

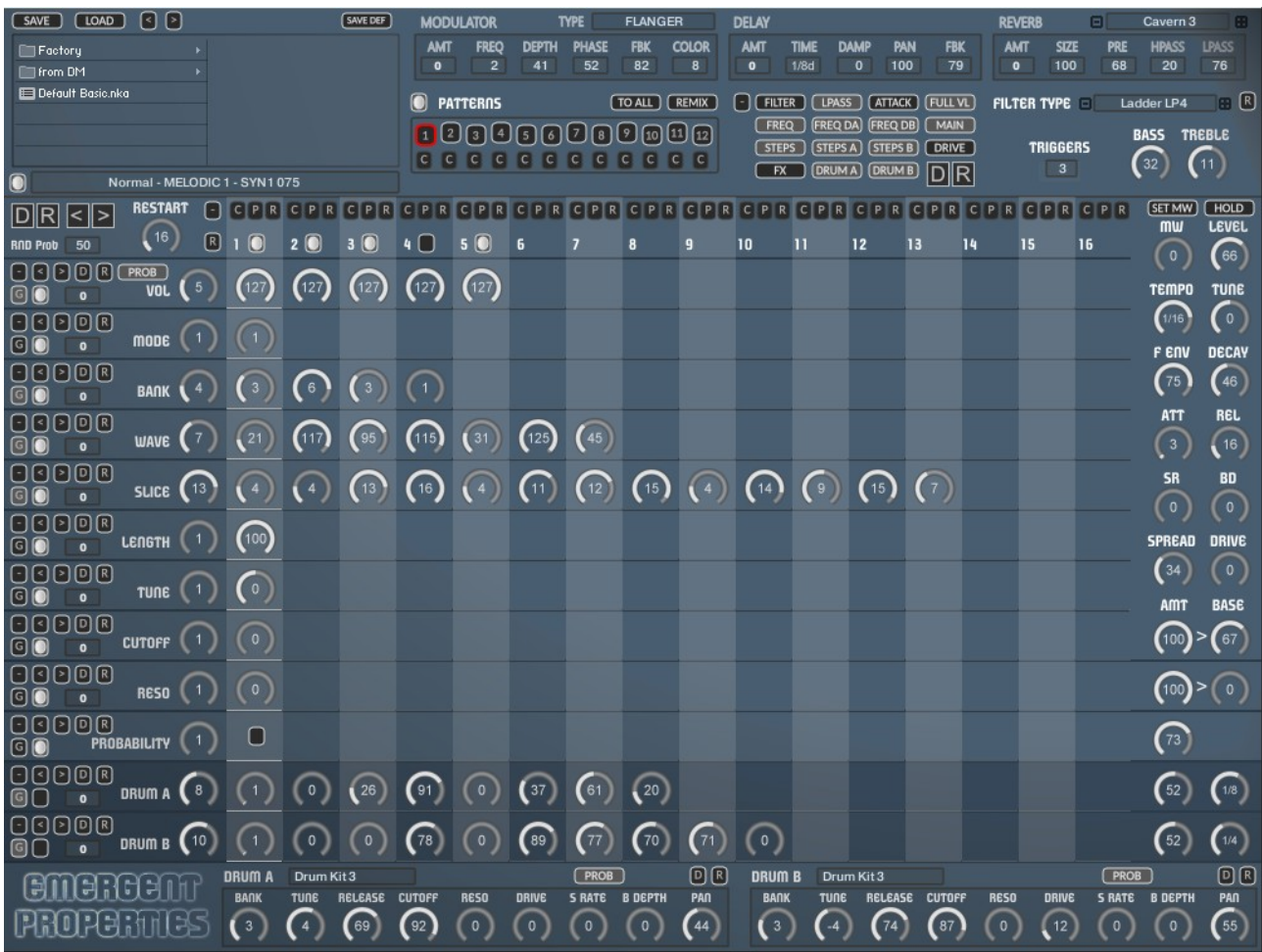
EMERGENT
PROPERTIES
MANUAL

Changelog

v1.0

- Initial Release

Introduction



Emergent Properties is an Advanced Polyphonic Sequencer for Kontakt 5, which includes a Rhythmic Sequencer and 2 Drum Sequencers.

Banks

There are 7 Banks of 127 unique Waveforms selected by the Banks Knobs.

1. **MELODIC 1** - 127 Morphing Waveforms which have a consistent Root Note
2. **MORPH 1** - 127 Morphing sounds
3. **MORPH 2** - 127 Wavetables and Radio Based Waveforms
4. **MORPH 3** - 127 Drum Hits, each Waveform is made up of 4 individual drum Hits which can be selected via slices.
5. **MORPH 4** - 127 Drum Hits, each Waveform is made up of 4 individual drum Hits which can be selected via slices.
6. **MELODIC 2** – 127 Morphing Waveforms which have a consistent Root Note
7. **SYNTHETIC** – 127 Drum Waveforms dissected from a single improvisation which provides different ethereal qualities.

Additionally there are 30 Different Modes selected by the Mode Knobs as follows:

- **1 – Normal**
The Samples are played normally
- **2 – Reversed**
Played normally and Reversed
- **3 – WARBLE CHOP**
Uses some Pitch Modulation and an LFO to chop rhythmically.
- **4 – HP SWEEP**
An LFO driving a HP Filter
- **5 - TALKER**
An LFO Driving a Formant Filer
- **6 - PULSAR**
Uses an Envelope to Create a Pitch Based Attack.
- **7 - CHOPPER 8**
The Chopper Modes use an LFO SAW shape to affect the Volume and Filter Cutoff to overlay pulses of different tempos to the samples. Especially good with the Morphs and Wavetables. This one uses 1/8 beats.
- **8 - CHOPPER 16**
This one uses 1/16 Beats.
- **9 – CHOPPER 32**
This one uses 1/32 Beats
- **10 – CHOPPER 6**
Uses 1/6
- **11 – CHOPPER 3**
Uses 1/3
- **12 - CHOPPER 8 - Reversed**
The Chopper Modes use an LFO SAW shape to affect the Volume and Filter Cutoff to overlay pulses of different tempos to the samples. Especially good with the Morphs and Wavetables. This one uses 1/8 beats.
- **13 - CHOPPER 16 - Reversed**
This one uses 1/16 Beats.
- **14 – CHOPPER 32 - Reversed**
This one uses 1/32 Beats
- **15 – CHOPPER 6 - Reversed**
Uses 1/6

- **16 – CHOPPER 3 - Reversed**
Uses 1/3
- **17 – SQ CHOP 8**
Uses a Square Waveform, Banks 2/3 use normal Sampler mode and the other banks use Time Machine 2.
- **18 – SQ CHOP 16**
- **19 – SQ CHOP 8 - Reversed**
- **20 – SQ CHOP 16 – Reversed**
- **21 – SINE SLOW**
Uses a Sine LFO to sweep the Filter
- **22 – SINE FAST**
Uses a Sine LFO to sweep the Filter
- **23 – GLITCH**
Uses a Random LFO to modulate the Waveform Length for a Glitch Effect.
- **24 – PHASER**
Uses an LFO to modulate a Phaser.
- **25 – VOWEL PULSE**
Uses an LFO to Modulate a Vowel Filter for a Didgeridoo/Talk type effect.
- **26 – NOTCHED**
Uses a LFO and a Notched Filter.
- **27 – FORMANT PULSE**
Sweeping Formant and an Envelope Pulse
- **28 – PHASED PULSE**
Filter Envelope > Phaser and a delayed Pulsing LFO on the Cutoff Filter
- **29 – RANDOM NOTCH**
Random LFO → Resonant Notch Filter and slight Random Pitch Modulation
- **30 – PHASEY EQ**
Phaser and Pulsing EQ



There is a display which is used to show the currently playing Mode, Bank and Waveform names. If you disable it, it will show this same information when adjusting the Mode, Banks and Wave knobs.

Modulation Wheel/Pitch Bend/Aftertouch

The Modulation Wheel is used to shift the Waves in a positive direction to get an instant remix. It will wrap around if a step goes over 127 and start again from 0 onwards. If you find a sequence that you like, you can use the SET MW button to make the change permanent.

Aftertouch affects the Filter Cutoff.

Pitch Bend Down makes the Note length Shorter, Bend Up makes the Notes longer.

The Sequencer

The Sequencers are the heart of Emergent Properties and allow having individual step lengths for each Row. There are 12 Patterns.

Because the multi step length nature of the sequencer means that it can go on forever changing, which can be desirable, the Restart setting provides a way of restarting after X steps so that you can force repetition. This setting can be between 0 and 128 steps, setting it 0 will disable it for true freeform playback.

When Editing the Knobs/Enable buttons with the Mouse using ALT/OPTION KEY all knobs in the Sequencer Row will sync and move to the same value which is very handing for making a row all the same value. ALT/OPTION can also be used on the non Sequencer Knobs and in this case will edit that control in all 12 Patterns simultaneously.

There are 13 Sequence Rows which target the following and all settings are distinct to each pattern:

- **VOL/ENABLE**
This determines if a step is played using the button and at what velocity level it will play.
- **MODE**
This will select which Mode will be used by an active step. See above for the list of available Modes.
- **BANK**
There are 7 Banks of 127 Waveforms, this will decide which will be triggered on the active steps.
- **WAVE**
This will determine which Waveform will play on the active steps from the current Bank.
- **SLICE**
Each Waveform can be triggered at 16 start points, they are not strictly slices as the Waveform will continue playback from that point, although slices describes them logically.
- **LENGTH**
This sets the percentage used for the length of a triggered step. The length itself is calculated up to the next triggered step which forms the 100% value. So if there are 3 steps that are untriggered the full length value will be 4 steps.
- **TUNE**
Offsets the pitch of the step by -12/12 semitones. This is active on all steps.
- **CUTOFF**
Affects the Filter Cutoff in a positive direction. To the right of the Row is an amount knob to adjust the intensity as well as a Base value which represents the Sequencer setting of zero. This is active on all steps.
- **RESO**
Filter resonance. To the right of the Row is an amount knob to adjust the intensity as well as a Base value which represents the Sequencer setting of zero. This is active on all steps.



- **PROBABILITY**

This Sequencer allows setting the probability of events occurring. The amount to the right determines how likely the event is to occur from 0-100%. It is used in conjunction with the Probability Buttons, there is one for the Main Sequencers and one for each of the drum Modules. The probabilities are all calculated independently and only on steps where the probability Step is switched on. Also note that the probability is also calculated independently for each held polyphonic note which leads to interesting pitch sequences appearing as a result.



- **DRUMS (see below)**

Each sequencer Row has the following options

- **< >**
Shifts the Row Left or Right. Note that Enables are shifted Left/Right with Volumes.
- **D**
sets the Row to the Default settings stored in the Default File. (You can save your own at anytime using the SAVEDEF Option.
- **R**
This will Randomize the Row.
- **G (global randomize)**
Decides if the Row will be Randomized by the Global Randomizers.
- **ENABLE**
Decides whether this Sequencer will run, the first step will be used when off, or in the case of the Velocity Lane it will disable Playback of the Main Sequencer should you want to isolate the drums.
- **RANDOM AMOUNT**
This will add a random Value to each step, additionally the **RND Prob** Setting will determine the probability of a random value being used.

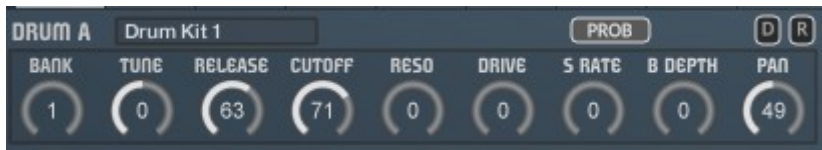


Pattern Randomize/Default/Shift



- **D**
Sets the current pattern to the default File pattern.
- **R**
Randomizes the Current Pattern respecting the Global Random Options and which rows have the 'G' Button enabled.
- **SHIFT LEFT/RIGHT**
Shift the entire Pattern Left and Right. Before doing so it will roll out the sequence to 16 steps in the background so that it will keep the pattern sounding the same.

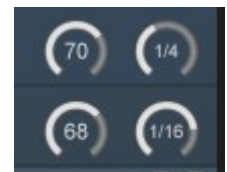
Drum Sequencers/Modules



There are 2 drum Sequencers which both have their own settings at the Bottom. There are a total of 635 Drum Samples which are organised into 5 Banks of Kits. Each Bank consists of 50 Bass Samples(1-50), followed by 30 Hi-hat samples(51-80) and finally 48 Snare samples(81-127). There are also a further 4 Banks which reorganises them into 2 Banks of Bass drums, a Bank of Hi-hats and a bank of Snares.

Each Drum Module has the following:

- **BANK**
This Selects the Bank used by the drum Module, the name is displayed at the top and automatically updated.
- **TUNE**
This Offsets the Tune by +/- 24 Semitones
- **RELEASE**
Sets the release amount of the Samples
- **CUTOFF**
Applies the Cutoff Frequency. The filter type uses the Global Setting.
- **RESONANCE**
Amount of Resonance for the Filter
- **DRIVE**
Amount of Overdrive
- **S RATE**
Amount of Samplerate Reduction
- **B DEPTH**
Amount of Bit Depth Reduction
- **PAN**
The Stereo Position of the Machine
- **PROB**
Should the Probability sequencer be used on the Drum Module?
- **VOLUME**
Overall Volume of the Drum Module. Note that this is relational to the Main Volume setting for the Pattern at the top left. Use this to get a good balance between the Main Sequencer and the Drum Sequencer.
- **CLOCK TEMPO**
This determines the Clock Frequency of the Sequencer.

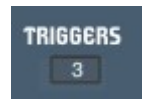


Patterns



There are 12 Patterns, 1 of which is always selected. Playback will only happen when a Note is played and the sequencers will play using that Note as their Root. The sequencers are rest when the first Note is played and will only reset after all Keyboard Notes are stopped and a new one occurs.

Changing Patterns has 2 methods. Firstly you can use the buttons which can also be automated. This way means that the Pattern will stay fixed until another is pressed or the same one depressed. The 2nd method is to use Octave dedicated to triggering them highlighted in red on the GUI keyboard.



The enable button decides whether the Patterns respond to Midi Triggers, this is useful if you want to work on a particular Pattern whilst trigger notes are playing back in your sequencer.



To All will copy the existing Pattern to all others.

Remix will copy the patterns to all others and then Remix each of the copies leaving the current one as it is, which is a great way to instantly create a set of variations based on the same theme. Remix 2 does the same but will also include other parameters such as the side and Drum Module settings. It will also follow the Global Randomizer Options where applicable.

The Copy Buttons under each each pattern selector allow copy any pattern to the currently selected one.

Automation

All Knobs can be automated, however because all patterns reuse the knobs it means any that are automated will overwrite patterns via automation when a pattern is changed. If you want to use Automation it is generally a good idea to stick to a single pattern.

The Options Menu has some functions relating to the Sequencer. Duplicate will repeat the 1st 'X' Steps through the rest of the Sequence. For example Duplicate 1-4 will repeat steps 1-4 four times to make up the 16 steps.

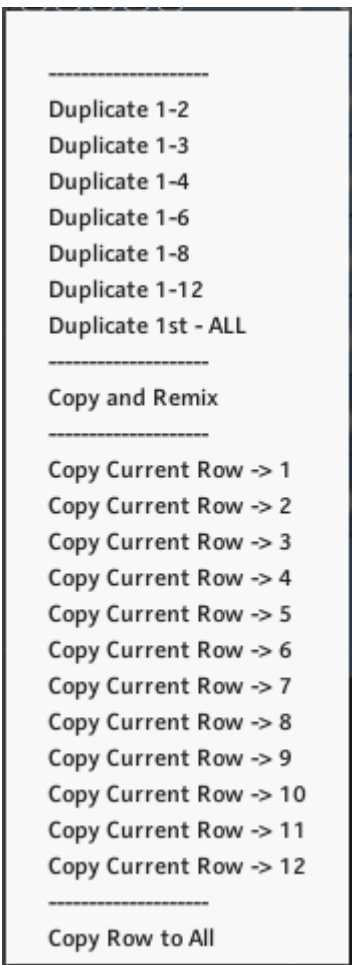
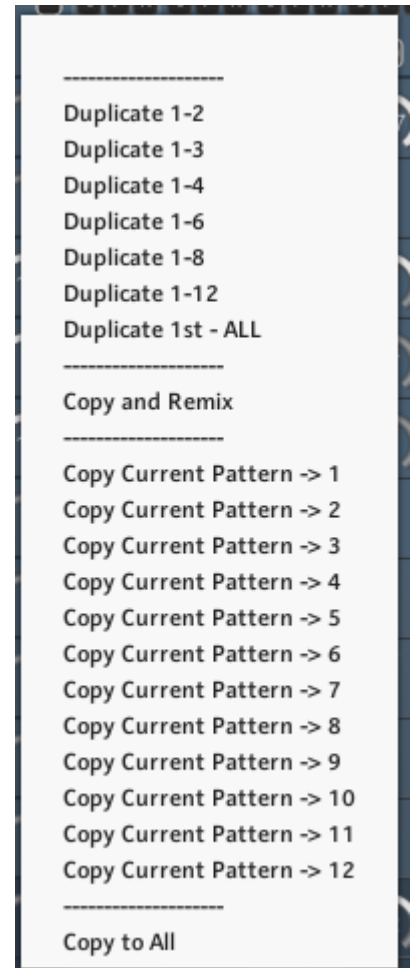
Copy and Remix is functionally identical to the Remix Button. It copy the current pattern to all other Patterns and slightly remix them.

Using Copy Current Pattern → 'x' using this option you can copy the current Pattern to any other slot.

Copy to All is in the Global Menu is functionally identical to the dedicated Copy to All Button.



The Top of each column has a copy, paste and Randomize. Copy will register that step ID and paste then copies to the new step.



There is also a Menu of identical functions for each Row which will only affect the Sequence of that Row.

Synth Options

- **FILTER TYPE**
Select which filter is used.

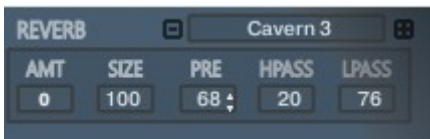


All of the following can be unique in each Pattern. Use ALT/OPTION to edit in ALL Patterns simultaneously.

- **LEVEL**
Main Level of the Sequencer/Pattern
- **MW – MOD WHEEL**
This is a representation of the Mod Wheel which has the effect of shifting the samples through the current Bank which is great for real time performance. However this can also be used to explore different sequences, once you find one that you like, click on the SET MW button and it will permanently change the Sequencer to those Waveforms and reset the MW Slider to zero. These can also be stored in Patterns.
- **HOLD**
This will allow holding played notes indefinitely as an easy way to work on presets hands free.
- **TEMPO**
The Tempo Synced clock divide of the Sequence.
- **TUNE**
Allows detuning the entire Sequencer by +-12 Semitones
- **ENV AMOUNT**
Amount of Envelope applied to the Filter, this can be Positive or Negative
- **FILTER DECAY**
Sets the Decay Time for the Filter
- **ATTACK**
Attack Time of the Volume of each triggered Sample
- **RELEASE**
Release Time of each triggered Sample. Note that this will only be obvious when using shorter step Lengths, as the steps are monophonic in playback.
- **SAMPLE RATE**
Reduces the Sample rate
- **BIT DEPTH**
Reduces the Bit Depth
- **SPREAD**
Distributes The voice in a Random Pan Location by the set amount.
- **DRIVE**
Amount of Overdrive



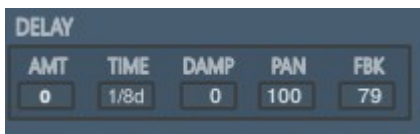
Reverb



The Reverb uses Impulse Responses to generate the Reverb.

- **AMT**
How much Reverb between dry and wet. Note that this is per Pattern, when using the Pattern Randomizer, the Effect Amounts will only be randomized when the 'FX' button is enabled.
- **Size**
This is the Time of the Reverb Tail in a percentage of the original IR Time.
- **LP**
Low Pass Filter
- **HP**
High Pass Filter
- **PRE**
Pre-Delay of the Reverb
- **Impulse**
Selects which Impulse Response is used from a selection of 50

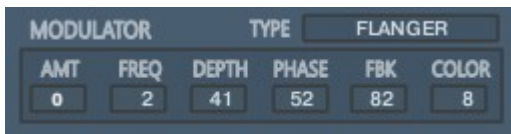
Delay



The Amount is unique to each Pattern.

- **AMT**
How much Delay between dry and wet. Note that this is per Pattern, when using the Pattern Randomizer, the Effect Amounts will only be randomized when the 'FX' button is enabled.
- **Time**
Tempo Locked Time of the Delay
- **Damp**
How much the signal is dampened.
- **Pan**
Width of the Delay Pan
- **Feedback**
How much Feedback the Delay uses to generate repeats.

Chorus/Flanger/Phaser



Multi Purpose Modulator which can be used as a Chorus, Flanger or Phaser. The Amount is unique to each Pattern

- **AMT**
The Amount of Chorus between 100% dry and 100% Wet. Note that this is per Pattern, when using the Pattern Randomizer, the Effect Amounts will only be randomized when the 'FX' button is enabled.
- **FREQ**
The Frequency of the Modulators LFO
- **DEPTH**
The depth of the Modulation
- **PHASE**
Stereo Phase Offset of the effect
- **FDBK**
The Feedback Level of the Flanger and Phaser
- **COLOR**
The Central Delay time of the Flanger.

EQ



This is a Global control that affects All patterns. Adds or Removes Bass and Treble.

Global Randomizers/Options



The Global Randomizer will Randomize Everything to create a unique Preset. The random Option will also affect other Randomizers where appropriate:

- **FILTER**
Should the Filter type be Randomised. Note that if this is enabled it will add a significant delay to Global Randomization because it has to update the Filter in every Group.
- **LPASS**
Forces the Filter Type to be locked to Low Pass when Randomizing.
- **ATTACK**
Should the Attack Time be randomised?
- **FULL VL**
Forces the any Trigger Randomization to use Full Volume Levels, global or local.
- **FREQ**
Should the main Sequencer Frequency/Clock Division be randomized?
- **FREQ DA/DB**
Should the respective drum Sequencer frequencies be Randomized.
- **MAIN**
Should the parameters on the right such as Release, Decay etc... be Randomized.
- **STEPS**
Should the Step lengths of the Rows be Randomized.
- **STEPS A/B**
Should the drum Sequencer Step Lengths be Randomized?
- **DRIVE**
Should the Drive, Sample rate reduction and Bit Depth Reduction be randomized. This is basically the noisy and Lofi parameters grouped.
- **FX**
When enabled the FX Section will be Randomized when using the Global Randomizers. The Global Randomizer will Randomize all of the FX Parameters, the Pattern Randomiser will only Randomize the Effect Amounts when this is Enabled.
- **DRUM A/B**
Should the Drum Sequences be Randomized.

BANKS INCLUDED IN RANDOMIZATION

- 1: MELODIC 1 - Enabled
- 2: MORPH 1 - Enabled
- 3: MORPH 2 - Enabled
- 4: MORPH 3 - Enabled
- 5: MORPH 4 - Enabled
- 6: MELODIC 2 - Enabled
- 7: SYNTHETIC - Enabled

Enable ALL

Disable ALL

Randomize Selection


MODES INCLUDED IN RANDOMIZATION

- 1: Normal - Enabled
- 2: Reversed - Enabled
- 3: Warble Chop - Enabled
- 4: HP Sweep - Enabled
- 5: Talker - Enabled
- 6: Pulsar - Enabled
- 7: Chop 8 - Enabled
- 8: Chop 16 - Enabled
- 9: Chop 32 - Enabled
- 10: Chop 6 - Enabled
- 11: Chop 3 - Enabled
- 12: Chop Rev 8 - Enabled
- 13: Chop Rev 16 - Enabled
- 14: Chop Rev 32 - Enabled
- 15: Chop Rev 6 - Enabled
- 16: Chop Rev 3 - Enabled
- 17: Square 8 - Enabled
- 18: Square 16 - Enabled
- 19: Square R 8 - Enabled
- 20: Square R 16 - Enabled
- 21: Sine Slow - Enabled
- 22: Sine Faster - Enabled
- 23: Glitch - Enabled
- 24: Phaser - Enabled
- 25: Vowel pulse - Enabled
- 26: Notched - Enabled
- 27: Formant Pulse - Enabled
- 28: Phase pulse - Enabled
- 29: Rand Notch - Enabled
- 30: Phasey EQ - Enabled

Enable ALL

Disable ALL

Randomize Selection

- **G – Row Randomize?**
Each Sequencer Row has one of these Buttons and the Row will only be Randomized when enabled. 
- **Options Menu**
This allows selecting which Banks and Modes are available to the Randomizers. You can also randomize the selection.
- **D**
This will Load the Main default Preset. You can overwrite this with the current Preset by using 'Save Def.'
- **R**
Global Randomizer which affects all enabled options.

Browser



Emergent Properties uses it's own Preset System and Presets can be loaded or Saved using the Preset Browser. The Preset Folder is called 'Emergent Properties Presets'

- **SAVE PRESET**
When you save a Preset, unfortunately Kontakt always opens the File Browser showing the data folder which stores all the configuration files for the Synth, so you must select the Preset Folder and save your preset there so it will be visible next time you load the synth. You can create sub folders in this directory if you wish, they will be listed on the Left hand side.
- **LOAD PRESET**
This is only needed to load a preset which isn't visible in the File Browser. Useful because Kontakt script provides no way of refreshing the browser except by reloading the Instrument. This provides a way of loading a preset in that situation.
- **SAVE DEFAULT**
All Homegrown Sounds Kontakt Instruments use a Default File for referencing when using any section or Global Default button. This Button will allow you to overwrite the file with the current state of the instrument, which will be used from then onwards.
- **PRESET PREVIOUS AND NEXT**
These Buttons will navigate through the presets. However a Preset must be loaded in the Browser first to create the start point.