

CHORD
STEPPER
ADVANCED

MANUAL

Changelog

V1.01

- Added Major and Minor 9th Chord Shapes
- Added 2 Note Chord Shapes which play the Root + 'x' note and a duplicate set which will just play a single + 'x' note.

v1.0

- Initial Release

Introduction



Chord Stepper is a Midi Sequencer for Kontakt 5 which is focused on creating Chord Progressions triggered by a Midi Note. It has 12 Patterns which can be switched in real-time via the set of Triggers which are highlighted in Red on the Kontakt GUI Keyboard, which can be placed on any Octave.

Each step can play a Chord Shape with a set of the most common Chords. Additionally you can also have a Sub Bass Root note, an optional Sub Bass + Note and a high Root note per step. Probability can be enabled per step using the probability % to decide whether notes will play. This can be set so that either all notes or most interestingly the default will decide on a note by note basis which adds an incredible amount of movement to the pattern. Full repeat decides whether the length should be a single step on the last repeat or held on to the next note through repeated blank steps. You can also override the Velocity and Length to Full per step.

Each step can be repeated x times with an adjustable repeat fade time for each Repeat. Because the repeats add to the length of the pattern steps, there is a Total Box which always displays the total amount of steps that are being used. This makes it easier when you want to constrain to a specific number of Steps.

Chord Stepper makes good use of the Pitch Bend, Aftertouch and the Modulation Wheel. The Mod Wheel runs up Chord Inversions much like Procession, PB Up shortens the Length, PB Down will cycle through the steps for instant remixing and finally Aftertouch shortens the Velocity.

Globally there are Random amounts available for Velocity, Length and Pitch Bend which are set as a Percentage. There is the ability to Copy any Pattern to the Currently Selected

as well as a Copy to all function. The Default Buttons cycle between switching a row of controls either All On or All off for each row where applicable.

There are plenty of Randomizers, although this Sequencer is more about using your ears really due to the complex nature of Chord Sequences, the Randomizers are less rewarding than the other Sequencers due to the nature of Chord Progressions. However there are options for deciding which elements will be Randomized making it highly customizable.

Chord Stepper does not come with Factory Presets but does include some useful Templates which make good clean starting points. There are so many variables to Chord Sequences that it really is a matter of taste and so the Sequencer is best used by using ears and judgement to create Sequences which are pleasing to you. It is hoped that you will find it very easy to build complex sequences. A suggested working method is to work on a pattern and then use 'Copy to All' and then work on variations on the other Patterns, and remember you do not need to use all of them.

Installation and Usage

Unzip to a place on your hard drive and using the Kontakt internal file browser locate the Instruments folder and Load 'Chord Stepper.nki'

Using VST Midi Output can be tricky and is handled differently in each DAW, hopefully most of you will have done this before as there is no way I could cover all DAWs. But basically VST plugins with Midi out appear as a selectable Midi Input which you can use as a midi input on the track you want to control.

I've made a video showing how it's done in all of the hosts I own as well Plogue Bidule and Metaplugin both of which make it simple and flexible.

<https://www.youtube.com/watch?v=kcKY7F2si-I>

I suggest doing a search on Google or Youtube for VST Midi output and the name of your DAW, it's well covered territory if I haven't covered yours.

Misc Notes

- Due to reasons only NI knows, when using Aftertouch as a destination it will also use this internally as though aftertouch is coming from your keyboard. This means that it can be used to sequence the Aftertouch>Freq Parameter which can be interesting. If you don't want this behaviour set Aftertouch>Freq to zero.
- When the 1st keyboard note is played all sequencers will reset to the start, if you then overlap notes the Sequencers will continue without resetting until no keys are held and a new one is played.
- Notes are generated from A to B so if an identical note was triggered by an upstream sequencer the note will not be triggered.
- Kontakt has a latency difference between the Note on from the midi input triggering and the clock pulse for some reason. As a result all midi is about 1500 micro seconds late and so a very small delay and shouldn't be noticed. You can always record the midi output to your DAW and quantize it if this bothers you.

Sequencer

There are a total of 16 steps available per pattern, although each step can be extended using Repeats to repeat the Current step x times. This will also work for Disabled steps so it can be a pause or with Length set to maximum and Full RPT enabled on the previous step, the previous note can be played until across to the next valid note.

The Sequencers are triggered by a Note on the Midi Controller and that note will determine which Key the Sequence is in. So if the sequence is triggered by a 'C' note then C will be the Root Note and everything runs relationally to that note. For example if a Step uses -2 for the Tune Knob the that step will be in 'B' which is 2 Semitones below the triggered Root ('C'). This can be seen visually for each step via the Display which shows the actual Chord being played for that Step in real-time.

- **ENABLE STEP**

Switches on the Note sequencer, the CC output has it's own enable.

- **CHORD DISPLAY**

This Display will always show the current actual Note and Chord Shape being played and the Current Step.

- **CHORD SHAPE**

This can either be set via the Knob or use the menu above the Knob to select by Name. The most Commonly used Chord Shapes are available. There are also a Series of 2 note Chords ('RT+X') which use Root + 'x' semitone which allows using it is a more traditional Note sequencer and works well in Combination with Chord Steps. These are also duplicated ('NR+X') so that the Root Chord can be ignored and just the 'x' semitone will play.

- **VELOCITY**

Sets the Velocity for the Current Step between 1 and 127. The random Velocity Parameter will also add/subtract from this value if it is being used. If Full Velocity is enabled for that step, the velocity is overridden and will be 127.

- **TUNE**

Offsets the Sequencer by -12/12 semitones. This is a real transpose so it makes it possible to create Chord Progressions. All Notes are relative and so either added or subtracted from the current Root note which was used to trigger the Sequence.

- **LENGTH**

The length of a note is calculated by determining the distance between the current note and the next to play. The Length setting allows setting the percentage of this time. If the following step is disabled, this step will be added to the Note Length so that it is possible to run up to the next playing Note. This is also true if using Repeats, however if the Repeats are on the current playing step, FULL RPT must be enabled for the last repeat to sustain. This provides the option of having a short single step length instead when desired.

- **REPEAT**

This determines how many times the Step will repeat, the lowest setting is 1 which means that the step will play once. There is also the possibility to fade the repeated Notes which is set by the RPT FADE knob per Pattern, a setting of zero will not Fade the repeats.



- **SUB BASS**
This will decide if a Sub Bass Note should be played for the step. How many Octaves below the Root Note is determined by the SUB OCT setting which can be between -1 and -3 Octaves.
- **HIGH**
This will play a Note 1 Octave higher than the Root Note for the step.
- **PROBABILITY**
This enables Probability for the current Step which adds a random chance of Notes playing determined by the 'PROB %' knob for how likely it is that they will play. The Default behaviour is that each individual note will be determined separately which adds a lot of Movement and complexity to the Pattern as different combinations of all available Notes will play.
- **FULL VELO**
This overrides the Velocity setting and makes the Step 127 Velocity
- **FULL LENGTH**
This Overrides the Length setting to make the Step 99%, however the random Length Parameter will still affect to provide some Movement in the Pattern.
- **AT**
Enables Aftertouch → Frequency for the Sequencer.
- **D**
Sets the sequencer to a flat default state.
- **R**
Randomizes the Sequencer Section

At the top there are Shift Left/Right Buttons which are used for Rotating the entire Pattern in the case you want to begin on a particular Step.

To the Right of each Row is a Default and Randomize Button. The default will alternate between turning all Steps on and all steps off for all button States. For the other settings it will set a hard coded default value.

Randomize will Randomize the Row to Random Values.



PATTERN OPTIONS

To the right of the Sequencer steps are the Pattern Specific Options which are unique to the currently selected pattern.

- **DEFAULT**
Sets the Pattern to a predetermined set of basic values
- **RANDOM**
Randomizes the Pattern obeying all of the selected Rules in the Global randomizer section.
- **STEPS**
Sets how many Steps are used from 1-16, only the selected amount of Steps will be visible on the sequencer.
- **TOTAL**
Because each step can be repeated x number of times, these steps are added to the total step amount beyond how many are selected in the steps box. This Box shows the actual number of steps used by the pattern.
- **P MODE**
When using Probability on a step this option determines whether Notes are treated individually which means that different combinations of valid notes on each step will be played, or if this is Enabled then the probability will be applied to all steps as a single entity so that the entire step will either play or not play.
- **PROB %**
For the steps which have Probability enabled this determines what the % chance of them playing will be. The higher the number the more likely they will play.
- **RPT FADE**
When Repeats are used on a Step if this knob is set to zero, every repeat will have the same Velocity. As the Knob is turned up each step will decrease in Velocity as it progresses. At the highest setting the final step will be almost silent (assuming the instrument you are controlling responds to velocity in that manner). It like a traditional Delay Effect for the most part. Of course you can also assign Velocity in the target instrument to other interesting Parameters which will have good results using this setting.
- **RPT PAT**
Repeat Pattern allows selecting a template that can be used on repeated Steps to determine which notes will play. It is ignored if the Repeat setting for a Step is 1. The patterns are in blocks of 8 and the numbers show which of the 8 will play. If the repeat steps are greater than 8, then steps 9 to 16 use a repeated version of the same pattern. It basically creates mini Sequences on the Repeated steps which can add lots of complex movement to a Sequence.
- **SUB +**
If the Sub Bass is enabled for a Step, this gives the option to add another note x semitones above the Sub Bass note, so for example setting it to 7 will play a Power chord in the lower region. If it I set to 0 then no extra note will play.
- **SUB OCT**
Sets how many Octaves below the Root note the Sub Bass will be which can be -1, -2 or -3 octaves.



PATTERN SELECTOR



This allows Selecting a Pattern for editing from the GUI which will display it and also make it the currently Playing. They are also selected via the Red Trigger octave (highlighted on the Kontakt GUI Keyboard if you have it visible).

You can Copy a Pattern from any other Pattern to the Currently selected Pattern by using the 'C' button below the Pattern you want to copy from. There is no undo for this operation!

Master Section



- **WHEEL**
A Visual Representation of the Mod Wheel which can also be used instead, however it isn't stored with a preset
- **MW > PITCH**
Sets the amount that the Mod Wheel affects the Pitch
- **AT > FREQ**
How much the Aftertouch will affect the Frequency
- **RND VEL**
Adds an amount of random velocity to all triggered Notes
- **RND PB**
Adds an amount of Random Pitch Bend when a note is triggered.
- **RND LEN**
Adds an amount of Random Length when a note is triggered.
- **X-SPOSE**
Transposes all Sequencers by -12/+12 Semitones.

OPTIONS



- **RESET**
The Default Behaviour of the Clocks is that when a Sequence Starts from No Notes Playing it will reset the Sequencer to step 1. The clocks will then never reset until no notes are held and a new Note is triggered. When Reset is enabled, the sequencer will still behave the same way, however when a Pattern is changed either via the GUI or the Red Trigger Keys the pattern will instantly reset to step 1.
- **TO ALL**
This will copy the Currently Visible Pattern to All other Patterns.

Global Randomizers

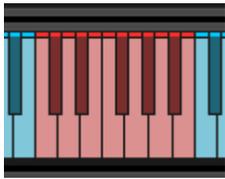


There are 6 flavours of Global Randomizer, the difference is mainly in the Tempos and step size possibilities. The Top 3 range from Chaotic to Sane and the Bottom 3 use fixed Tempos Frequencies of 16, 8 or 4.

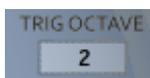
There are also the following options that affect all Randomizers:

- **DEF**
Should the Pattern be set to a Default State before it is Randomized
- **BASS/HI**
Should the Sub Bass and High Notes be randomized.
- **CHORDS**
Should the Chord Shapes be Randomized
- **RPTS**
Should the Repeat Amounts and FULL RPT be Randomized
- **PROB**
Should the Probability Steps be Randomized
- **FV/FL**
Should the Full Velocity and Full Length be Randomized
- **TEMPO**
Should the Tempo Be Randomized
- **STEPS**
Should the Step Amount be Randomized
- **VELOCITY**
Should the Velocity Knobs be Randomized
- **LENGTH**
Should the Length Knobs be Randomized

Triggers



The red Triggers are used to switch Patterns in Real Time and are the Equivalent of clicking on the 1-12 Buttons. If RESET is enabled then the new Pattern will play from Step 1 when triggered.



You can decide where the Triggers will be on the midi Keyboard with the TRIG OCTAVE Setting.

Browser



Chord Stepper uses its own Preset System and Presets can be loaded or Saved using the Preset Browser. However I discovered that Presets are not very relevant to it due to the complexity of Chord Progressions, the Sequencer is more about using your ears to build Sequences. So there aren't really any presets that come with it, but there are a set of useful Templates to form good clean starting points for building Sequences. The Preset Folder is called 'Chord Stepper 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 Presets 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.

- **LOAD CC**

CC information is stored with Presets, however usually you wouldn't want to load it when loading a preset as it's a very synth specific setting. It's disabled by Default so that they will not load.