



# GrainSpace

(AU, AAX, CLAP, VST2, VST3)

produced by Luca Capozzi (Audiority), January 2017.

**Current Manual version:** v2.4.1 (October 2022)

**GrainSpace** is a granular processor focused on real-time granulation, harmonization and reverberation of the incoming audio signal. **GrainSpace** provides dynamic grain generation (up to 32 per channel), 7 grain parameters, a multi-mode filter, 4 grain modulators (including two 11 waveforms LFO), smearing, chord resonator and reverb to create crazy sound effects, rich textures and much more.

Please, read carefully both product specifications and system requirements **before** purchasing any **Audiority** products.

# GrainSpace

produced by Audiority, January 2017.

## Credits

Concept & DSP: Luca Capozzi (Progsounds / Audiority), January 2017.

GUI Design: Luca Capozzi

Code & DSP: Luca Capozzi

Published by Audiority Srls

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## Specifications

- Real-Time Granular Engine
- Recording Buffer of 10 seconds
- Playback modes: Stereo, Mono (L+R), Side
- Up to 32 grains per channel
- Grain Size up to 500ms
- 7 Grain Parameters (Size, Distance, Pitch, Feedback, Freeze, Position and Stretch)
- 2 Stretch modes
- Multi Mode Filter
- 4 Grain Modulators (2 x LFO, 2 x Random)
- Tempo sync'd LFOs with 11 waveforms
- Smearing
- Chord Resonator
- Reverb

## System Requirements

### PC

- Windows 7 64bit or later
- Intel i5 or equivalent
- 2 GB RAM
- Screen resolution: 1024×768
- VST2, VST3, AAX 64-bit host

### MAC

- OSX 10.8 or later
- Intel i5 or equivalent
- 2 GB RAM
- Screen resolution: 1024×768
- VST2, VST3, AU, AAX 64-bit host

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## FILE LOCATIONS

### Mac

All presets, license, IR files and settings are located in:  
/Users/Shared/Audiority/

AAX and VST plugins will be placed in their own Audiority sub-folder located in:

AAX: /Library/Application Support/Avid/Audio/Plug-Ins/Audiority

CLAP: /Library/Audio/Plug-Ins/CLAP/Audiority

VST: /Library/Audio/Plug-Ins/VST/Audiority

VST3: /Library/Audio/Plug-Ins/VST3/Audiority

### PC

All presets, license, IR files and settings are located to:  
C:\Users\Public\Public Documents\Audiority

AAX and VST plugins will be placed in their own Audiority sub-folder, usually located in:

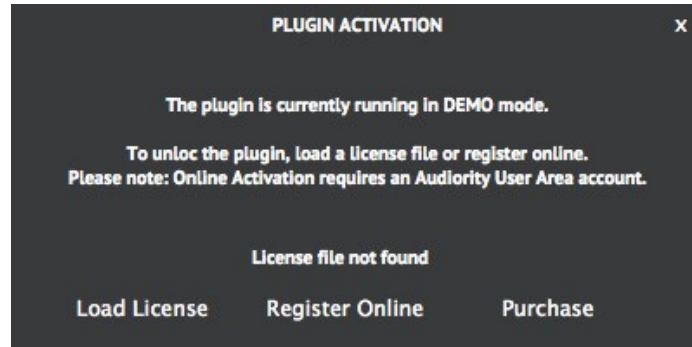
AAX: C:\Program Files\Avid\Audio\Plug-Ins\Audiority

CLAP: {Your CLAP Path}\Audiority

VST: {Your VST Path}\Audiority

VST3: {Your VST3 Path}\Audiority

## PLUGIN ACTIVATION



Once you install and open the plugin for the first time, it will be in **Demo Mode** until a license file is loaded. In Demo Mode the plugin will output 3 seconds of silence every minute.

You can activate the plugin either OFFLINE or ONLINE.

### OFFLINE ACTIVATION

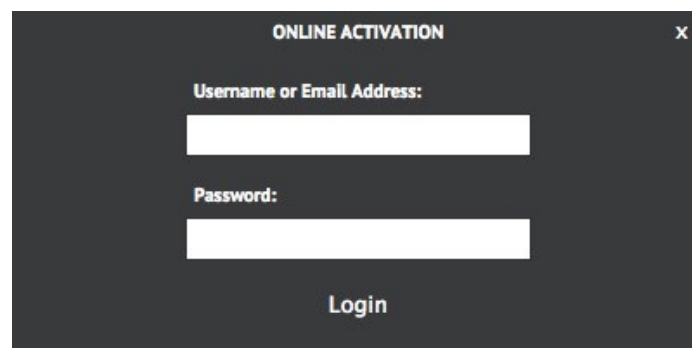
If you purchased the plugin from our site, you should have received an email to download the installers and the license file. Save the license file you got with your purchase email (or via our User Area) anywhere on your computer.

Then, to activate the plugin, click on the **Audiority** logo and select "**Register**". The Registration window will pop up allowing you to load the license file you got while purchasing the plugin by clicking the "**Load License**" button. Alternatively, you can drag and drop the license file on the registration window.

**NOTE:** If you purchased the plugin from one of our dealers, please check the "**USER AREA AND REDEEM CODES**" section below.

### ONLINE ACTIVATION

If you are registered to our User Area, then you can activate the plugin online.



Insert your Username (or email address), your password and click the "**Login**" button. The license file will be automatically delivered in your computer and the plugin will be activated.

## USER AREA AND REDEEM CODES

If you purchased from one of our dealers, then you should have received an email with a redeem code. This code is required to deposit a license in your User Area account and let you download the license file or activate the plugin online.

If you don't have an User Area account yet, please follow these steps:

- 1) Go to <https://www.audiority.com/register> and fill out the signup form.

**IMPORTANT:** Please be sure to register with the **e-mail address you use for your purchases**, otherwise your products will not show. Since we use reCAPTCHA for registration only, please temporarily disable any ad blocker you are using.

**Username**

**First Name**

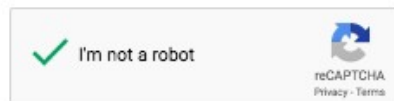
**Last Name**

**Purchase E-mail Address**

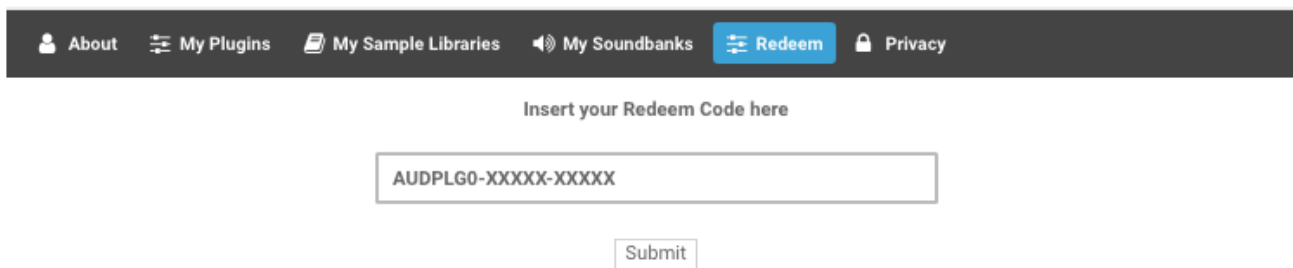
**Password**

**Confirm Password**

I read and agree to the Privacy Policy and Terms of Use

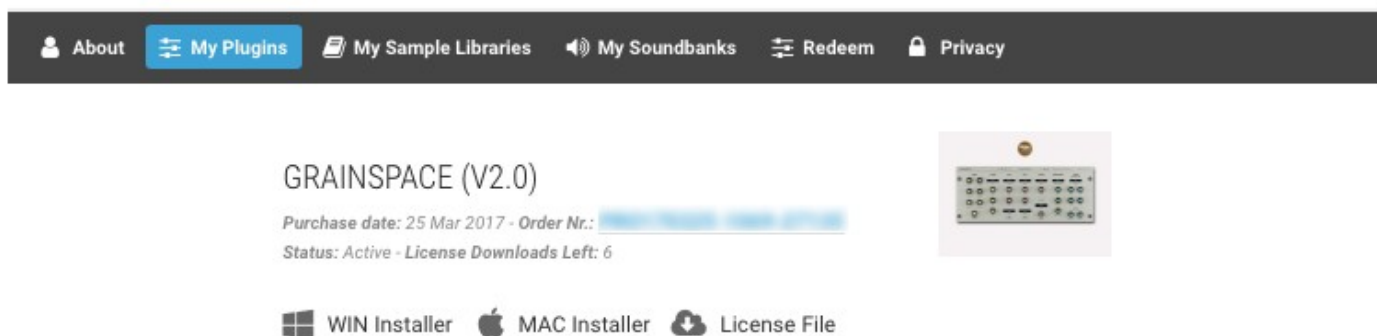


2) Once registered, log in to your account by clicking the User Area section of our site. Click the **REDEEM** section of your account and paste the code you received via email from our dealer.



The screenshot shows a dark navigation bar with links: About, My Plugins, My Sample Libraries, My Soundbanks, Redeem (highlighted in blue), and Privacy. Below the navigation bar, the text "Insert your Redeem Code here" is centered. A text input field contains the code "AUDPLG0-XXXXX-XXXXX". Below the input field is a "Submit" button.

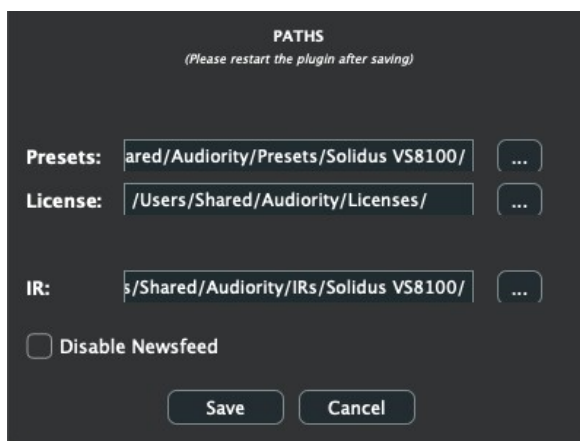
3) After submitting the code, a license will be deposited in your account and will be shown in **"MY PLUGINS"** section of your User Area.



The screenshot shows the "MY PLUGINS" section of the user area. The navigation bar includes links: About, My Plugins (highlighted in blue), My Sample Libraries, My Soundbanks, Redeem, and Privacy. The main content area displays the plugin "GRAINSPACE (V2.0)". Below the plugin name, it shows "Purchase date: 25 Mar 2017 - Order Nr.: [redacted]" and "Status: Active - License Downloads Left: 6". To the right is a small image of the plugin's interface. Below the plugin details are three download options: "WIN Installer" (with a Windows icon), "MAC Installer" (with an Apple icon), and "License File" (with a download icon).

4) Now you can click "License File" and save the license anywhere on your computer and ready to be loaded through the plugin registration window. You can also skip this part and activate your plugin online (see previous section of this manual).

## USER PATHS SETTING



The screenshot shows a "PATHS" settings dialog box with a dark background. At the top, it says "PATHS" and "(Please restart the plugin after saving)". There are three rows of settings, each with a label, a text input field, and a "..." button to the right. The first row is "Presets:" with the path "ared/Audiority/Presets/Solidus VS8100/". The second row is "License:" with the path "/Users/Shared/Audiority/Licenses/". The third row is "IR:" with the path "s/Shared/Audiority/IRs/Solidus VS8100/". Below these is a checkbox labeled "Disable Newsfeed" which is currently unchecked. At the bottom are "Save" and "Cancel" buttons.

By selecting **"Settings"** from the logo menu, you can change the path for **Presets**, **License** and **IR** folders. You can also disable our Newsfeed from here.

**Note:** Please do not move the **Settings** folder from its default location.

# GRAINSPACE PARAMETERS



## Grain Parameters (Yellow Knobs)

- GRAIN SIZE** Sets the size in milliseconds for each grain. Range: 16ms to 500ms
- DISTANCE** Sets the distance between each grain. Increase to generate and overlap grains getting a richer texture.
- PITCH** Change the pitch of each grain in semitones according to the selected PITCH SCALE
- FEEDBACK** Increase the feedback in the granular delay line. Useful to create delay and shimmer effects. Most effective if used while modulating pitch and size. **CAUTION: can create a VERY LOUD signal.**
- FREEZE (Knob + Switch)** When on, it stops recording the incoming audio and loops the internal buffer. You can use the grain parameters to travel inside the recorded audio. You can also sync the freezing, to get time varying effects. HINT: map the **Freeze Switch** to your controller for performing live.
- POSITION** Changes the reading position from the recorded buffer. Positive values creates a delay effect, while negative values creates a reverse effect.
- STRETCH** A crude but nice sounding time stretch algorithm. Positive values creates a stuttering acceleration of the signal, while negative values slow it down. Very dirt and glitchy.

## Grain Filter Parameters (Yellow Knobs)

- TYPE** Sets the type of filter you'll be using.
- CUTOFF** Sets the filter's cutoff frequency in Hz.
- RES** Sets the filter's resonance. LPF6 and HPF6 are not affected by this parameter.
- SAT** Increase the saturation of the selected filter.

## LFO 1 & 2 (Red Knobs)

- WAVE** Sets the LFO waveform.
- RATE** Sets the LFO speed.
- AMOUNT** Modulation amount from -100% to 100%.
- DEST** Sets the parameter that will be modulated by the current LFO.
- UNI** When enable, will switch the LFO output from bipolar to unipolar.



### RAND 1 & 2 (Red Knobs)

**DEST** Sets the parameter that will be modulated by the current LFO.  
**AMOUNT** Modulation amount from -100% to 100%.

### Grain Output (Green Knobs)

**PLAYBACK MODE** Sets the plugin playback mode. In **Stereo** each channel is independently processed; in **Mono** the channels of the incoming signal are summed; in **Side**, only the difference between channels is processed.  
**SMEAR** Smears the incoming audio signal by processing it with a chain of allpass filters  
**GRAIN VOL** Adjusts the volume of the granulated signal.  
Range: -12db to +12dB  
**GRAIN BLEND** Mixes the dry and granulated signal and send it to the chord resonator.

### Chord Resonator (Blue Knobs)

**CHORD** Sets chord type. When set to "None", it works as a resonant comb filter.  
**DECAY** Sets the decay length of the resonator.  
**TUNE** Sets the root note of the chord.  
**GAIN** Adjusts the volume of the resonator.  
Range: -12db to +12dB  
**MIX** Mixes the dry and processed signal and send it to the reverb.

### Reverb (Blue Knob)

**REV DECAY** Increases the reverberation time  
**REV MIX** Adjusts the reverberation amount

### GLOBAL CONTROLS (Footer)

**INPUT / OUTPUT** Pre/Post effect gain  
**PITCH SCALE** Quantize the grain pitch to the selected scale  
**ALT STRETCH** Alternate stretch mode  
**LEGACY** Sets the engine in LEGACY MODE, for compatibility with patches made with v2.3 and lower. In this mode, the Grain Buffer is reset to 2 seconds.  
**MIX** Dry/wet signal mixer.

### RESIZING CONTROLS (Audiority logo menu)

**Small / Default / Big Size** Reduce, reset or increase the size of the plugin interface.  
**Resizing Corner** You can resize from the bottom right corner of the GUI

# CHANGELOG

## V2.4.1 (October 2022)

- NEW: Legacy Mode

## v2.4 (September 2022)

- NEW: Updated Framework
- NEW: Modulation destinations for Chord Resonator and Reverb sections
- NEW: Alternate Stretch mode
- NEW: Input / Output / Mix controls
- NEW: CLAP plugin format (beta)
- NEW: Non-destructive Monophonic Modulations (CLAP only)
- NEW: Persistent GUI settings (via Settings option)
- NEW: Drag and Drop license file on registration window
- NEW: Vector toolbar
- NEW: Corner Resizer (bottom right corner of the UI)
- NEW: More presets
- FIX: Improved Licenser and Online Activation
- FIX: GUI not showing correct preset name when opened the first time
- FIX: Improved button automations
- FIX: Tail not flushed on transport restart
- FIX: Improved glitching reduction
- FIX: Grain Position not working as expected
- FIX: Infinite feedback when Grain Feedback is set to a high value
- CHANGE: Improved error messages
- CHANGE: Grain Buffer size increased to 10 seconds
- BREAKING CHANGE: Improved licenser requires a new activation

## v2.3 (March 2021)

- NEW: Updated Framework
- NEW: Universal 2 Binary for Apple Silicon Macs
- CHANGE: HQ is now global (per session)

## v2.2.1 (October 2020)

- FIX: Chord Resonator wrong pitch when enabling HQ
- FIX: Licenser not validating license file on some configurations

## v2.2 (August 2020)

- NEW: Retina / HiDPI support
- FIX: Subsonic build up on some presets
- FIX: Smear parameter not working
- CHANGE: Improved framework and file size

## v2.1 (March 2020)

- FIX: Noises while changing Pitch
- FIX: Noises when modulating Pos
- FIX: Typo in GUI
- FIX: Typo in Bouncing Grains preset
- FIX: Some presets resetting to INIT state
- FIX: Last save location not stored
- FIX: Silence triggered randomly in some configurations
- NEW: Notifications System
- NEW: VST3 plugin format
- NEW: Mac OSX 10.15 Catalina support
- CHANGE: New framework
- BREAKING CHANGE: Reverb on/off moved from Decay to Mix
- BREAKING CHANGE: 64bit only

## v2.0 (August 2018)

- NEW: Reworked graphic interface
- NEW: Grain Filters
- NEW: HQ interpolation (switch on toolbar)
- NEW: More modulations
- NEW: Chord Resonator
- NEW: Resizable GUI

For older changes, please check the product page on our site.

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We wanna thank you for buying **Audiority GrainSpace** plugin.

We hope you will enjoy it as much as we did.

If you have any question, concerns, technical issues or even for just say 'Hello', get in touch with us at:

[info@audiority.com](mailto:info@audiority.com)

or checkout our site at [www.audiority.com](http://www.audiority.com)

Cheers,  
Luca

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