GrainSpace

(AU, AAX, CLAP, VST2, VST3)

produced by Luca Capozzi (Audiority), January 2017.

Current Manual version: v2.5 (July 2023)

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

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	MAC (Intel)	MAC (Silicon)
• Windows 7 64bit or later	• OSX 10.9 or later	• macOS 11.0 or later
• Intel i5 or equivalent	• Intel i5 or equivalent	• M1 or higher
• 4 GB RAM	• 4GB RAM	• 4 GB RAM
• Screen resolution: 1024×768	• Screen resolution: 1024×768	• Screen resolution: 1024×768
• VST2, VST3, AU, CLAP 64-bit host	• VST2, VST3, AU, CLAP 64-bit host	• VST2, VST3, AU, CLAP 64-bit host
• PT11 or higher, AAX 64-bit host	• PT11 or higher, AAX 64-bit host	• PT11 or higher, AAX 64-bit host

INDEX

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:
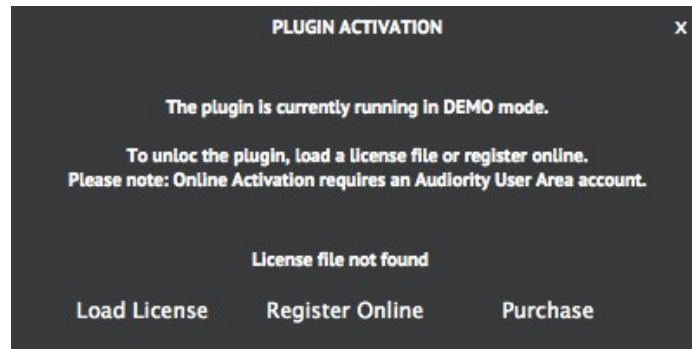
AAX: C:\Program Files\Avid\Audio\Plug-Ins\Audiority
CLAP: {Your CLAP Path}\Audiority
VST: {Your VST Path}\Audiority
VST3: {Your VST3 Path}\Audiority

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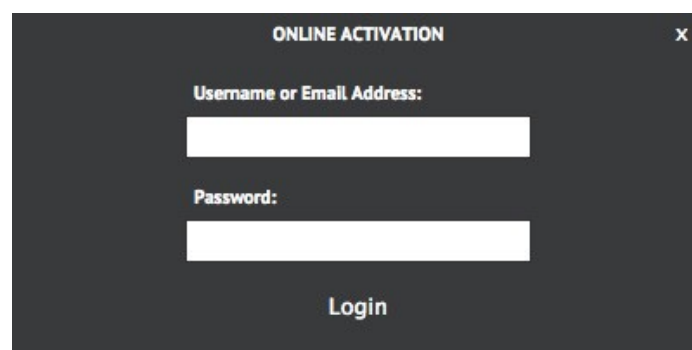
Insert your Username (or email address), your password and click the "**Login**" button. The license file will be automatically delivered in your computer and the plugin will be activated.

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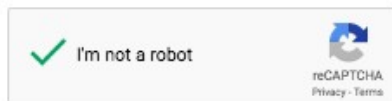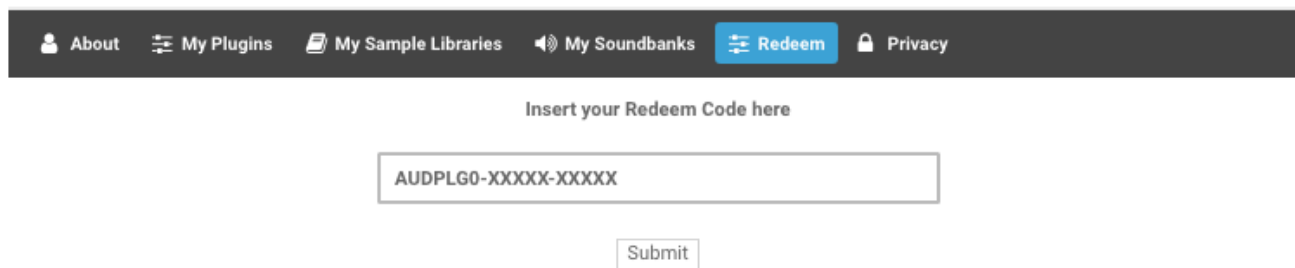
2) Once registered, log in to your account by clicking the User Area section of our site. Click the **REDEEM** section of your account and paste the code you received via email from our dealer.
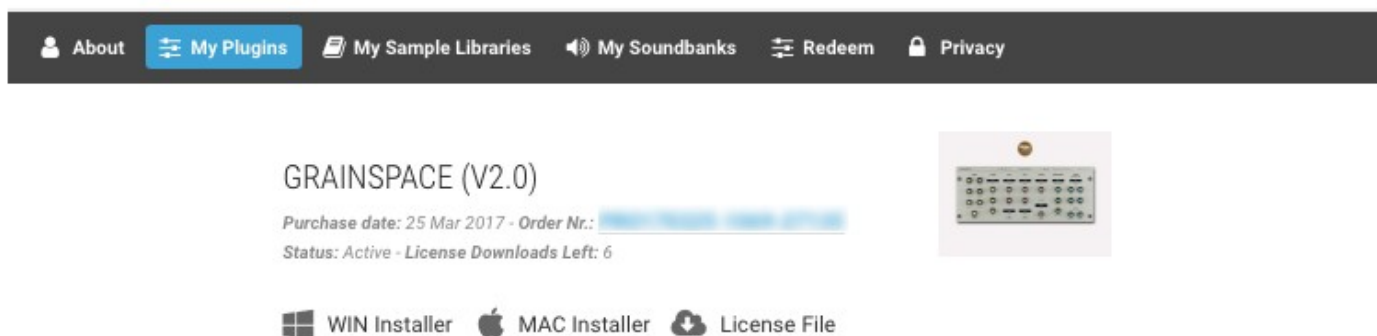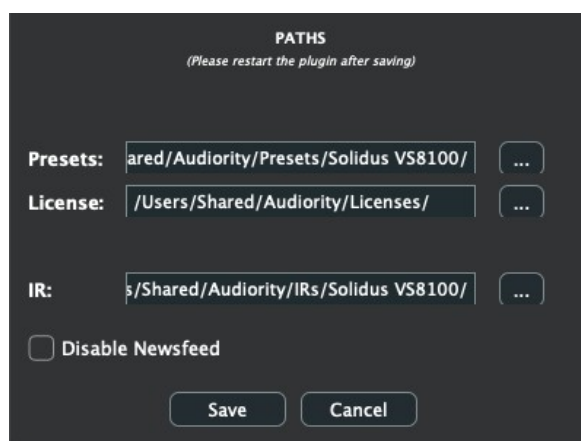

3) After submitting the code, a license will be deposited in your account and will be shown in "**MY PLUGINS**" section of your User Area.

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

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

v2.5 (July 2023)
- NEW: Framework update
- NEW: AAX Native Silicon
- NEW: McRocklin presets
- CHANGE: Improved tempo sync
- FIX: Mac installer was asking for Rosetta on Silicon Macs
- FIX: Windows installer could erase User folder when updating

v2.4.2 (October 2022)
- FIX: Plugin crashing while trying to edit a knob value via shift + double click
- FIX: Missing value units on Chord Gain and Chord Mix knobs

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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Last updated on May 19th, 2021

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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

or checkout our site at www.audiority.com

Cheers,
Luca

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