ChordSQ
Chord Sequencer Player

Rack Extension for Reason

USER MANUAL
version 1.3.6

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1. Introduction

ChordSQ is a player instrument for the Reason rack designed to help you create chord progressions. The device interface does away with the traditional piano roll and offers an intuitive way to achieve results fast. It's easy to create or modify progressions in just a few clicks. No drawing of notes required.

At the heart of the player is a 16-step sequencer which can be synced to the host transport or can be triggered by MIDI notes. For each step of the sequence, you select a root note and choose a chord from the many available presets. Then you can change the chord voicing, add a bass note, set a duration and velocity. Each parameter has dedicated edit menus so that the selected steps can be altered easily. To help you choose chords, set a key and scale and all compatible chords for each scale degree are available from the chord type menu.The interface conveniently highlights which notes and chords are in the scale. A customizable randomization engine can help spark new ideas, but if you want to to keep things in check, all outgoing notes can be quantized to the selected key and scale. For selected scales*, it is possible to automatically generate chord progressions and chord sets in just a mouse click!

The device has four operation modes. In mode 1, any note triggers the sequence. In mode 2, a note triggers the sequence and it also transposes it up or down (no transposition when you play C3). In mode 3, notes C1 to D#2 play the chords in slots 1 to 16 without triggering the sequence. This mode turns the player into a one-finger chorder which can store 16 different chords per variation for a total of 64 chords per patch. Finally, in mode 4 the internal sequencer is synced to the host transport so the chord sequence starts playing as soon as you press play in Reason.

ChordSQ is fast to program, fun to use and it encourages experimentation. Try it out and see for yourself!

* Major, Minor, Dorian, Lydian, Mixolydian, Phrygian and Locrian.

Product Details:

- Four operation modes:
    1. any key press triggers the sequence
    2. a key press triggers and transposes the sequence
    3. keys C1 to D#2 play the chords individually, do not trigger the sequence (chorder mode)
    4. chord sequence is synced to the host transport
- 16 step sequencer with adjustable number of steps, start offset and travel direction
- Each step has the following parameters:
    1. Step On - steps can be turned on or off. When a step is turned off, it acts like a note rest
    2. Gate Length - there are 4 settings which determine the note lengths relative to the step duration
    3. Velocity - the velocity of the outgoing notes for the given step
    4. Duration - independent for each step, from as short as 1/64 to as long as 4 bars
    5. Bass Note - additional note in the range from C-2 to B5 to be played with the chord (can be turned off)
    6. Voicing - 11 voicing types, including inversions and root-less options
    7. Root Note - base note of the chord in the range from C0 to B7
    8. Chord Type - 60 presets including major, minor, dominant, augmented, diminished and suspended chords
- Various editing menus to quickly create and modify sequences for a single row of parameters or for the entire sequence
- Fast edit button which remember the last editing function performed
- Automatic generation of chord progression and chord sets for select scales
- Automatic generation of patterns of different lengths, plus resize pattern function (half and double)
- Visual representation of notes and chords in the selected key and scale, plus optional note quantization
- Compatible chords in the selected key and scale available from the chord menu for each scale degree
- Several options to display scale notes in Roman numerals
- Chord type and voicing randomization percentages
- Hold button
- 4 variations per patch with easy duplication and reset
- Play quantization to a selectable time division
- Adjustable swing from light to heavy, plus three levels of velocity humanization
- Automation of sequence parameters, root note, voicing and chord type for all 4 variations
- Comprehensive Remote implementation

2. Overview

2.1 Front
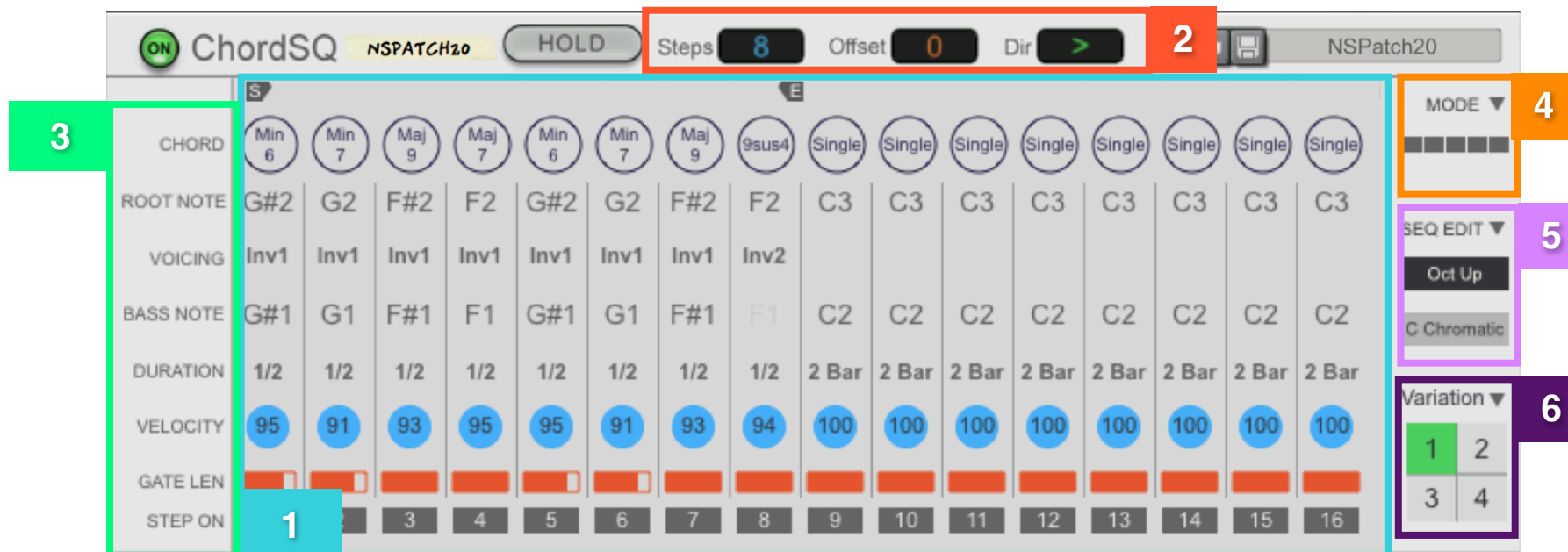
1. Main interface for programming the sequence. Each step has a set of parameters which can be set independently from the rest.

2. Programmable displays for setting the number of steps in the sequence, the starting position offset, and the direction

3. Clicking on one of the labels opens an "Edit" menu for that specific parameter. The editing functions affect those steps which are included between the "Start" and "End" step locators (shown with an "S" and "E" labels above the main sequencing area)

4. There are 4 input modes. In mode 1, any incoming note triggers the start of the sequence. In mode 2, an incoming note triggers and transposes the sequence (C3 no transposition). In mode 3, notes C1 to D#2 trigger the chord slots 1 to 16 respectively without triggering the sequence. In mode 4, the sequence is synced to the host transport.

5. Clicking on the "Seq Edit" label opens the edit menu for affecting all the parameters of the sequence which are included between the "Start" and "End" locators. The black button remembers the last edit function which was performed from the menu. The grey button is used to set a key and scale.

6. There are 4 sequence variations that can be selected during playback by using the numbered buttons. Clicking on the "Variation" label opens an edit menu with operations like duplicate and reset of sequence variations.

2.2 Back
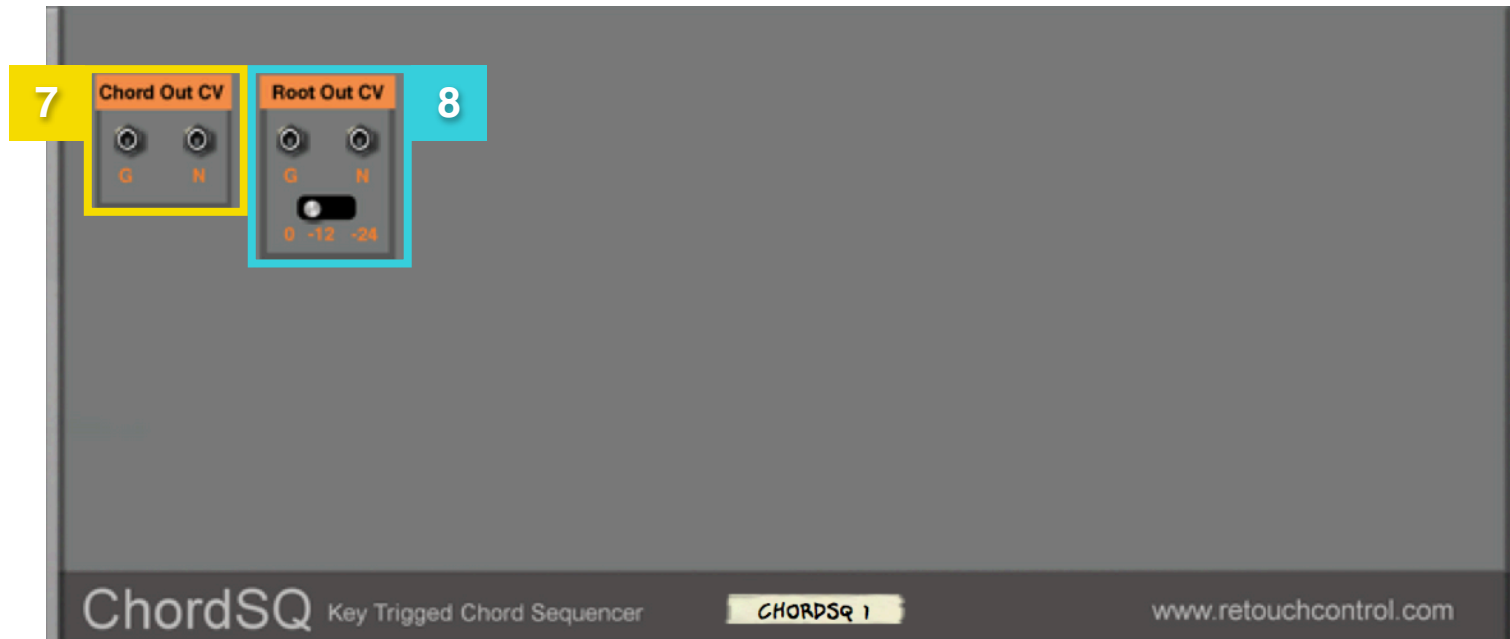
7. Gate and Note CV outputs for the chords. You can connect these to any device and play the chords via CV. You can also use these outputs to connect one or more NoteSet players for correcting incoming notes based on the playing chord.

8. Gate and Note CV outputs for the root note. You can connect these to any device and play only the root note via CV. Additionally you can transpose down the root note by one or two octaves. Great for playing bass parts!
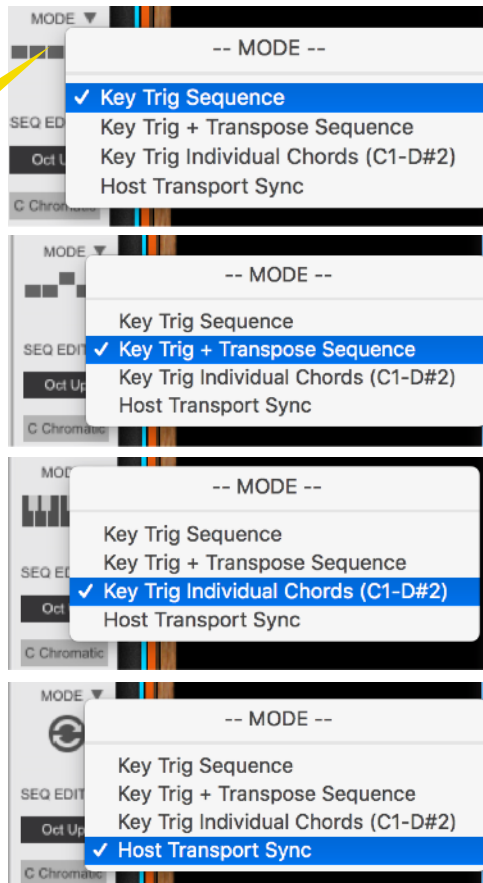
3. Usage

ChordSQ is a player device and hence it needs to be instantiated on top of an instrument. This can be a synth or a sampler. There are several ways to trigger the chord sequence. These are described in the next section, "Operation Modes".

3.1 Operation Modes

The operation mode dictates how the chord sequence is triggered. To select an operation mode, click on the "MODE" text in the upper right corner of the device, as shown below.

click on the **Mode** label

-- MODE --
✓ Key Trig Sequence
Key Trig + Transpose Sequence
Key Trig Individual Chords (C1-D#2)
Host Transport Sync

Mode 1: any incoming midi note will trigger the sequence

-- MODE --
Key Trig Sequence
✓ Key Trig + Transpose Sequence
Key Trig Individual Chords (C1-D#2)
Host Transport Sync
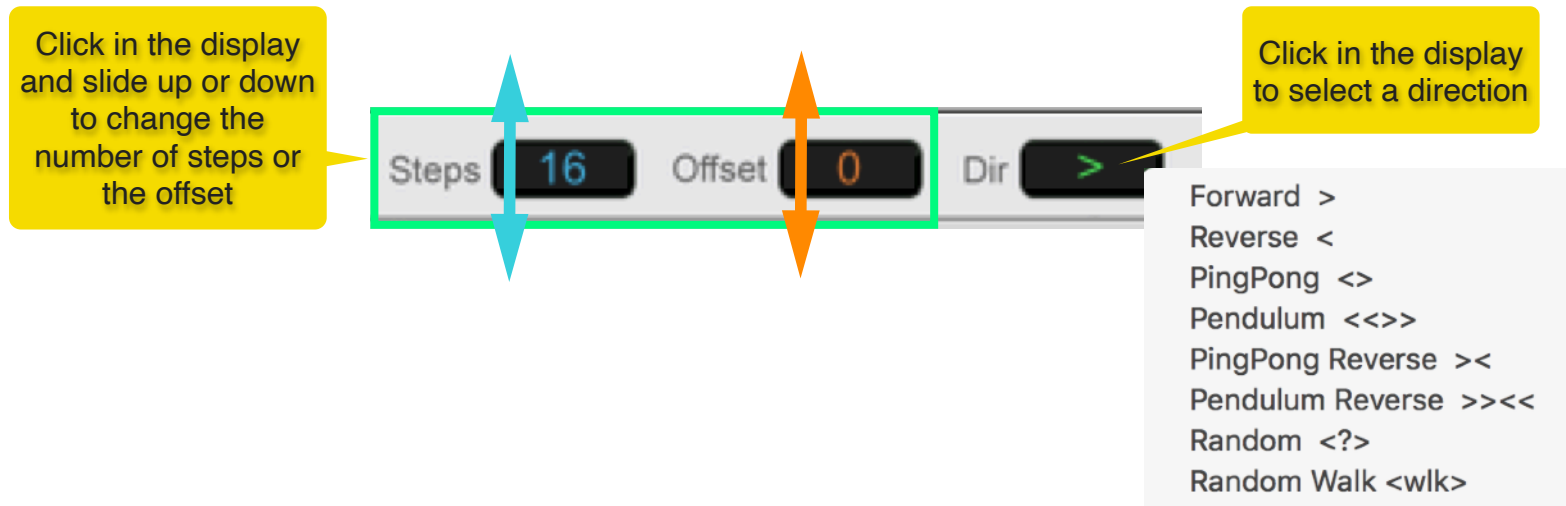
Mode 2: any incoming midi note will trigger the sequence and transpose it up or down (C3 no transposition)

-- MODE --
Key Trig Sequence
Key Trig + Transpose Sequence
✓ Key Trig Individual Chords (C1-D#2)
Host Transport Sync

Mode 3: midi notes C1 to D#2 will trigger the chords stored in slots 1 thru 16 respectively and the sequence in **not** triggered

-- MODE --
Key Trig Sequence
Key Trig + Transpose Sequence
Key Trig Individual Chords (C1-D#2)
✓ Host Transport Sync

Mode 4: the chord sequence is synced to the host transport and starts playing as soon as you press play in Reason

3.2 Sequencer basics

3.2.1 Setting the Number of Steps, Offset and Direction

Click in the display and slide up or down to change the number of steps or the offset

Click in the display to select a direction

Steps 16   Offset 0   Dir >

Forward >
Reverse <
PingPong <>
Pendulum <<>>
PingPong Reverse ><
Pendulum Reverse >><<
Random <?>
Random Walk <wlk>

When changing the number of steps or the offset, you can see which section of the sequence is selected by looking at the sequence start and end locators right above the main sequencing window. When the sequence starts playing, you will se a running light between the locators indicating the currently playing step.
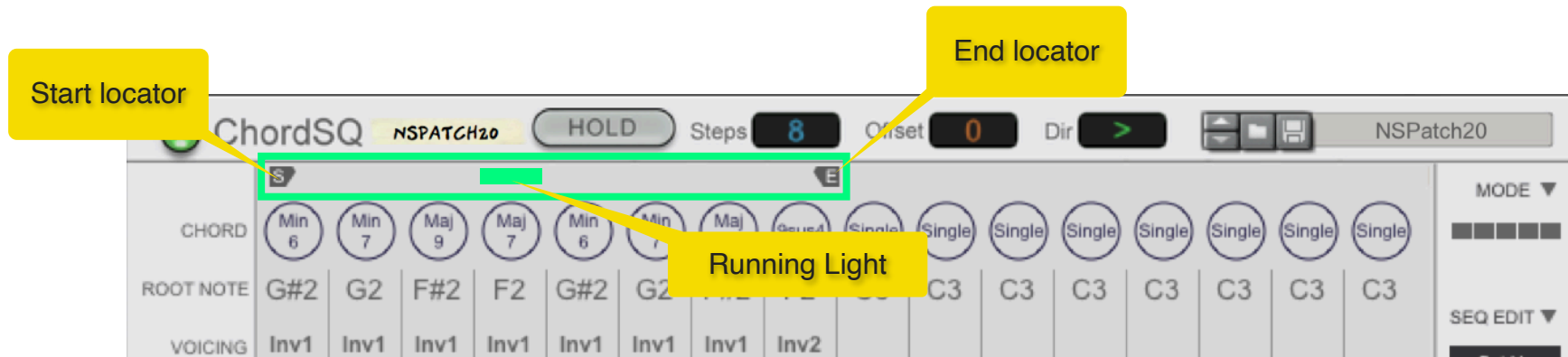
As far as the directions are concerned, similar ones can be found in other Reason devices, for example Thor's step sequencer, and they should be familiar to the reader. Nonetheless, here is a brief description:

Forward >   sequence proceeds from start to end point, and jumps back to start point after reaching the end point

Reverse <   sequence proceeds from end to start point, and jumps back to end point after reaching the start point

PingPong <>   sequence proceeds from start to end point, then immediately reverses its direction

Pendulum <<>> sequence proceeds from start to end point, plays the end step twice and it reverses its direction

PingPong Reverse >< same as Ping Pong, but starting from the end step in reverse direction

Pendulum Reverse >><< same as Pendulum, but starting from the end step in reverse direction

Random <?>   sequence proceeds in random order between start and end steps

Random Walk <wlk>   sequence steps in a random walk fashion between the start and end locators

3.2.3 Sequence Global Parameters

The global parameters affect how the sequence is played. These can be accessed by clicking on the "Step Edit" label as shown below
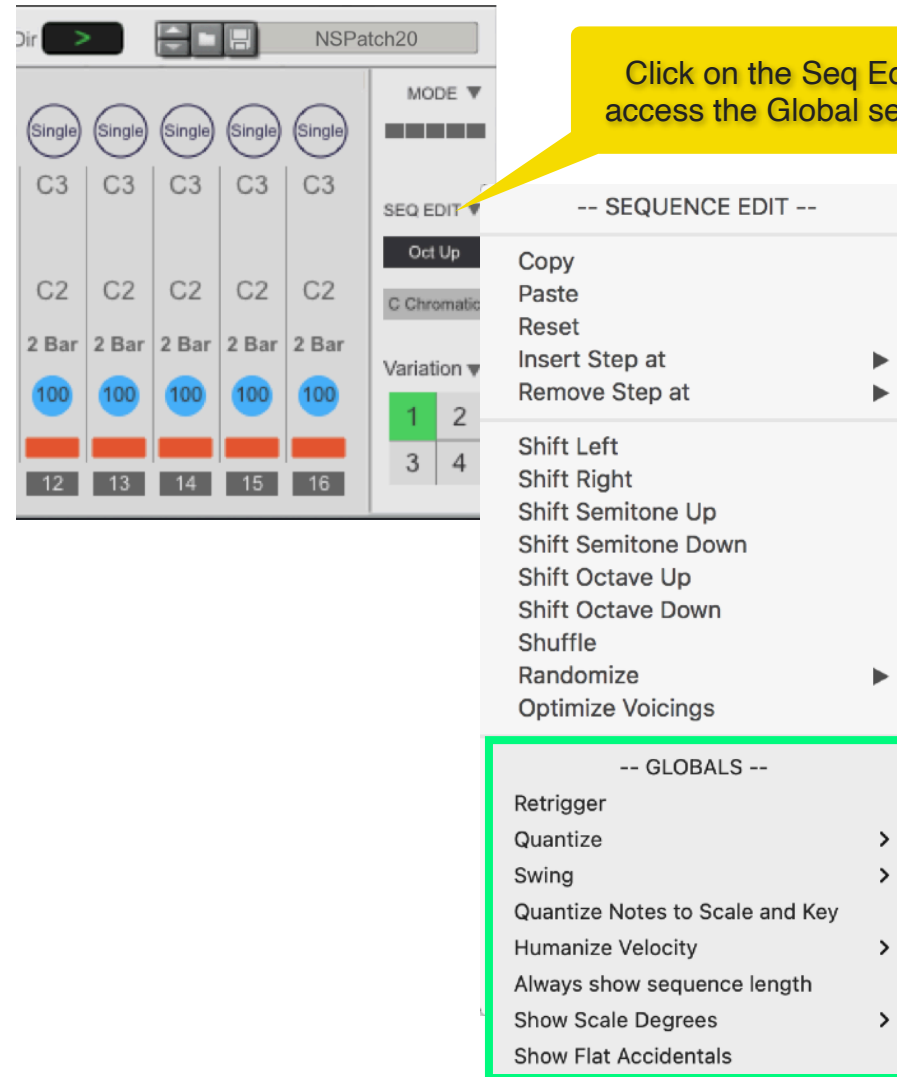
✓ Retrigger if Retrigger is enabled, pressing on a new key while another key is held down will restart the sequence from its Start position. If Retrigger is disabled, pressing a new key while another one is held down will not restart the sequence which continues to play from its current position, also know as **Legato**.

Quantize ▶ ✓ none
Bar
1/2
1/4
1/8
1/16
1/32
1/64

Quantize forces the sequence to start at a precise grid division of the Reason sequencer.

If Quantize is set to something other than "**none**", the sequence will not start as soon as you press a key, but it will wait until the next time division is reached. This works when the Reason sequencer is running. If the playhead is stopped, the sequence is not going to start until you press "Play".

If Quantize is set to "**none**", the sequence starts as soon as you press a key, regardless of whether the Reason sequencer is running or not.

Swing ▶ none
Light
✓ Medium Light
Medium
Medium Heavy
Heavy

from the **Swing** menu, you can choose one of the swing preset settings. If "none" is selected, no swing is applied to the sequence. All other values will apply a varying amount of swing, from very "Light" swing to "Heavy" swing. Set to taste.
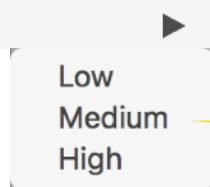
Quantize Notes to Scale and Key

if **enabled**, any note leaving the player will be corrected to match the selected Key and Scale. As a visual indication, the Key and Scale button turns green.

SEQ EDIT ▼

Oct Up

C Minor
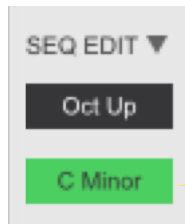
Button turns green when Quantize to Scale and Key is enabled

Humanize Velocity ▶

if **enabled**, the notes in the chord will be played with a random amount of velocity variation note to note. The amount of the variation depends on the intensity level.

Low
Medium
High

Three levels of random velocity variation from note to note

Always show sequence length

if **enabled**, the length of the sequence between the Start and End point locators is always shown in the top display area.
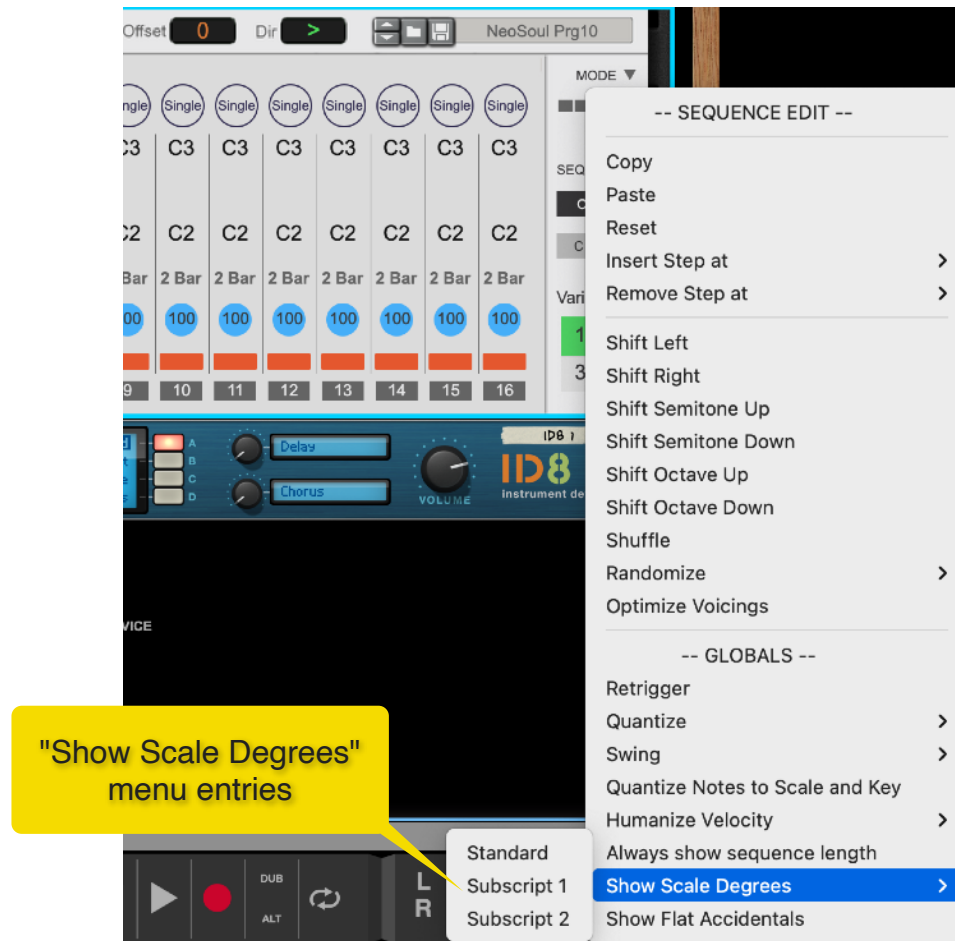
S   E length: 4.00 bar

sequence length shown in the top display area

Show Scale Degrees

when a scale other than Chromatic is selected, enabling "Show Scale Degrees" will display the root notes in roman numerals according to their position in the scale. For example, in the key of C Major, C is represented as "**I**" being the first degree in the scale. If the key of G Minor is selected instead, then G is represented as "**I**". So on for the other notes in the scale. You can also enable the "Show Scale Degrees" option by "*Shift + Alt + click*" on any root note.

Shift + Alt + Click on a root note to enable/disable the "Show Scale Degrees" option

the scale degrees are shown in parentheses when selecting a root note from the selection menus

Two new options "Subscript 1" and "Subscript 2" have been added to the menu entry which provide alternative ways to display the note names and roman numerals for both the root notes and the bass notes. See below for some examples.

"Show Scale Degrees" menu entries

"Subscript 1" selection for "Show Scale Degrees"

Bass notes also show the roman numeral as a subscript

"Subscript 2" selection for "Show Scale Degrees"

Show Flat Accidentals

It is possible to choose if to display note names using either "sharp" (default) or "flat" accidentals, as shown below.

Note names displayed using flat notation

Option to show "flat" accidentals

3.2 Programming Steps

3.2.1 Anatomy of a Step

Each step has a set of identical parameters which can be set independently of each other. You create sequences by adjusting these parameters. To make editing faster, each parameter has its own editing menu which allows to edit multiple steps at once. If you press "Alt" and then click on in the step area, a "Step Edit" menu opens with various options for editing.

Sets the chord type

Sets the root note

cmd(Mac)/ctrl(Win) + Alt + click to audition the chord

Sets the voicing of the chord

Sets the bass note

Sets the duration of the step

Sets the velocity for the step

Sets one of 4 available gate lengths for the step

cmd(Mac)/ctrl(Win) on a parameter to reset it to default

Turns a step on or off

Press Alt + click in the step area to open the Step Edit menu

STEP EDIT

Copy
Paste
Paste Special
Reset

--Randomize Step--
All
Chord
RootNote
Voicing
Bass Note
Duration
Velocity
Gate Len

Commit

A word about the "Paste Special" option in the Step Edit menu. The difference from the regular "Paste" command is that when you use "Paste Special", the contents of the step which is being overwritten are copied into memory so they can be pasted somewhere else. This makes it easier to "swap" steps for example, as shown in the example below where step 3 and step 5 are swapped.

1. Copy Step 3

2. Paste Special to Step 5. The contents of Step 3 are written and those of Step 5 are copied in memory

3. Paste to Step 3. The contents of Step 5 are copied to Step 3
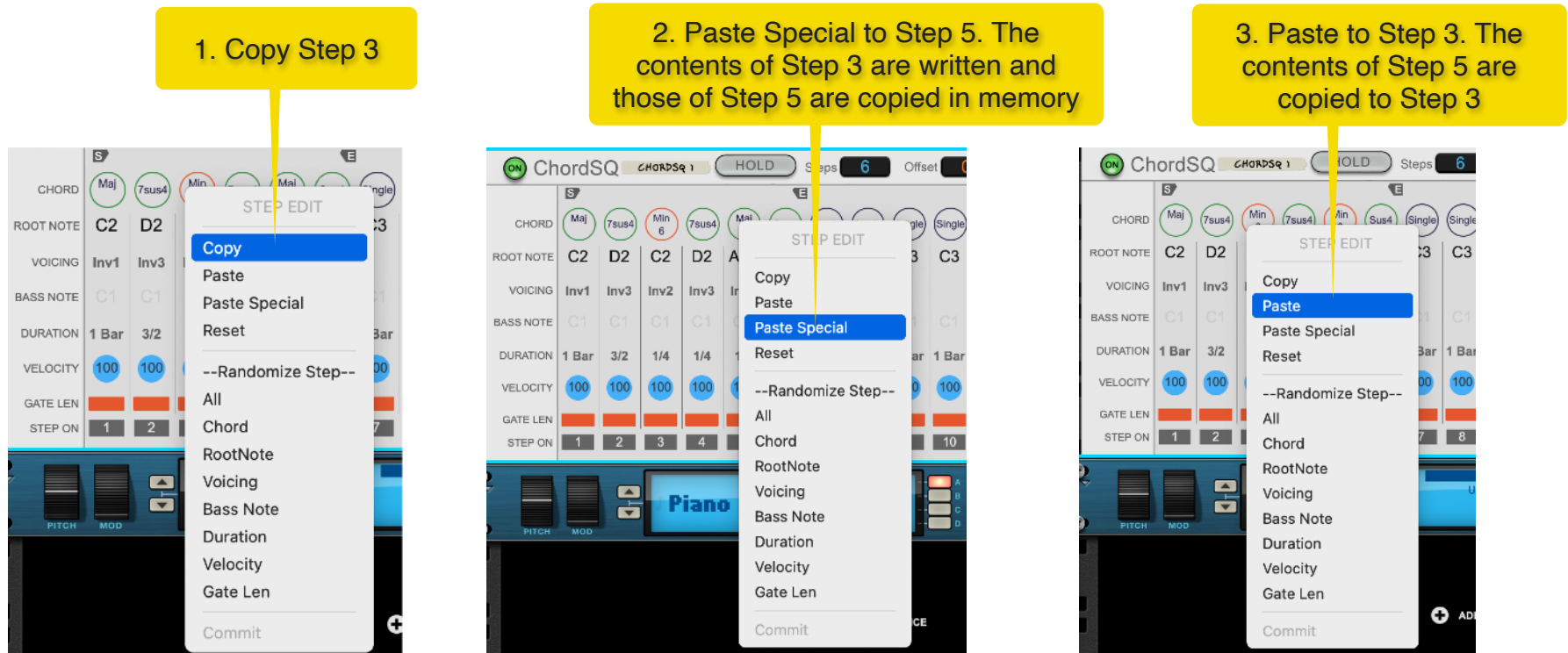
3.2.2 Step On

Here you turn steps on and off. When a step is turned off, it is greyed out. Please keep in mind that even if a step is turned off, it still remains part of the sequence and it is played through (i.e. it is not skipped), but the note is NOT played.

You can quickly modify the "Step On" parameter of multiple steps by accessing the Step Edit menu, as shown below. You can shift, shuffle and randomize the steps. There are also presets with some interesting patterns which can be used as great starting points. Please note that editing actions are restricted to the steps between the start and end point locators (see **section 4.1** for more info).

Step 2 is turned off and hence it's greyed out

Click on the "Step On" label to open the edit menu

--- STEP EDIT ---

Shift Left
Shift Right
Shuffle
Randomize
Reset

Preset ▶

Patterns can be used as quick starting points

XOXOXOXOXOXOXOXO
XOXXOXOXXOXOXXOX
XOXXOXOXOXOXXOXO
XOXOXOXXOXOXOXXO
XOXOOXOXOXOXXOXO
XOOXOXOXOOXOXOXO
XOOXOOXOOOXOXOXO
XOOXOOXOXOOXOOXO
XOOXOOXOOOXOOXOO

3.2.3 Gate Length

The gate length determines for how long the note(s) is played during the duration of the step. There are 4 possible settings and these correspond to 25%, 50%, 75%, and 100%. For example, if the step has a duration of 1/16 and the gate length is set to 50%, then the note will only play for half of 1/16, which is 1/32. Gate length is a great parameter to experiment with for creating interesting grooves out of repetitive sequences.

Shift + drag with the mouse to change the value

1/16	1/16	1/16	1/16
100	100	100	100
3	3	3	3

click on the left area to set the gate at 25%

click in the middle area to set the gate at 50%

click on the left area to set the gate at 75%

click on the far left area to set the gate at 100%

Actual Note length

1/4 x 1/16 = 1/64

1/2 x 1/16 = 1/32

3/4 x 1/16

1/16
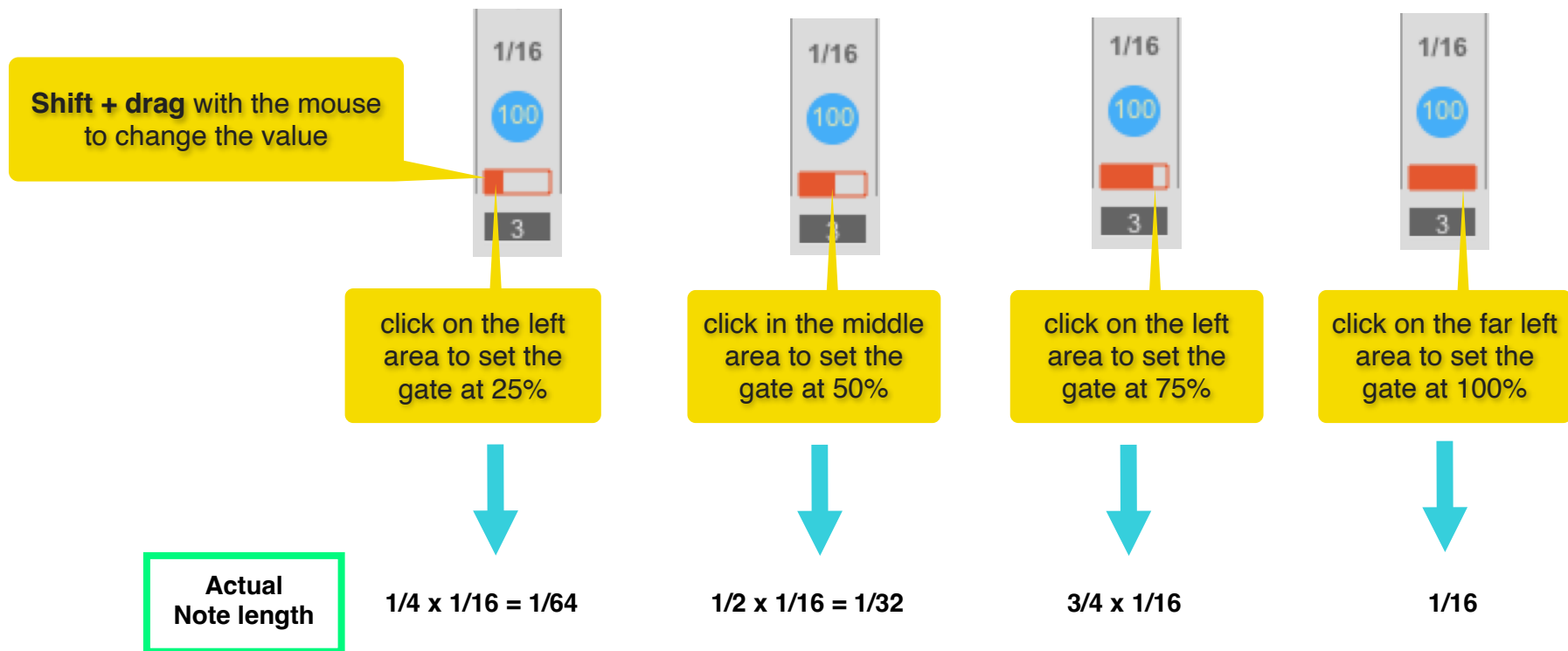
Clicking on the "Gate Len" label opens the Gate Length edit menu which allows quick editing actions for all the steps between the start and end locators. There are options for shifting, shuffling, randomizing and resetting the gates. With the Randomize [min, max] option you can choose the min and max values to be used in the randomization process. This is done by looking at the values of the start and end step which will be used respectively as the min and max values.

GATE LEN

STEP ON

-- GATE LEN EDIT --

Shift Left
Shift Right
Shuffle
Randomize ▶
Reset ▶

click on the "Gate Len" label to open the edit menu

Shift Left
Shift Right
Shuffle
Randomize ▶
Reset ▶

100%
75%
50%
25%

reset all selected steps to the chosen value

-- GATE LEN EDIT --

Shift Left
Shift Right
Shuffle
Randomize ▶   25% 100%
Reset ▶   [min, max]

randomizes the selected steps using the start and end step values as min and max

Start step is 50% and this is used as the min

End step is 100% and this is used as the max

3.2.4 Velocity

Each step has it own velocity setting. You can change it by simply clicking and dragging on the numbered circles. If you click on the "Velocity" label, the Velocity Edit menu opens with several options for affecting all the steps included between the start and end point locators. You can randomize the velocities, reset them, or use presets for crescendo and diminuendo. If you select "EXT velocity", the steps will use the velocity of the incoming MIDI notes instead.
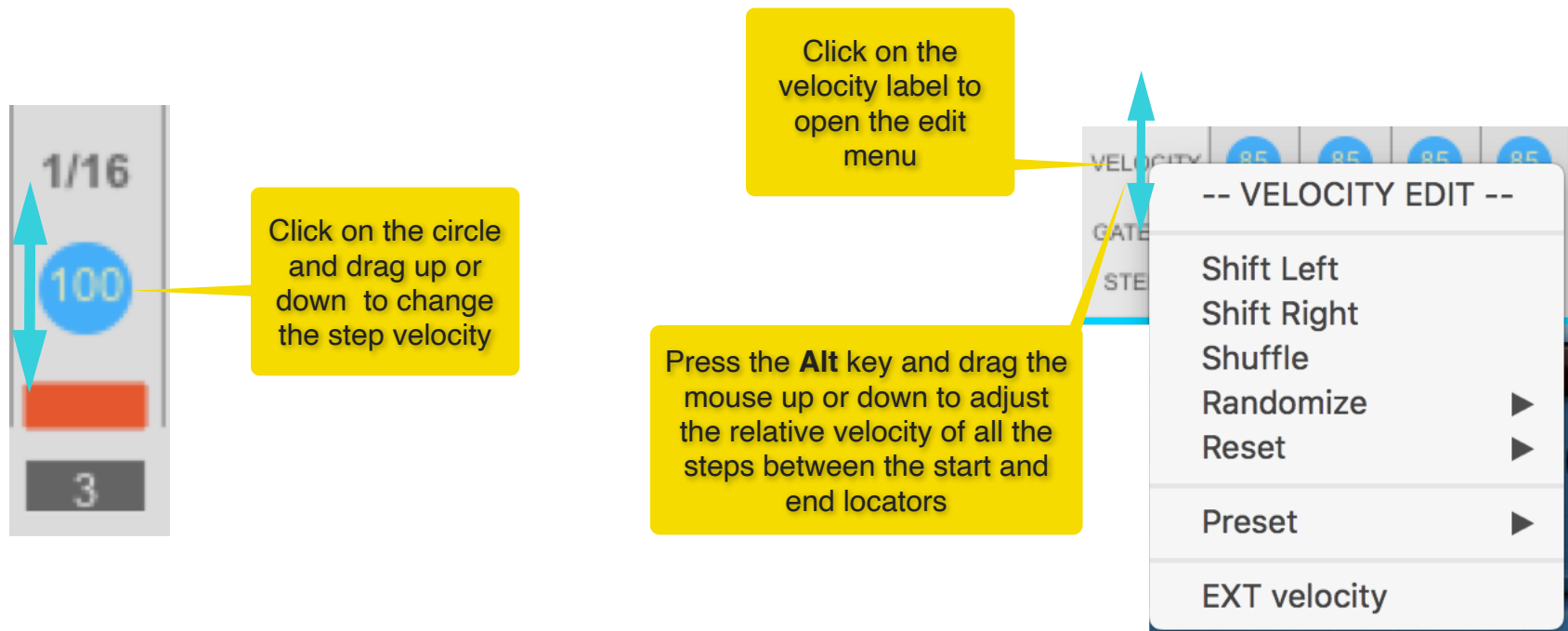
Click on the velocity label to open the edit menu

Click on the circle and drag up or down to change the step velocity

Press the **Alt** key and drag the mouse up or down to adjust the relative velocity of all the steps between the start and end locators

-- VELOCITY EDIT --

Shift Left
Shift Right
Shuffle
Randomize ▶
Reset ▶

Preset ▶

EXT velocity

-- VELOCITY EDIT --

Shift Left
Shift Right
Shuffle
Randomize ▶
Reset ▶

Preset ▶

EXT velocit

0-127
[min, max]

assign random values
between 0 and 127

assign random values
using the start and end step
values as min and max

1/16 1/16 1/16 1/16 1/16

20 85 85 85 120

1 2 3 4 5

start step value is
used as min

end step value is
used as max

-- VELOCITY EDIT --

Shift Left
Shift Right
Shuffle
Randomize ▶
Reset ▶

Preset ▶

EXT velocity

5 6 7 8 9

Crescendo (fixed)
Crescendo (variable)
Diminuendo (fixed)
Diminuendo (variable)

creates a velocity crescendo for the steps between the start
and end locators using 9 as the min and 127 as the max

creates a velocity crescendo for the steps between the start
and end locators using the start step value as the min and
the end step value as the max

creates a velocity decrescendo for the steps between the
start and end locators using 10 as the min
and 127 as the max

creates a velocity decrescendo for the steps between the
start and end locators using the start step value as the max
and the end step value as the min

3.2.5 Duration

ChordSQ lets you select a duration for each step which can be as short as 1/64 or as long as 4 full bars. For a given step, clicking on the duration value opens up a menu with the various length options. Also, clicking on the "Duration" label opens the "Duration Edit" menu with options for affecting the duration for all the steps between the start and end locators.

Click on the Duration label to open the menu

DURATION EDIT

Shift Left
Shift Right
Shuffle
Randomize   >
Reset   >
Generate Pattern >

> 1/8
> 1/4
> 1/2
> 3/4
All
[min, max]

assigns randomly duration values greater than 1/8

assigns randomly duration values greater than 1/4

assigns randomly duration values greater than 1/2 bar

assigns randomly duration values greater than 3/4 of a bar

assigns randomly duration values from 1/64 to 4 bars

uses the start step duration value as the min and the end step duration value as the max for the randomization

Whenever you change any of the duration parameters or you change the number of steps or offset, a temporary text feedback appears in the center of the running light strip to indicate the current length of the sequence included between the start and end point locators. This feedback can be toggled on and off by clicking directly in the area as shown below or by enabling the option "*Always show sequence length*" in the "Global" section of the "Seq Edit" menu.

Shift + drag with the mouse to change the value

text feedback showing the length of the sequence between the start and end locator. Click in the area to toggle the text on or off

expanded duration values from the selection menu

You can automatically generate patterns of a given duration from the edit menu. Click on the "Duration" label and from the "Duration Edit Menu", select "Generate Pattern". From there you can select the desired pattern duration in bars. Please note, patterns always start from step 1 and the end step is adjusted to meet the desired length requirements.

If you have a pattern of a certain total length but you wonder what it might sound like at a different length, let's say 4 bars instead of 8 bars, there is a handy option from the Duration Edit menu which allows you to half or double the total pattern length. This is shown below.

Please keep in mind that it's not always possible to generate a new pattern which is exactly half or double the length of the existing pattern. This is because the options for the step duration are limited. In any case, if an exact half or double option does not exist for a given step, the algorithm will try to find the closest value and set the step duration to that value.

3.2.6 Bass Note

For each step, you can set an additional note to the programmed chord. This is usually a bass or slash note, but feel free to use it creatively as you see fit. The range of available note choices goes from C-2 to B5. By default, the bass note is disabled. To enable it, Shift + Alt + Click on the note name. Clicking on the "Bass Note" label opens the "Bass Note Edit" menu with several edit functions which are explained below.

Shortcut: Shift + Alt + click to enable the note

Click on the Bass Note label to open the edit menu

Turns on/off the bass notes for the steps between the start and end markers

Copies the root notes shifted down by either 1 or 2 octaves

Shifts Left or Right the bass notes

Shifts Up or Down the bass notes by either semitones or octaves

Quantizes the bass notes to fit the selected scale and key. A note in scale & key is shown in dark grey

Shuffles the bass notes between the selected steps

Reset all bass notes between the start and end steps

-- BASS NOTE EDIT --

Enable/Disable
Copy Root Note ▶
Shift Left
Shift Right
Shift Up Semitone
Shift Down Semitone
Shift Up Octave
Shift Down Octave
Apply Selected Key & Scale
Shuffle
Randomize ▶
Reset ▶

C-2 B-2 ▶
C-1 B-1 ▶
C0 B0 ▶
C1 B1 ▶
C2 B2 ▶
C3 B3 ▶
C4 B4 ▶
C5

click to open the note select menu

Shift + drag up/down to change the note

-- BASS NOTE EDIT --

Enable/Disable
Copy Root Note ▶
Shift Left
Shift Right
Shift Up Semitone
Shift Down Semitone
Shift Up Octave
Shift Down Octave
Apply Selected Key & Scale
Shuffle
Randomize ▶
Reset ▶

+1 Octave
-1 Octave
+2 Octave
-2 Octave
+/- 1 Octave
+/- 2 Octave
[min, max]

assigns random values within one octave up

assigns random values within one octave down

assigns random values within two octaves up

assigns random values within two octaves down

assigns random values within one octave up and down

assigns random values within two octaves up and down

uses the start locator value as the min and the end locator value as the max for the randomization
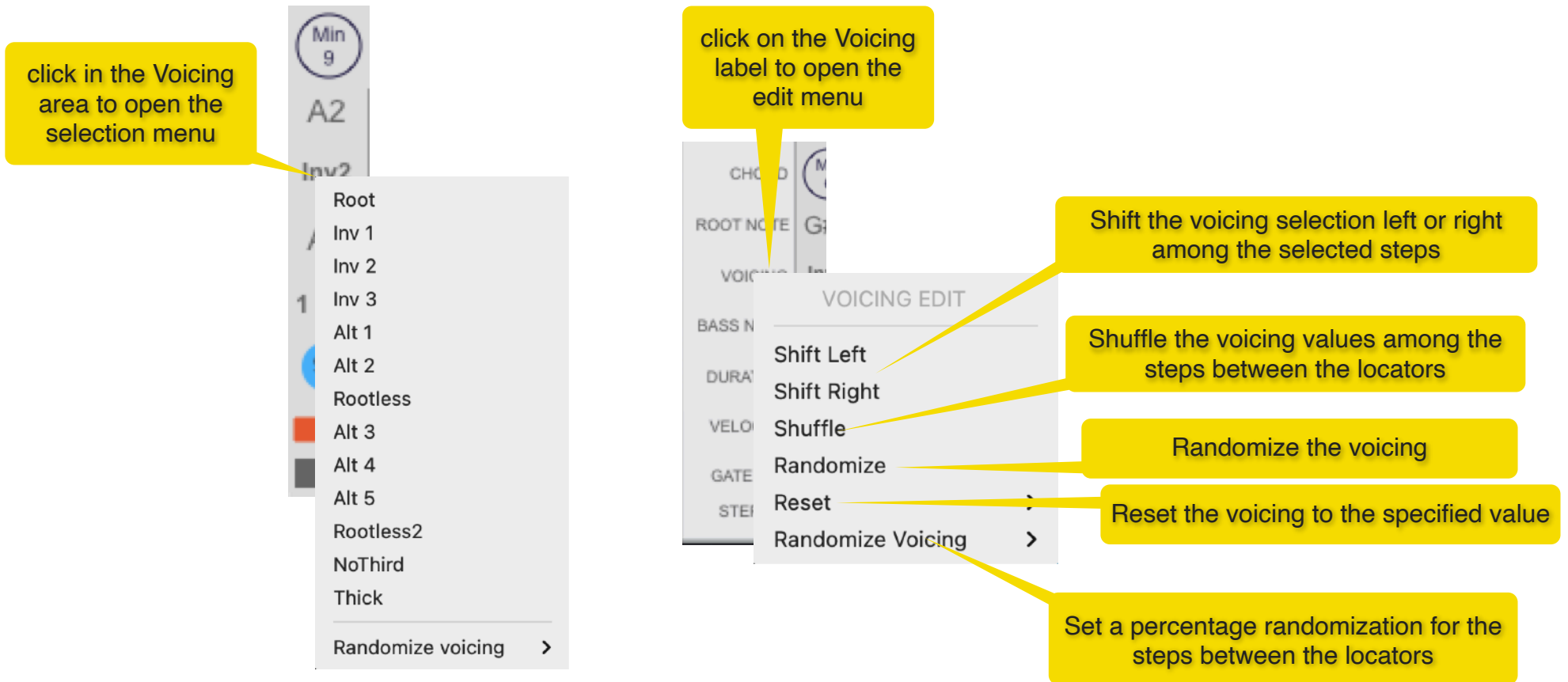
3.2.7 Voicing

The Voicing determines how the notes in the chords are played. The right voicing makes all the difference, so make sure to spend some time understanding this important parameter! The table below shows a summary of the available voicing options.

Voicing	Description
Root	plays the chord in root position, with the root at the bottom and the other notes stacked on top
Inv 1	plays the top note in the chord shifted down by 1 octave
Inv 2	plays the top 2 notes in the chord shifted down by 1 octave
Inv 3	plays the top 3 notes in the chord shifted down by 1 octave
Alt 1	plays the 2nd note in the chord shifted up by 1 octave
Alt 2	plays the 3rd note in the chord shifted up by 1 octave
Rootless	plays the chord by omitting the root note
Alt 3	plays the 2nd and 3rd notes in the chord shifted up by 1 octave
Alt 4	plays the 2nd note up an octave and the 3rd note down an octave
Alt 5	plays the 2nd note down an octave and the 3rd note up an octave
Rootless2	plays the chord by omitting the root note, and the 2nd and 3rd notes shifted down by an octave
NoThird	omits the third note
Thick	thickens up the chord by duplicating some of the notes above and below the root note

Clicking on the Voicing label opens the "Voicing Edit" menu which allows to affect all the voicing parameters for the steps included between the Start and End locators.

click in the Voicing area to open the selection menu

click on the Voicing label to open the edit menu

Min 9

A2

Inv2

Root
Inv 1
Inv 2
Inv 3
Alt 1
Alt 2
Rootless
Alt 3
Alt 4
Alt 5
Rootless2
NoThird
Thick

Randomize voicing   >

CHORD
ROOT NOTE   G
VOICING
BASS N
DURAT
VELO
GATE
STEF

VOICING EDIT

Shift Left
Shift Right
Shuffle
Randomize
Reset   >
Randomize Voicing   >

Shift the voicing selection left or right among the selected steps

Shuffle the voicing values among the steps between the locators

Randomize the voicing

Reset the voicing to the specified value

Set a percentage randomization for the steps between the locators

The voicing menu has four entries for randomizing the voicing type for the chosen step in the sequence. The options are 25%, 50%, 75% and 100%. Select an option to activate it. Once activated, select that option again to deactivate it.
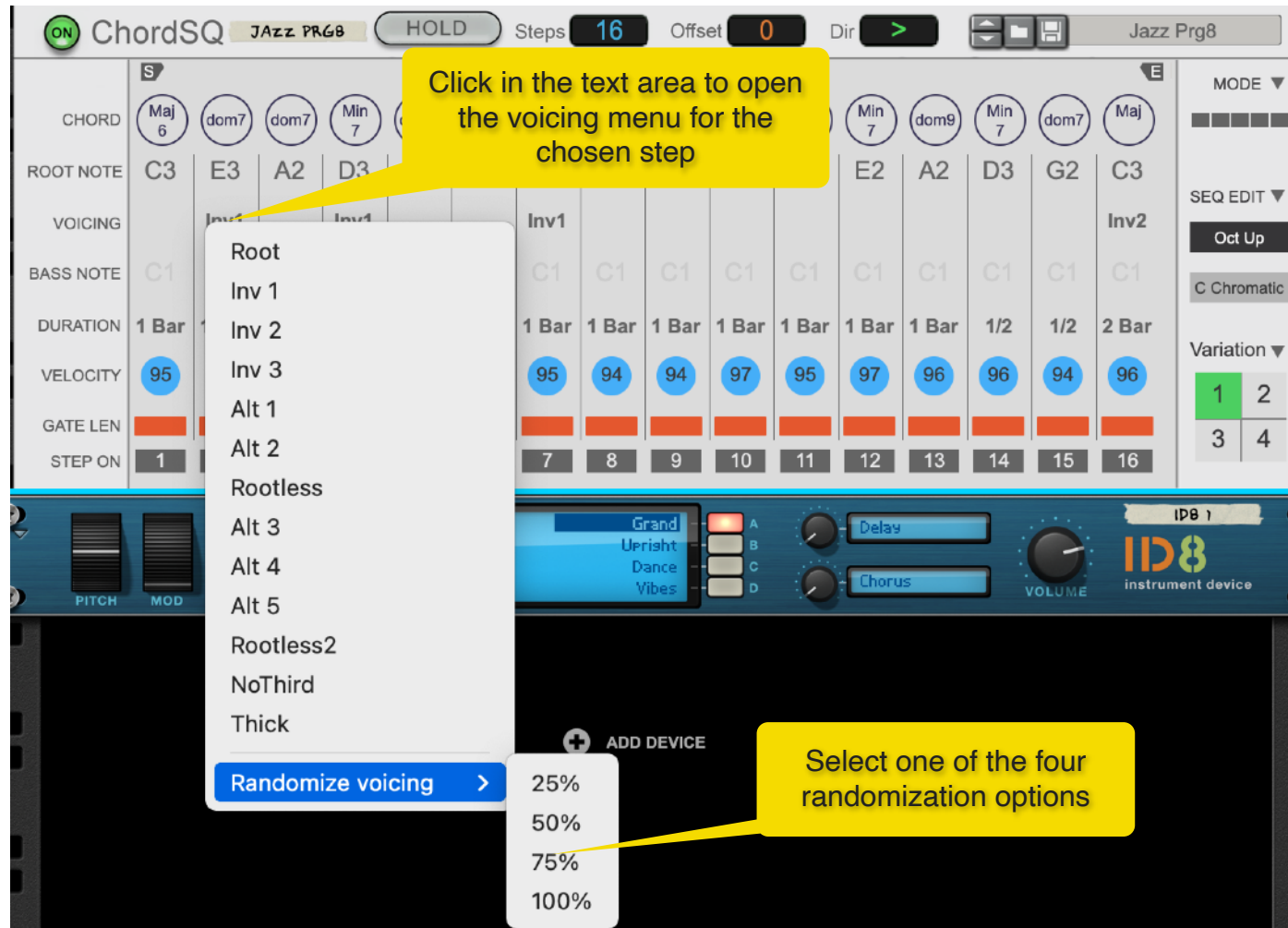
With the first option selected, there is a 25% chance that when the step is triggered, the voicing is selected randomly from all the available types, otherwise the original voicing is used. With 100% selected, the voicing is always chosen randomly every time the step is triggered.

If the randomization is active, there is a question mark "?" next to the original voicing name.
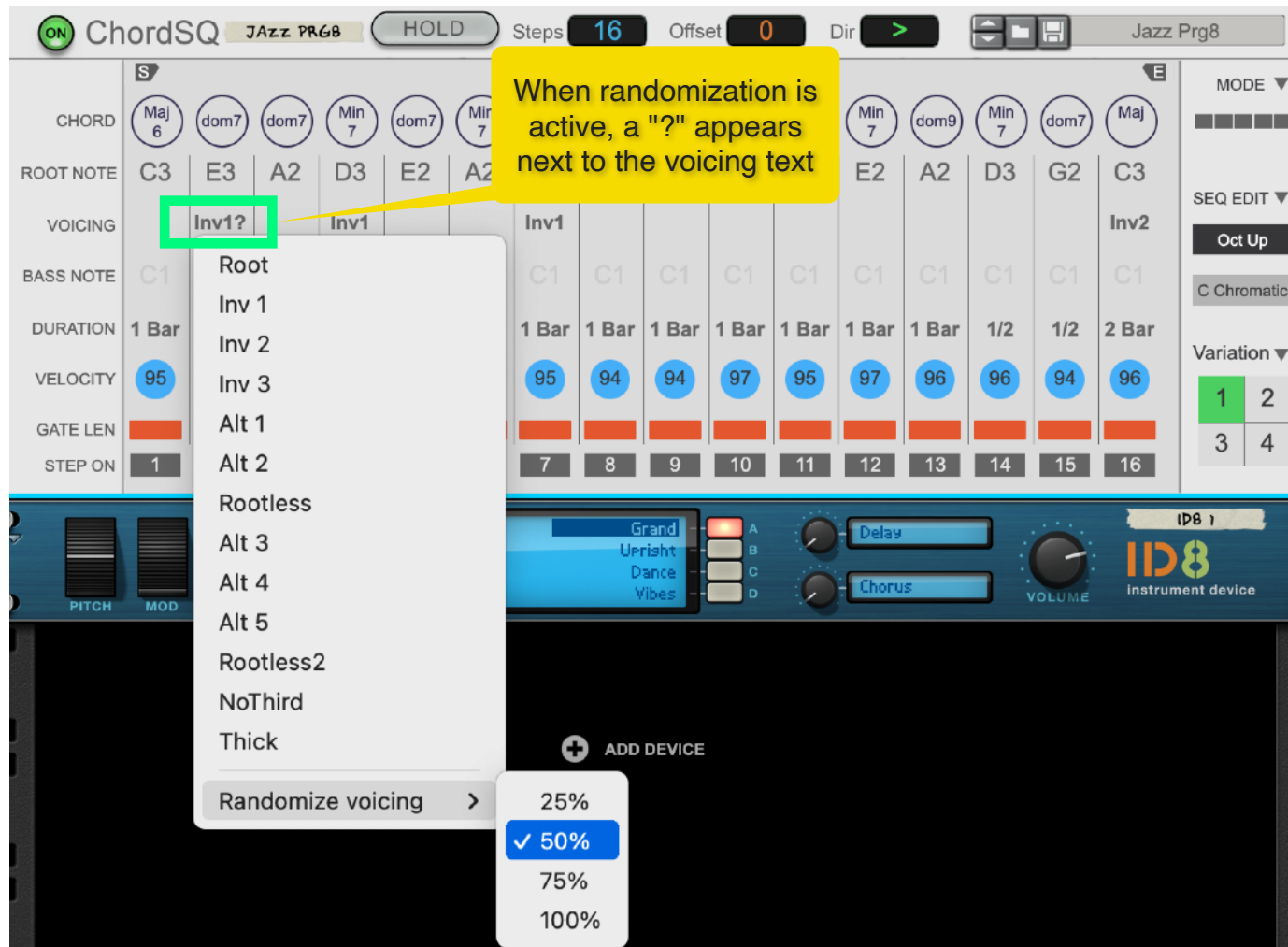
To make any random changes to the voicing permanent, you can use the option in the "Step Edit" menu called "Commit". This option becomes active when Voicing randomization is enabled as shown below. Alternatively, you can use the shortcut of "Shift" + "Alt" + click on the voicing name to save the changes.
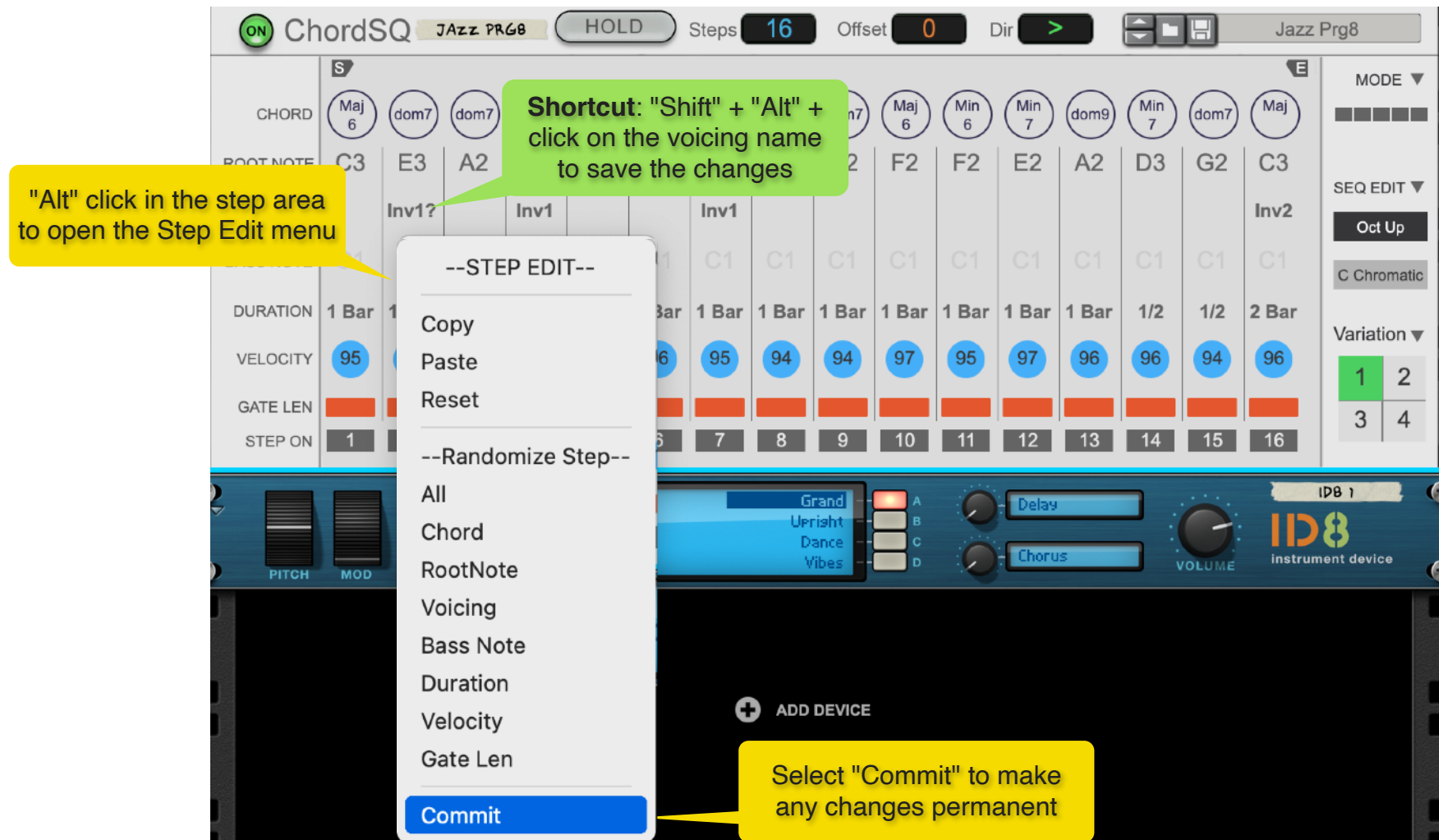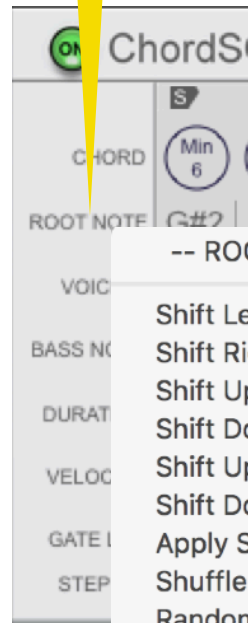
3.2.8 Root Note

The root note value, as the name implies, determines the root note on which the chord is built. The range of available note choices goes from C0 to B7. To select a root note, simply click on the root label for the given step and select a value from the selection menu. Alternatively, you can press **Shift** and drag the mouse up or down to change the note. If a scale and key are selected, the note name is displayed in dark grey when it fits the chosen scale and key.
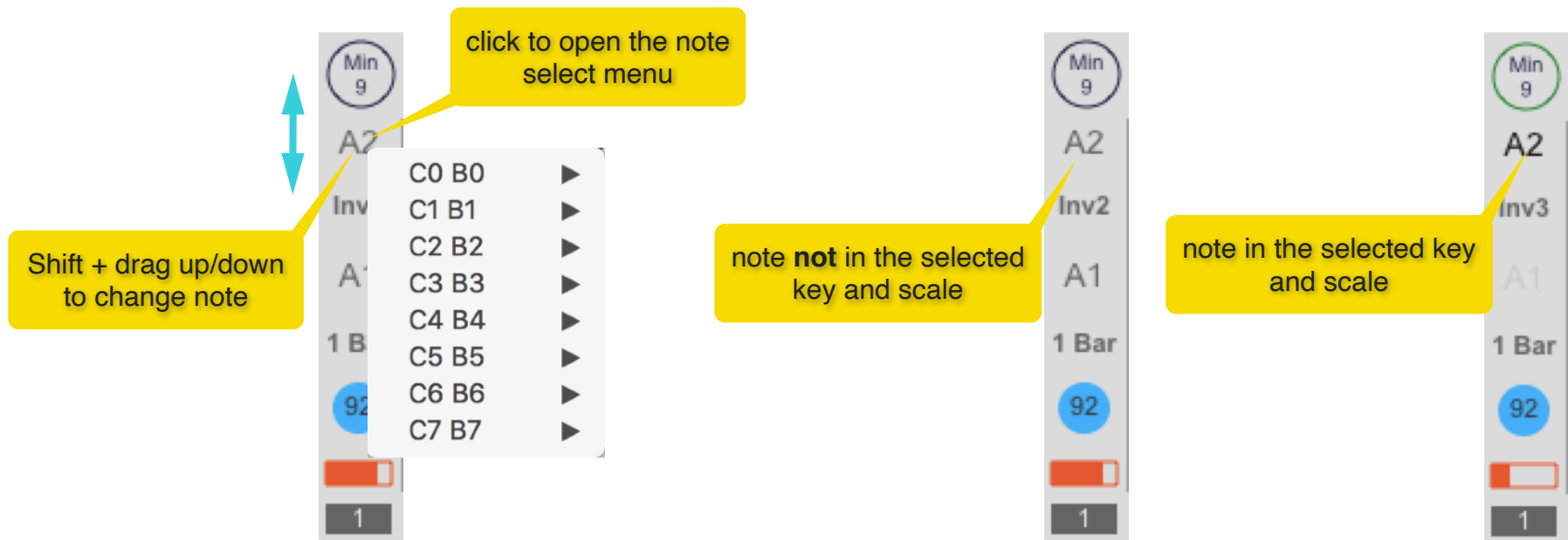
Clicking on the Root Note labels opens the "Root Note Edit" menu with several options for editing the root notes between the Start and End locators.

Click on the Root Note label to open the edit menu

ChordSQ

CHORD

ROOT NOTE G#2

VOIC

BASS N

DURAT

VELOC

GATE

STEP

-- ROOT NOTE EDIT --

Shift Left
Shift Right
Shift Up Semitone
Shift Down Semitone
Shift Up Octave
Shift Down Octave
Apply Selected Key & Scale
Shuffle
Randomize   ▶
Reset   ▶

Shifts Left or Right the root notes

Shifts Up or Down the root notes by either semitones or octaves

Quantizes the root notes to fit the selected scale and key. A note in scale & key is shown in darker grey
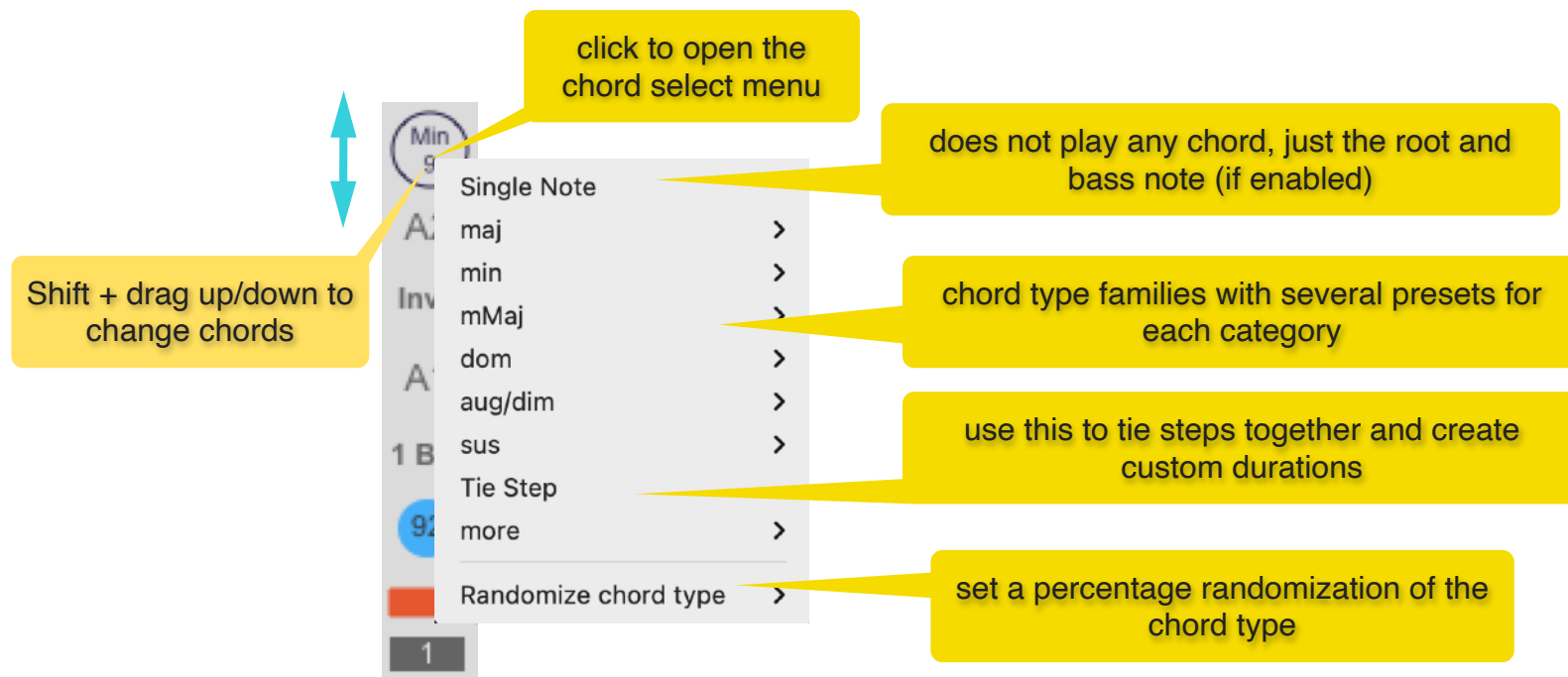
Shuffle the root notes among the selected steps

Randomizes the root notes based on the selected octave range

Resets the root note to the specified value

3.2.9 Chord Type - Chord Families

Once you set a root note, the chord type parameter determines what chord is built on the root. To select a chord type is very easy: just click in the circle corresponding to the chord type and select a chord from the menu. Chord types are grouped according to the chord quality, like major, minor, etc. The topmost and bottom entries in the selection menu work differently. The topmost is called "Single Note" and as the name implies, it won't create any chord at all buy but just play the root and the base note (if enabled). On the other hand, the bottom entry called "Tie Step" allows you to tie steps together to create custom note durations.

click to open the chord select menu

does not play any chord, just the root and bass note (if enabled)

Shift + drag up/down to change chords

Single Note
maj   >
min   >
mMaj   >
dom   >
aug/dim   >
sus   >
Tie Step
more   >

Randomize chord type   >

chord type families with several presets for each category

use this to tie steps together and create custom durations

set a percentage randomization of the chord type

Once you have selected a chord type, you can audition the full chord you have just created by keeping pressed Cmd(Mac)/Ctrl(Win) + Alt on the keyboard and clicking in the chord selection circle.

cmd(Mac)/ctrl(Win) + Alt + click to audition the chord

Min 9

A2

Inv2

A1

1 Bar

92

1
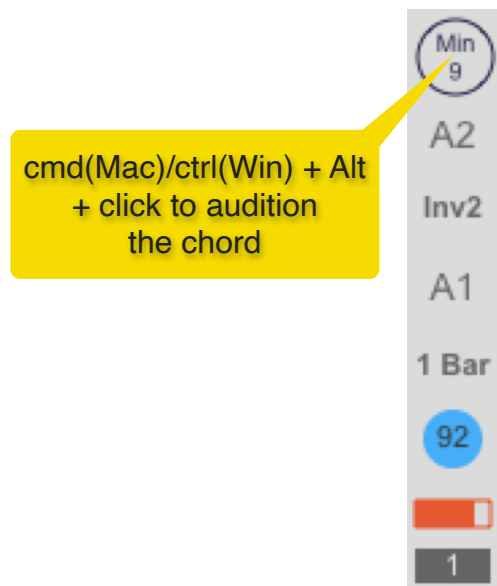
3.2.10 Chord Type - Randomization

The are four entries for randomizing the chord type for the chosen step in the sequence. The options are 25%, 50%, 75% and 100%. Select an option to activate it. Once activated, select that option again to deactivate it.
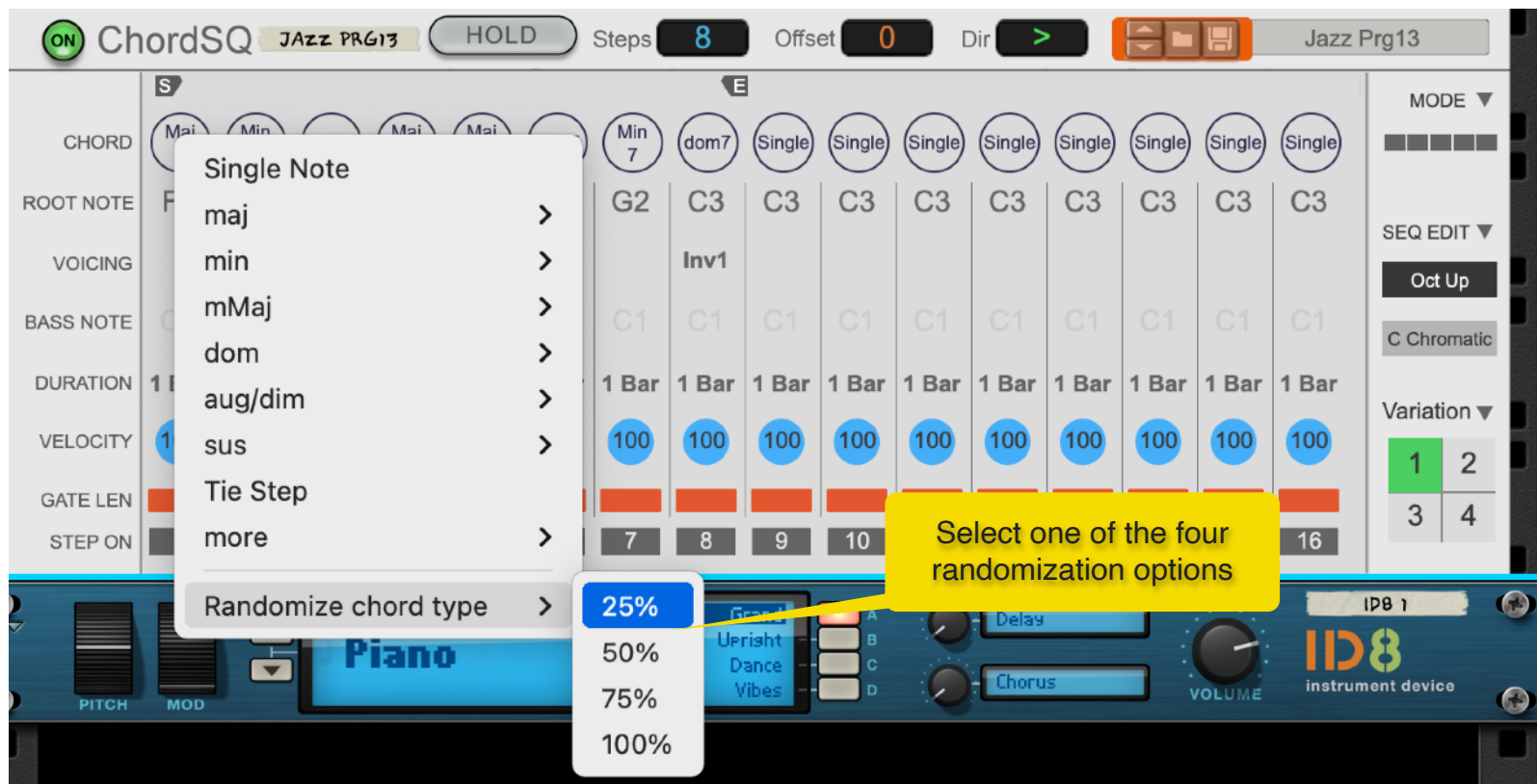
With the first option selected, there is a 25% chance that when the step is triggered, the chord type is selected randomly from all the available chord types, otherwise the original chord type is played. With 100% selected, the chord type is always chosen randomly every time the step is triggered.

If the randomization is active, the graphic circle around the chord type goes from solid to partially or fully dashed as shown below.
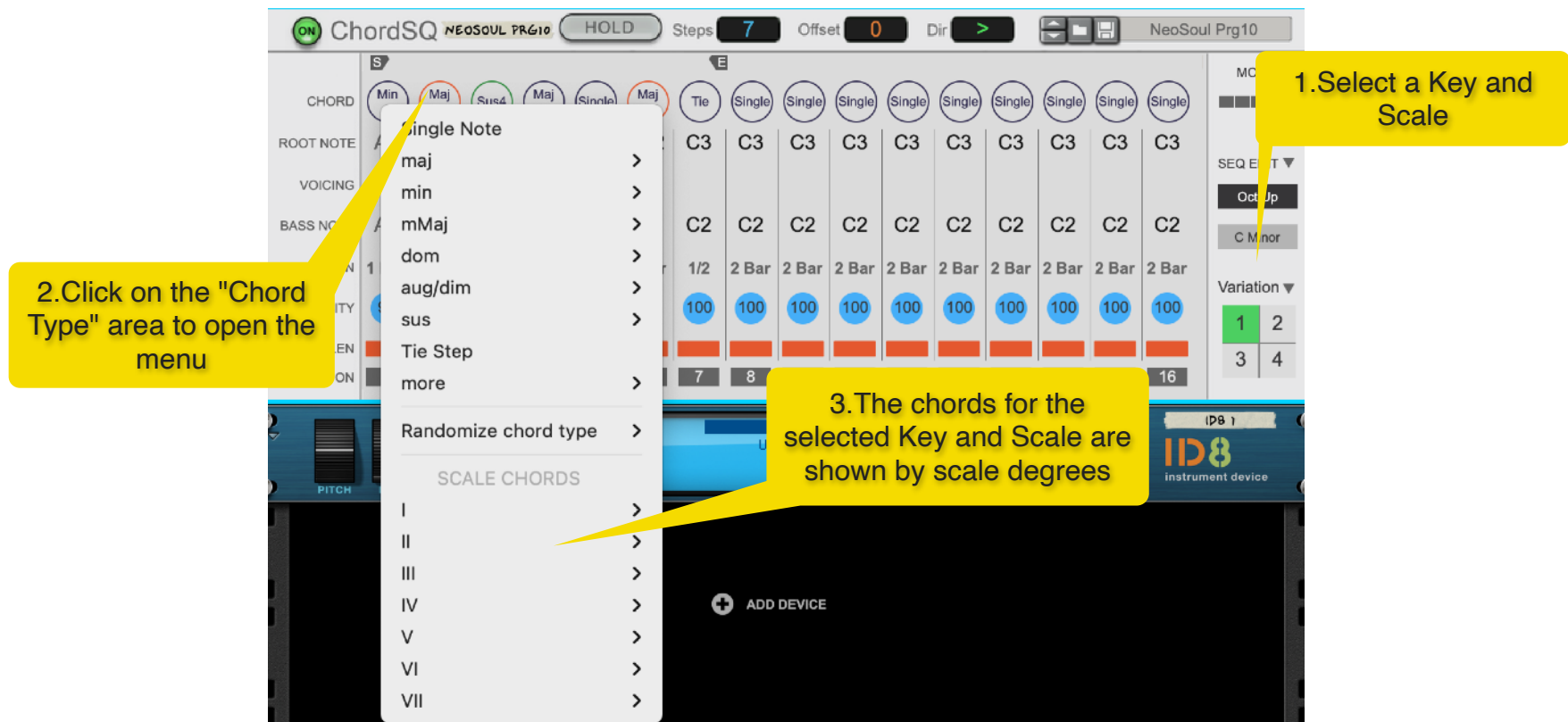
Chord type randomization is great for changing an existing progression. What happens if you hear a change you like and want to make it permanent? This can be done by using a new option in the "Step Edit" menu called "Commit". This option becomes active when either Chord Type randomization is enabled.
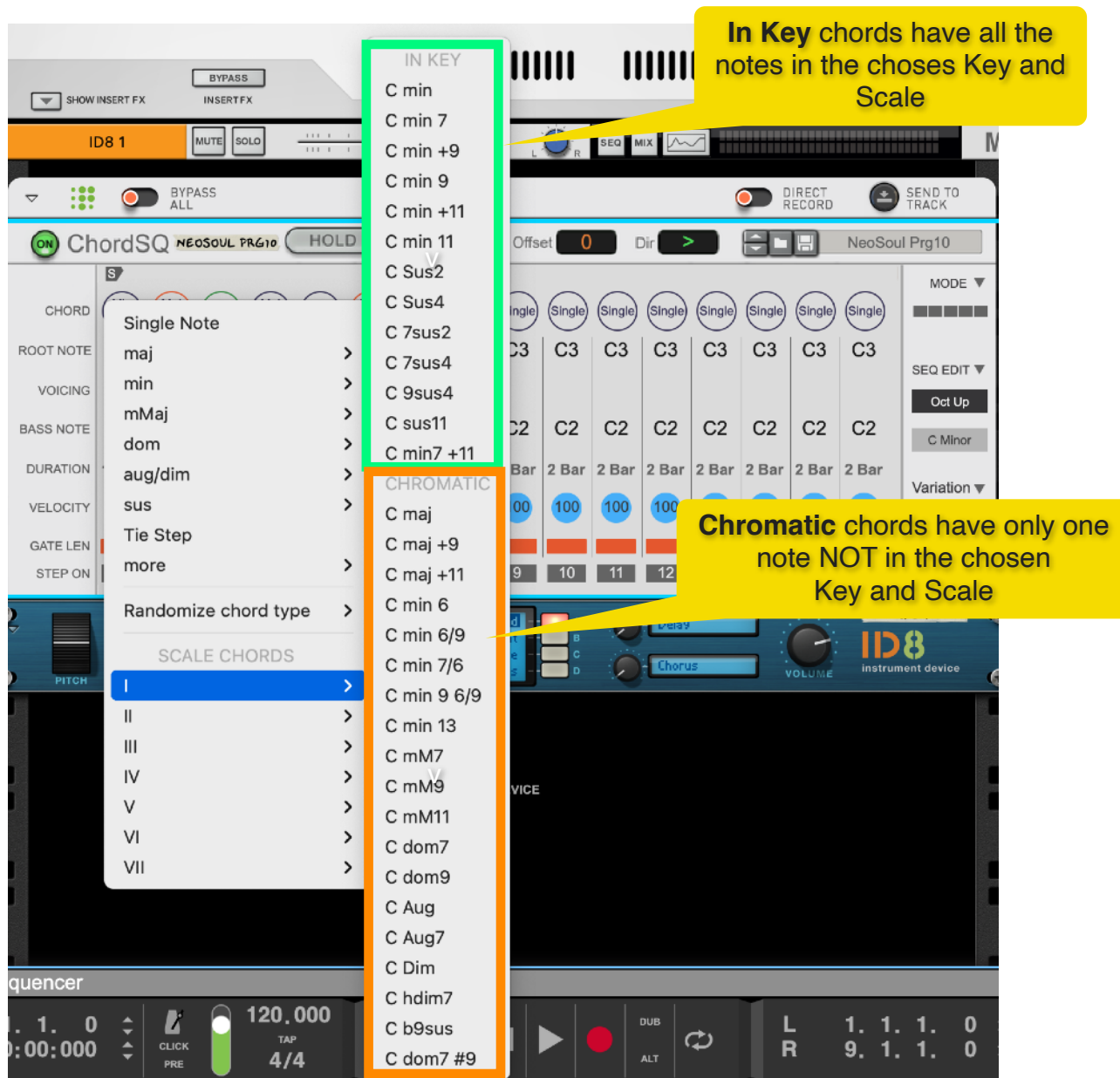
In addition to the Step Edit menu, a handy shortcut to save any changes due to randomization is to "Shift" + "Alt" + click in the chord type selection area of the chosen step.

"Alt" click in the step area to open the Step Edit menu

Shortcut: Shift + Alt+ click to commit any changes due to randomization

Select "Commit" to make any changes permanent

--STEP EDIT--

Copy
Paste
Reset

--Randomize Step--
All
Chord
RootNote
Voicing
Bass Note
Duration
Velocity
Gate Len

Commit
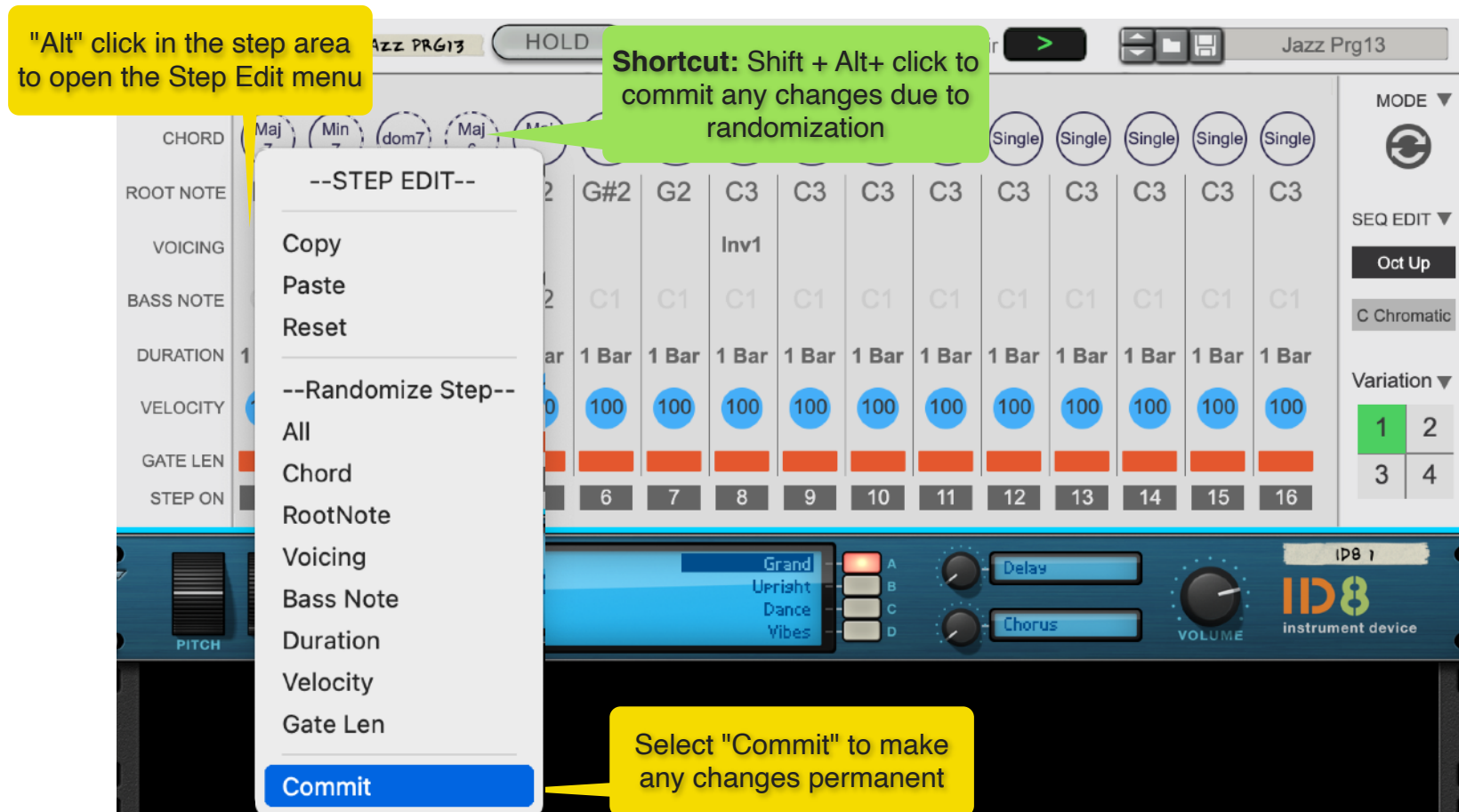
3.2.11 Chord Type - Scale Chords

When you select a Scale and a Key, the chords for that scale and key become readily available from the "Chord Type" menu as shown below. The chords are arranged by scale degrees and they are divided in two categories: "In Key" and "Chromatic". The first category collects the chord types which are strictly "In Key" with all the chord notes in the chosen scale. The second category collects the chord types which have all notes except for one in the chosen scale.

In Key chords have all the notes in the choses Key and Scale

IN KEY
C min
C min 7
C min +9
C min 9
C min +11
C min 11
C Sus2
C Sus4
C 7sus2
C 7sus4
C 9sus4
C sus11
C min7 +11

CHROMATIC
C maj
C maj +9
C maj +11
C min 6
C min 6/9
C min 7/6
C min 9 6/9
C min 13
C mM7
C mM9
C mM11
C dom7
C dom9
C Aug
C Aug7
C Dim
C hdim7
C b9sus
C dom7 #9

Chromatic chords have only one note NOT in the chosen Key and Scale

Single Note
maj
min
mMaj
dom
aug/dim
sus
Tie Step
more

Randomize chord type

SCALE CHORDS
I
II
III
IV
V
VI
VII

If a scale and key are selected, the chord type selection circle changes color based on whether the chord is in the selected scale and key or not.

Clicking on the "Chord Type" label opens up a menu with various options to affect the chord types for all the steps within the Start and End locators.

click on the Chord label to open the chord edit menu

shift the chords left or right for the selected steps

shuffle the chords among the selected steps

randomize the chords for the selected steps

reset the chords to the chosen value for the selected steps

set an amount of randomization for the selected steps

chord **not** in the selected scale&key

chord in the selected scale&key

only one note is **not** in the selected scale&key

two notes are **not** in the selected scale&key. The chord has at least 4 notes

CHORD EDIT

Shift Left

Shift Right

Shuffle

Randomize

Reset

Random Chord Type

3.2.12 Chord Type - Next Chord Suggestions

When a supported scale is selected, and the sequencer motion is set to "forward", the device can provide suggestions for building progressions. In order to start, you need to program a chord for step 1. Make sure that at least the root note is in key. Then when you open the chord type menu for the next step, you will see towards the button a new item called "Suggestions". By overing on the ">>" menu entry, you get a sub menu with several chords which are suggested by the algorithm. Please note, the suggestions are not always the same. If you click on the menu more than once, you will notice that the suggestions change.
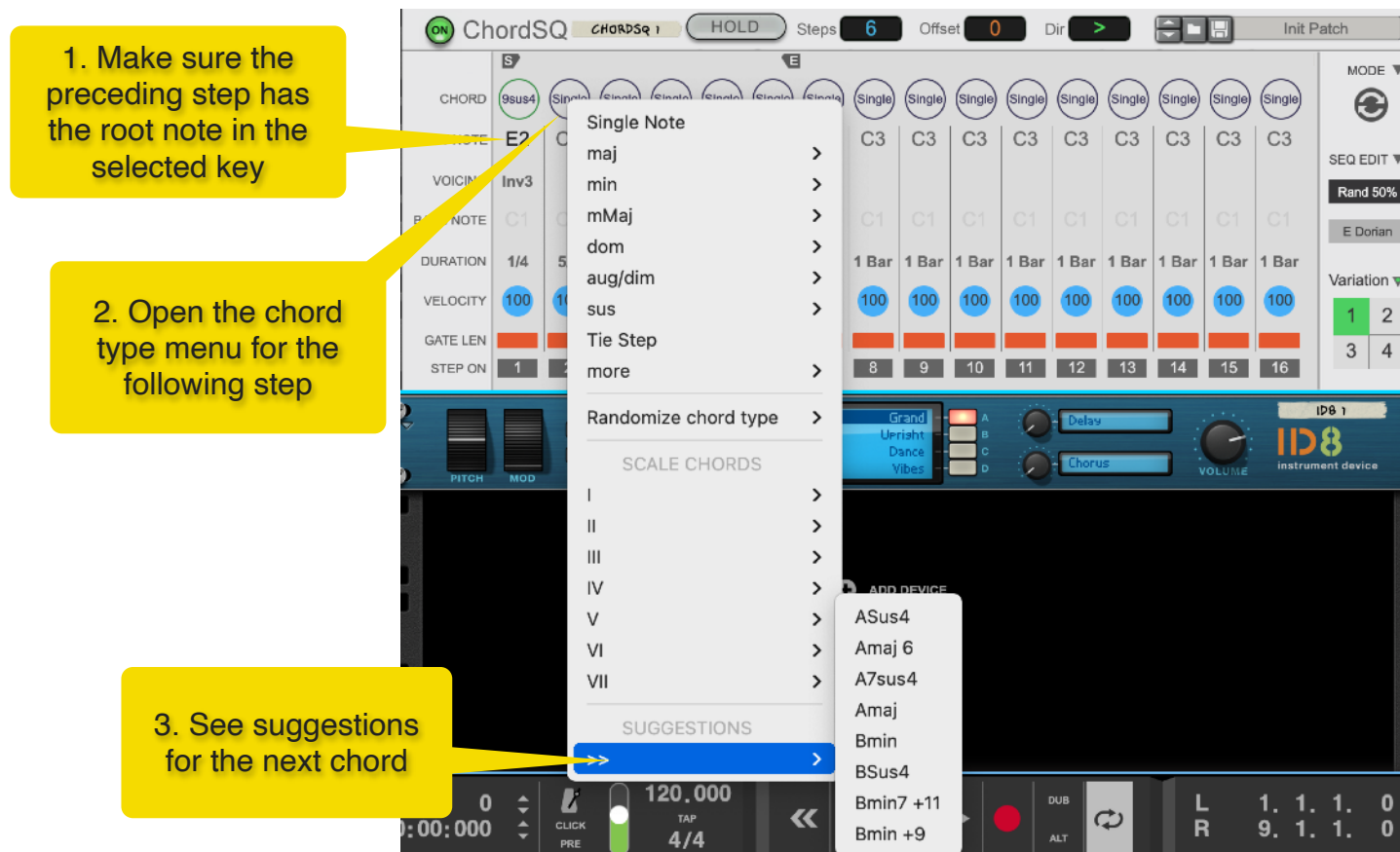
3.3 Sequence Edit

So far we have discussed the editing of a single step, or of rows for successive steps for a specific parameter only. With the Sequence Edit menu it is possible to alter all of the parameters at once for the steps contained between the start and end locators.

Click on the Seq Edit label to open the menu

3.3.1 Copy and Paste

Let's say you are programming a sequence and you stumble on a combination of steps which sound quite good and you would like to repeat those same steps somewhere later in the sequence. One obvious option if to copy and paste each step one by one. But there is a faster way and it involves using the Start and End locators as selection tools. This technique is discussed in more details in **section 4.1** and it can be used for other editing functions as well.

Goal is to copy these 4 steps to another part of the sequence

Step1: move the Start and End locators to the steps you want to copy
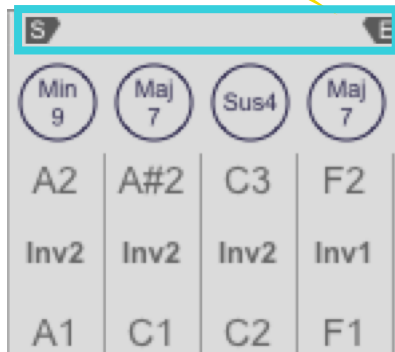
Step 2: click on Copy from the Seq Edit Menu

SEQ EDIT

Oct Up

C Chroma

Variation

1	2
3	4

-- SEQUENCE EDIT --

- **Copy**
- Paste
- Reset
- Insert Step at ▶
- Remove Step at ▶

- Shift Left
- Shift Right
- Shift Semitone Up
- Shift Semitone Down
- Shift Octave Up
- Shift Octave Down
- Shuffle
- Randomize ▶
- Optimize Voicings

Min 9	Maj 7	Sus4	Maj 7
A2	A#2	C3	F2
Inv2	Inv2	Inv2	Inv1
A1	C1	C2	F1

Step 4: paste the steps to the new location!

SEQ EDIT

Oct Up

C Chroma

Variation

1	2
3	4

-- SEQUENCE EDIT --

- Copy
- **Paste**
- Reset
- Insert Step at ▶
- Remove Step at ▶

- Shift Left
- Shift Right
- Shift Semitone Up
- Shift Semitone Down
- Shift Octave Up
- Shift Octave Down
- Shuffle
- Randomize ▶
- Optimize Voicings

Single	Single	Single	Single
C3	C3	C3	C3
C2	C2	C2	C2

Step 3: move the Start and End locators to the steps you want to paste
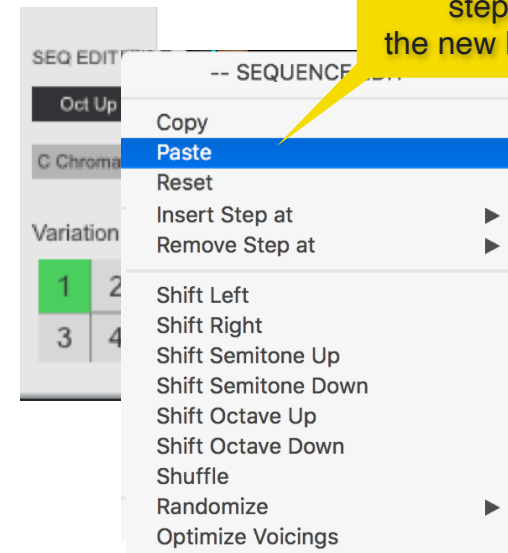
3.3.2 More Sequence Editing Functions

From the "Seq Edit" menu, you can access even more functions to quickly alter the sequence included between the Start and End locators. These functions are described below.

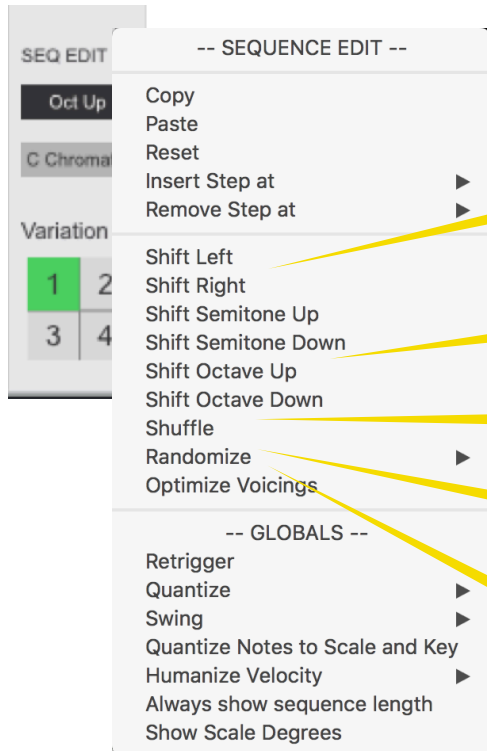|	
SEQ EDIT Oct Up C Chroma Variation 1 2 3 4	**-- SEQUENCE EDIT --** Copy Paste Reset Insert Step at ▶ Remove Step at ▶ Shift Left Shift Right Shift Semitone Up Shift Semitone Down Shift Octave Up Shift Octave Down Shuffle Randomize ▶ Optimize Voicings **-- GLOBALS --** Retrigger Quantize ▶ Swing ▶ Quantize Notes to Scale and Key Humanize Velocity ▶ Always show sequence length Show Scale Degrees

Shifts Left or Right the selected steps

Shifts Up or Down the selected steps by either semitones or octaves

Shuffle the parameters for the selected steps

Randomizes the parameters for the selected steps (see the next page for details)

Optimizes chords voicing so that all notes are contained in a fixed range. The chord at the "S" locator step is used as the reference for optimizing all other chords.

In some cases, clicking on "Optimize Voicings" more than once can yield better results

SEQ EDIT ▼

Oct Up

C Chromati

Variation ▼

| 1 | 2 |
| 3 | 4 |

-- SEQUENCE EDIT --
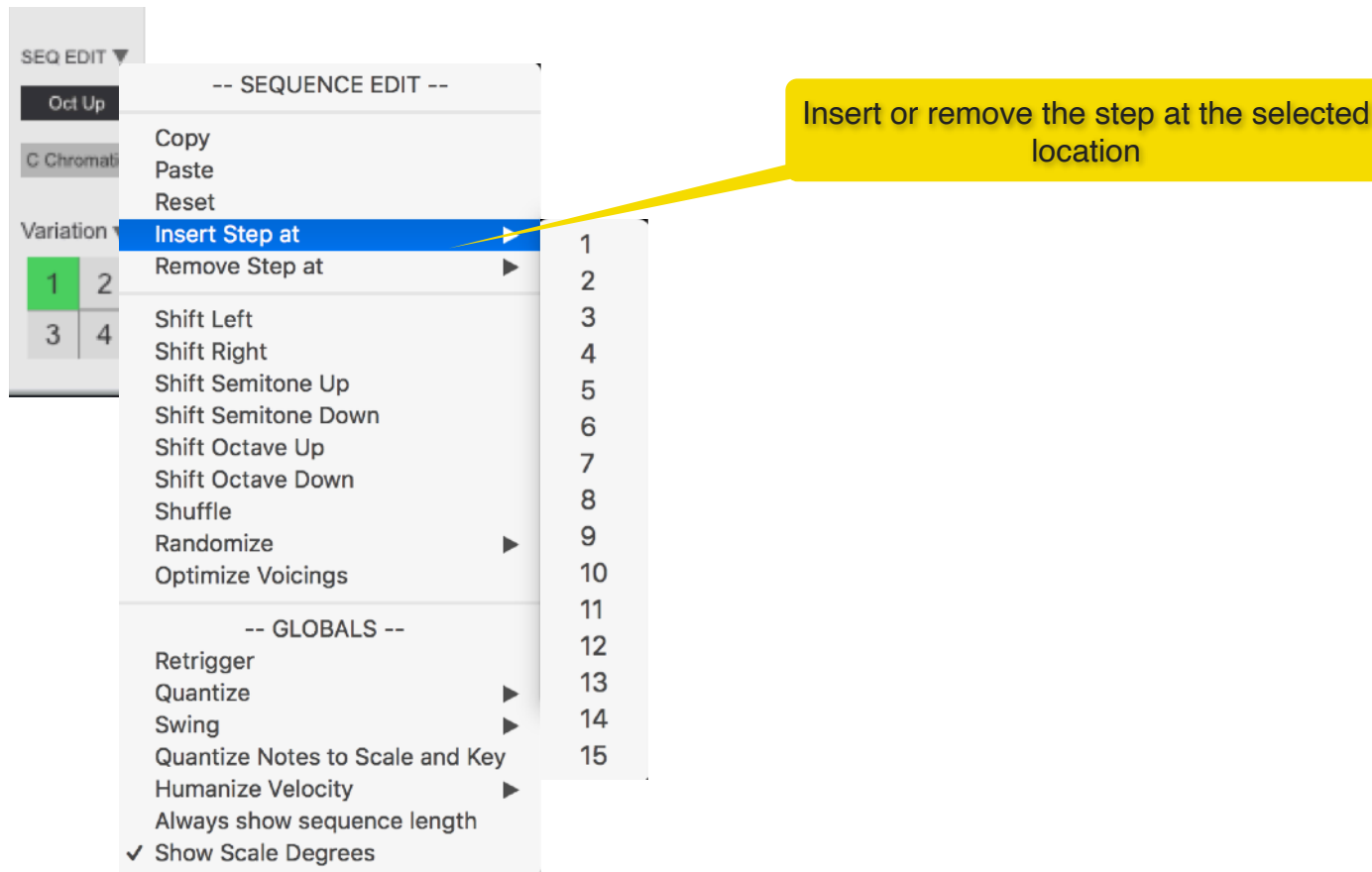
Copy
Paste
Reset
Insert Step at   ▶
Remove Step at   ▶

Shift Left
Shift Right
Shift Semitone Up
Shift Semitone Down
Shift Octave Up
Shift Octave Down
Shuffle
Randomize   ▶
Optimize Voicings

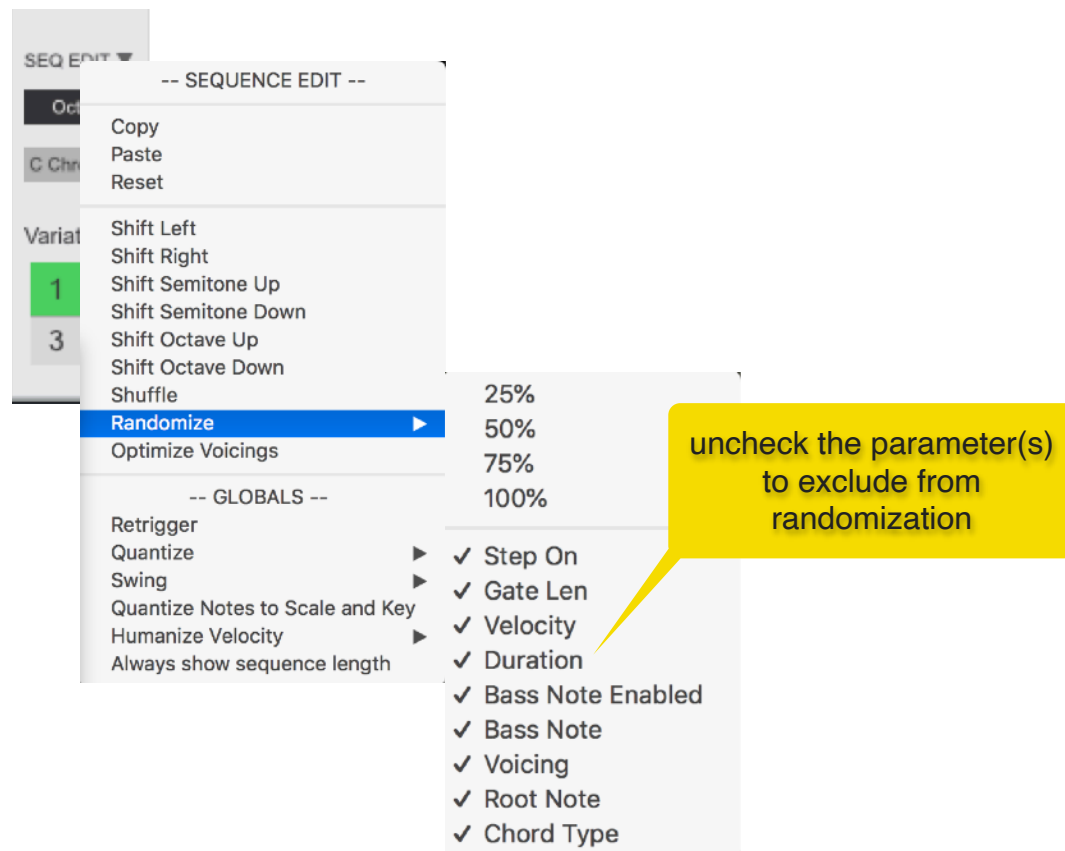-- GLOBALS --
Retrigger
Quantize   ▶
Swing   ▶
Quantize Notes to Scale and Key
Humanize Velocity   ▶
Always show sequence length
✓ Show Scale Degrees

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Insert or remove the step at the selected location

Randomization can be a great way to come up with interesting sequences with little effort. You have the option to control the "strength" of the randomization by choosing how many parameters you want to alter. There are 4 options, 25%, 50%, 75% and 100%. At 25% only few parameters will be altered, at 100% most parameters will be altered. If you want to exclude certain parameters from randomization, you can do that by unchecking them in the list.

SEQ EDIT ▼

-- SEQUENCE EDIT --

Copy
Paste
Reset

Shift Left
Shift Right
Shift Semitone Up
Shift Semitone Down
Shift Octave Up
Shift Octave Down
Shuffle
Randomize ▶
Optimize Voicings

-- GLOBALS --
Retrigger
Quantize ▶
Swing ▶
Quantize Notes to Scale and Key
Humanize Velocity ▶
Always show sequence length

25%
50%
75%
100%

✓ Step On
✓ Gate Len
✓ Velocity
✓ Duration
✓ Bass Note Enabled
✓ Bass Note
✓ Voicing
✓ Root Note
✓ Chord Type

uncheck the parameter(s) to exclude from randomization
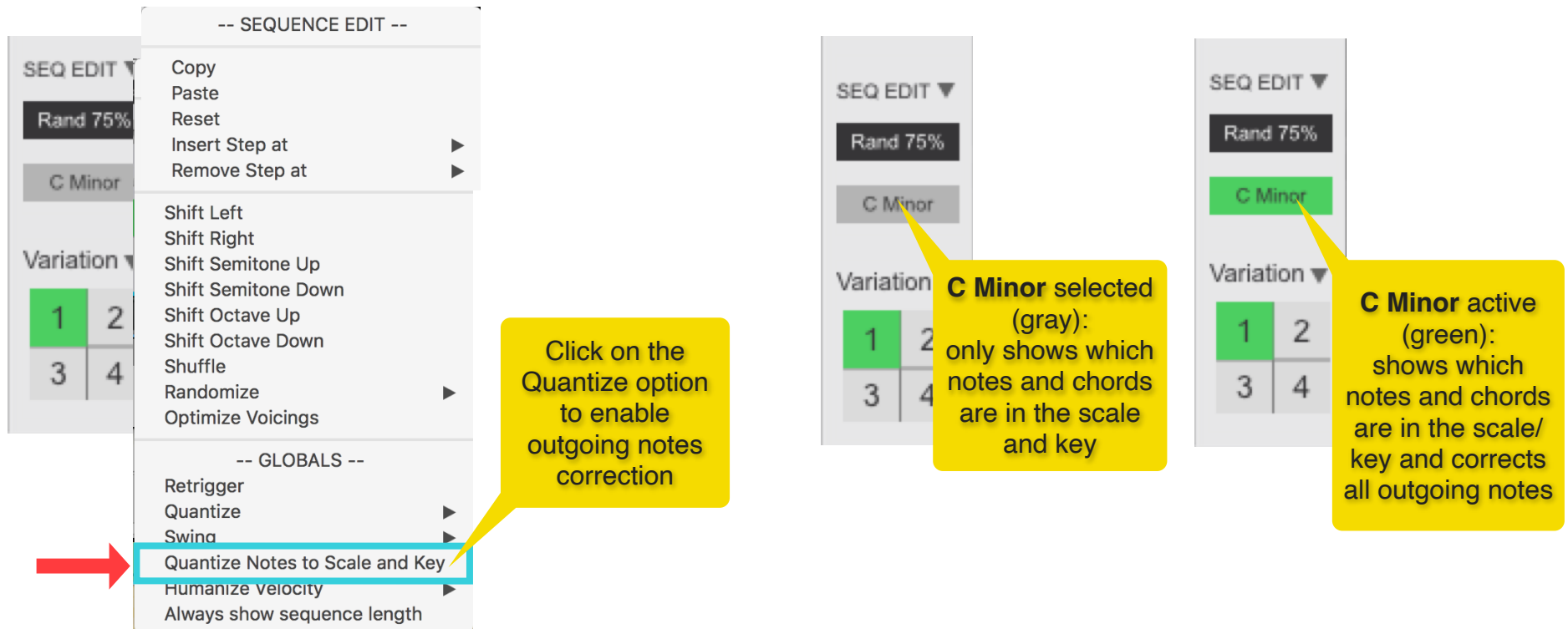
3.3.3 Fast Edit Button

When you are executing editing functions like "Shift Left", "Shift Right", "Shuffle" and "Randomize", instead of using the edit menu multiple times to repeat the same action, you can use the "Fast Edit" button. Located just below the "Seq Edit" label, it remembers the last operation you performed from the edit menu and will repeat that operation again when you press it.
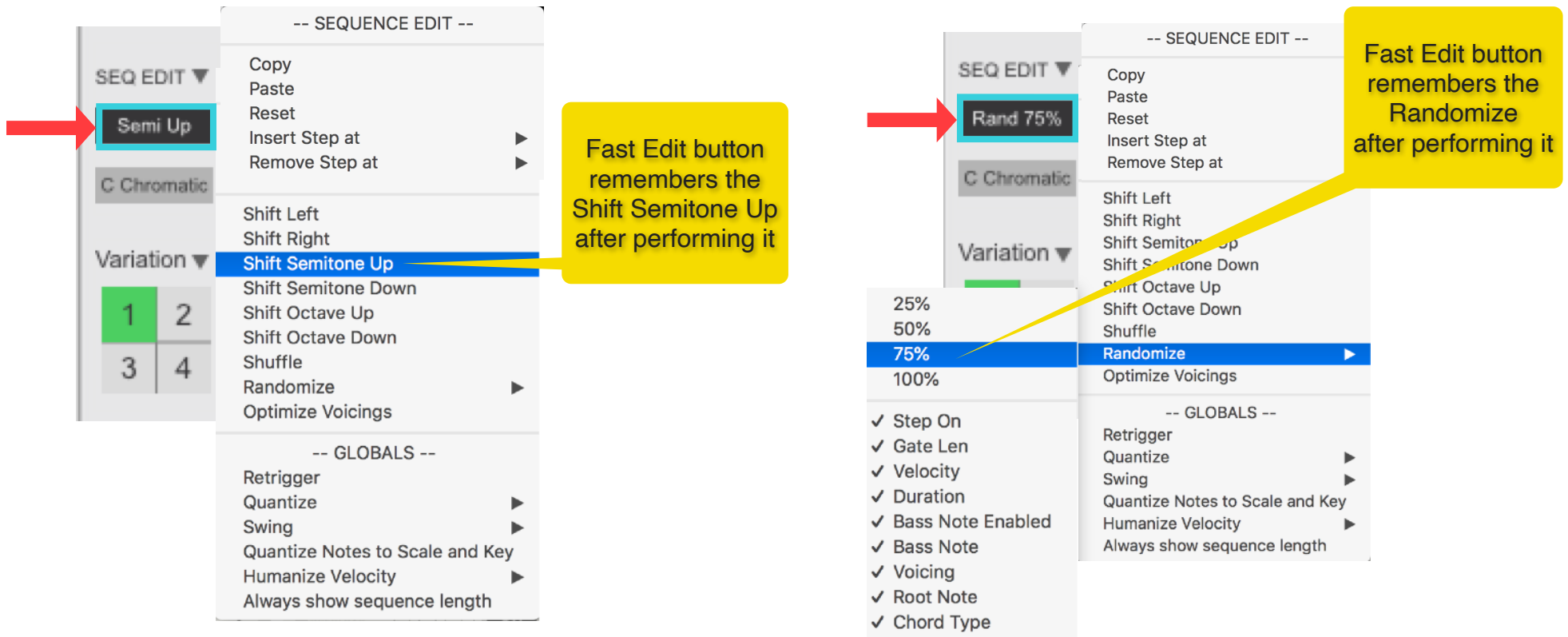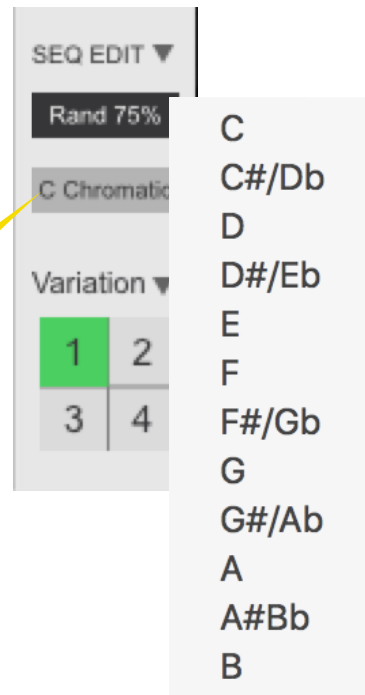
3.3.4 Scale and Key Correction

There are two ways to use the Scale and Key feature. In the first mode, selecting a Scale and Key does not have any effect on the outgoing notes, but it serves to show which notes and chords are in the selected scale and key. For example, when the root note is in the selected scale and key it is shown in a dark tone. Similarly the chord name is shown with a green circle around it.

The second mode, which is activated by enabling the "**Quantize Notes to Scale and Key**" from the "Seq Edit" menu, in addition to showing which notes and chords are in key, also corrects any outgoing notes to the selected scale and key. Very convenient to have enabled when you want to "tame" the results of randomizations! When this mode is active, the button goes from grey to green as shown below.
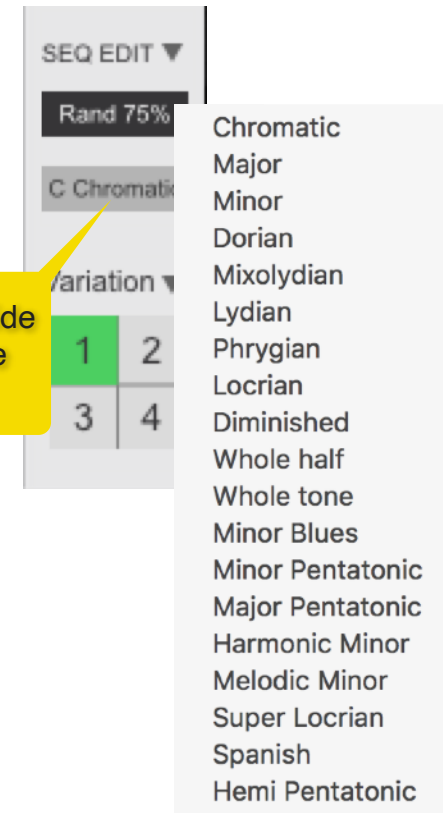

-- SEQUENCE EDIT --

Copy
Paste
Reset
Insert Step at ▶
Remove Step at ▶

Shift Left
Shift Right
Shift Semitone Up
Shift Semitone Down
Shift Octave Up
Shift Octave Down
Shuffle
Randomize ▶
Optimize Voicings

-- GLOBALS --
Retrigger
Quantize ▶
Swing ▶
Quantize Notes to Scale and Key
Humanize Velocity ▶
Always show sequence length

Click on the Quantize option to enable outgoing notes correction

C Minor selected (gray): only shows which notes and chords are in the scale and key

C Minor active (green): shows which notes and chords are in the scale/ key and corrects all outgoing notes

To select a scale and key, click on the Scale and Key button as shown below.

SEQ EDIT ▼

Rand 75%

C Chromatic

Variation ▼

| 1 | 2 |
| 3 | 4 |

C
C#/Db
D
D#/Eb
E
F
F#/Gb
G
G#/Ab
A
A#Bb
B

Click on the left side to open the Key selection menu

SEQ EDIT ▼

Rand 75%

C Chromatic

Variation ▼

| 1 | 2 |
| 3 | 4 |

Chromatic
Major
Minor
Dorian
Mixolydian
Lydian
Phrygian
Locrian
Diminished
Whole half
Whole tone
Minor Blues
Minor Pentatonic
Major Pentatonic
Harmonic Minor
Melodic Minor
Super Locrian
Spanish
Hemi Pentatonic

Click on the right side to open the Scale selection menu

When a scale other than "Chromatic" is selected, the interface will show which notes and chords are in the selected scale and key with different colors. For example, notes in the scale are shown in dark grey while chords are shown with a green circle around them. Chords which have only one note not in the scale are shown with an orange circle.

3.4 Variations

ChordSQ can have 4 different sequence variations per patch. You can change variation live during play, either by clicking on the 4 variation select buttons or by automating the variation parameter in the sequencer. Clicking on the "Variation" label opens the edit menu with various options like duplicating the current sequence to another slot or resetting the entire sequence. An important parameter is the "Restart when switching" option. By default, when you change variations, the sequence will continue to play from the current step in to the next variation. This is called "Legato". If you want the sequence to restart from the start step when you switch variations, then enable "Restart when switching". When enabled, you will see a check mark next to it.

click on a select button to change variation

change variation via automation

enable to restart the sequence when switching variation

duplicate the current variation to another slot
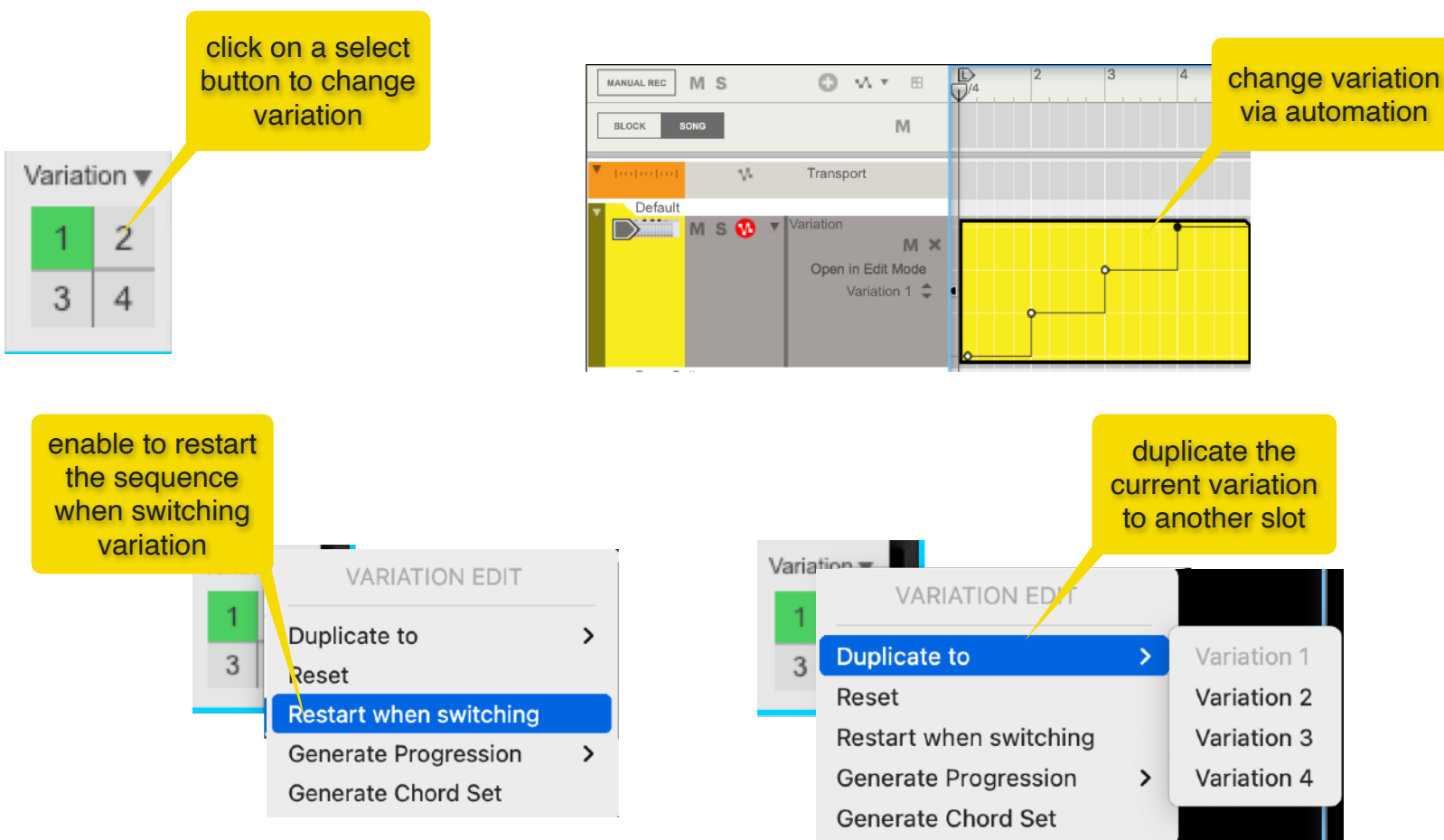
3.4.1 Generate Progression

For select scales, you can automatically generate chord progressions of a certain number of bars. Click on the Variation edit menu and select "Generate Progression". The algorithm will generate a progression using chords compatible with the selected scale. Please note, the option to generate progressions is only active when a supported scale is selected.

Currently supported scale are Major, Minor, Dorian, Lydian, Mixolydian, Phrygian and Locrian.

If you already have a duration pattern that you like and only want to generate chords for the steps in the pattern, then you can use the "Current Duration" option. This will preserve the number of steps and their duration values and only change the chords (root note, chord type and inversion).

In general, the steps which are not part of the generated progression get the default settings. Also, the input mode is automatically switched to "Host" sync if it was set to trigger individual chords.

Furthermore, once you perform the operation of generating a chord progression, you might notice that the downward arrow next to the Variation label shows a small "green" dot. This is to indicate that it is possible to use the "Shift" + click shortcut to repeat the same operation again without having to open the menu and select the entry. It's a time saver when you just want to quickly audition generated progressions in succession.

Shortcut: Shift + Alt+ click tn the green arrow to repeat the operation
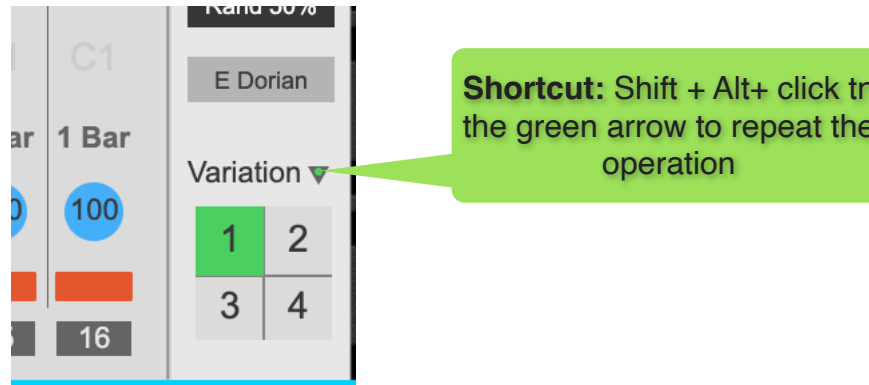
3.4.2 Generate Chord Sets

For select scales, you can automatically generate chord-sets of compatible chords. Unique chords are generated for all of the 16 steps and they can be played using the "Key Trig Individual Chords" mode. The input mode is automatically changed to "Key Trig Individual Chords" if it was set to some other mode. Please note, the option to generate chord sets is only active when a supported scale is selected.

Currently supported scale are Major, Minor, Dorian, Lydian, Mixolydian, Phrygian and Locrian.

3.5 CV and Gate Outputs

The player can send the chords and root note via dedicated Gate and Note CV outlets. These can be used if you want to have the same instance of ChordSQ trigger multiple devices. The root note outlet is especially useful to create bass parts to accompany the progression.

Also the chord out CVs can be connected to a NoteSet player which can be used to correct notes on other devices so that they align with the notes of the chord currently playing.
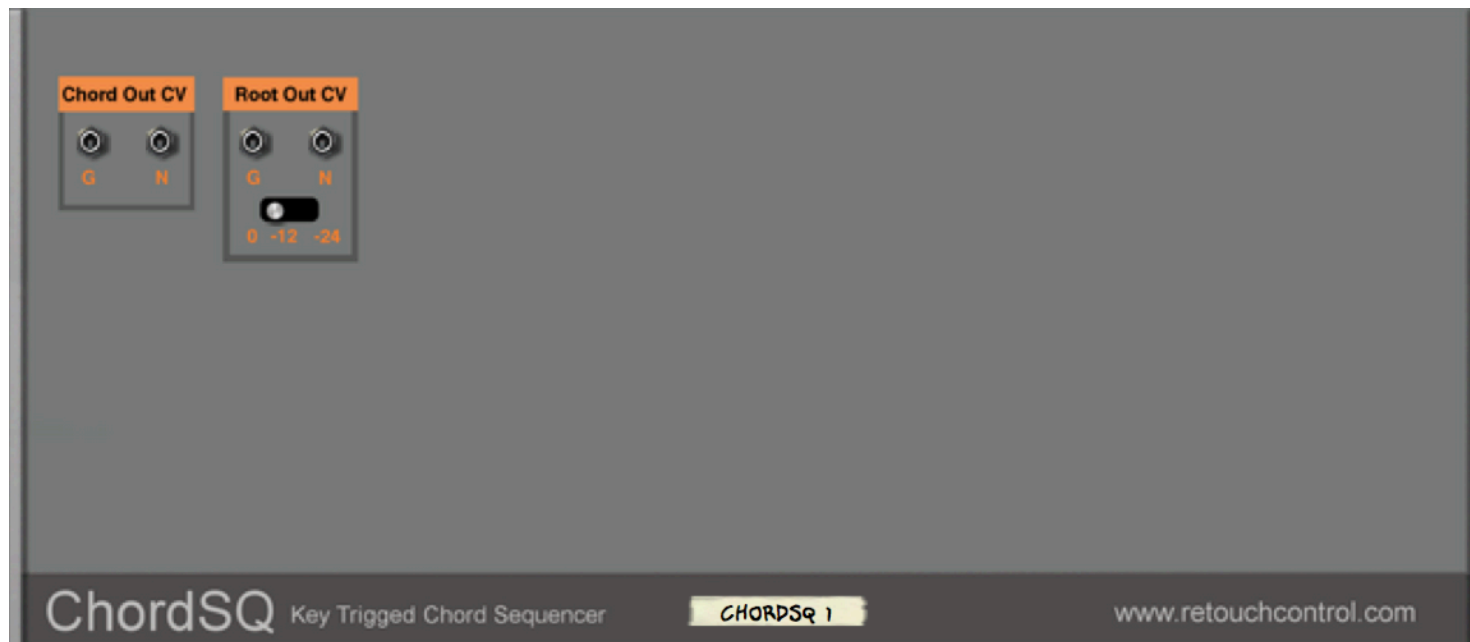
4. Tips and Tricks

4.1 Using the Start and End locators as selectors for editing

You can use the Start and End locators to perform editing functions. Basically, when used this way, you move the locators to a certain position in the sequence only temporarily, for the purpose of performing an editing task, and then you return them to their original positions. In section 3.3.1, there is already an example of using the locators as selectors for copy and paste of steps.
Here it's another example where the goal is to create a velocity crescendo from steps 1-8 and a velocity decrescendo from steps 9-16.

Step 3: move the locators to steps 9-16 by changing the offset

Step 4: apply the diminuendo preset to the selected steps

Step 5: the locators are returned to their original positions…

…and the velocity ramp up/down is done!
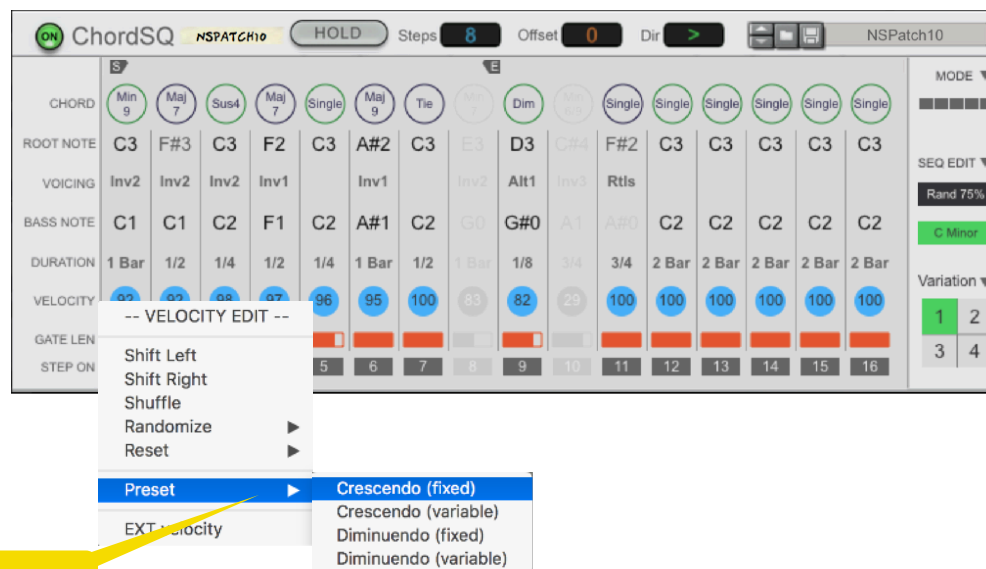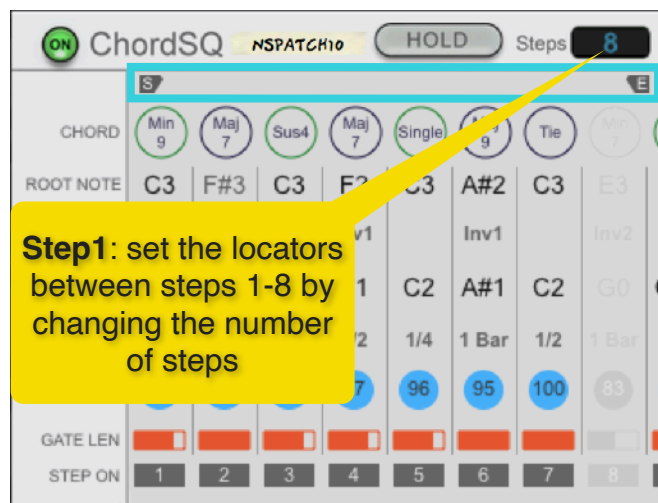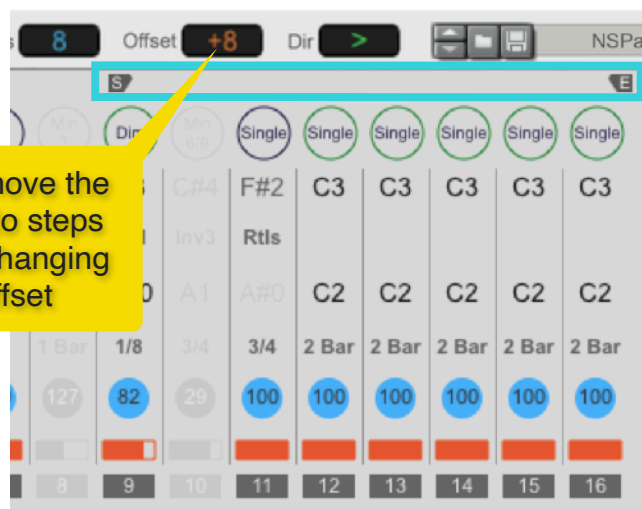
4.2 Humanize the chords

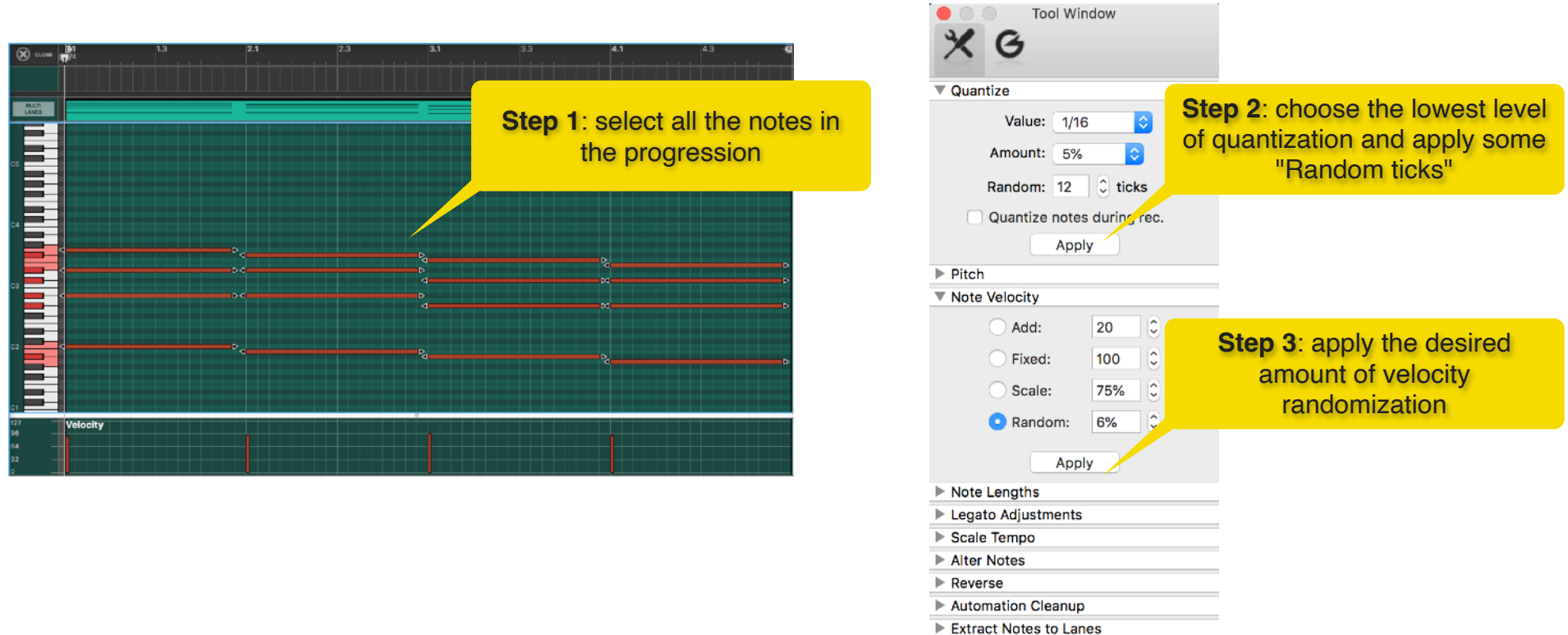You have the option under the "Seq Edit" menu to choose three different amount of velocity randomization. This should help with creating less "static" sounding progressions. For even better results, you should take advantage of the midi editing features of Reason (or your DAW if you use the Rack VST). In this example, we are going to show a method which involves recording the progression unto a MIDI track and then using the "Tools Window" (F8) to affect the notes. To record the progression unto MIDI, you can either use the "*Send to track*" or the "*Direct Record*" methods for players. If you decide to use the "*Send to track*" method, create first a midi clip with a long note which lasts the duration of the progression. This will correctly trigger the ChordSQ sequencer. Once you have recorded the chords to MIDI, follow these steps.

Step 1: select all the notes in the progression

Step 2: choose the lowest level of quantization and apply some "Random ticks"

Step 3: apply the desired amount of velocity randomization

4.3 Emotional Chord Progressions

An easy trick to create emotional chord progressions is to go up and down a scale in thirds while playing alternating major and minor chords. This is very easy to do in ChordSQ. First select a key and scale in the "Seq Edit" section.

For the first step, pick any note in the scale as the root note and assign it a major or minor chord. For best results, if the scale has a major chord at that position, select that (if the chord is in the scale, the circle turns green). Then move to the next step. Adjust the root note so that it's a third above the root note of the first step. At this point, if you selected a major chord for the first step, select a minor chord for the second step. Carry on in a similar fashion until you have a satisfying progression. Make sure to select nice voicing so that there are not big jumps from chord to chord.

4.4 Create bass lines using the Root Note CV outputs

The chord and root note CV outputs in the back of the device can come in handy in several scenarios. For example, you could split the chord CV outputs from ChordSQ and feed the same chord progression to other devices or players. If you own the NoteSet player, then you can use these outputs for doing note correction based on the chord notes. There are many opportunities for experimentation. In this example, we are going to show a way to use the root note cv outputs to create "automatic" bass lines using the RPG8 device.

Step 2: connect root note Gate and CV outputs to the combinator CV inputs

Step 3: shift the root note down if needed

Step 1: connect the Rpg-8 to a bass instrument, then combine the two inside a combinator

Step 4: set up a nice pattern, set a rate and choose "2 Oct" for better bass lines. Make sure "Single Note Repeat" is ON

4.5 Beyond basic progressions

Chord progressions can be simple but can get quite complex as well! If you would like to go beyond the basics, here are some tips which might help to add a bit more sophistication to your chords.

Tip 1: choose a key and a scale as the basic foundation on which to build any progression. This is your home from which you can depart (as we'll show next) but to which you almost always want to return. Selecting a key and scale in ChordSQ has the advantage of showing the notes and the chords which belong to it.
For a more sophisticated sound, choose 7th and 9th chords when building your progression.

Set a key and scale as your base

the interface shows which notes and chords are diatonic

choose 7th and 9th chords for a more sophisticated sound
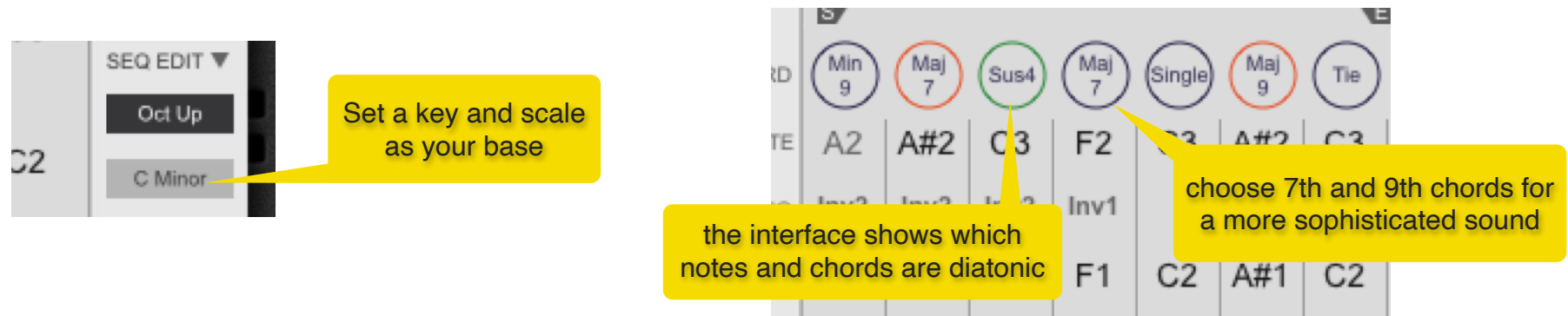
Tip 2: carefully voice your chords as it makes a difference. With 11 voicing types, it's easy to experiment in ChordSQ and find the one which works the best. For a more "closed in" sound, try *Inv1*, *Inv2* and *Inv3*. For a more "open and spread" sound, try *Alt1* to *Alt5*. *Rootless* voicing can also be very effective, especially when the root is played one or two octaves below, as shown below. For a a less "jumpy" progression with smaller interval changes from chord to chord, you can use "Optimize Voicing" in the "Seq Edit" menu.

add the root 1 or two octaves below as the bass note for a rootless voicing

try the "Optimize Voicings" from the Sequence Edit menu
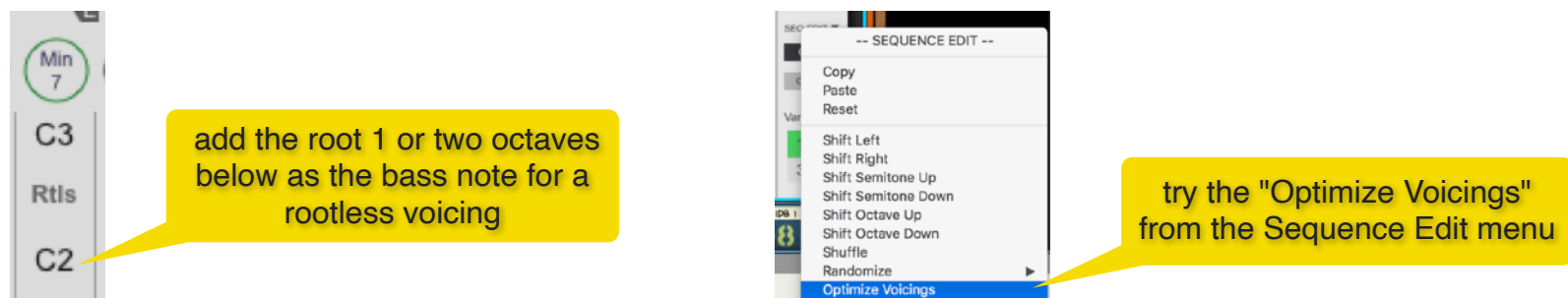
Tip 3: get temporarily out of the key. This adds instant sophistication when done properly. There are many techniques to go out of key, here are just some examples:

   Chord Substitutions: here are some example of chord substitutions for a minor scale. Changing the chord type momentarily takes the music to a different key, often to a different mode of the same key as shown below (also called *modal interchange*).

Chords of a Minor scale with substitutions
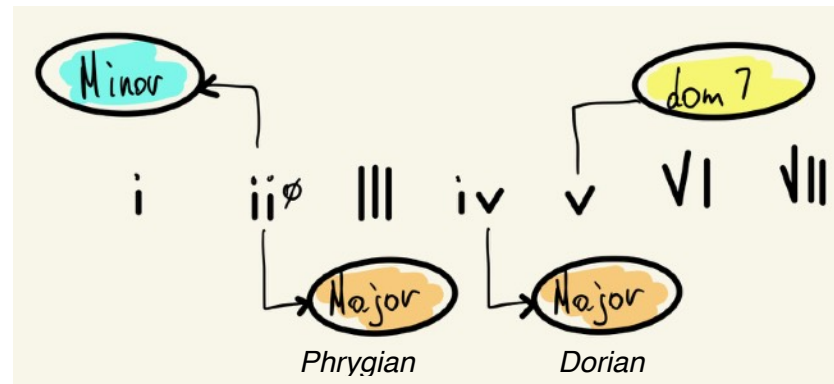
   Side Slipping: this technique consists in playing the same chord type with the same voicing usually one or two semitones up/down from the chord in the scale. For example, in the progression below in C Minor, we go out of key for 3/4 of a bar by playing a Dmaj7 chord right after the D#maj7 chord scale, and then return to the D#maj7 to finish the progression.

Tritone Substitution: this technique is often used by jazz musicians in a 2-5-1 progression, however it is useful in other contexts as well. For example, the C minor progression below starts on C (the tonic), moves to the III (D#maj7), then goes to the VI (A#2maj), and before landing on the iv (Fmin7), passes by F#7 which is a dominant 7th chord not in the scale of C minor. Using a dominant 7th chord one semitone above the target scale chord can often be used to great effect to spice up an otherwise predictable sequence. As an alternative, an augmented chord can be used instead of the dominant chord.

use a dom7 chord
one semitone above
the target chord

as an alternative to a
dom7, use an
augmented chord

5. MIDI Implementation

MIDI CC - Parameter

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6. Remote Implementation

To obtain the complete list of all the available parameters which are controllable via Remote, use the "Extract Device Remote Info" from the File menu in Reason. Here is a partial list of all parameters for Variation 1.

Remotable	Min	Max	Input type	Output type
Steps Var1	0	15	Value	ValueOutput
Offset Var1	0	15	Value	ValueOutput
Dir Var1	0	6	Value	ValueOutput
Scale Var1	0	18	Value	ValueOutput
Key Var1	0	11	Value	ValueOutput
ChordType1 Var1	0	43	Value	ValueOutput
ChordType2 Var1	0	43	Value	ValueOutput
ChordType3 Var1	0	43	Value	ValueOutput
ChordType4 Var1	0	43	Value	ValueOutput
ChordType5 Var1	0	43	Value	ValueOutput
ChordType6 Var1	0	43	Value	ValueOutput
ChordType7 Var1	0	43	Value	ValueOutput
ChordType8 Var1	0	43	Value	ValueOutput
ChordType9 Var1	0	43	Value	ValueOutput
ChordType10 Var1	0	43	Value	ValueOutput
ChordType11 Var1	0	43	Value	ValueOutput
ChordType12 Var1	0	43	Value	ValueOutput
ChordType13 Var1	0	43	Value	ValueOutput
ChordType14 Var1	0	43	Value	ValueOutput
ChordType15 Var1	0	43	Value	ValueOutput
ChordType16 Var1	0	43	Value	ValueOutput
Root1 Var1	0	95	Value	ValueOutput
Root2 Var1	0	95	Value	ValueOutput
Root3 Var1	0	95	Value	ValueOutput
Root4 Var1	0	95	Value	ValueOutput
Root5 Var1	0	95	Value	ValueOutput
Root6 Var1	0	95	Value	ValueOutput
Root7 Var1	0	95	Value	ValueOutput
Root8 Var1	0	95	Value	ValueOutput
Root9 Var1	0	95	Value	ValueOutput
Root10 Var1	0	95	Value	ValueOutput
Root11 Var1	0	95	Value	ValueOutput
Root12 Var1	0	95	Value	ValueOutput
Root13 Var1	0	95	Value	ValueOutput
Root14 Var1	0	95	Value	ValueOutput
Root15 Var1	0	95	Value	ValueOutput
Root16 Var1	0	95	Value	ValueOutput
Voicing1 Var1	0	10	Value	ValueOutput

Voicing2 Var1	0	10	Value	ValueOutput
Voicing3 Var1	0	10	Value	ValueOutput
Voicing4 Var1	0	10	Value	ValueOutput
Voicing5 Var1	0	10	Value	ValueOutput
Voicing6 Var1	0	10	Value	ValueOutput
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Voicing13 Var1	0	10	Value	ValueOutput
Voicing14 Var1	0	10	Value	ValueOutput
Voicing15 Var1	0	10	Value	ValueOutput
Voicing16 Var1	0	10	Value	ValueOutput

7. Version History

Version 1.0.0: initial release

Version 1.1.0:
• added "Show Scale Degrees" option which shows the root notes as roman numerals if they are in the selected key and scale
• added more lengths to the Duration selection menus
• added more chord presets to the Chord Type selection menus
• added "Insert and Remove Step at" options in the Seq Edit menu
• added a "Random Walk" option in the sequencer direction menu
• extended the "Shift + drag" method for changing values to more step parameters (e.g. gate, duration, voicing)
• improved the "Optimize Voicings" algorithm in the Seq Edit menu
• various bug fixes

Version 1.2.0:
• added "Host Transport Sync" to sync the chord sequence to the Reason sequencer
• fixed a bug with the "Inv 3" voicing and 3 notes chords. Re-labelled the inversion voicing in the selection menu

Version 1.3.0
• added new randomization options for the Chord Type and the Voicing step parameters
• added scale chords directly in the Chord Type menu when a scale and key are selected
• added "Generate Pattern" of various lengths in bars from the Duration Edit menu
• added "Generate Chord Progression" and "Generate Chord Set" from the Variation Edit menu. These options are active when the Major or Minor scales are active
• added more chord types and more options for chord voicing
• added full range Reset options in the Root and Bass notes edit menus
• added option to "Show Flat Accidentals" in the Sequence Edit menu
• added two more options for "Show Scale Degrees" in the Sequence Edit menu

Version 1.3.5
• added support for more scales when using the Generate Progression and Generate Chord Set functions
• added shortcut to execute the Generate Progression and Generate Chord Set functions which does not require to open the menu
• added Next-Chord suggestions in the Chord Type menu when creating progressions using the supported scales
• added "Resize Pattern" in the Duration Edit menu to half or double the duration of an existing pattern
• added a new color indicator for identifying chords which have two notes not in the selected scale and key

- added a "Paste Special" in the Step Edit menu to facilitate swapping stepsVersion 1.3.5

Version 1.3.6

- added chord audition from the UI by keeping pressed Cmd(Mac)/Ctrl(Win) + Alt and clicking inside the chord type circle
- fixed an issue where the chord suggestions menu entry would show empty and could cause a device error if clicked on
- optimizations to the "generate chord progression" and "quantize to scale" algorithms
- factory patches in the "Progressions" folder have been changed to use "Host Sync" mode instead of "Key Trigger" mode