

Descent User's Guide

Audio Damage, Inc.

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System Requirements

The following table summarizes the operating system requirements and formats provided for Descent. Descent is a 64-bit plugin.

Operating System	Minimum Version	Formats
macOS	10.13	AAX, AudioUnit, CLAP, VST3; Intel and Apple Silicon
Windows	10.0	AAX, CLAP, VST3
Ubuntu	18.0	CLAP, LV2, VST3
iOS (separate purchase)	iOS 12	AUv3

Demonstration Version

We encourage you to download and try the demonstration version of Descent before purchasing it. The demo version of Descent is the same as the regular version, but has the following limitations:

- Presets cannot be saved, nor can parameter values or other settings. This includes the information usually stored by your host DAW. If you save a DAW session with an instance of the demo version of Descent, Descent will revert to its default state when you reload the session.
- Descent will cease to emit audio altogether 20 minutes after you add it to your DAW session. You can remove it and add it again, but it will revert to its default state.

If you purchase Descent after using the demonstration version, simply run the installer provided to you after your purchase to replace the demo version with the full version.

Introduction

Thank you for purchasing Descent, our real-time granular-synthesis effect. Granular synthesis works by dividing audio up into short fragments called *grains*, then layering, shifting, and repositioning them to create textures such as subtle shimmers, pointillistic impressions, and dense, otherworldly clouds of sound. Descent produces sounds beyond the capabilities of conventional delays, reverbs, and pitch shifters, but at times are reminiscent of all three. Try Descent for both subtle effects, such as thickening a synth pad, and extreme effects that completely deconstruct any sound and reassemble it into something new.

Installation

Descent uses our custom plugin manager application for installation. Launch it as usual on your operating system of choice and you'll be presented with a window like this:



Near the top of the window, beneath the large word **DESCENT**, you'll see the version number of the software carried by the installer. This is distinct from the version of the plugin manager itself, which is shown in the upper right and usually not of much interest.

Under the heading **FORMATS** are large buttons corresponding to the plugin formats which can be installed: AAX, AU, CLAP, LV2 and/or VST3, depending on the operating system. If the plugin is already present on your system in one or more formats (i.e. if you're upgrading from a previous version), the corresponding button is drawn in blue. When possible, the version number of the existing plugin is also shown.

Click a button to select the format for installation. A yellow outline appears around the button to indicate that its format will be installed. In the above screenshot, VST3 and CLAP are installed, AAX and AudioUnit is not installed, and VST3 is selected for installation. The older instance of the VST3 plugin will be overwritten by the version contained in the plugin manager. Clicking a button a second time removes the yellow outline, and the corresponding format will not be installed. Clicking the **SELECT ALL** button selects all available formats for installation.

No changes to your system's storage device take place until you click the **INSTALL** button near the lower-right corner of the window. Click that button and you'll receive visual confirmation that the formats you've selected have been installed. (Yes, it happens quickly.) On Windows and Linux, if you hold down the Shift key on your keyboard, the **INSTALL** button's label switches to **UNINSTALL**, and clicking it will remove the selected formats from your system¹. Once you're installed and/or removed the formats you need, simply close the application in the usual manner for your operating system. You're done. There is no license code or other authorization necessary; we'd rather assume we can trust you than burden you with an onerous DRM system.

You'll find some handy buttons under the **EXTRAS** heading, all of which are pretty self-explanatory:

EULA – presents the End-User License Agreement for our products. By clicking the **INSTALL** button you're implicitly agreeing to these terms, but we expect that you'll find them reasonable should you take the time to read them.

MANUAL – opens the current version of this user manual, in PDF form, in your web browser.

WEBSITE – opens the product's web page in your browser.

SUPPORT – displays information for contacting us, either via our Discord presence or through email.

¹ Blame Apple, not us, for the lack of this feature on macOS. On macOS just manually delete the plugin(s) from your plugin folder(s).

Operation

Descent is based on *granular synthesis*, a signal-processing method in which sounds are divided into small chunks called *grains*. Varying the speed, size, and positioning of the grains produces a wide range of effects including pitch shifting, time alteration, pointillistic glitchy effects, washes of sound, and so on. While granular synthesis traditionally involves processing of previously recorded sounds (as found in our popular Quanta granular synthesizer), Descent focuses on real-time, continuous processing within your DAW tracks.

Descent's user interface is fairly simple insofar as it presents all of its controls in a single panel. However, the processing itself is somewhat complex and there is some interaction between the controls. Hence we're going to describe its operation and describe the controls as their use arises in context.



Descent works by continuously recording the incoming audio into a buffer and simultaneously playing short copies of the audio (grains) from the same buffer. The Count knob sets the number of grains, from zero up to 50. Each grain has a finite length, set by the Size knob. The fractional value displayed below the knob when you move it is in units of a whole note, with a resolution of $1/32$.

Descent tends to begin playing grains at metrical intervals in sync with your host DAW's transport, at intervals set by the Size knob. If you turn on the Chaos switch, Descent decouples itself from the host transport and plays grains in a more continuous manner. With Chaos on, the Size knob switches to units of seconds.

The Envelope knob—the knob with a little drawing rather than a name—applies a volume envelope individually to each grain. At its default, center setting the Envelope knob has little effect, but when you turn it to the left or right the ends of the grain are smoothed causing it to fade in and out as it plays. At the far left setting the envelope has a nearly instantaneous attack and a smooth release, creating percussive or plucked sounds. At the opposite extreme the times are reversed.

The Pitch knob shifts the pitch of the grains either up or down depending on whether you turn the knob to the right or left from center. Pitch shifting works by playing the grains faster or slower than the rate at which the audio is recorded. Since playing faster than the recording rate means that the playback position would run ahead of the recording position, any grain with an upward pitch shift is delayed before being played.

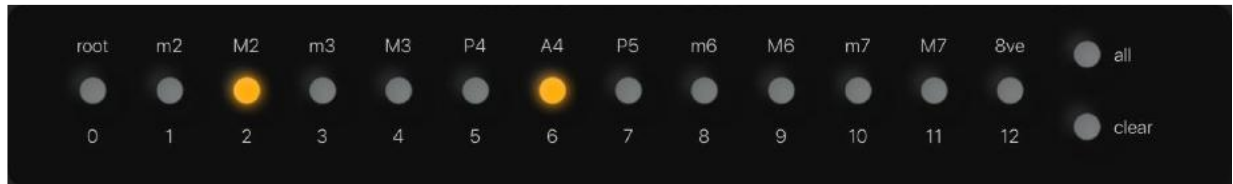
Descent restarts grains as soon as they finish playing to maintain a constant number of active grains as set with the Count knob. Considering only the controls that we've described so far, Descent will apply a sort of tremolo effect to the audio with a rate set by the Size knob and a shape set with the Envelope knob. The Pitch knob will shift the pitch up or down. However, you won't hear individual grains because they're all starting at the same time and playing the audio in the same way. They're identical copies of the same audio so there's nothing to differentiate them.

Things become more interesting when you move the Randomizer sliders. Moving each slider upwards applies an increasing amount of random influence to the grains. The Size, Count, and Pitch sliders affect the controls with the corresponding names. The Amp slider affects the loudness (amplitude) of the grains, making some grains quieter than their usual full volume. The Pan slider randomizes the apparent stereo position of the grains, causing them to spread

to the left and right². Finally, the Pos (short for Position) slider delays the playback of the grains relative to when they're recorded, spreading them apart in time by random intervals. The effects of these sliders are cumulative and applied independently to each grain when it begins playing.

Some of the effects of the Randomizer sliders are more apparent when Chaos is on. Also, the influences of the Randomizer sliders can be strong enough to completely override the settings of the corresponding controls.

By default, the Pitch knob and the Pitch Randomizer slider alter the pitch of the audio by amounts that don't correspond to musical values. In other words, the results probably won't be in tune with your music. Clicking the Shifts button invokes a panel with a collection of buttons corresponding to musical intervals.



Turning on one or more of these buttons restricts Descent's pitch shifting to the corresponding interval(s). You can turn them all on to simply make Descent work in semitones, or you can turn on a subset of the buttons to restrict Descent's pitch shifting to the key of your music. If at least one shift-quantization button is on, a little indicator light appears next to the Shifts button. At the far right are a couple of buttons for turning all of the buttons on or off en masse. Click outside the panel to dismiss it.

The Direction buttons determine the direction that the grains play audio: forwards, backwards, or one or the other chosen randomly for each grain.

The Dwell knob stretches each grain's length, allowing them to overlap. This stretching is not quantized to metrical intervals, regardless of the Chaos switch's state.

The Feedback knob creates a feedback path from the buffer, allowing incoming audio to recirculate and gradually fade. This gives the grains something to play after the source signal ceases. Note that the feedback happens with the original signal received by the plugin, not the processed, granulated signal.

The Diffusion knob applies a smearing effect to the grains. It's a bit like a very simple reverb and serves to create some space between the original and processed audio.

Finally, the Amount knob adjusts the amount of Descent's processing that you hear in the plugin's output, although it works somewhat differently than the usual output-mix knob found on most effects. The numeric value reflects the amount of the processed signal as a percentage. Turn the Amount knob fully anticlockwise and you'll hear only the input signal; turn it fully clockwise and you'll hear only the processed signal. If you're using Descent as an insert plugin on a channel, you'll probably want to use a setting somewhere in between. If you're using it on a send/return effects channel, set the Amount knob to 100. It's worth noting that Descent's granular processing runs continuously regardless of the Amount setting—think of it like the send level on a return channel, where turning the send down doesn't stop the effect from running or producing tails. Because Descent is a real-time effect rather than a conventional delay, some grains will play back in sync with the incoming audio; with subtle granularization settings the processed output can be nearly indistinguishable from the dry input.

If you click the little lock icon next to the Amount knob, illuminating it, the Amount setting will not change when you load presets. This allows you to audition presets when using it either as an insert effect or on a send/return channel without having to correct the Amount setting if the value in the preset differs.

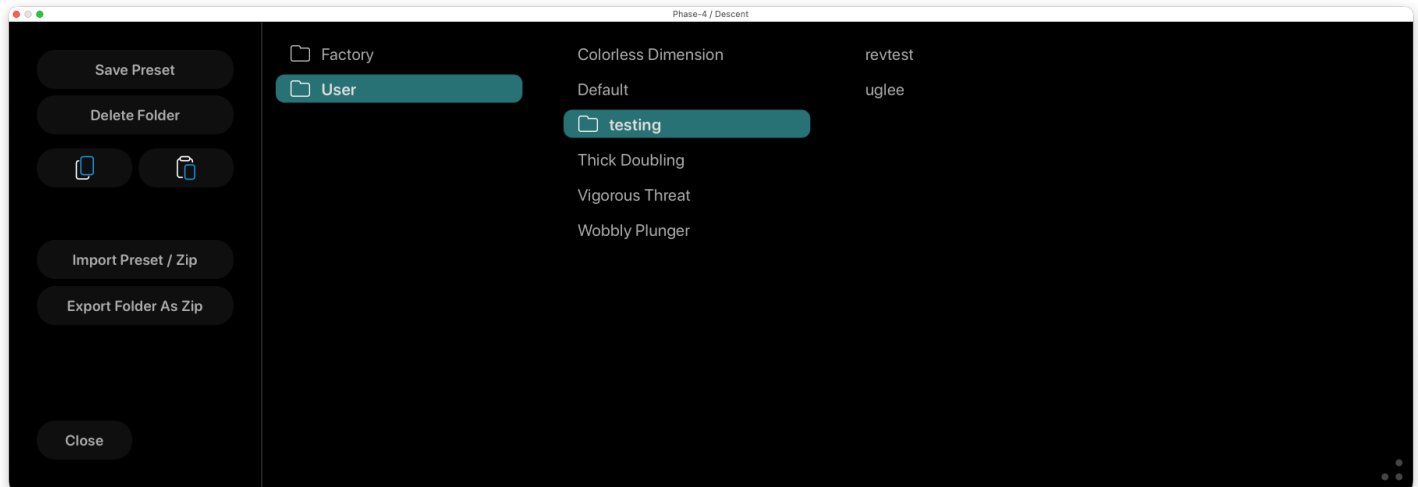
² An idiosyncrasy of the Pan Randomizer is that you won't hear much effect if it's used in isolation and the Chaos button is off. Since each grain is playing the same audio at the same time, randomizing their stereo positions and adding them all together averages those random positions, resulting in a summed signal approximately in the center. Imagine running the same signal through a bunch of channels on a mixer and moving each pan control randomly. You won't hear much difference than if you leave all the pan knobs at the center.

Preferences

Clicking the cog-wheel icon near the top right of Descent's window invokes the Preferences pane. In this pane you'll find several switches which affect Descent's display: Show Tooltips, Enable Animation, and Enable Glow Effects. Their functions should be self-evident from the names. You may find that disabling the glow effects and/or animation improves the responsiveness of the user interface if you're using a computer with a less-capable GPU.

Presets

Descent includes a number of presets to serve as a demonstration of its capabilities and inspirations for your own creations. To access the presets, click the hamburger icon near the top right corner of the window to open the preset browser. Click the Close button at the lower left corner to dismiss the preset browser.

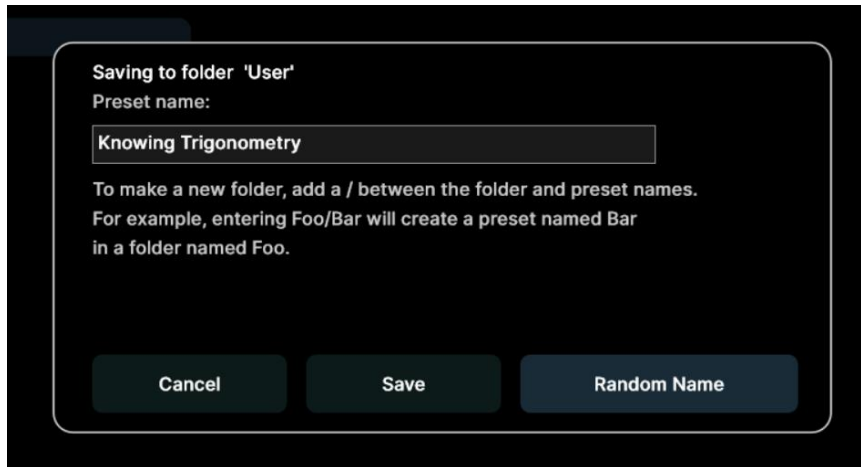


The browser displays presets and folders in scrollable lists, arranged in columns. The browser displays four columns so you can nest up to three levels of folders within the Presets folder; that is, two levels of folders within the User folder. The leftmost list shows the presets and folders within Descent's preset collection. Clicking any of these folders reveals its contents in the next list. These folders can contain sub-folders of their own. Clicking on a preset name loads the settings into Descent. Double-clicking a preset name loads the preset and dismisses the preset browser. **Loading a preset irretrievably erases Descent's current settings and any audio you've recorded**, so if you have created something that you want to use again, save it as a new preset before loading another preset.

Once you have clicked on any item in the panel, you can navigate within the preset browser with the keys on your keyboard. The left and right arrow keys move the selection between columns, and the up and down arrow keys move it within the list. Tap the ESC key to dismiss the preset browser.

The folders and presets in the browser correspond to folders and files within Descent's own folder on your storage device (i.e. your computer's SSD or hard drive). This folder is located at `C:\ProgramData\Audio Damage\Descent\` on Windows, and `~/Music/Audio Damage/Descent/` on macOS and Linux. You can store your presets anywhere you like but, to avoid possible collisions during future updates, do not store your presets within the Factory folder.

To save your presets, click the Save Preset button at the left edge of the window. This invokes a dialog box with a couple of helpful features. As the text therein describes, you can create a folder within the destination folder (whose name is given at the top of the dialog box) by adding the folder's name to the beginning of the preset's name, separated by a slash mark.



Clicking the Random Name button replaces the preset's name with a pair of words chosen at random from two lists. While the resulting names won't have any connection with what the plugin is doing, you may find this feature useful for coming up with alternatives to routine names like "My Preset 12".

Potential pitfall: once you've saved a preset, clicking its name in the list loads the preset, overwriting whatever changes you've made since you saved the preset. Hence if you want to save the preset again to preserve the changes you've made, **do not** click on its name before saving it.

You can delete presets from the lists by clicking their name and then clicking the Delete Preset button, or by pressing the Delete key on your keyboard. Descent will give you a chance to confirm this action or cancel it. If you confirm, the preset/folder will be removed from your storage system and is gone for good.

Importing and Exporting Presets

Preset files are plain-text XML files so that you can exchange them online in forums, copy them between a Windows computer and a Macintosh (and even between an iPad and a regular computer), email them to your friends, etc.

The two buttons with icons representing copying and pasting (copy on the left, paste on the right) copy Descent's current settings to the system clipboard and paste settings from the clipboard. You can use the copy and paste commands to transfer settings between two instances of Descent or paste the settings into an email message or text editor. When copied to the clipboard, presets are presented in the same XML text as used in preset files.

The Import Preset / Zip button provides a way to add presets to Descent without manually moving them into the appropriate folders in your file system. Clicking this button produces a file-browser window wherein you can select either a single preset file or a .zip file containing one or more presets. After you select the file, Descent copies the preset(s) into whichever folder you have selected in Descent's preset list, unzipping the file first if necessary.

Depending on whether you've selected a preset or folder, the Export Single Preset or Export Folder As Zip button performs the complementary functions of the Import button. First select either a preset or a folder in Descent's list, then click the export button. A file-save window appears; choose a location in your file system, give the file a name, and click Save. If you have chosen a folder in Descent's preset list, the plugin places it and all of the presets it contains in a .zip file.

Default Preset

If you save a preset with the special name "Default" in the User folder, new instances of Descent will load it automatically when you add it to your DAW session. You can use a default preset file to give you the same starting point with Descent whenever you use it. Descent's installer creates a default preset file for you but feel free to replace it with your own.

And Finally...

Thanks again for purchasing Descent. We make every effort to ensure your satisfaction with our products, and want you to be happy with your purchase. Please write to support@audiodamage.com if you have any questions or comments.

Document Revisions

- 19 February 2026: Initial release
- 24 February 2026: Added mention of lock button, updated screenshots
- 5 March 2026: Added mention of settings panel, expanded description of Amount knob, updated screenshots