# **ChordSet Harmonic Module**

Rack Extension for Propellerhead Reason



USER MANUAL version 1.7.0

**ChordSet User Manual** 

www.retouchcontrol.com

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## 1. Introduction to ChordSet

ChordSet is a utility device for the Reason rack which allows to program, store and play chords with one finger.

In order to play the chords, you connect the device chord CV outputs to the gate and CV inlets of the sound module of interest, for example a synthesizer or a sampler. If you have also purchased NoteSet, then you can connect the chord CV outputs to NoteSet and then use the "Chord Thru" function to play the chords on the connected device. For more info on this, please chapter 2.

The device has 12 slots and each slot can store one chord. For a given slot, the chord is programmed by selecting the root note and then adding the extra notes with the "Shift Notes" knobs. The "Shift" knobs can add notes which are from -36 to +36 semitones apart from the selected root note.

Each slot responds to a specific MIDI note: slots 1 to 12 correspond to notes C2 to B2. So for example, if you wanted to play the chord programmed in slot 1, you would play the C2 note from your MIDI controller, Reason's piano roll, or from a connected CV device. There is a switch on the front panel which selects whether the device can be triggered by MIDI key or by CV.

Once you create a chord set in a certain key, it can be easily transposed to another key by using the "Global Transpose" knob which will shift the entire set. Most factory patches have been programmed in the key of C, but thanks to the transpose knob, they are easily adapted to other keys as well.

The back of the device has several CV outlets. In addition to the chord gate and note CV outs, there are outlets for each single note in the chord as well. These can be useful when creating a bass line which plays the root of the chords, or a melodic line which plays one of the other notes in the chords. There are also CV outlets for some common performance parameters, like pitch bend, mod wheel, aftertouch and sustain pedal.

At the back, you will also find CV inlets for note and gate which allow to play the device from a Matrix sequencer for example. There is a CV In for the "Global Transpose" which will transpose the chords based on the incoming CV signal. Finally, there is a CV output called "Link" which is used in conjunction with NoteSet.

The device is fully automatable in the Reason sequencer, and it provides complete Remote support for external MIDI controllers. It has patches so that you can store your favorite chords and progressions for later use in other projects.

# 2. Set Up

In order to play ChordSet, you will need to connect its CV outlets to the gate and note CV inlets of the sound module on which you intend to play the chords. The image below shows the connections between ChordSet and the Thor synthesizer (see the yellow squares).

Please note, if you want to affect the pitch bend or the mod wheel while playing ChordSet, you will need to connect the pitch bend and mod wheel outs as well (see the red squares).



connecting ChordSet to a sound module (Thor)

If you own NoteSet, then you can use that to trigger the chords on the device connected to the player. This offers the advantage that now you can use the features of player devices, like "Send to Track" and "Direct Record" with ChordSet. Using ChordSet and NoteSet together in this way effectively gives ChordSet all the advantages of player devices, without losing the flexibility of being a utility which can be connected to many devices at once and is not restricted to just one device (like players).



connecting ChordSet to NoteSet in "Chord Thru" mode (front)



connecting ChordSet to NoteSet in "Chord Thru" mode (back)

# 3. Usage

In the following sections we will investigate how to program chords, and then how to play them in a variety of ways. For more advanced topics, please see the "Tips and Tricks" chapter.

All the important editing functions are accessed via the main display of the device. From this view, it is possible to change chord slots, chord presets and chord inversions very easily without extra key presses. Clicking on the numbered box opens the slot navigation menu. Clicking on the "P" box opens the main editing menu. The smaller two boxes on the right can be used to quickly create inversions of the currently selected chord. Very convenient.



## 3.1 Programming Chords

#### 3.1.1 Creating Chords Manually Note by Note

To program a chord, first select one of the 12 slots. A slot is selected by clicking with the mouse on the slot LCD area as shown below.



selecting a chord slot

Let's now choose a root note. This is done by turning the root note knob and adjusting the root note octave switch. If the root note octave switch is set to "0", the root note is in its "middle" position on the keyboard. For example, if you have selected "D" and the octave switch is at "0", the note is D3. If the octave switch is at "-1", the note is one octave lower, that is D2, and so on.



The next step is to start adding notes to the chord with the "Shift Notes" knobs. If the knobs are in their middle position and their display shows "-", then no notes are being added. To start adding notes, move the shift knobs. Each shift knobs is capable of adding a note which is up to 36 semitones lower or higher than the root note. The image below shows the configuration for a C major triad. For more information on how to program different chord types, please see the "Single" folder in the factory patches.



#### 3.1.2 Using Chord Presets

To speed up the process of creating chords, you can use chord presets. These are accessed by within the "P" area of the display. There are presets for the most common chord types which can then be furthered customized using the knobs or the two inversion modes (see section 3.1.4).

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						-	add11					
			Randomize	all slots (k	keep root	ts)	min12					
			Randomize	all slots			111113					

Click on the "P" area to access the presets

#### 3.1.3 Learn Chords from MIDI

Another way to program chords is by playing the chord directly on a connected MIDI keyboard or from the Reason sequencer\* after enabling Learn Mode. Please note, Learn Mode works on a per slot basis, that is, you need to enable Learn Mode for the selected slot, then play the chord to learn it and after that you can either turn off Learn Mode or switch to another slot to register the chord into the device. If you want to use Learn Mode for another slot, you will then have to enable it again.

With Learn Mode enabled, the slot display will show a yellow "L" letter at the right bottom side. During the learning process, any note you play will be registered as being part of the chord. So you can either play all the notes of the chord at once or play one note at a time (or a combination of both). Please be aware, only up to 7 notes chord can be learnt this way. If you input more than 7 notes, the first note you played will be replaced with the last note and so on. Once you have entered your chord, simply click on the "L" letter in the display to disable learn mode.

T Harmony CH	ORDSET 2 ROOT NOTE SHIFT NOTES	
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	Chord Presets	
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	aug/dim 🕨	
	sus	
	Randomize Slot (keep root) Randomize Slot Mark slot as favorite	
	Randomize all slots (keep roots) Randomize all slots	
	Reset all favorites	
	Fill Empty Slots (3 chords min)	
	Learn from MIDI	

Click in the "P" area to open the menu then select "Learn from MIDI" to enable Learn Mode



Once a chord has been inputted, simply click on the L to disable learn mode \* You can also use the Reason sequencer to program chords into the device. You will need to program the chord into a MIDI clip on the ChordSet track in the sequencer first. Then you enable Learn Mode and press play in the Reason transport to play the chord. After all the notes of the chords have been played, press Stop in the transport and disable Learn Mode to register the chord into the device.

<u>One important caveat</u>: make sure the starting points of all the notes in the chord do not line up exactly or the learning algorithm won't be able to detect all the notes at once.



MIDI clip on the ChordSet Track to learn a chord. Note the gap in the starting position for all notes in the chord

#### 3.1.4 Randomization

Another method to create chords is to use the various randomization options as described below:

- *Randomize slot (keep root)* it creates random chord notes for the selected slot preserving whatever root note is currently assigned to that slot
- *Randomize slot* both the chord notes and the root are chosen randomly for the selected slot
- *Randomize slots (keep roots)* it creates random chord notes for all slots preserving whatever root note is currently assigned to each slot
- *Randomize slots* both the chord notes and the roots are chosen randomly for the all the slots



**Randomization Options** 

If you want to exclude one or more chord slots from the process of randomization, you can mark the slot(s) as favorite. To do so, open the Edit menu and choose the entry *"Mark slot as favorite"*. Now the slot will not be changed when applying randomization. When a slot is marked as favorite, a green circle appears in the upper left corner next to the slot number. To unmark a slot, select again from the edit menu the *"Mark slot as favorite"* entry. To remove all slot favorites, choose *"Reset all favorites"*.

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Slot favorite menu entries



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#### 3.1.5 Using Inversions

If you need to change the voicing of the chord, you can use the Variation engine to quickly do that.

*Inversion* - will keep the root note where it is but it will start shifting the other notes down the octaves, starting from the highest note in the chord.

*Inversion +* will keep the root note where it is but it will start shifting the other notes up the octaves, starting from the lowest note in the chord.



3.1.6 Using Copy/Paste/Copy and Paste to Slot and Reset

To copy a chord, select its slot first, then Alt + click in the slot indicator display and from the contextual menu choose "Copy".

To paste a chord to another slot, make sure you copy it first as describe above, then select the next slot, click in the P indicator display and from the contextual menu choose "Paste". Alternatively, you can directly copy and paste the currently selected chord to another slot by using the "Copy and Paste to Slot" menu entry. This will paste the chord to the chosen slot and will automatically select that slot for editing If you want to quickly reset the knobs to the default, choose "Reset" from the contextual edit menu choose.



copy, paste or reset an existing chord

#### 3.1.7 Optimize Voicings

When creating chords from presets and especially when using the randomization functions, it is usually the case that the notes contained in the chords are one or more octaves apart from each other. This produces "jumps" when playing the chords in a progression. In order to minimize these jumps and smooth the transitions, you can use the "Optimize Voicings" function.

This is the way it works: select a chord which is in the right note range for your song. Then open the edit menu and select "Optimize Voicings". The software will not attempt to transpose all other chords in the other slots to match the range of the currently selected chord.



Optimize Voicings from the menu

#### 3.1.8 Fill Empty Slots

This is a useful function when you have 3 or more chords and want to fill the remaining slots with variations of those preexisting chords. The software basically creates for you various inversion of those chords which you can use the change up your progressions from sounding too repetitive and stale.

Please note, for this function to work, you need at least 3 programmed chords in memory.



Fill Empty Slots from the menu

## **3.2 Playing Chords**

Chords can be played by MIDI key or by CV. By default, the device is set to be triggered by MIDI keys. In order to be able to use CV, you need to set the trigger mode switch to "CV" as shown below.



#### 3.2.1 Play Chords by MIDI key

If the trigger mode switch is set to "Key", you will be able to play one-finger chords from your MIDI controller or from the Reason sequencer. Please note, each chord slot is triggered by a particular MIDI key. Specifically, slots 1 thru 12 are played by using MIDI keys C2 to B2.

When you trigger a chord by MIDI or by CV, the slot display shows in the bottom right corner the slot which is being triggered.



#### 3.2.2 Play Chords by CV

One of the most fun aspects of a device like ChordSet is the ability to play chords from a device like the Matrix pattern sequencer for example.

In order to play ChordSet by CV, please connect the gate and note CV inputs in the back to the Gate and Note CV outputs of the sequencer device. Just like before, you will be able to play the chords in slots 1 thru 12 by programming notes C2 to B2 in the sequencer device. This is shown below for the Matrix Pattern Sequencer.



connecting ChordSet to Matrix



programming notes in Matrix

#### 3.2.3 Humanize and Strumming

The Humanize feature allows to play chords where the notes do not all play exactly at the same time and with the same velocity. This is meant to mimic the inevitable human imperfections which occur when the player triggers keys on a piano (sometimes deliberately). The process is quasi-random and as you strike the same chord more than once in a succession, you will hear slight different sounding variations depending on which notes were struck first and their velocity. In order to activate the Humanize feature, Alt+click in the display and from the menu choose "Humanize".

Similarly, the Strumming feature allows to "strum" the notes of the chord, that is, each note in the chord will be played slightly delayed from the previous one. The delay time between each note is controlled by a strength factor in percentage. There are 4 strengths to choose from and these are 25%, 50%, 75% and 100%. Of course, the latter will have the longest delay between the notes.

The Humanize and Strumming feature can be used simultaneously, so they are not mutually exclusive. Also, both features are automatable in the Reason sequencer.



Activate Humanize



Enabling Strumming at 50%

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Automating Strumming % in the sequencer

## 3.3 Transposing Chords

It is possible to transpose the whole chord set at once by using the "Global Transpose" knob. This will affect the chords in all the 12 slots. This feature is useful if you would like to transpose the entire chord set to another key.

Most factory patches have been programmed in the key of C. Use the transpose knob to change them to whichever key you might be working in. For example, if you are currently working in the key of G, then you would turn the transpose knob clockwise to position +7 semitones. In general, the transpose knob can shift the current chord set up or down by 24 semitones.



transposing the chord set by -4 st

It is also possible to use a CV signal to transpose the chord set. This is done by connecting a unipolar or bipolar CV signal to the transpose CV inlet in the back of the device. The incoming CV signal will be clamped to transpose the chord set up or down by 24 semitones. Please note, once the CV inlet connection is made, the transpose knob on the front of the device will have no affect as the transposition is controlled by the incoming CV signal instead. This is indicated by the "Ext" led being lit as shown below.



controlling the transposition with the Matrix



Lit LED for external control

## 3.4 Single Notes Out

In addition to the chord output, the ChordSet device is also capable of sending the single notes of the chord out of separate outlets. There is an outlet for the root note and 6 separate outlets for each of the shift notes.

The root note CV outlet has an octave shift which allows to transpose the root position by either one or two full octaves. This is useful if you are using the root note of the chords to play a bass line and need to adjust it to play at a lower octave than the actual chords. This is shown below.



Subtractor playing the root of the chords and triggered by the Matrix sequencer

## 3.5 Performance Parameters CV Out

At the back of ChordSet, you will find 4 CV outlets for various performance parameters, namely Pitch Bend (PB), Mod Wheel (MW), Sustain (ST) and After Touch (AT). If you are using your keyboard to play ChordSet and would like to use at your pitch or modulation wheel, then these CV outs come in handy.

The picture below shows how to connect the pitch bend and mod wheel outs to a Subtractor synthesizer.



connecting the pitch bend and mod wheel outs to a Subtractor

### 3.6 Recording in the sequencer

Once you have programmed several chords which sound good together, you can record the progression in the Reason sequencer. Instead of fully formed chords, you will be recording single notes (precisely, notes in the range from C2 to B2). Although this might seem limiting at first, in reality, thanks to the ability to automate almost any parameter of the device, there is a lot of scope for experimentation.

For example, once you have created a progression of several notes, you can copy the midi clip over and experiment with the automation to change the progression so that it does not sound too repetitive. You could play with the transposition, chord inversions, or even take out or add notes. You might find it even more fun to create progressions this way than having to pencil in notes with the mouse! Especially if you are using a midi controller and have it mapped to the knobs on ChordSet.

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sequencer chord progression with automation

## **3.7 Direct Record or Copy Notes to Track**

It is possible to direct record or copy notes to track by using a Player device. If you also own NoteSet, this is very simple. But you can use any other of the stock players as well.

#### 3.7.1 Using NoteSet

- 1. create a NoteSet player on top of the device playing the chords
- 2. connect the Gave and CV out from ChordSet to NoteSet
- 3. Put NoteSet in "Chord Thru" mode
- 4. if you want to record the chords directly into the sequencer, enable "Direct Record" from the top player stack. Then arm record in the sequencer and play the chords from ChordSet. Make sure the ChordSet track is not set for recording, or you will be triggering the chords twice!
- 5. alternatively, you can record the chord changes on the ChordSet track, and then use the "Send to Track" from the player stack to create chord notes on the actual track of the device playing the chords.



#### 3.7.2 Using a stock player

- 1. Create a player device on top of the device you want to trigger, and turn it off
- 2. Combine the two together in a combinator

3. Connect the Gate and CV out from ChordSet to the Gate and CV inputs of the combinator

4. Select the ChordSet MIDI clips which you want to copy to track, and bound them by the L and R loop locators

5. Go to the Player device and press "Send To Track"



combine Player and instrument



connect CVs to the combinator



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# 4. Tips and Tricks

## 4.1 Chords, Bass lines and Melodies

Thanks to the multiple CV outlets at the back, it is possible to send entire chords to one device, just the root note (possibly shifted by an octave or two) to another, and the single notes to other devices as well. This allows the creation of complex set ups which can play separate parts in "tune" with each other, and are triggered by single key presses on your keyboard!

In the picture below, ChordSet is sending its chord outputs to a Thor synthesizer which creates the harmonies, then the root note is sent to the Subtractor which plays the bass line, and the third note is sent to an NNXT sampler which plays the melodies. Please note, the Subtractor and the NNXT are triggered by two separate Matrix sequencers with different rhythmic patterns, so they don't both play the same lines.



Using ChordSet with multiple devices

## 4.2 Rhythmic Chord Stabs

The following set up will allow you to trigger rhythmic chord stabs as played from your keyboard. Instead of playing the ChordSet device directly, you will be playing the Thor synth instead. However, the keys won't be triggering the internal sounds in Thor (notice the "MIDI" and "Step Seq" trigger mode are both disabled), but they will be triggering the Thor step sequencer instead, which in turn is going to provide the note and gate CV outs to the ChordSet device. Then the ChordSet device will be playing chords on Thor thru the note and gate CV on the back!

Please note, you can connect the ChordSet chord outputs to any other device, if you prefer, so you are not limited to just triggering Thor.



set up for chord stabs (front)

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set up for chord stabs (back)

## 4.3 Combining multiple ChordSet devices

This is a trick that can greatly expand the usefulness of ChordSet. Let's look at the "MajorToolKit" factory patch in the "Combinator" folder. It consists of a combinator with 3 ChordSet devices all connected to the free CV8 Gateway RE from DLD Technology.

If we open the programmer, we can see that each device has been "stacked" to receive notes on a different octave, with the first instance receiving notes from C2 to B2, the second one from C3 to B3, and the third one from C4 to B4. However, notice how the notes received on the second device have been transposed by 12 semitones. Similarly, on the third device the notes have been transposed by 24 semitones. This way, you can still trigger all three devices even if played across 3 octaves on your keyboard.

Device: 1 Root Position 2 Ist Inversion 3 2nd Inversion 4 CV-81 ✓ Receive Hotes → Ke Performance Controllers	C2 V Ranse Lo: C3 Hi Pitch.B. Mod.W.	C3 C4	CS C6	Device: 2 1st Inve     Source: Tarset:     Rotary 1      Global Tran     Rotary 2     Rotary 3     Rotary 3     Button 1     Button 2     Button 2     Button	rsion Min: Maxc spose24 +24 ransposition for th 2nd ChordSet
Charder Harmony	Marker Tabada				
Module Module	Major Triads		Qn 🛡	by retouchcontrol	ROOT POSITION
ChordSET Module	Major Triads		Dn •	by retouchcontrol	ROOT POSITION
ChordSET Harmony ChordSET Harmony Module	Major_1st_Inve Major_2nd_Inve		Dn •	by retouchcontrol	ROOT POSITION IST INVERSION 2ND INVERSION

combi programmer with stacked ChordSets

Once you have devices stacked in this fashion, you can load your favorite patches in each so that you have access to a larger number of chords for your compositions. The patch in this particular example has all the scale chords for a major key in the first device, and the 1st and 2nd inversion of the same chords in the other two devices. This way you can quickly experiment with chord substitutions to spice up or better voice a particular progression in any major key.

Now let's look at the connections in the back. Basically, each ChordSet's Note and Gate outputs are connected to a separate CV and Gate port on the CV8 Gateway. You then would connect the CV and Gate of the CV8 Gateway to a synth or sampler which is supposed to sound the chords.



connections to the CV8 Gateway

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# 5. Remotable Items

ChordSet can be fully controlled from an external MIDI controller via Remote. The remotable items and their names are listed below.

iviap	μοιο	
Мар	pot4	Shift 2 Slot <1-12>
Мар	pot5	Shift 3 Slot <1-12>
Мар	pot6	Shift 4 Slot <1-12>
Мар	pot7	Shift 5 Slot <1-12>
Мар	pot8	Shift 6 Slot <1-12>
Мар	pot9	Global Transpose
Мар	pot10	Humanize
Мар	pot11	Strumming

//End of Remote Map

# 7. MIDI Key Implementation

In order to play ChordSet from your MIDI keyboard, please remember to create a sequencer track first. A track is automatically created when you instantiate ChordSet from the "create" menu.



## 8. MIDI Implementation Chart

#### **CC** Parameter

[12] = "shift 1 knob slot1". [13] = "shift 1 knob slot2". [14] = "shift 1 knob slot3". [15] = "shift 1 knob slot4", [16] = "shift 1 knob slot5". [17] = "shift 1 knob slot6", [18] = "shift 1 knob slot7", [19] = "shift 1 knob slot8", [20] = "shift 1 knob slot9", [21] = "shift 1 knob slot10". [22] = "shift 1 knob slot11", [23] = "shift 1 knob slot12", [24] = "shift 2 knob slot1", [25] = "shift 2 knob slot2", [26] = "shift 2 knob slot3", [27] = "shift 2 knob slot4". [28] = "shift 2 knob slot5". [29] = "shift 2 knob slot6", [30] = "shift 2 knob slot7". [31] = "shift 2 knob slot8", [33] = "shift 2 knob slot9", [34] = "shift 2 knob slot10", [35] = "shift 2 knob slot11", [36] = "shift 2 knob slot12", [37] = "shift 3 knob slot1", [39] = "shift 3 knob slot2", [40] = "shift 3 knob slot3". [41] = "shift 3 knob slot4" [42] = "shift 3 knob slot5", [43] = "shift 3 knob slot6", [44] = "shift 3 knob slot7", [45] = "shift 3 knob slot8", [46] = "shift 3 knob slot9", [47] = "shift 3 knob slot10" [48] = "shift 3 knob slot11", [49] = "shift 3 knob slot12", [50] = "shift 4 knob slot1", [51] = "shift 4 knob slot2",

[52]	<pre>= "shift 4 knob slot3",</pre>
[53]	= "shift 4 knob slot4",
[54]	= "shift 4 knob slot5",
[55]	= "shift 4 knob slot6",
[56]	= "shift 4 knob slot7",
[57]	= "shift 4 knob slot8",
[58]	= "shift 4 knob slot9",
[59]	= "shift 4 knob slot10",
[60]	= "shift 4 knob slot11",
[61]	= "shift 4 knob slot12",
[62] [63] [65] [66] [67] [68] [69] [70] [71] [72] [73] [74]	<pre>= "shift 5 knob slot1", = "shift 5 knob slot2", = "shift 5 knob slot3", = "shift 5 knob slot4", = "shift 5 knob slot5", = "shift 5 knob slot6", = "shift 5 knob slot7", = "shift 5 knob slot8", = "shift 5 knob slot9", = "shift 5 knob slot10", = "shift 5 knob slot12",</pre>
[75]	<pre>= "shift 6 knob slot1",</pre>
[76]	= "shift 6 knob slot2",
[77]	= "shift 6 knob slot3",
[79]	= "shift 6 knob slot4",
[80]	= "shift 6 knob slot5",
[81]	= "shift 6 knob slot6",
[82]	= "shift 6 knob slot7",
[83]	= "shift 6 knob slot8",
[84]	= "shift 6 knob slot9",
[85]	= "shift 6 knob slot10",
[86]	= "shift 6 knob slot12",
[87] [88] [90] [91] [92] [93] [94] [95]	<pre>= "root selector slot 1", = "root selector slot 2", = "root selector slot 3", = "root selector slot 4", = "root selector slot 5", = "root selector slot 6", = "root selector slot 7", = "root selector slot 8", = "root selector slot 9",</pre>

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[102] = "root selector slot 10",
[103] = "root selector slot 11",
[104] = "root selector slot 12",

[105] = "root octave selector slot 1",
[106] = "root octave selector slot 2",
[107] = "root octave selector slot 3",
[108] = "root octave selector slot 4",
[109] = "root octave selector slot 5",
[110] = "root octave selector slot 6",
[111] = "root octave selector slot 7",
[112] = "root octave selector slot 8",
[113] = "root octave selector slot 9",
[114] = "root octave selector slot 10",
[115] = "root octave selector slot 11",
[116] = "root octave selector slot 12",

[117] = "global transpose",

[118] = "humanize",

[119] = "strumming",

# 9. Version History

#### Version 1.0.3

- Fixed a bug where the value of the "Global Transpose" would not be recalled correctly after opening a saved project
- Fixed a bug where the shift notes would play the wrong note if the shift amount calculated below C0
- Fixed the labeling on the Shift Notes Out CV outputs

### Version 1.5.1

- Copy and Paste chords from one slot to another. Easily reset chord slots to default values
- Use built-in presets for the most common chord types to create chords faster
- Change the voicing of an existing chord by using the Variation 1 and Variation 2 engines, especially useful for inversions
- Learn chords directly from input from a connected MIDI keyboard or from a MIDI clip in the sequencer
- Humanize playing mode to make chords sound more natural
- Strumming playing mode with 4 settings for different strumming styles

### Version 1.5.5

- new random chord generator with the following options:
  - Randomize slot (keep root)
  - Randomize slot
  - Randomize all slots (keep roots)
  - Randomize all slots
- larger display now shows the slot which is being triggered

## Version 1.6.1

- "Quick Edit" mode with faster access to chord presets and inversion. To enter this mode, shift+click in the slot display
- added slot favorites to exclude marked slots from randomization
- · chord labels are assigned automatically when creating chords from a preset

## Version 1.7.0

- Quick Edit mode is now the default view
- Chord editing menu has been changed with better organization of chord presets plus new options, and it's accessed with a single click in the "P" area
- added "Copy and Paste to Slot" to speed up copying a chord from one slot to another
- added "Optimize Voicings" which tries to optimize the voicing for all chords by reducing the note "jumps" when going from chord to chord
- added "Fill Empty Slots" option, which starting from at least 3 chords, fills all the slots with inversions of the chords already there
- several workflow improvements, like changing slots by directly clicking on the currently playing slot indicator, disabling learning mode by directly clicking on the L indicator, and changing the shift notes display from semitones to actual note names
- added a "Link" CV output in the back of the device for communication with the NoteSet player. This allows to create custom scales in NoteSet for each chord received from ChordSet