INERTIA SOUND SYSTEMS

GRANULIZER

Operation Manual

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Inertia Sound Systems

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1 Introduction

Inertia Sound Systems Granulizer is a granular synthesizer in Audio Unit Instrument format, capable of producing complex textures using samples by pitch shifting, time stretching, rearranging, mangling and by performing spectral operations on the original sample audio frames.

1.1 System Requirements

Inertia Sound Systems Granulizer is currently only available in AudioUnit (AU) format and supports OSX Yosemite (10.10) and above (see FAQ at `https://www.inertiasoundsystems.com/faq/`)

1.2 Installation

Double click Granulizer.pkg and follow the instructions. The plugin will be installed into */Library/Audio/Plug-Ins/Components* by default

1.3 Registration

The first time the plugin is loaded the User Registration Screen will come up. Pressing the *"Get Your Authorization code"* link will take you to your account at Inertia Sound Systems where you can generate your serial number. You can authorize the plugin by inserting your Inertia Sound Systems user name and the serial number you just generated in the fields indicated below.

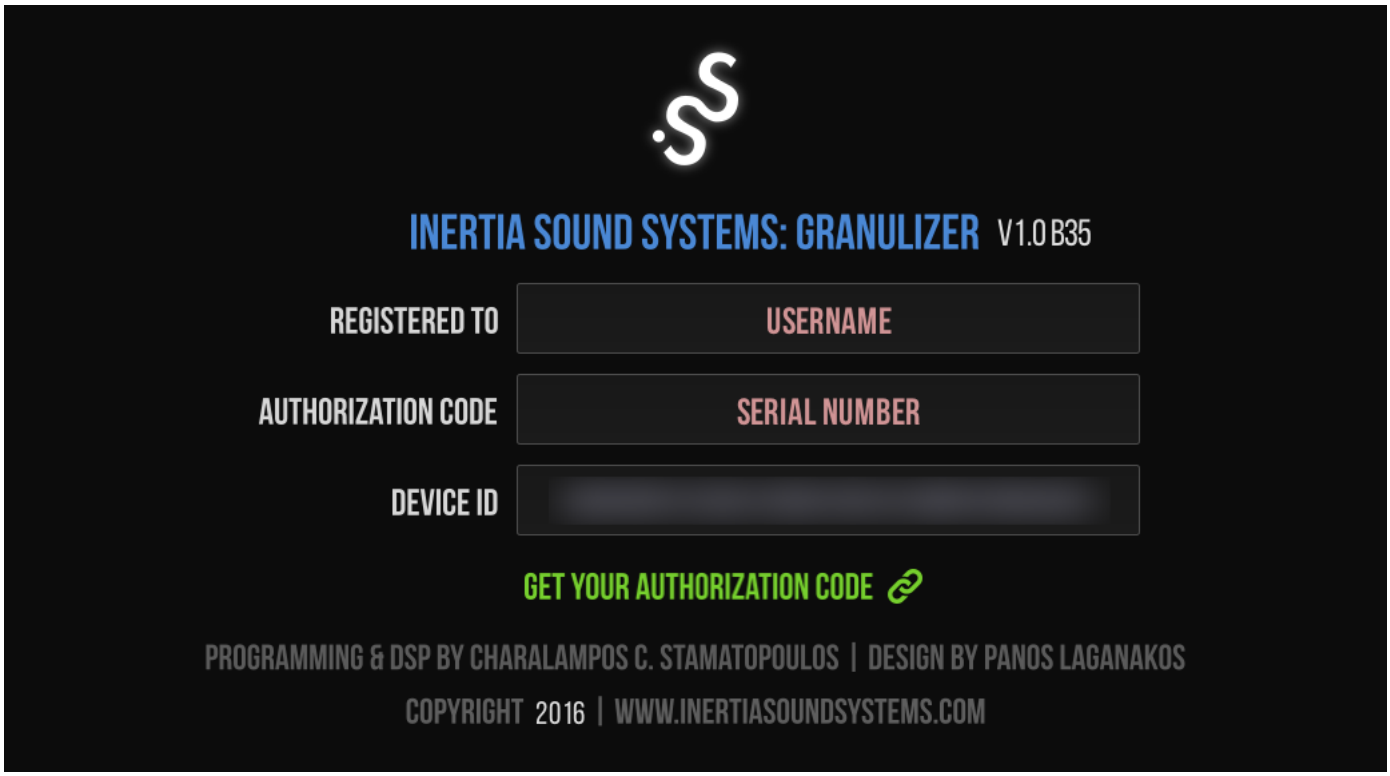

Figure 1: Inertia Sound Systems Granulizer

2 Plugin Settings

In case you want to review your username and serial number you can click at the gear at the left side of the display. This will bring up the registration view of the plugin. To get back to the main screen just click anywhere.

3 Parameters and Operation

3.1 Overview

Figure 2: Inertia Sound Systems Granulizer

Inertia Sound Systems Granulizer features the following modules:

- **Engine**, The actual granular synthesis engine, with controls for grain size, density, speed - distance, temporal envelope shape, mode of operation, and grain direction.
- **FX**, Spectral Processing with controls for spectral dimension, spread, formant shifting and effect mixing amount
- **Main**, With controls for amplifier attack and release time, output volume, and core randomizer (magic).
- **Session Setup**, With controls for sample reverse, quantization for the grain speed parameter, loop mode.

3.2 Parameters

3.2.1 Engine

- **SIZE** : Sets the grain size in milliseconds
- **DENSITY** : Sets the density of the grains, i.e how many grains are produced (Mode OFF).
- **SP/DST** : Sets the playback speed of the grains or the spacing between them according to the MODE parameter value.
- **E. TYPE** : Sets the shape of the envelope of each grain. Lower values shape the envelope towards a delta function, whereas higher are shaping the envelope to a rectangular window.
- **REV** : When active, reverses the audio contained in each grain.

- **MODE** : When MODE is OFF both density and SP/DST are bound to the SIZE parameter, this means that these values change internally in order to maintain a certain speed or density. When MODE is ON both DENSITY and SP/DST are independent of grain size and can be freely set in milliseconds

3.2.2 FX

- **DIMENSION** : Sets the level of affection of Granulizer's custom spectral compressor.
- **SPREAD** : Sets the amount of the grains' diffusion.
- **F. SHIFT** : Sets the amount of the grains' frequency shift.
- **DRY/WET** : Sets the FX section mix to the dry sound.

3.2.3 Main

- **ATTACK** : Amplitude envelope attack time.
- **RELEASE** : Amplitude envelope release time.
- **MAGIC** : Randomizes SP/DST parameter separately for each stereo channel. Small values produce huge stereo width. Larger values create a more random sequence of grains.
- **VOLUME** : Sets the overall volume of the plugin.

3.2.4 Session Setup

- **QUANTIZE** : Sets the SP/DST parameter to fixed values when the MODE parameter is inactive. Useful to stretch a loop to multiples of the original speed, when the loop has the same BPM as the project you are working with.
- **LOOP** : When LOOP parameter is active playback will go on as long as midi notes are active. If LOOP is inactive playback will stop at the end of the sample.
- **REVERSE** : Reverses the whole audio sample.
- **LOAD** : Alternative way of loading sample to the engine, instead of dragging it to the loop area at the bottom of the plugin.

3.3 Default Values

Each knob on the ISS Granulizer can be reset to it's default value by double clicking on it.

3.4 Operation

The operation of ISS Granulizer is quite intuitive. Here everything starts with a sample. So the first thing you should do is to load a sample, either by dragging it to the loop area , or by clicking the LOAD button.

As soon as a sample is loaded you can start playing with your midi keyboard or you can get sound by inserting notes in the piano roll.

You can choose just a portion of the sample you have loaded to modify by selecting it in the loop area. This can happen by clicking and dragging the mouse to the desirable length. To reset that just single click elsewhere in the loop area, or choose a different portion by performing the same dragging operation on a different area of the sample.

4 Tips

You can start experimenting with the ENGINE controls to make the sample play faster or slower by adjusting the SP/DST parameter. Increasing DENSITY parameter produces more grains and the sound gets reacher. Extreme values create a comb filter effect.

Similar effect to that has the ENV shape parameter. High values of this parameter shape the envelope grain towards a rectangular shape making the grains sound closer to one another, whereas low values make the. grains sound more distant.

Adjusting the SIZE parameter to high values will create long grains which is useful when a percussive sample is used. A sound can get bigger by increasing the MAGIC parameter a little bit to create a wide stereo effect.

You can also get interesting results by experimenting with the FX section. Increasing the DIMENSION parameter you increase the noisiness of each grain by spectral compression. You can also alter the locality of the sound by increasing the SPREAD parameter.

Nice pads and atmos can be achieved by selecting a very small loop, adjusting speed and density to create a comb filter effect and then by applying the FX at 100% WET and with high SPREAD values.

ISS Granulizer can also be ideal for glitch effects. This can be achieved by modulating SIZE, SP/DST and / or density from the host.

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