



# GRANULAR MORPHING TEXTURES FOR KONTAKT 6.4.2



USER MANUAL

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# INTRODUCTION

GRAINSTATES is a set of 128 „granular morphing„ textures and soundscapes.

It comes with two sequencers and 4x 64 source waveforms within four distinct layers that can be played back randomly.

There is control over granular playback as well as onboard effects like flair, flanger and phaser.

Besides this, each preset in GRAINSTATES comes with three „states“ (snapshots) that can be edited and played back in various order and morphed if wished.

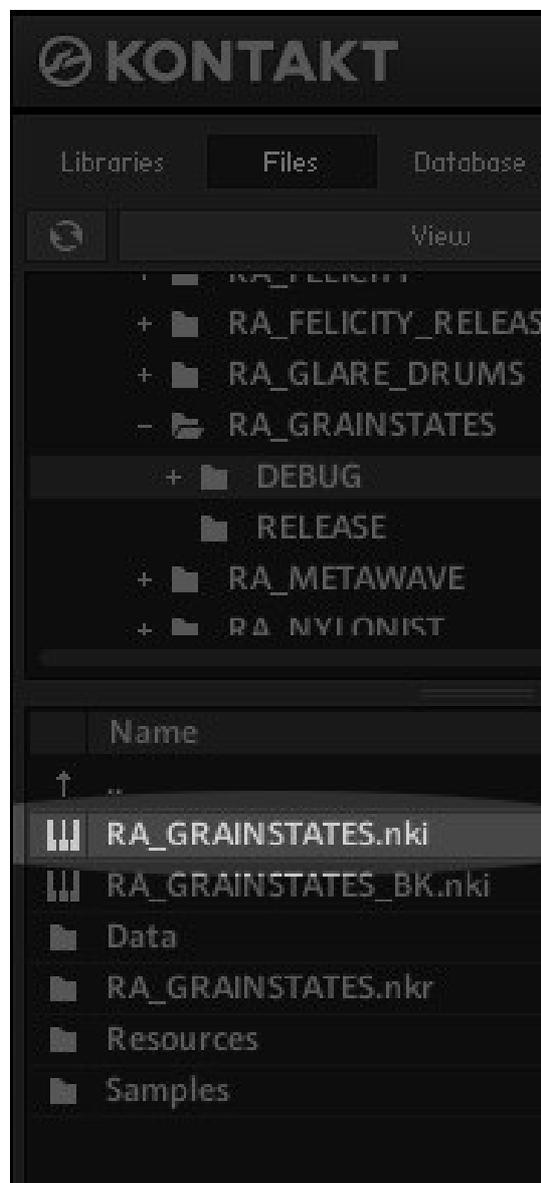
On top of that you can import your own WAV/AIF files into each GRAINSTATES layer via drag and drop.

# INSTALLATION

There is no special installation required.

Simply extract the contents of the downloaded archive (RA\_GRAINSTATES.zip) to any location on your computer.

To load up GRAINSTATES in KONTAKT, head over to the KONTAKT file browser and load „RA\_GRAINSTATES.nki“:



# OVERVIEW



When you launch GRAINSTATES, you will be presented with the „main“ screen, where you can adjust parameters and effects for all the presets.

The < grainstates > - label at the top shows the currently active preset.

Use the left and right arrows to cycle between presets. As an alternative, you can click on „library“ at the top to open up the browser and choose a different preset from there.

GRAINSTATES generates its soundscapes by playing back chosen sounds from four layers simultaneously:

<g1> - granular layer one.

<g2> - granular layer two.

<wt> - wavetable layer.

<tm> - „timemachine“ (timestretching) layer.

Each layer has a set of controls to shape the sound. You can adjust the volume for each one, use the reverb knob to dial in reverb for each layer as well as choose a source waveform to be played back.

Each layer also has a little note icon, which is enabled by default. Once disabled, that particular layer will no longer track pitch from MIDI notes and will be played back using the last received MIDI note pitch.

This is helpful if you have a certain sound that shouldn't be played back with a different pitch, depending on what notes you play. As soon as the note icon is turned off, that particular layer will play with the last received MIDI pitch.

Besides this you can „swap“ a source sound randomly while the whole sequence is running, whenever that playback sequence reaches that particular layer by using the little „rnd“ button.

A „new“ random sound is chosen with every next step in the sequencer.

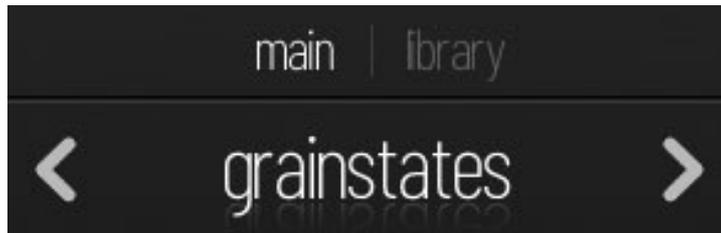
**NOTE:** The <tm> layer will require a new MIDI note-on command to play the newly chosen random sound.



At the top-right you can find a little dice symbol.  
Click here to randomize the currently selected preset.

The dice symbol in the lower-right section will randomly choose source sounds for all four layers.

## GLOBAL CONTROLS



In the top center, you'll find the preset and library controls. From here you can switch GRAINSTATES presets using the left and right arrows.

As an alternative, you can click on the „library“ tab to open up the library browser for more convenient preset browsing.

You can always rename a preset by clicking on the name in the top section.



These knobs do control sequencer and granular sample playback parameters.

FLUX – adjusts the speed of layer cycling ( $g1 \rightarrow g2$ ).

SPEED – controls the sequencer tables playback speed.

**NOTE:** Also affects state-sequencing and morphing speed.

SPREAD – stereo position for layers  $g1$  &  $g2$ .

DETUNE – random detune amount.

LENGTH – length of a single „grain“ ( $g1$  &  $g2$ ).

Higher values will result in a smoother release tail but also consume more voices (CPU).

MULTIPLY – sample offset multiplier:

Some source samples in GRAINSTATES are longer than other ones. By adjusting this knob, you can multiply the sample playback offset, determined by the first (top) sequencer table to reach points in a sample „further away“).

OFFSET – sample offset control ( $g1$  &  $g2$ ).

**NOTE:** All sequencer and granular control knobs can be modulated by the modulation wheel (CC #1).

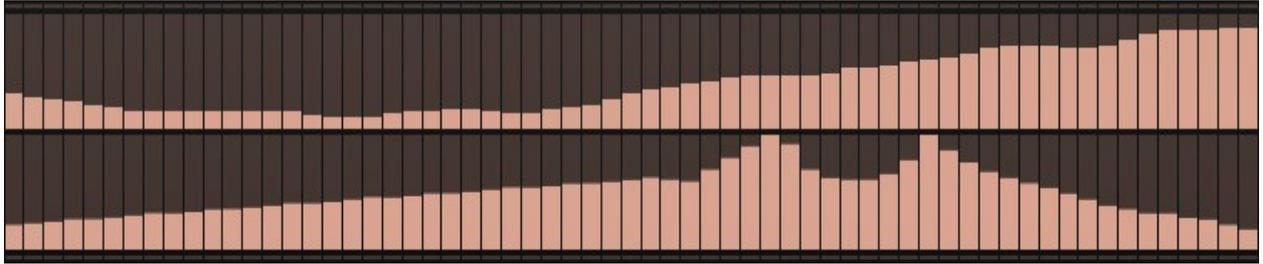
For any control that you want to modulate using the modwheel simply press the little „MW“ button next to it.

### **A word on controls:**

<SHIFT> - for more precise control.

<COMMAND/CONTROL> - to reset a control to its default value.

# THE SEQUENCER



The first (top) sequencer lane controls the sample offset / sample start position for the two granular layers (g1 & g2).

The second sequencer lane controls the wavetable position for the <wt> (wavetable) layer and the playback speed for the <tm> timestretching layer. Lower values will result in a slower playback speed.

## **A word on tables:**

<SHIFT> - for more precise control over a single sequencer step.

<COMMAND/CONTROL> - to erase steps in the table.

<OPTION/ALT> - When pressing this key on your keyboard while adjusting the 1<sup>st</sup> step on any one of the two tables – it will set **all** steps to that particular value.

<RIGHT MOUSE> - This way you can draw in straight lines into the tables.



In the top-right you will find the sequencer state and morphing controls.

RETRIG – the sequencer will restart, once a new note-on MIDI command has been received.

MORPHING – enables table and knob morphing.

STOP – immediately stops the sequencer playback.

The [A], [B] and [C] buttons in the right corner let you switch between the three states in each preset. Click these to make changes to a particular state.

You can press the <SHIFT> key on your keyboard to select more than one state at once so that all editing affects all the selected states.

An [>>>] animation will indicate the currently active (playing) state.

The eight toggle buttons in the center can be seen as a state-playlist. Clicking on one of these will toggle between A,B and C. Use the <SHIFT> key while clicking these, to set all steps in that playlist to a particular state.

The playback will always go from left to right and restart from the beginning once the last step has been reached.

# LAYER CONTROLS



In the bottom, you can adjust parameters for all the four source layers in GRAINSTATES.

<NOTE ICON> - pitch tracking.

<RND BUTTON> - chooses a random source sound whenever the granular layer cycles between g1 & g2.

<MW> - controls the layer's volume via the mod-wheel.

<VOL> - layer volume.

<REVERB> - layer reverb send amount.

<GRAIN XX> - granular layer source sound menus.

<TABLE XX> - wavetable layer source sound menu.

<WAVE XX> - timemachine layer source sound menu.

<A> - layer envelope attack amount.

<R> - layer envelope release amount.

At the right there is a little dice symbol.

Click on this to choose random source sounds for all four layers at once.

# EFFECTS



These knobs do control the master effects:

<FLAIR> – controls the amount of the „flair“ effect. This effect uses tuned delays to create metallic/ringing overtones.

<PITCH> - controls the pitch (tuning) of the „flair“ effect.

<MW> - use these to control either the flair amount or pitch via the modulation wheel (CC #1).

<FLANGER> - flanger effect amount.

<PHASER> - phaser effect amount.

<RND RANGE> - These two knobs control the range in which random source waveforms are chosen whenever a [RND] switch for a particular layer is engaged.

## AUDIO FILE IMPORTING

GRAINSTATES features audio file importing (WAV/AIF) via drag and drop. You can either import a single audio file or multiple files at once (up to 64 per layer):



To import audio files, simply drag them from KONTAKT's files browser or from anywhere outside into the GRAINSTATES interface.

Choose a layer you want to load these files into. In the example above, we're dragging an audio file into the „g1“ layer into sample slot #4. („grain 04“).

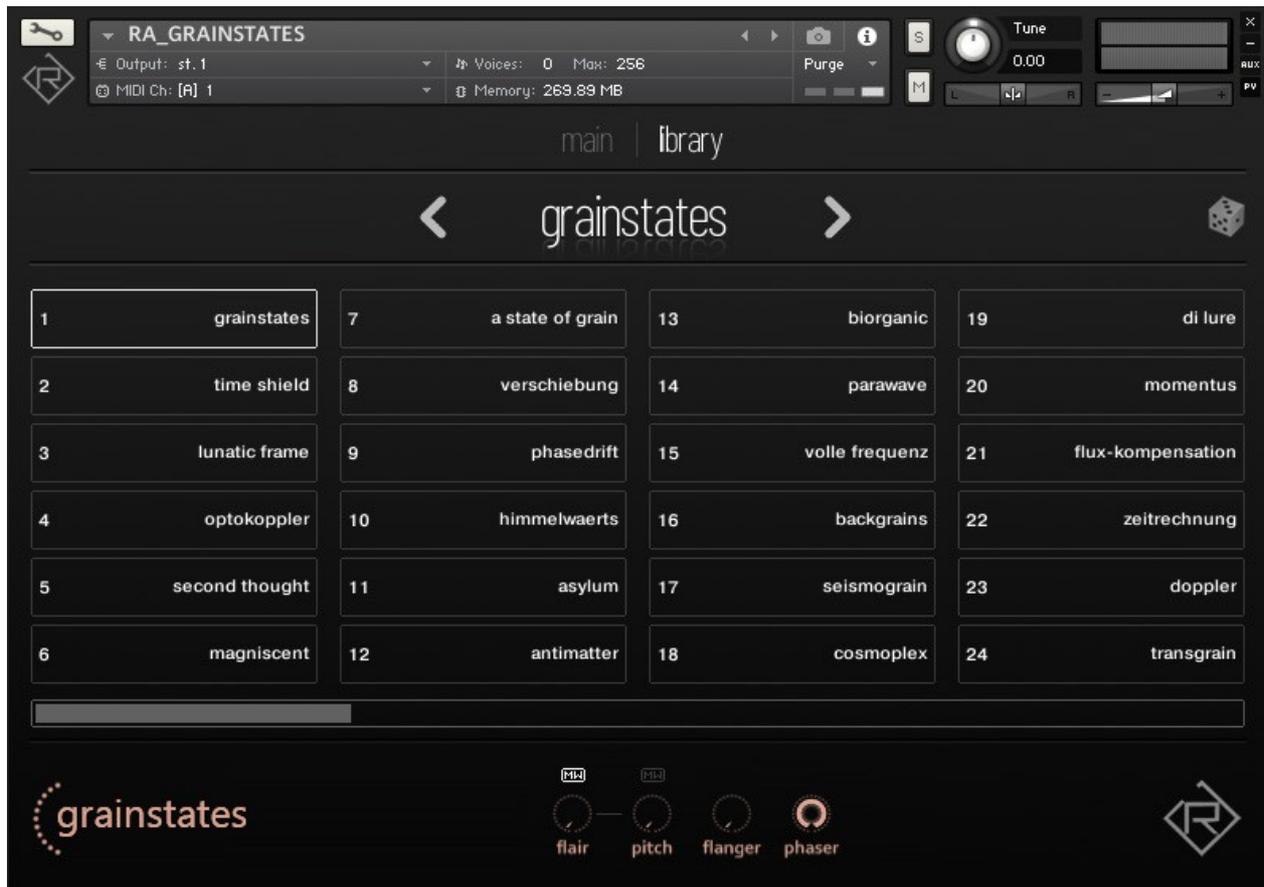
If you are dragging more than one audio file into any layer, it will load these in ascending order, starting at sample slot #1. Previously loaded samples will stay in memory

**NOTE:** The „wt“ layer does not support audio file import.

**NOTE:** The maximum number of audio files per layer is 64.

From now on, this audio file(s) will be stored within the active GRAINSTATES instance. You can save the NKI instrument to permanently store the user sounds associated with it, e.g. „RA\_GRAINSTATES\_CUSTOM.nki“.

# LIBRARY



From here you can choose a factory preset.

To navigate, use either the slider at the bottom or the left and right arrow buttons at the top.

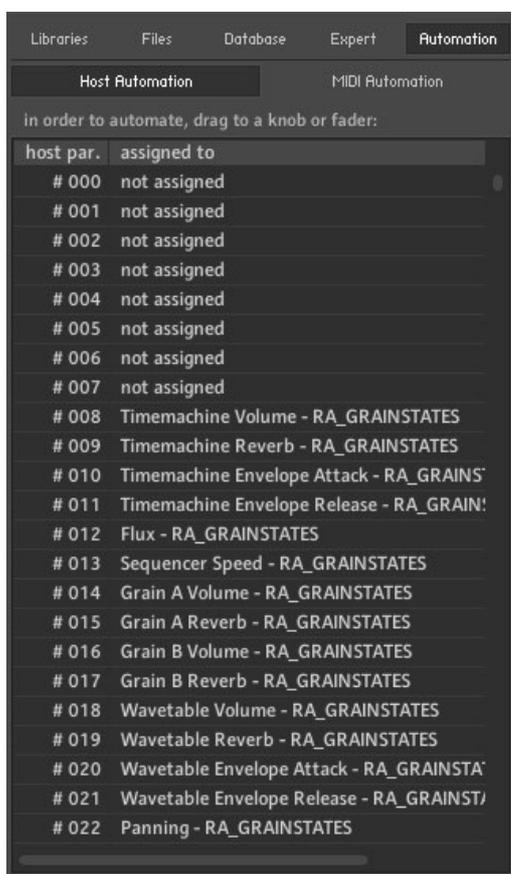
You can rename any preset by clicking on the name display on the top. GRAINSTATES can hold up to 128 presets at once.

You can easily create your own presets this way and store them within one single NKI instrument.

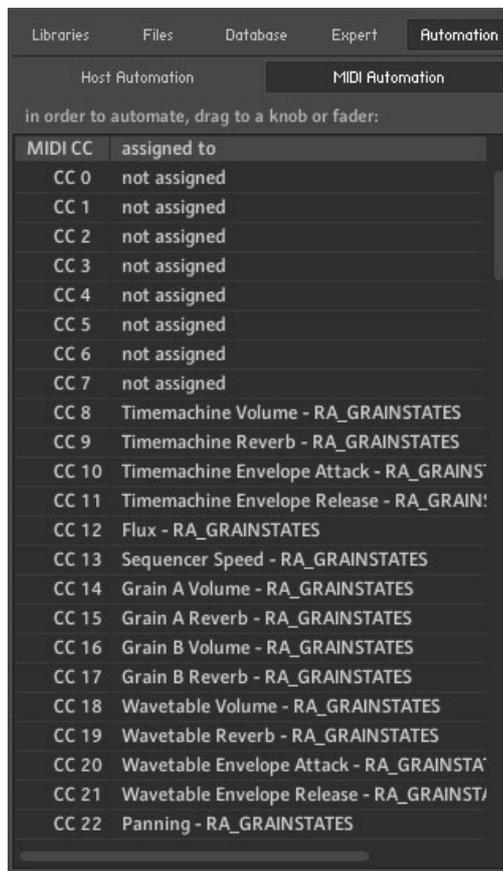
**Note:** All changes made to a preset are permanent for the current GRAINSTATES instance!

# AUTOMATION & MIDI CC LIST

GRAINSTATES can be controlled (automated) by MIDI CC (continous controllers) or host (DAW) automation.



host par.	assigned to
# 000	not assigned
# 001	not assigned
# 002	not assigned
# 003	not assigned
# 004	not assigned
# 005	not assigned
# 006	not assigned
# 007	not assigned
# 008	Timemachine Volume - RA_GRAINSTATES
# 009	Timemachine Reverb - RA_GRAINSTATES
# 010	Timemachine Envelope Attack - RA_GRAINSTA
# 011	Timemachine Envelope Release - RA_GRAINSTA
# 012	Flux - RA_GRAINSTATES
# 013	Sequencer Speed - RA_GRAINSTATES
# 014	Grain A Volume - RA_GRAINSTATES
# 015	Grain A Reverb - RA_GRAINSTATES
# 016	Grain B Volume - RA_GRAINSTATES
# 017	Grain B Reverb - RA_GRAINSTATES
# 018	Wavetable Volume - RA_GRAINSTATES
# 019	Wavetable Reverb - RA_GRAINSTATES
# 020	Wavetable Envelope Attack - RA_GRAINSTA
# 021	Wavetable Envelope Release - RA_GRAINSTA
# 022	Panning - RA_GRAINSTATES



MIDI CC	assigned to
CC 0	not assigned
CC 1	not assigned
CC 2	not assigned
CC 3	not assigned
CC 4	not assigned
CC 5	not assigned
CC 6	not assigned
CC 7	not assigned
CC 8	Timemachine Volume - RA_GRAINSTATES
CC 9	Timemachine Reverb - RA_GRAINSTATES
CC 10	Timemachine Envelope Attack - RA_GRAINSTA
CC 11	Timemachine Envelope Release - RA_GRAINSTA
CC 12	Flux - RA_GRAINSTATES
CC 13	Sequencer Speed - RA_GRAINSTATES
CC 14	Grain A Volume - RA_GRAINSTATES
CC 15	Grain A Reverb - RA_GRAINSTATES
CC 16	Grain B Volume - RA_GRAINSTATES
CC 17	Grain B Reverb - RA_GRAINSTATES
CC 18	Wavetable Volume - RA_GRAINSTATES
CC 19	Wavetable Reverb - RA_GRAINSTATES
CC 20	Wavetable Envelope Attack - RA_GRAINSTA
CC 21	Wavetable Envelope Release - RA_GRAINSTA
CC 22	Panning - RA_GRAINSTATES

# TROUBLESHOOTING

In case you're having any issues, please refer to the troubleshooting PDF that you have received within your download or which is available in the release archive:

RA\_Kontakt\_Troubleshooting\_EN.pdf

Thank you – have fun with GRAINSTATES!



*GRAINSTATES Lead Development: Dennis Lenz*