

The Step Sequencer

Controls

Example Sequence Configuration

The screenshot shows the STEPSEQ software interface. At the top, there are four sequence buttons: SEQ1 (selected), SEQ2, SEQ3, and SEQ4. Below these are control parameters: Step Length (1/64trpl), Loop (unchecked), Length (16), Retrigger (unchecked), Signature Mode (Off), Sig (4 / 4), C-Key (C3), and Hold (unchecked). The main area is a 16-step sequence grid. Each step is represented by a vertical bar with four parameters: Note, Length, Gate, and Velocity. The Note is C3 for all steps. The Length is 1 for all steps. The Gate is 51% for all steps. The Velocity is 100 for all steps.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Note	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3
Length	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gate	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%
Velocity	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

NOAH - Tactive Instrument Modeller

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fidelity at work.

The Step Sequencer



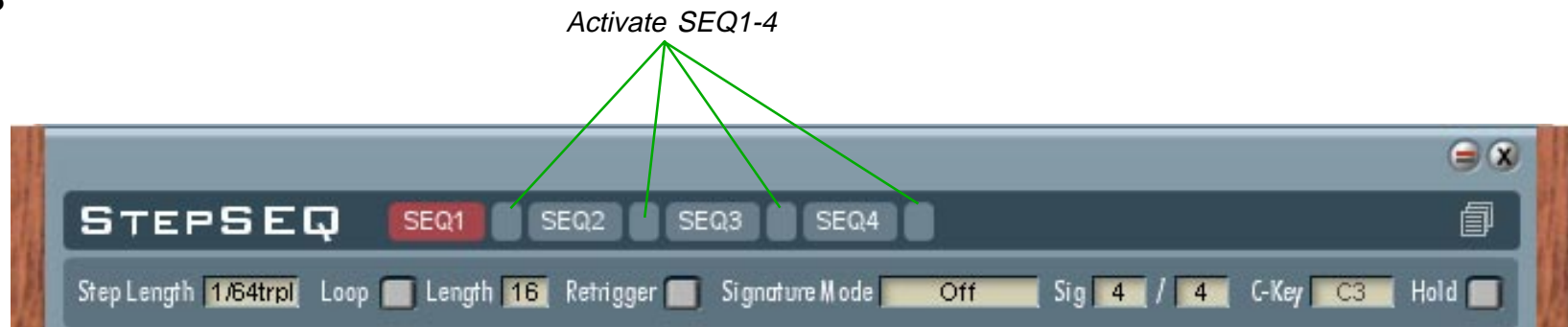
Each of the 4 instrument slots can be addressed not only by an external keyboard or MIDI sequencer, but also by Noah's onboard Arpeggiator or Step Sequencer. You can assign an independent *instance* of the Step Sequencer to each slot.

To assign the Step Sequencer to an instrument slot, select *Seq* as the *Trig Src* (*Trigger Source*) for the respective slot in the MIDI Manager.

The Step Sequencer lets you create unison sequences you can think of as loops. A sequence consists of a maximum of 16 steps in which each step has a configurable length.

When it receives a MIDI note, the Step Sequencer starts playback at the speed set in the MIDI Manager. The sequence is transposed according to the note received.

Controls



SEQ 1 - 4: Multiple instances of the Step Sequencer exist. Each instance is assigned to one of the Instrument slots. Use the switches - the number of which depends upon the operating mode (*Single*, *Multi*) and the hardware version (Noah, Noah EX) - to select the desired instance for display and editing.

Activate SEQ1-4: Turn this switch on to activate the step sequencer for the corresponding slot. This is equivalent to selecting the step sequencer as trigger source in the MIDI Manager.

Step Length: Selects the overall resolution for the Step Sequencer (that is, the smallest required note length). For example, choose 1/16 if your shortest step is a 16th note.

Possible values: 8/1, 4/1, 2/1, 1/1, ½ dot, ½, ½ trpl, ¼ dot, ¼, ¼ trpl, 1/8 dot, 1/8, 1/8 trpl, 1/16 dot, 1/16, 1/16 trpl, 1/32, 1/32 trpl, 1 Clock .

Values of the form x/1 are longer than a beat. 4/1, then, indicates 4 beats per step. Values with a „trpl“ are triplets. 1/4trpl indicates a resolution of four triplets, or six steps per bar. (in 4/4). Values with a „dot“ indicate a dotted note value. Therefore, 1/4dot stands for a dotted quarter-note (= 3 eighth notes).

Set the actual length of the individual steps under *Length* per Step, where you can enter a whole number multiple of the value configured here for each step.

Step Loop: Switches loop playback on or off.

Length: Select here the number of steps to include in the loop (continuous loop).



Signature Mode: Signature (time signature) mode specifies the start/stop behavior of loop playback through the following options:

Off: Signature settings have no effect.

Auto Restart: The Step Sequencer starts from the beginning using the bar/beat settings configured under *Signature*. This is independent of whether Step Loop is enabled or not.

Auto Stop: The Step Sequencer stops at the end of the bar configured under *Signature*, even if the total of the step lengths adjusted under *Length* exceeds the bar length.

Signature: These two values define the number of beats in the loop (bar), and the value of a beat (see *Signature Mode*). They represent the time signature of the loop.

Center Key: This is the MIDI note number that starts the sequence without any transposition. When notes other than this are received, the sequence is transposed according to the note received relative to this one.

Hold: Push this button in order to have the sequence continue to play after the key is released. Push it again to stop the sequence. You can achieve a similar result using the hold pedal: the sequence plays as long as the pedal is held and stops when the pedal is released. The control message sent by the hold pedal is „absorbed“ by the sequencer and is not passed along to the synthesizer which the sequencer is playing.

The following parameters, located in the lower part of the control interface, are individually adjustable for each step.

Note: Sets the MIDI note for each step.

See the comments under *Center Key*.

Length: The length (duration) of the step as a multiple of the resolution as configured under Step Length. For example, if the Step Length is 1/16, a value of 1 means the step will have a duration of a 1/16th note. A value of 2 indicates a step duration of two 1/16th notes, or an 1/8th note.

Gate Duration: This is the length (duration) of the note itself as opposed to the length of the step. Therefore, if the step length is 1/16 and the *Gate Duration* is set to 50, the note will last for 1/32nd note (50% of a 16th note) and the remaining time will be played as a rest.

You can change the value by adjusting the bar display with the mouse.

Velocity: Sets the MIDI Velocity value (keystroke intensity) for each step.

You can change the value by adjusting the bar display with the mouse.

You can also control certain device parameters such as the filter cutoff of the Minimax or Lightwave's Pan using Velocity values.



Example Sequence Configuration

The following example should help clarify the use of the *Step Length*, *Length*, and *Signature Mode* parameters.

We'll assume that the sequence has the following rhythmic form and that a loop is the equivalent of a bar.



Step Length	1/8trpl	Loop	<input checked="" type="checkbox"/>	Length	7	Retrigger	<input type="checkbox"/>	Sig	
	1	2	3	4	5	6	7		
Note	C3	C3	C3	C3	C3	C3	C3		
Length	3	3	2	1	1	1	1		
Gate Duration	100%	100%	100%	100%	100%	100%	100%		
Velocity	100	100	100	100	100	100	100		

The smallest note value that occurs is an eighth note triplet. Therefore, set the *Global* value for *Step Length* to 1/8trpl. Because the phrase is only seven notes long, you'll need only seven of the 16 steps. Therefore, set the *Length* to 7 steps and enable *Step Loop*. Next, set all notes to the desired pitches (in this example, C3 for all steps).

Give the first two steps a *Length* of 3 (because a quarter-note = 3 eighth-note triplets). Give the next note a length of 2, and the last four notes a length of 1.

The Step Sequencer will now play the seven notes as a continuous loop and will ignore the subsequent, unused steps, since the first seven correspond to the length of a bar.

Alternatively you could set the *Signature* to 4/4, and *Signature Mode* to *Auto Restart*. With these settings, too, the 7-note sequence will play back as a loop.

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