameters on the Delay Modulation Panel below).

If you click the MIDI interface icon you can set the Delay time for sending MIDI note values to the plugin (read your DAW's instructions on how to send MIDI notes to a track). Moreover, with the number box above the MIDI icon, you can set the transposition (in semitones) of the received MIDI note.

Delay Modulation Panel

Just below the delay panel, there's the **Delay Modulation Panel**.



The delay time variation is granulated, i.e., the "play head" of the delay lines changes its position at discrete times, and this prevents pitch variation when the delay time changes (if you want pitch variation use the Glide button described below). There are two play heads for each delay line, which are crossfaded according to the granulation frequency specified by the **GrainFreq** parameter. For instance, a grain frequency of 10 Hz produces 10 grains per second. Each grain has a different delay time set by the Scrub parameter.

The **Scrub** is an LFO that oscillates between the minimum and the maximum delay values and sets the delay time for each grain. The parameter regulates the Scrub LFO rate (in hertz).

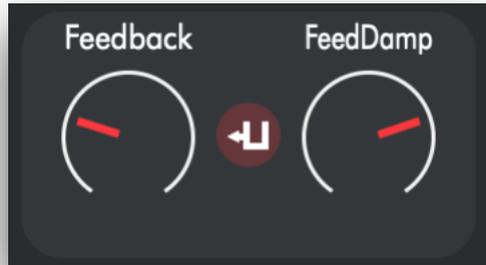
The **Rand** parameter sets the Scrub LFO waveform shape. When its value is 0, the LFO is a sine wave; when it is 1, the LFO is a random waveform. The red dot moving vertically, which is located between the Scrub and Rand parameters, is an indicator that signals the change in delay time.

The upper button on the left (**Glide**) bypasses the granulation. It activates the continuous variation of the delay time, resulting in the constant variation of the pitch of the delayed sound.

The lower button (**Delay Mod**) determines whether the modulation for the left and right channels should be the same for both channels or different.

Feedback Panel

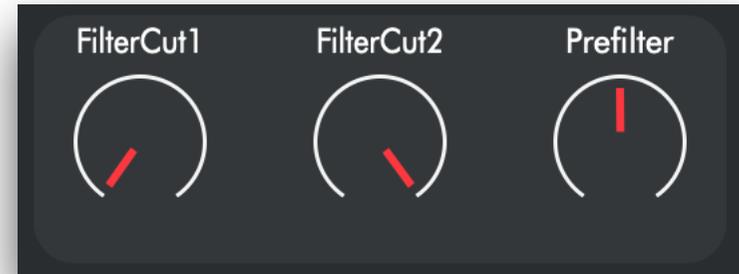
The panel below the Delay Modulation panel contains the Feedback and Feedback Damp parameters.



Feedback sets the amount of feedback in the delay circuit. Values greater than 1 can produce endless feedback; in this case, you can use the **FeedDamp** parameter to gradually attenuate the feedback when there is no input sound. When the delay is in pitch mode, high feedback values generate audible frequencies (related to the tempered scale). The middle button activates the Gate/Duck processor for the feedback (see below).

Filter Panel

The Filter panel is on the top right.

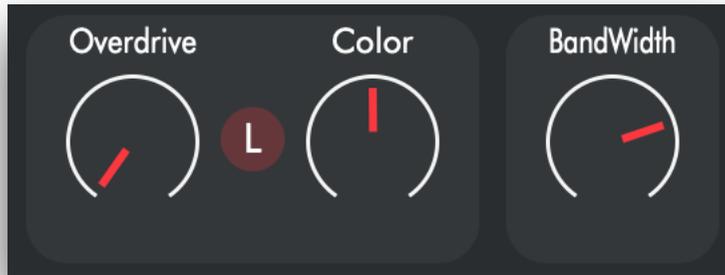


The **FilterCut1** and **FilterCut2** parameters set the filters' low and high cutoff frequencies inside the delay circuit. Only the frequencies between the two cutoff values are passed.

When the **PreFilter** parameter equals 0, the signal is filtered inside the feedback cycle. When it is 1, the signal is also filtered before entering the feedback cycle (i.e., it is pre-filtered). Values between 0 and 1 set the amount of the pre-filtered signal.

Overdrive and Bandwidth Panels

Next, there are the Overdrive and the Bandwidth panels.



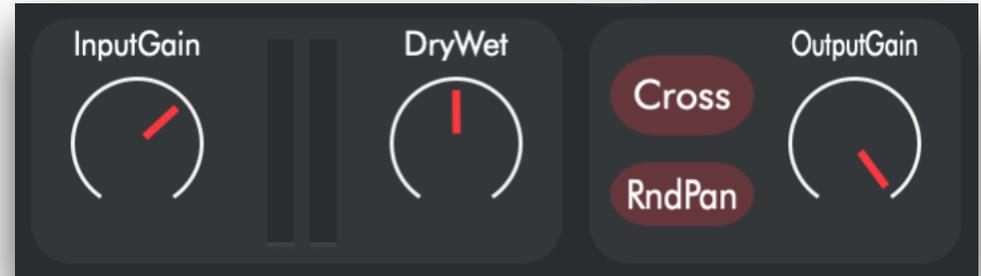
Use the **Overdrive** parameter to add distortion to the sound. The **Overdrive Limit** switch (the small "L" button in the middle) limits the high distortion values. When it is off, loud sounds will be heavily modulated.

The **Color** parameter sets the distortion bandwidth: median values affect the whole spectrum, low values the lower frequencies (saturation), and high values the higher frequencies (excitation).

The **Bandwidth** parameter limits the amplitude of the high frequencies: when its value is 1, no frequencies are attenuated. When its value is 0, only the lowest frequencies are let through.

I/O Panels

Below the central oscilloscope, we have two panels with the I/O parameters.



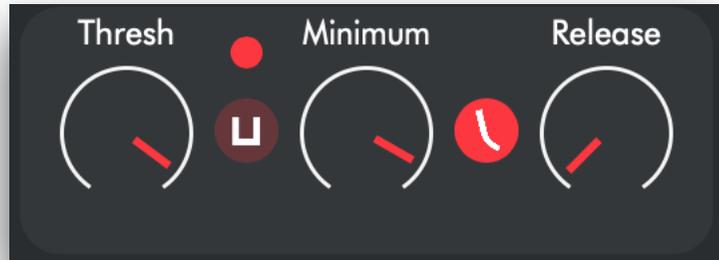
Use the **InputGain** parameter to set the gain of the signal sent to the delay circuit. The meters report the input audio amplitude. Use the **DryWet** parameter to mix the unprocessed and processed signal.

The **Cross** button swaps the left and right channel delay circuits and creates a kind of ping-pong delay effect; **RndPan** activates a random panning effect: the spatial position of the audio grains is scattered in the stereo field. The scattering rate depends on the Scrub parameter (see above).

Then there is the **OutputGain** which sets the global volume of the effect.

Duck/Gate Panel

The Duck/Gate panel is to the right of the I/O panel.



The **Thresh** parameter sets the threshold (in dB) above which the ducking or gating effect is activated.

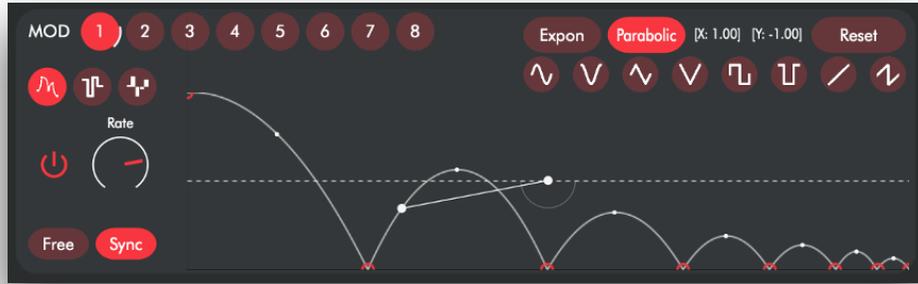
The **Duck/Gate** button, between the Thresh and the Minimum parameters, allows you to set the ducking or gating mode. When it shows a squared U (as in the figure above), the ducking effect is active. In this mode, when the input signal is above the threshold, the signal produced by the delay is attenuated by the value in dB set with the **Minimum** parameter.

If gate mode is activated, the delay signal is attenuated when the input signal is below the threshold. In gate mode the button shows an inverted squared U.

The **Release** parameter determines the release time of the effect.

The **Lin/Exp** button, located between the Minimum and Release parameters, sets the release curve: linear or exponential.

Modulators



The large panel at the bottom is the modulator panel. There are 8 modulators that you can use to modulate all parameters. A modulator can also modulate another modulator and even modulate itself!

You can select a modulator by clicking on each of the 8 numbered buttons.

Drag a numbered button over a parameter knob to assign the modulation to the parameter.



Shift-click on the knob to delete the modulation.

Hover over the bottom of the modulated knob to reveal the modulation percentage.

You can drag the mouse up and down to change the percentage: a positive percentage sets the modulation above the knob value, and a negative percentage sets the modulation below the knob value. You can see the parameter values corresponding to the percentage set on the top center of the plugin window.

Below the 8 modulator buttons are the modulator mode selectors: **Draw**, **Chaos**, and **Step**.



Draw Mode (visible in the figure on the top left) allows you to edit the waveform of the modulator by dragging and creating segments. In the middle of each segment is a curve point which you can use to warp it.

The curve type can be set with the two buttons "**Expon**" and "**Parabolic**" in the upper right.

Below these two buttons, eight buttons allow you to set primitive waveforms (sine, cosine, triangle, etc.)

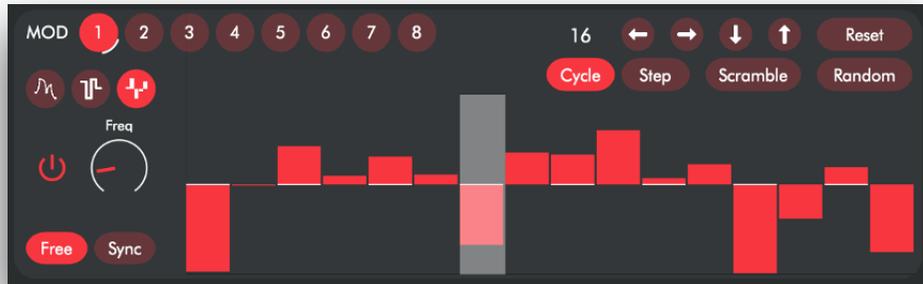


You can create a new breakpoint with a double click and delete a breakpoint with a shift-click. To set the segment curve, drag the curve point vertically. Shift-click on the curve point to reset a curve (turn it into a line).

The knob on the left is used to set the frequency of the modulator and can be managed in milliseconds ("Free" button) or note values ("Sync" button). To the left of the knob, there is the power button that activates the modulator.



The figure above shows the **Chaos Mode** (the second modulator mode) that turns the modulator into a random value generator. There are three generation modes, which can be activated with the three buttons on the upper right: "**Hold**," "**Linear**," and "**Curve**." The first generates random values held until the next value is generated, the second does a linear interpolation between the yielded values, and the third does a polynomial interpolation that connects the values with curves.



values of the step sequencer: Scramble randomly swaps the position of the steps without altering their value, while Random generates a new set of random values.

The third modulator mode is the **Step Sequencer Mode**. On the right side, we see a number box to set the number of steps, followed by two left-right arrows that are used to shift the steps to the left and right, respectively. The two down-up arrows after that are used to decrease or increase the value of the steps. Close to the arrow buttons is a reset button that resets the value of all steps to zero.

The two buttons, "**Cycle**" and "**Step**," determine how the step sequencer advances. In Cycle mode, the value of Freq/Rate represents the time it takes the step sequencer to go through all the steps. In Step mode, the value of Freq/Rate represents the time it takes the step sequencer to advance one step. Finally, the two buttons "**Scramble**" and "**Random**" change the

Parameter Lock



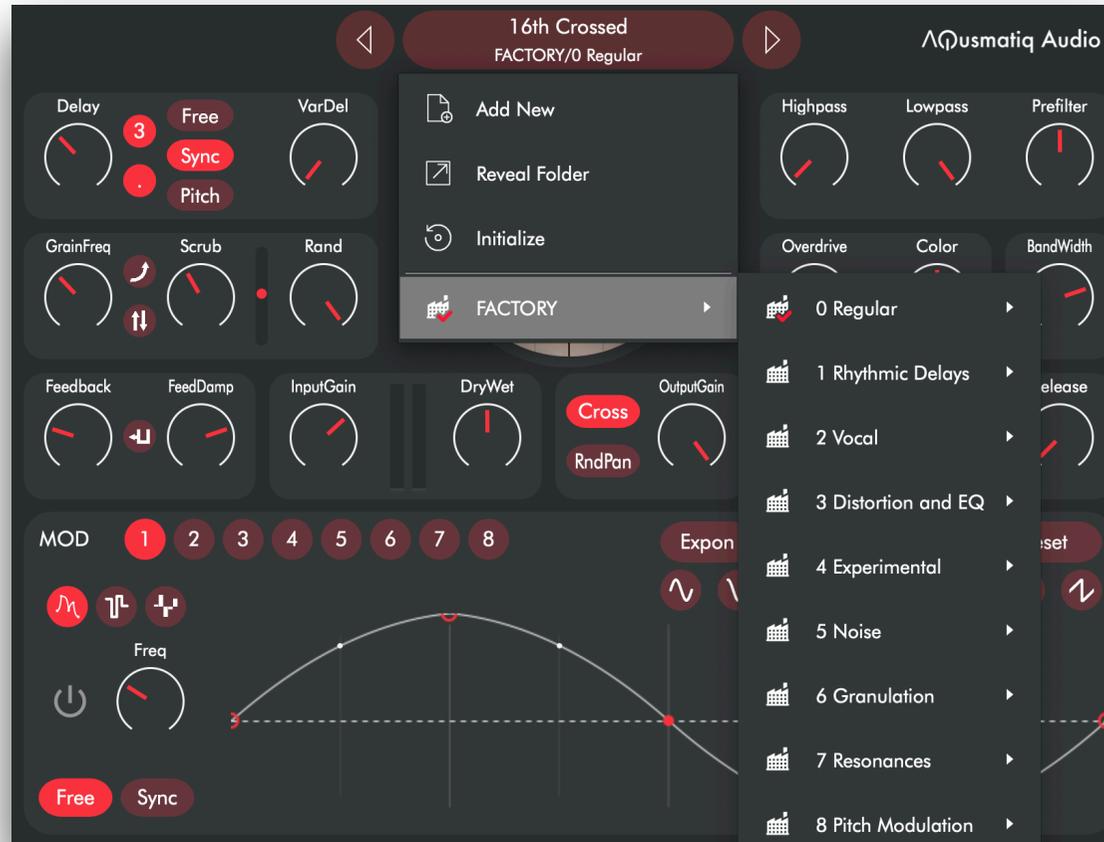
This is useful when, for example, the plugin is used in a return track and you want the output signal to be always 100 percent wet, or when you adjust the Duck/Gate values according to the characteristics of an audio file and want to try different presets while keeping those settings, or when you want to keep the same filtering in different presets, and so on.

To "unlock" the parameters, simply Ctrl-Alt-click on the panel again.

Ctrl-Alt-clicking on a panel allows you to "lock" the parameters in that panel: the panel containing the "locked" parameters is surrounded by a red dotted line.

"Locked" parameters are not changed when new presets are loaded, but you can manually adjust their value.

PRESETS



Click on the preset name (upper button in the middle) to show the Preset Manager Menu. From here, you can select any factory preset or save your own preset (Add New) into the User folder.

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Ctrl-drag a parameter value for fine-tuning.

Double-click or Alt-click a knob to reset it to the default value.

The DAW Undo/Redo commands work on the plugin parameters, too.

What's new in Dedalus 1.1

- Delay Free: added variation mode (p.4)
- MIDI Input Transpose parameter (p.5)
- Highpass and Lowpass parameters renamed FilterCut1 and FilterCut2 for clarity (p.7)
- Duck/Gate: added linear/exponential switch (p.9)
- Parameter Lock (p.13)
- Added Help Menu on the left
- Color Palettes

MORE INFO:

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SUPPORT EMAIL:

support@aqusmatiq.com

YOUTUBE CHANNEL (with several tutorials):

<https://www.youtube.com/@aqusmatiq>