TERRASTRATE

USER MANUAL

TABLE OF CONTENTS

INTRODUCTION

Welcome to TERRASTRATE, the expansive toolset that reimagines granular synthesis.

By slicing sound into tiny segments, known as grains, granular synthesis allows for intricate manipulation: enabling expressive sample sweeps; introducing randomization to organically transform static tones into vibrant, evolving sounds; transforming into a versatile pulse engine by tempo syncing granular controls..

Multiple modulators expand the possibilities of sound design and manipulation, and the intuitive UI allows for easy, fast tweaks.

TERRASTRATE extends beyond traditional granular synthesis, offering the ability to craft lush pads, complex textures and rhythmic patterns with unparalleled freedom.

SPECS

- TERRASTRATE v1.0
- Kontakt 6.7.1 or higher
- 4.8GB (compressed)
- 375+ Presets
- 499 Sound Sources
- 2 layer sample and granular playback engine
- Sample drag and drop
- NKS / Kontakt Player Compatible

SNAPSHOTS

TERRASTRATE comes with 375+ snapshots, which are organized into 11 categories. To display snapshots, click the ① **camera icon**. Then click the ② **arrow** to access the dropdown menu.

Snapshots are divided into 12 categories

01a. Synth Pads
01b. Organic Pads
02. Complex Textures
03. Soundscapes
04. Leads and Keys
05. Organic Scrubs
06. Signature Gestures
07. Basses
08. Rhythmic Motion
09. Bends
10. Percussive
11. Drag and Drop Templates

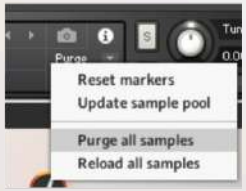
QUICK TIP: Use the Performance Controller (MW) to hear evolving presets in folders 05. Scrubs and 09. Bends

SOUNDSOURCES

TERRASTRATE comes with over 499 pre-recorded soundsources, organized and labeled with the 2 prefixes. starting with designed sounds, going from tonal to atonal, then a series of recorded analogue synth and organic sounds.

You can also **drag and drop** any audio wave file into the waveform sections. Terrastrate will automatically read the file's pitch.

QUICK TIP: select ⓘ, **Purge** dropdown menu, **Purge all samples** to save RAM by purging all unused samples.

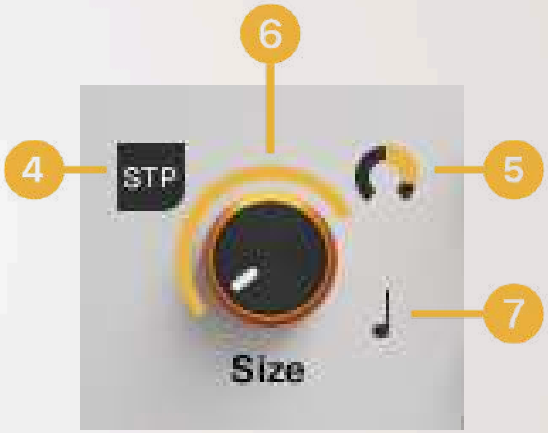


	Soundsource Category	Abr.
Designed – Tonal	Pads	PD
Designed	Complex Textures	CT
Designed	Soundscape (Atonal Texture)	SC
Designed – Atonal	Atmosphere	AT
	Synth (Leads, Wave Sources)	SY
Organic	Bass	BS
Organic	Flutes	FL
Organic	Bowed Glass	GL
Organic	Guitar	GT
Organic	Keys	KY
Organic	Mallets	ML
Organic	Bowed Metal	MT
Organic	Strings	ST
Organic	Vocals	VX
	Bends	var.

OVERVIEW

TERRASTRATE contains 4 pages accessed by the ① **menu tabs** on the bottom of the UI. Select the ② **question mark** on any of these pages to pull up an in-depth splash text, or hover over any control for ③ **info text** at the bottom of the kontakt window.

There are a **15 modulatable parameters, 4 user controlled modulators**, and **5 programmable modulators**, which you can assign using knob controls or in the modulation matrix.



KNOB CONTROLS

④ **Assign Modulator**

⑤ **Assign Mod Depth**

⑥ **Mod Ring Display:** indicates control position after applied modulation

⑦ **Tempo Sync:** Toggle between millisecond and tempo sync

PAGES OVERVIEW

TERRASTRATE contains 4 pages: **Performance, Sample / Grain, Mod / Matrix, and FX Controls.**

1

2

3

4

① **PERFORMANCE:** Navigate basic controls designed to browse, perform, and spark inspiration.

② **SAMPLE/GRAIN:** Explore detailed sample and granular controls for in-depth sound shaping.

③ **MOD/MATRIX:** Adjust setting for 5 automated modulators; monitor and control modulation assignments in the matrix

④ **FX CONTROLS:** Precisely adjust FX, delay, and reverb settings to refine your sonic creations

DASHBOARD

All 4 pages share the **dashboard**, which includes **master instrument controls**, that are applied to the whole instrument. The dashboard also holds the **user controlled modulators**. You can assign these, or any knob to a CC automation by right clicking.

User Controlled Modulators

① **Mod Wheel:** Performance controller

② **Aftertouch:** Performance controller

③ **Macro 1:** Performance controller

④ **Macro 2:** Performance controller

⑤ **Bend Range:** Pitch Bend up/down range in steps

QUICK TIP: Macro 1 and Macro 2 can be assigned to an XY pad for expressive performances

Master Instrument Controls

⑥ **Filter:** Bipolar HP/LP Filter

⑦ **Filter Selection:** Apply filter to A sample, B sample, or A+B samples

⑧ **EQ:** Bipolar Tone Control

⑨ **FX:** Control relative depth of all effects in the FX section

⑩ **Delay:** Delay Send

⑪ **Reverb:** Reverb Send

⑫ **Master:** Master Instrument Volume

PERFORMANCE PAGE

The **Performance Page** features the basic sample controls and displays for the **A** and **B sides.**

① **Performance Controller:** Control with MW or click and drag

② **Waveform and Playback Cursor:** Displays the loaded sample and the location of playback

③ **Bypass:** Disable A or B sample side

④ **Sample Selection:** Select soundsource with dropdown menu or navigation arrows

⑤ **Volume:** A and B side sample volume

⑥ **Attack:** Note attack length

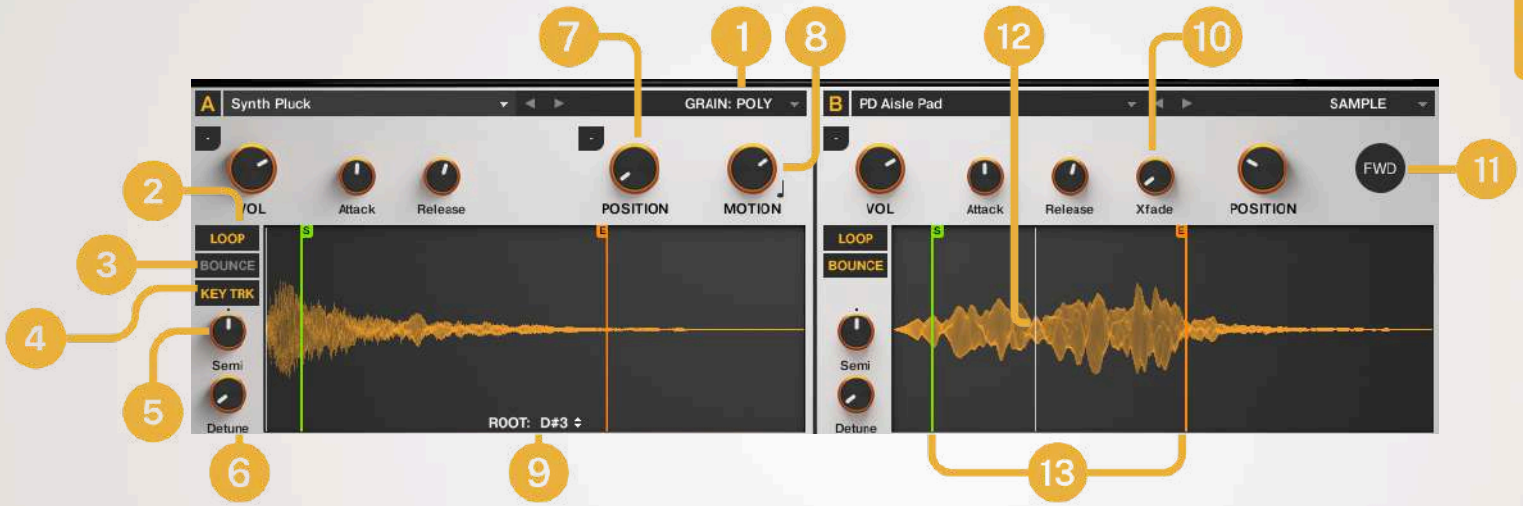
⑦ **Release:** Note release length

SAMPLE / GRAIN PAGE

The **Sample/Grain Page** contains a set of identical controls for the **A and B sides.**

QUICK TIP: Grain Poly sounds great with pads and Grain Mono works well for pulses

SAMPLE SECTION



① **Sample Modes**: Select between: Grain Mono Position (Cursor position syncs across all held notes), Grain Poly Position (Cursor position applies independently to each note), Sample (regular playback)

② **Loop On/Off:** On enables loop. Off plays sample to end

③ **Bounce:** Cursor changes direction when reaching end of loop bounds

④ **KeyTrack:** (sample drag and drop only) Enable/Disable key-tracking

⑤ **Semi:** Tuning + or - 24 steps

⑥ **Detune:** Randomize grain detuning

⑦ **Position:** Sample start position

⑧ **Motion:** (grain modes only) Speed of sample playback from frozen (0%) to +-1000%. Loop on: Sync length = loop boundaries. Loop off: Sync length = sample length

⑨ **Root:** (sample drag and drop only) Select the sample's root note.

⑩ **Xfade:** (sample mode only) Loop boundary crossfade length

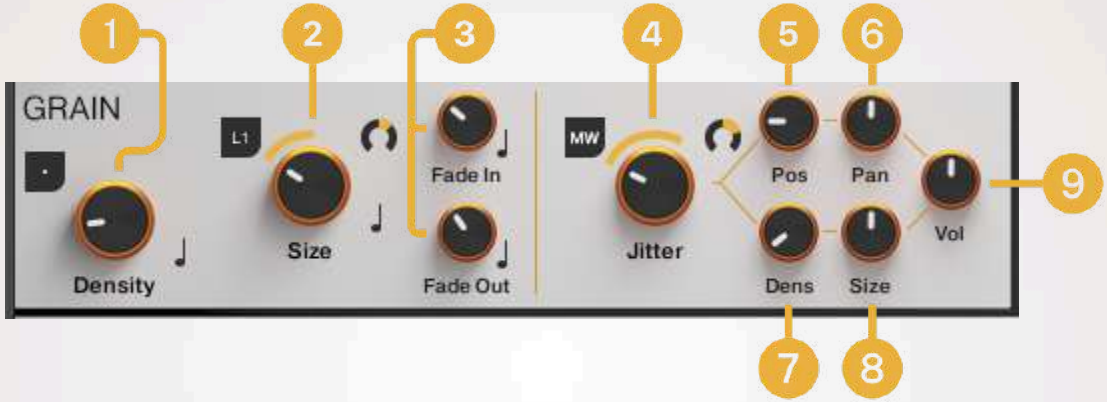
⑪ **FWD/REV:** (sample mode only) Select between forward and reverse sample playback

⑫ **Position Cursor:** Click and drag to select sample start position

⑬ **Loop cursors:** Click and drag to select loop bounds

SAMPLE / GRAIN PAGE (cont)

GRAIN SECTION



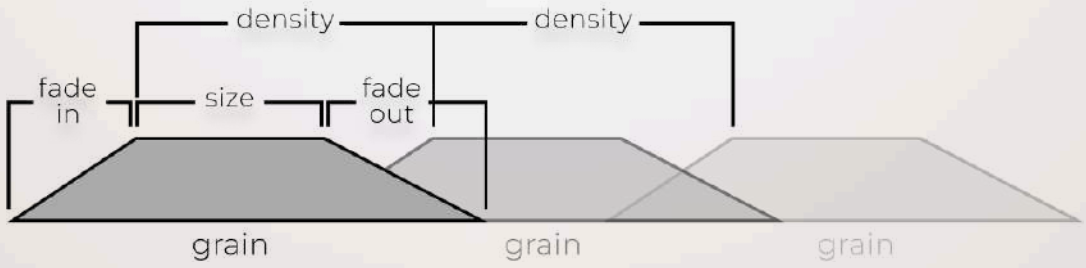
① **Density:** Frequency of grains

② **Size:** Size of grains

③ **Fade In/Out:** Attack/release length of each grain (adds to size)

④ **Jitter:** Master control relative depth of jitter sub controls
- ⑤ **Pos:** Randomize grain position
- ⑥ **Pan:** Randomize grain panning
- ⑦ **Dens:** Randomize grain density
- ⑧ **Size:** Randomize grain size
- ⑨ **Vol:** Randomize grain vol

QUICK TIP: tempo sync Density, Size and Fade In/Out to transform into a pulse engine



MOD / MATRIX PAGE

MATRIX SECTION

Displays and controls all **modulatable parameters**

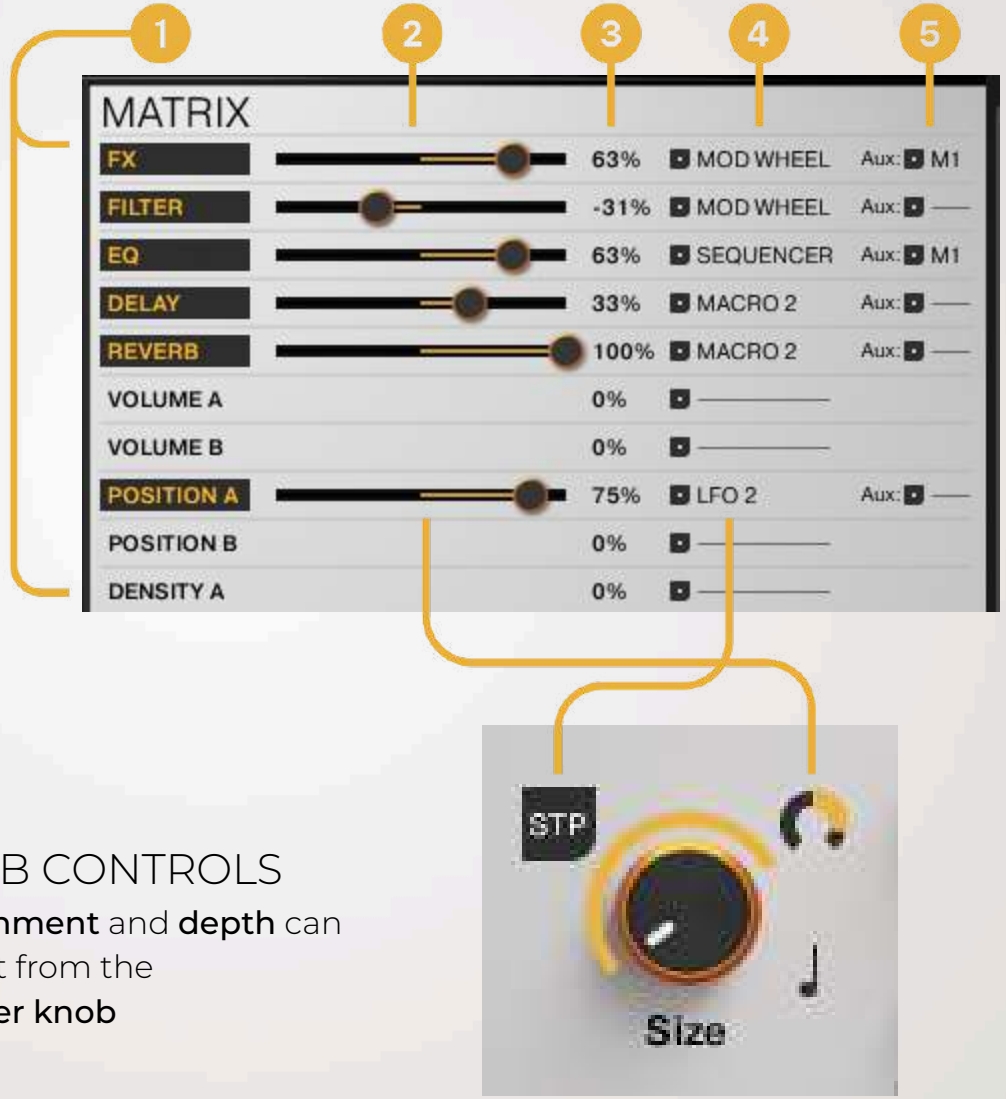
① **Parameter Display and Bypass:** Bypass parameter modulation

② **Mod Slider:** Bipolar, modulation depth slider

③ **Percentage Display:** Displays depth of the current modulation

④ **Mod Selector:** Select between 5 automated modulators and 4 performance controllers

⑤ **Aux:** Aux mods control the amount of effect the main mod applies to the



MIRRORED KNOB CONTROLS

The **modulation assignment** and **depth** can also be controlled right from the modulatable **parameter knob**

MOD / MATRIX PAGE (cont)

MODULATION SECTION

Controls the **5 automated modulators**

STEP SEQUENCER

① **Presets:** Select step sequencer presets

② **Table display:** draw custom steps.

③ **Steps:** Number of steps

④ **Time:** Duration between steps

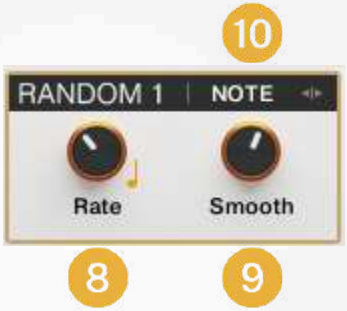
⑤ **Length:** Step length before returning to the 0 position

⑥ **Smooth:** Length of crossfade between steps

⑦ **Playback: Note:** syncs to note, resets on playback end. **Sync:** syncs to tempo

QUICK TIP: select number of steps before loading presets to access 32 steps on all sequence presets

RANDOM



⑧ **Rate:** Duration of random position

⑨ **Smooth:** Length of crossfade between positions

⑩ **Playback: Note:** syncs to note, resets on playback end. **Sync:** syncs to tempo

LFO

⑪ **Presets:** Select LFO presets

⑫ **Table display:** Draw custom LFO shapes. Right click/control-click and drag to draw straight lines

⑬ **Rate:** Duration of cycle

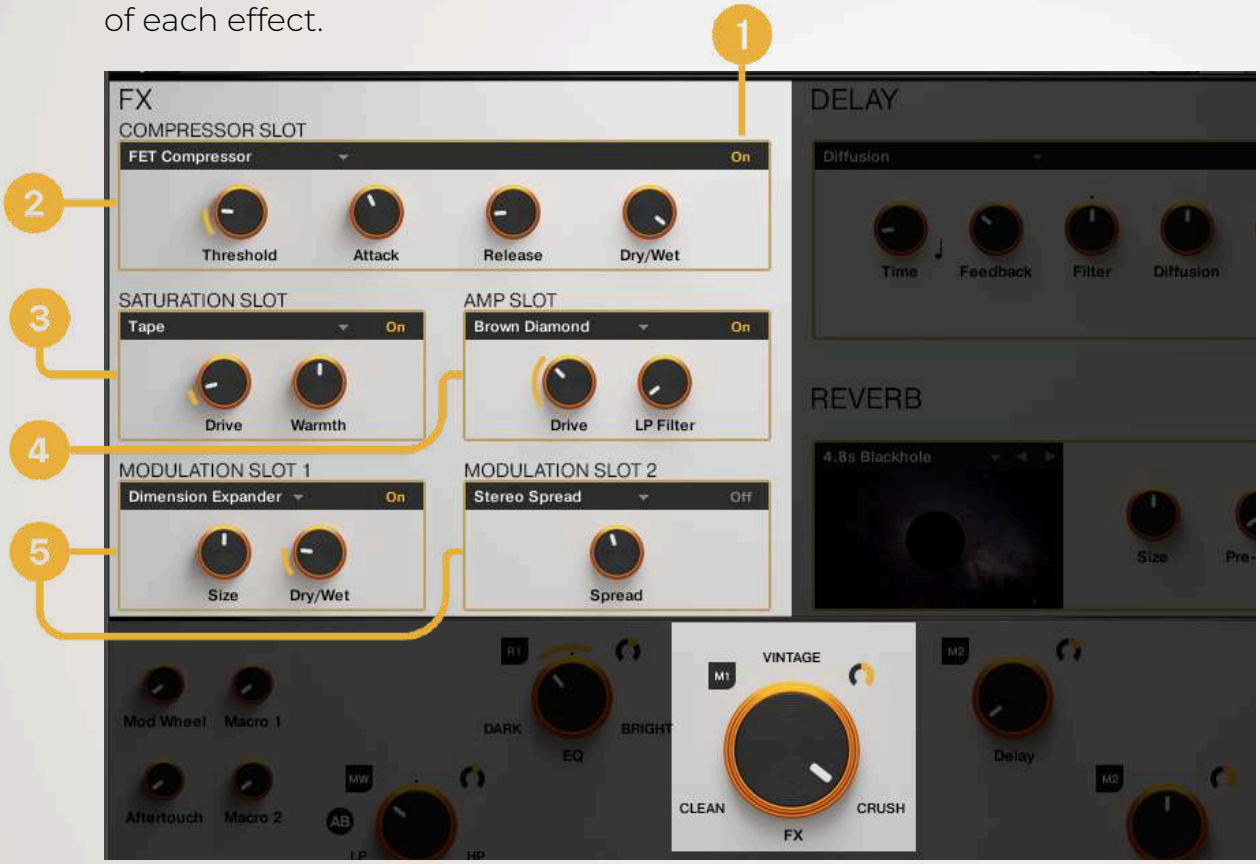
⑭ **Offset:** Adjust LFO start position

⑮ **Playback: Note:** syncs to note, resets on playback end. **Sync:** syncs to tempo **Oneshot:** plays one cycle on note

FX CONTROLS PAGE

FX SECTION

Select and control effects in the **5 category slots**. The **FX Knob** in the **Dashboard** controls the relative depth of each effect.



① **On/Off:** Enable/disable effect slot

② **Compressor Slot:** Select and control dynamic compressor

③ **Saturation Slot:** Select and control saturation effect

④ **Amp Slot:** Select and control amp emulator

⑤ **Modulation Slots (2):** Select and control spatial and chorus effect

FX CONTROLS PAGE (cont)

DELAY SECTION

The delay controls offers comprehensive controls for **three modeled delay types**. The **delay knob** in the **Dashboard** controls the wet mix.

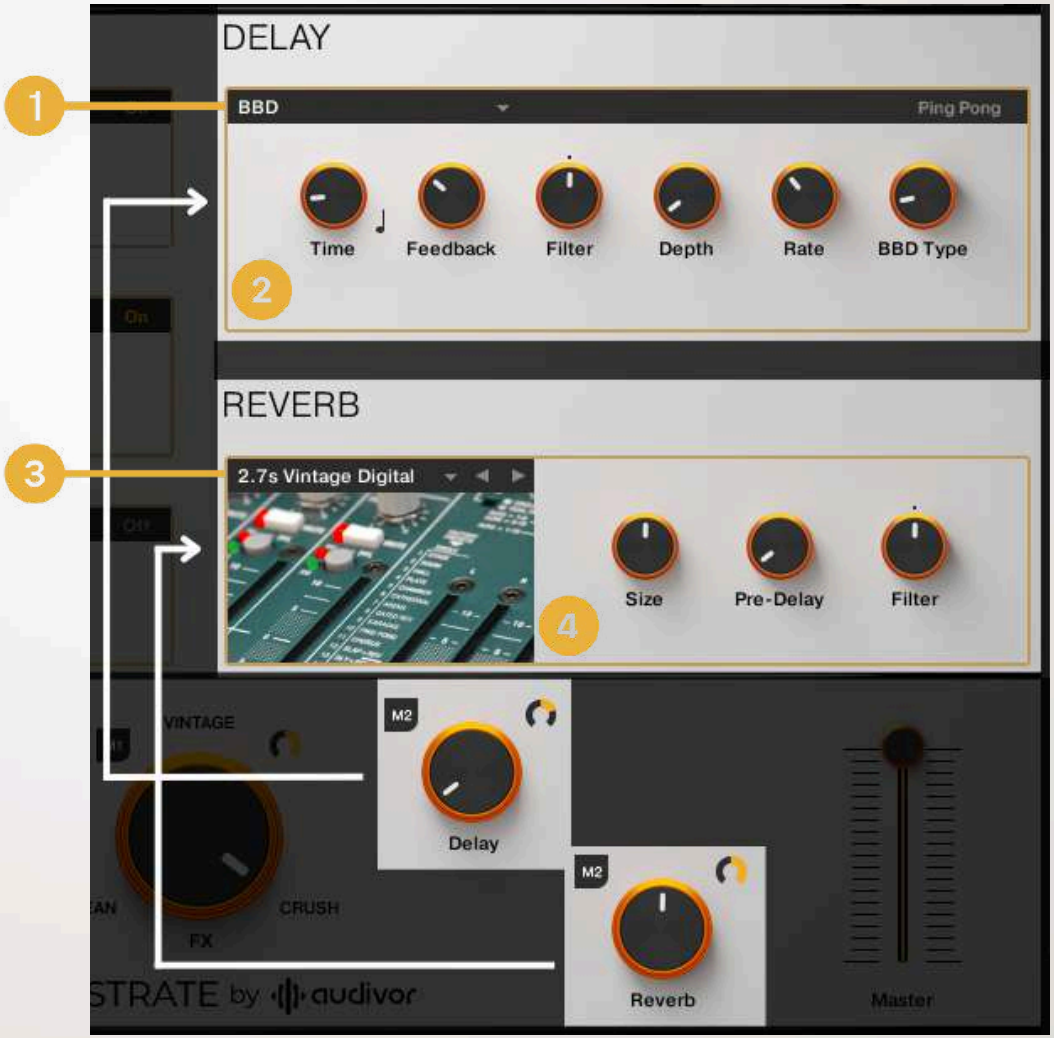
① **Delay Type:** Select between delay types
② **Delay Controls:** Control delay parameters

REVERB SECTION

Control and select between **10 reverb convolutions**. The **reverb knob** in the **Dashboard** controls the wet mix.

③ **Reverb Type:** Select between reverb convolutions
④ **Reverb Controls:** Control reverb parameters

QUICK TIP: Delay is CPU intense, so turn the knob to 0 to disable when possible



FX CONTROLS PAGE (cont)

FX CONTROL DESCRIPTIONS

In depth effect and controller list and descriptions

TYPE/CONTROL	DESCRIPTION
FX COMPRESSOR	
Tube Compressor	delivers warm, harmonically-rich compression reminiscent of vintage analog gear
Glue Compressor	modeled after a classic, analog bus compressor; imparts punchy, transparent dynamics
FET Compressor	modeled after the classic FET compressor; offering aggressive, fast-acting compression with a signature "gritty" edge.
Threshold	adjusts the point at which compression begins to engage, controlling the sensitivity to input level changes.
Attack	determines how quickly the compressor reacts to incoming signals, influencing the initial transient preservation or attenuation.
Release	sets the duration for which compression continues after the input signal falls below the threshold, shaping the recovery time of the dynamics.
Dry/Wet	blends the uncompressed (dry) and compressed (wet) signals, allowing for parallel compression and precise mix control.
FX SATURATION	
Tape	emulates the warm, cohesive compression and subtle harmonic distortion reminiscent of analog tape recording
Tube	offers a smooth, rich sound with even harmonics and gentle compression
Transistor	introduces a more aggressive, edgy character with odd harmonics and tighter compression
Distortion	delivers intense, gritty, and heavily clipped tones with pronounced harmonic distortion
Drive	adjusts the intensity of saturation effect, controlling the amount of harmonic distortion applied to the signal.
Filter	(Tube/Transistor/Distortion) attenuates high frequencies from the saturated signal, allowing for smoother and warmer saturation characteristics.
Warmth	(Tape) adds a subtle analog-like coloration to the signal, enhancing the overall richness and depth of the saturation effect.

FX CONTROLS PAGE (cont)

TYPE/CONTROL	DESCRIPTION
FX AMP	
Brown Diamond	provides the warm, crunchy tones associated with vintage amplifier models, featuring a rich midrange and distinct overdrive character.
Black and Gold	embodies the classic rock sound often attributed to amplifiers of the early 1980s, characterized by tight low-end response and soaring midrange presence.
Silver Grate	captures the aggressive, high-gain characteristics favored by metal and hard rock guitarists, offering tight low-end response, searing highs, and relentless distortion.
Drive	adjusts the amount of overdrive saturation applied to the signal
LP FIlter	(Brown Diamond) attenuates high frequencies for a warmer, smoother tone.
Hi EQ Boost	Black and Gold / Silver Grate) enhances high-frequency content, adding clarity and presence to the tone without sacrificing warmth or richness.
FX MODULATION SLOTS	
Vintage Chorus	recreates the lush, swirling modulation of classic analog chorus units, enriching the signal with depth and movement.
Stereo Spread	widens the stereo image, spreading the signal across the stereo field for enhanced spatialization and immersion.
Modern Hype	adds contemporary excitement and presence to the signal, imparting a sense of energy and intensity.
Dimension Expander	creates a spacious, three-dimensional sound by adding subtle delays and modulations to widen the stereo image.
Depth	(Chorus) adjusts the amount of modulation applied to the Delay, altering the delay times of the chorus voices.
Width	(Chorus) pans the chorus voices in opposite directions, widening the stereo image.
Wet/Dry	(Chorus/Modern Hype/Dimension Expander) blends the processed (wet) and unprocessed (dry) signals, allowing for precise control over the amount of modulation effect applied to the original sound.
Spread	(Stereo Spread) Widen stereo image from 100% to 200%
Rate	(Modern Hype) adjusts the speed of the delay time modulation.
Size	(Dimension Expander) adjusts the size of the virtual space created by the modulation effect, influencing the perceived depth and spaciousness of the sound.

FX CONTROLS PAGE (cont)

TYPE/CONTROL	DESCRIPTION
DELAY	
Tape	emulates the warm, vintage sound of tape delay, with its characteristic saturation and slight wow and flutter.
BBD	(Bucket Brigade Device) replicates the distinctive analog delay effect produced by cascading capacitors in a series, known for its dark, murky repeats and distinctive modulation.
Diffusion	creates a lush, ambient delay effect by spreading the delayed signal across time and space, resulting in a smooth, reverberant tail.
Time	adjusts the length of the delay, controlling the interval between the original signal and its repeats.
Feedback	determines the number of repetitions or echoes in the delayed signal, with higher settings creating more repeats.
Filter	bipolar controller adjusts the tonal characteristics of the delayed signal, allowing for manipulation of both high and low frequencies.
Ping Pong On/Off	toggles the ping pong effect, enabling or disabling the alternation of the delayed signal between the left and right stereo channels.
Tape Age	(Tape) simulates the degradation and wear of a physical tape, affecting the overall tone and warmth of the delay.
Flutter	(Tape) introduces subtle variations in the speed of the simulated tape, creating a gentle modulation effect similar to the flutter of vintage tape machines.
Saturate	(Tape) adjusts the amount of saturation applied to the delay,, mimicking the saturation and distortion inherent in tape delay units.
Depth	(BBD) adjusts the intensity of modulation applied to the delayed signal, altering the depth of the chorusing or flanging effect.
Rate	(BBD) controls the speed of modulation, determining how quickly the delayed signal fluctuates in pitch or time.
BBD Type	(BBD) select between clean, warm, dark, and grunge settings, offering different tonal characteristics ranging from pristine to gritty.
Diffusion	(Diffusion) adjusts the amount of diffusion applied to the delay signal, resulting in a reverb effect.
Size	(Diffusion) controls the size of the virtual space in which the delayed signal is processed, affecting the perceived depth and spaciousness of the delay effect.
Mod	(Diffusion) sets the depth and speed of diffusion modulation, adding movement and texture for a more organic and evolving sound.
REVERB	
Convolution	selects between various reverb convolution styles and lengths: **0.7s Ambience, 1.7s Dense Chamber, 2.7s Scoring Stage, 2.7s Vintage Digital, 3.0s Sunset Chamber, 3.4s Mech Hall, 4.1s Classic Plate, 4.8s Blackhole, 9.6s Shimmer, and 13.0s Trailer Tail**
Size	compresses or stretches the impulse response in time
Pre-Delay	introduces a delay between the original sound and the onset of the reverb, allowing for the creation of a sense of distance or separation.
Filter	bipolar control adjusts the tonal characteristics of the reverb by manipulating both high and low frequencies, offering precise control over the frequency response of the reverberated signal.

CREDITS

PRODUCED & DESIGNED BY DAN MARTINEZ

KSP PROGRAMMING: AZRUL SALEH

GRAPHIC DESIGN: PAULO NUNES

SOUND DESIGN: DAN MARTINEZ, ANDY PAGE,
LORENZO CARRANO, MICHAEL SUTHERLAND

SPECIAL THANKS
Stephanie Alves, Bradley Martinez, Jordan Seigel, Cody Westheimer,
John Carey, Moises D'Bello, Ascen Garcia, Voger Designs,
Lauren Martinez, Joy Ngiaw, Maksim Gill, DZineLoop

www.audivor.com