



**REFRACTOR
AUDIO**

TRANSPORT

**USER
MANUAL**

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ABOUT TRANSPORT

Transport by Refractor Audio is an instrument comprised of over 2000 samples designed by Klayton (Celldweller.) This “powered by Kontakt” instrument allows the user to create boundless variations on the source material, using Transport’s powerful Probability Engine to mash and manipulate samples into new and exciting content.

Transport plays loops in an unconventional and unpredictable manner. It is monophonic in the sense that it will only play one sample at a time, despite how many notes are played. However, at its core sits the ability to take a chosen set of loops and let the Probability Engine randomly jump between slices of those loops at varying rates, all synced to your DAW. Slice “in order” to ensure your kicks, snares, and other accents always land in logical spots, or “randomly” to allow the Probability Engine to make your patterns more unpredictable.

After triggering one or more loops, create new variations using the 5 step sequencers which control volume, delay send, cutoff, pitch, and hold time. Sequence “in order” or “randomly” at a separate rate from the Probability Engine for constantly evolving rhythms that never repeat.

Other features include keyswitch presets for changing patterns on the fly, keyswitch tuning which can be combined with the scale quantized pitch sequencer for arpeggios across different chords, a keyswitch slice repeater and stepper, velocity sensitivity, sustain pedal compatibility, and additional controls for each of the sequenced effects.

Triggered, one-shot samples have not been forgotten in Transport, with over 600 sounds ranging from drums, to modular synth FX and cinematic impacts.

Sound sources include the Moog Voyager, Moog Vocoder, Swarmatron, Juno 60, Prophet 600, Dave Smith Evolver, Korg Volca series, Access Virus, along with a massive modular synth collection with modules from 4MS, Analogue Systems, Audio Damage, Buchla, Circuit Abbey, Cwejman, Doepfer, Hex Inverter, Intellijel, Make Noise, Malekko, Modcan, Moog, Mutable Instruments, Pittsburgh Modular, Qu-Bit Electronics, Roland, Synthesizers.com, The Harvestman, Tip Top Audio, WMD, Erica Synths, Waldorf, and more!



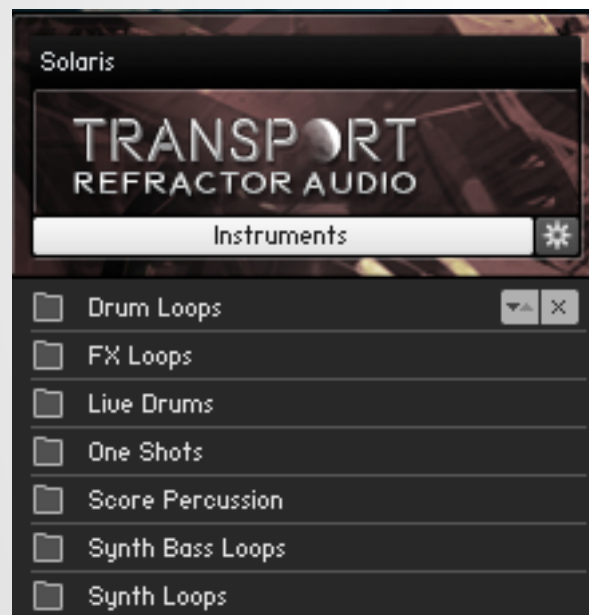
TRANSPORT INSTALLATION INSTRUCTIONS

- 1.** Install the latest version of Kontakt 5 or Kontakt 5 Player. (Transport is Powered by Kontakt, so you are not required to own a full license of Kontakt 5, but be sure to at least download the free Kontakt 5 Player to use the instrument at <http://www.native-instruments.com/en/products/komplete/samplers/kontakt-5-player>).
- 2.** Install the latest version of Native Instruments' Native Access application at <https://www.native-instruments.com/en/specials/native-access/>.
- 3.** Launch Native Access and select "Add Serial" and input your Refractor Audio Transport Serial Number and it will authenticate the install of the software to run on your machine, for use with Kontakt.
- 4.** Launch Kontakt and Transport should now be ready to use.
- 5.** Be sure to register your product for access to the raw WAV files, future Transport updates and important news at <http://www.refractoraudio.com/>.

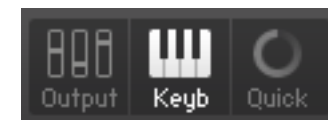


QUICK START INSTRUCTIONS

1. Once Transport is installed, you can navigate through the different subfolders of the Transport library to browse different patches comprised of loops or one shot sounds.
2. After a patch has been loaded into Kontakt, you can trigger samples by either using an external MIDI keyboard, entering MIDI notes manually in your DAW, or by using the virtual keyboard within Kontakt. Display the virtual keyboard by clicking the keyboard icon at the top of the Kontakt window. The virtual keyboard also displays important color coding of keys, to help locate the various key switches for presets, slice repeating, sample triggering, and pitch shifting.



TRANSPORT LIBRARY



KEYBOARD ICON



For more information on using Kontakt, refer to the Kontakt user manual.

iv CONTROLS: At a Glance

The diagram illustrates the following controls:

- 1 Bypass Buttons:** Located at the top of the interface.
- 2 Delay-Send Tab:** Labeled 'DLY-SND'.
- 3 Volume Tab:** Labeled 'VOLUME'.
- 4 Sequencer Step Size:** Labeled 'STEP SIZE'.
- 5 Sequence: In Order/Random:** Labeled 'SEQUENCE' with 'IN ORDER' and 'RANDOM' options.
- 6 Slice: In Order/Random:** Labeled 'SLICE' with 'IN ORDER' and 'RANDOM' options.
- 7 The Probability Engine:** Labeled 'RATE' and 'SLICE'.
- 8 Keyswitch Presets:** Labeled 'KEYSWITCH PRESETS'.
- 9 Low Pass Cutoff Tab:** Labeled 'CUTOFF'.
- 10 Pitch Tab:** Labeled 'PITCH'.
- 11 Hold Tab:** Labeled 'HOLD'.
- 12 Quick Patterns:** Represented by waveform icons above the piano roll.
- 13 Sequencer Min/Max:** A vertical slider on the right side of the piano roll.
- 14 Link Sequencer Min/Max:** A button below the sequencer min/max slider.
- 15 Factory Presets:** A list of preset names under the 'FACTORY' tab.
- 16 User Presets:** A list of preset names under the 'USER' tab.



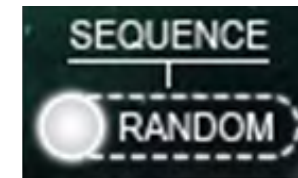
7 THE PROBABILITY ENGINE

The powerful Probability Engine expands the capability of Transport beyond just basic sample playback. Play any number of keys simultaneously, and let the Probability Engine randomly jump between slices of those loops at varying rates, all synced to your DAW. The initial key press will begin playback, but as more notes are added or played at once, rather than layering the sounds, Transport randomly cycles through them (with timing set by the "Rate" knob,) only ever playing one slice at a time. This is analogous to putting a set of numbers into a lottery, and drawing numbers in rhythmic fashion. Each sample in Transport is mapped as a 2 bar, 8 beat loop. Once the initial note begins the loop, the 8 beat sequence will continue to repeat until all notes are released, and the sustain pedal is up.



4 SEQUENCER STEP SIZE

The second important timed function is the 16-step sequencer that steps at a pace independent of "Rate." This setting affects the playback timing of the first 4 sequencers ("Hold" is timed by the "Rate" knob,) viewable by changing the current tab, done by clicking the planets at the top of the Transport GUI. The sequencers control volume, delay send, low-pass filter cutoff, pitch, and hold.



5 SEQUENCE: IN ORDER/RANDOM

The 16-step sequencer for each tab can advance sequentially from left to right, or randomly. Multiple sequencers advancing randomly will move independently of one another.

8 KEYSWITCH PRESETS

The lowest octave of Transport' keyboard is mapped as 10 "quick" presets for the user to recall instantaneously. To assign the current state of the instrument to a keyswitch, click the "store" button, then select the key to be assigned by either using the drop down menu, or by triggering its corresponding MIDI note. The state of the instrument will be saved instantly to that keyswitch preset.

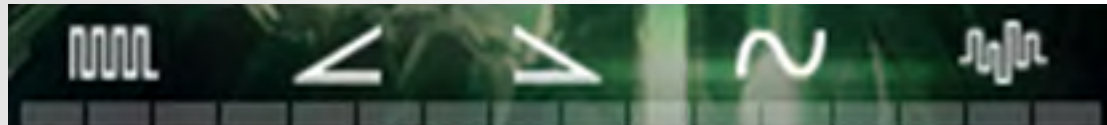
NOTE: Keyswitches work most effectively when triggered slightly before the next beat division or step. Keep this in mind when editing MIDI or looping. It is also good practice to record a keyswitch with the desired settings before your first MIDI note triggers a sample (to ensure the instrument state is recalled if you happen to change it later in the session.)



V CONTROLS: In Depth

12 QUICK PATTERNS

Clicking one of the 5 "quick pattern" icons will overwrite the current sequence with a pattern denoted by the icon image: every other, ramp up, ramp down, sine, randomize.



6 SLICE: IN ORDER/RANDOM

Slice "in order" to ensure your kicks, snares, and other accents always land in logical spots, or "random" to allow the Probability Engine to make your patterns more unpredictable.



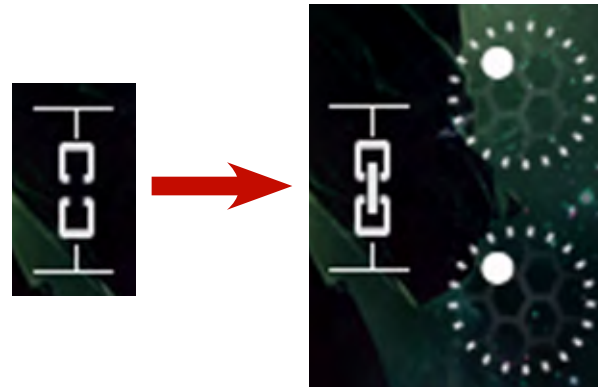
13 SEQUENCER: MIN/MAX

Determines boundaries for the minimum and maximum values of the sequencer.



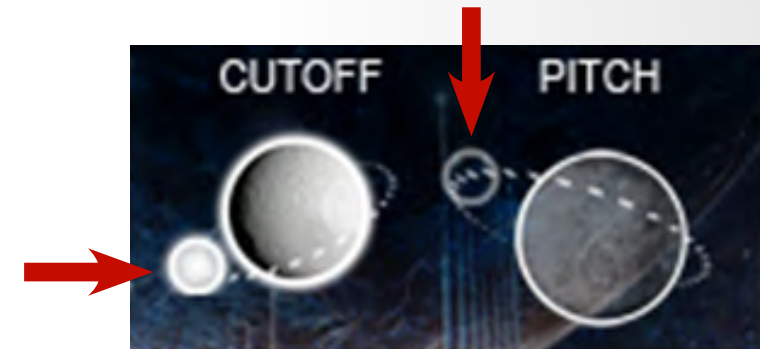
14 LINK SEQUENCER: MIN/MAX

Matches the minimum and maximum to set all 16-steps to the same value.



1 BYPASS BUTTONS

Each "planet" icon has an orbiting "moon" button that acts as a bypass for each sequencer.



15 FACTORY PRESETS

These are shown as a list with a scroll bar on the GUI.

Double-click a factory preset to recall it.



16 USER PRESETS

"Save" or "Load" user presets is done using a dialogue box, and are not listed with the factory presets on the GUI.

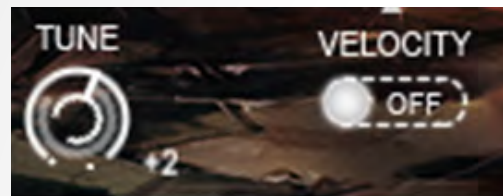
It is good practice to have any keyswitch presets backed up as a user preset.



vi TABS & POP-UP CONTROLS

3 VOLUME TAB

16-step sequencer controls volume, with its timing determined by "Step Size."



12-A. TUNE

Transport includes over 2,000 unique sounds and samples, with varying keys and tempos. Samples with identical or nearby keys and tempos, are grouped together into groups of 24 for each NKI. The name of the NKI will contain the average root note and/or tempo in the name as necessary. In order to make samples in different keys sound better when being mixed up by the Probability Engine, some samples were transposed up or down a number of semitones using the "Tune" knob on the Volume Tab. The position of the Tune knob corresponds to whichever sample was triggered last. To find out the native key and/or tempo of a sample, click the wrench icon in the top left of the NKI, then navigate to the "monitor" tab of the Kontakt window, then select the sub-category named "Zones". Pressing a note will highlight the sample being played. Its name will contain pitch info if applicable.

12-B. KEY VELOCITY

When disabled, Transport ignores MIDI input velocity. When enabled, MIDI input velocity is combined with the volume sequencer to determine playback volume.



vi TABS & POP-UP CONTROLS

2 DELAY-SEND TAB

16-step sequencer controls the send level to the built-in delay effect, with its timing determined by "Step Size."



13-A. FEEDBACK

Percentage of the delayed signal sent back into the delay, effecting number of repetitions.

13-B. TIME

Correlates to the number of 16th note divisions, so a value of 4 would be a delay of 1 beat, while a value of 16 would equal a 4 beat measure, etc. NOTE: The maximum value changes according to tempo.

13-C. PAN

Amount of signal alternating between left and right channels with each delay.



9 LOW PASS CUTOFF TAB

16-step sequencer controls the cutoff frequency of the low-pass filter, with its timing determined by "Step Size."



14-A. RESONANCE

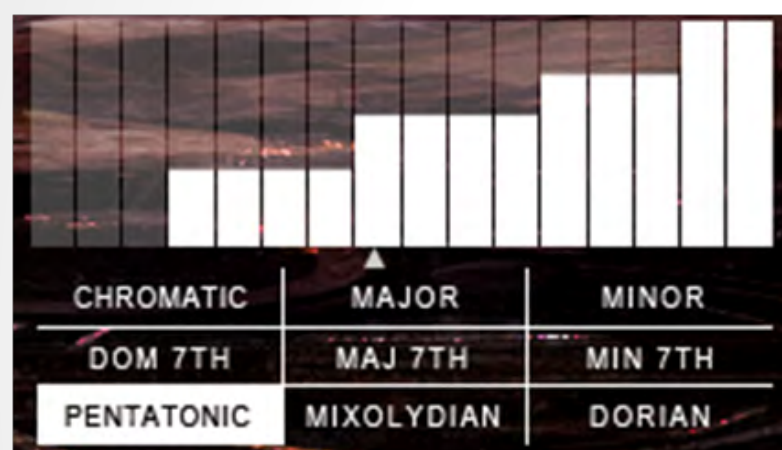
Resonance of the low-pass filter.
NOTE: Defaults to 0 when cutoff tab is bypassed.



vi TABS & POP-UP CONTROLS

10 PITCH TAB

16-step sequencer transposes upward, to a maximum of 12 semitones or 1 octave, with its timing determined by "Step Size." NOTE: Experiment combining the "Pitch" sequencer with the transposition keyswitches (see below,) resulting in the transposition of whole sequences.



15-A. QUANTIZER PRESET

Constrain the sequencer values to the scale or chord selected. Defaults to "chromatic," using all 12 semitones.



vi TABS & POP-UP CONTROLS

11 HOLD TAB

16-step sequencer controls the hold time for each slice triggered by the probability engine. Hold time scales according to the "Rate" knob.

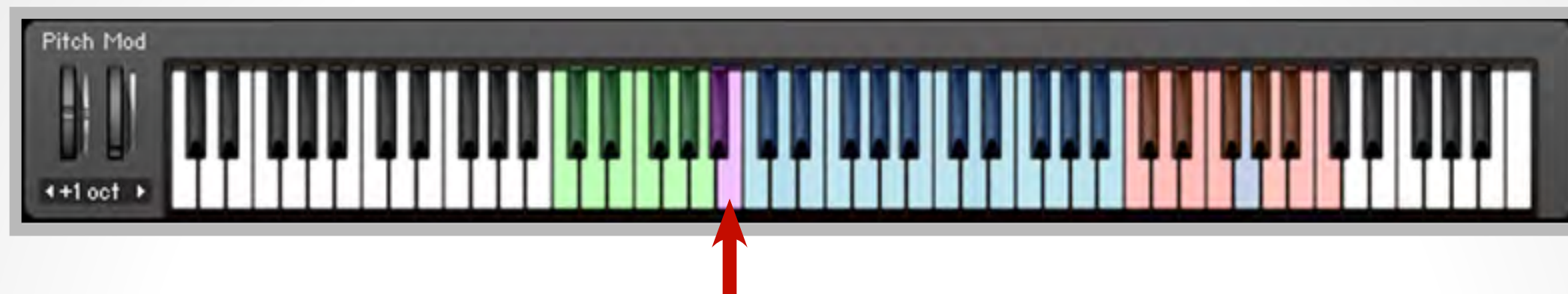
NOTE: The step size of the "hold" sequencer is determined by the probability engine's rate, not the step size like the other sequencers.

16-A. ATTACK TIME



16-B. DECAY TIME





1. SLICE REPEAT

Triggering the purple note to the left of the sample bank (B2) will cause whichever slice played last to be repeated while a note is being sustained. You can adjust the timing of these repeats in real time using the "Rate" knob.

2. SLICE REPEAT STEPPER

If "Slice Repeat" is active, the purple note immediately to its left (Bb2,) will advance to the next slice in divisions set by "Rate".

3. TRANSPOSITION KEYS

The octave above the sample bank (C5-C6,) allows for real time transposition by playing MIDI notes, as opposed to using the "Pitch" sequencer. The root note of the instrument will be highlighted in blue (none highlighted if the instrument is atonal.) The "Transposition Keys" can be combined with the "Pitch" sequencer to create interesting musical variations.

1. TIPS & TRICKS

- It is good practice to commit MIDI to audio while recording or immediately after being quantized. Refer to your DAW's manual for instructions on how to route the audio output of a virtual instrument track to an empty audio track. Not doing so could result in your patch settings being overwritten. Refer to the Keyswitch section of the manual for other ways to save patch settings.
- Due to the synchronized looping nature of Transport, there are many functions in the script which rely on proper timing of note information sent between your DAW and Kontakt. In the event of back-to-back note repetitions written into a MIDI editor and quantized, there is a chance the repetition will not sound due to simultaneous "note on" and "note off" messages. The suggested work around for this instance would be to zoom in to the former note, and shorten the end just enough so it is not connected to the following repetition.
- The quick way to get unsliced playback of any one sample, is to load the "PLAYBACK.nkp" factory preset. Alternatively, set the rate to "8/4", set "Slice" to "in order", and bypass all tabs. You can also play a sample directly from the wave editor, with the instrument in edit mode.
- The sample has been detuned from its native key if the Tune knob reads something other than "0" when played. Option click, or adjust the tune knob, setting it to "0" to hear the native tuning.
- To find a sample's native tempo, navigate to the "monitor" tab of the Kontakt window while in edit mode, then select the sub-category named "Zones". Pressing a note will highlight the sample being played. Its name will contain tempo and pitch info if applicable.
- Map MIDI controllers to Transport to record control change automation. In the Kontakt window, select "Auto" from the tabs in the upper left, then click "MIDI Automation." Drag one of the MIDI CC's to a parameter on the Transport interface to assign it. Now the automation for that parameter can be recorded and edited within your DAW. See your DAW's user manual for further instructions on recording and editing control change information.
- After mapping multiple MIDI CC's to your liking, you can transfer these mappings to a different Transport patch, simply by right clicking in the assignment window, and selecting "copy Kontakt 5 setting." You can then paste these assignments into another patch's assignment window.

Files	Libraries	Database	Monitor	Modules	Auto
Groups	Zones	Parameter	Engine	Instr	Nau
Synth Loops 15 (G - 140) Zones					
Synth Loops 15 (A - 140)-01					0
Synth Loops 15 (A - 140)-02					1
Synth Loops 15 (A - 140)-03					2
Synth Loops 15 (A - 140)-04					3
Synth Loops 15 (A - 140)					4
Synth Loops 15 (Ab - 140)-02					5
Synth Loops 15 (Ab - 140)					6
Synth Loops 15 (F - 140)-02					7
Synth Loops 15 (F - 140)-03					8
Synth Loops 15 (F - 140)-04					9
Synth Loops 15 (F - 140)-05					10
Synth Loops 15 (F - 140)					11
Synth Loops 15 (G - 140)-01					12
Synth Loops 15 (G - 140)-02					13
Synth Loops 15 (G - 140)-03					14
Synth Loops 15 (G - 140)-04					15
Synth Loops 15 (G - 140)-05					16
Synth Loops 15 (G - 140)-06					17
Synth Loops 15 (G - 140)-07					18
Synth Loops 15 (G - 140)-08					19
Synth Loops 15 (G - 140)					20
Synth Arps 15 (Bb -140)					21
Synth Arps 15 (F -140)					22
Synth Arps 15 (Gb - 140)					23

2. TROUBLESHOOTING

If playback is sounding choppy, it could be caused by the value of the “Rate” knob, or the envelope. Try adjusting the hold sequencer, or attack knob on the HOLD tab.

Root key not highlighted correctly in transposition keys: Click the wrench icon, and in the first row of tabs, select “Script Editor.” Click the first script slot tab from the left named “Patch Data.” Using the dropdown menu on the left, select the key corresponding to the patch name, and reload the instrument.

Zones must be numbered from 0 to 23 without skipping any values. If values are missing, quit and relaunch Kontakt. It might be necessary to revert back to the original NKL.

3. TECHNICAL SUPPORT

If you’d like further explanation regarding the features of Transport or if you have encountered a confusing error, please contact us using the following email address and we will be happy to assist you:

support@refractoraudio.com

4. ABOUT REFRACTOR AUDIO

Refractor Audio is a pro audio software & hardware company founded by entrepreneur & musician/producer Klayton, known for his projects Celldweller, Circle of Dust, and Scandroid. Klayton also owns FiXT, an independent electronic-rock record label, as well as Subterra Records, a Film/TV Licensing label, and the Sci-Fi inspired clothing line, Outland Industries.

5. CREDITS

Product Concept: Klayton

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KONTAKT Scripting: Kyle Kramer

Art & GUI Design Team: Ninja Jo, Erica Schaub, Matthew Akin, Kyle Kramer

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