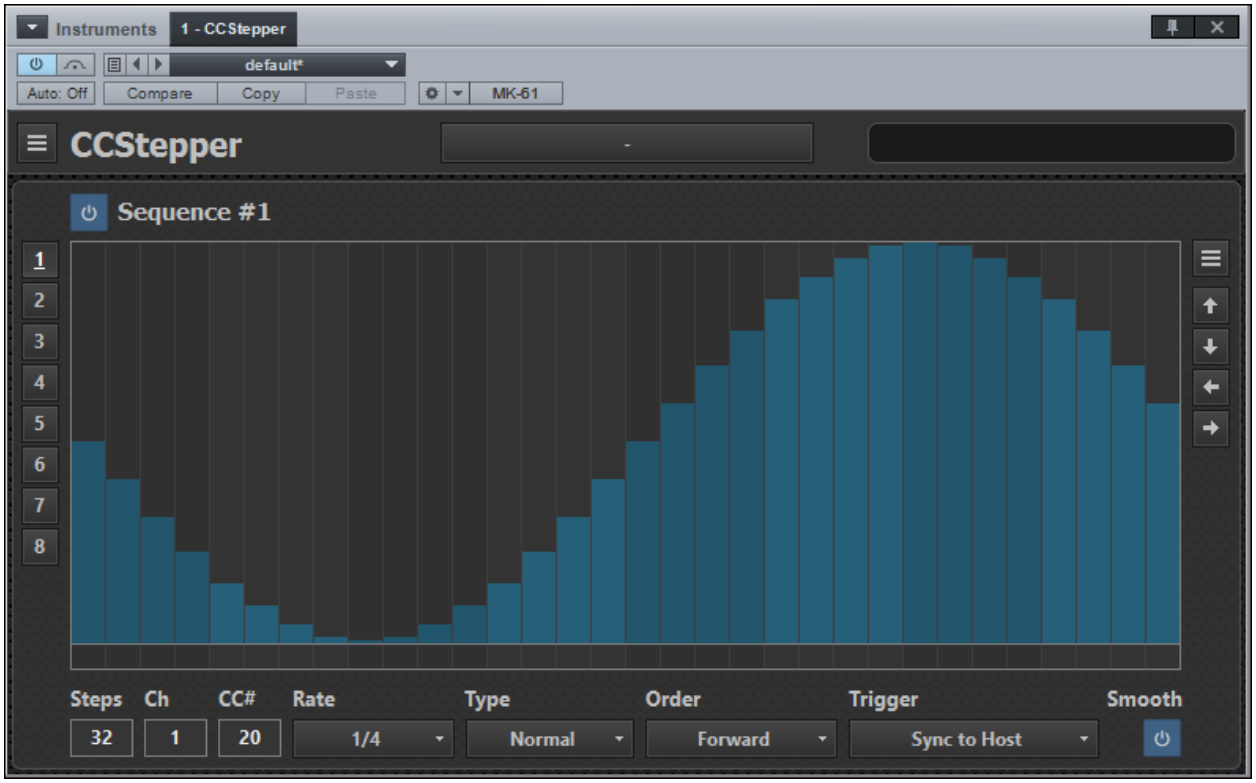
CCStepper

User Guide



CCStepper is developed with Delphi XE5 using the Delphi ASIO & VST framework

VST is a trademark of Steinberg Media Technologies GmbH

Email: info@codefn42.com
Website: http://www.codefn42.com

© 2014 - CodeFN42

Table of Contents

Introduction 4

System Requirements 4

Installation 4

Setting up CCStepper in your DAW 5

User Interface 6

User interface controls 7

Drop-down lists 7
Numeric input boxes 7
On/Off switches 8

Editing Parameters 9

Selecting sequence 9

Setting number of steps, rate and other parameters 9

Steps 9
Channel (Ch) 9
CC# 10
Rate 10
Type 10
Order 10
Trigger 10
Smooth 11

Editing the sequence data 11

Randomize values 12

Sequence menu 12

Increase/decrease step values 13

Shift steps left/right 13

Presets 14

To save a preset 14
To load a preset 14
To delete a preset 14
To open the presets folder 14

MIDI CC Teach 16
To use the CC Teach feature 16

MIDI Control / Automation 17
To assign a MIDI CC message with MIDI learn 17
To assign a specific MIDI CC message 17
To remove a MIDI CC assignment 17

Introduction

CCStepper is a VST MIDI CC data sequencer plugin, suitable for controlling MIDI capable software (softsynths or effects) or external hardware devices. CCStepper lets you create up to 8 independent sequences with up to 64 steps each, and can either be synced to your host or triggered by MIDI notes. The step rate can be set from 1/128 notes and up to 32 bars, and various randomization features allows you to create unpredictable sequences.

System Requirements

To use CCStepper you need a VST2 compatible 32-bit or 64-bit host running on Windows XP, Vista, 7 or 8.

Installation

To install CCStepper, simply open the downloaded zip file and extract the dll file to your VST plugin folder (CCStepper32.dll if you use a 32-bit host, or CCStepper.dll if you use a 64-bit host).

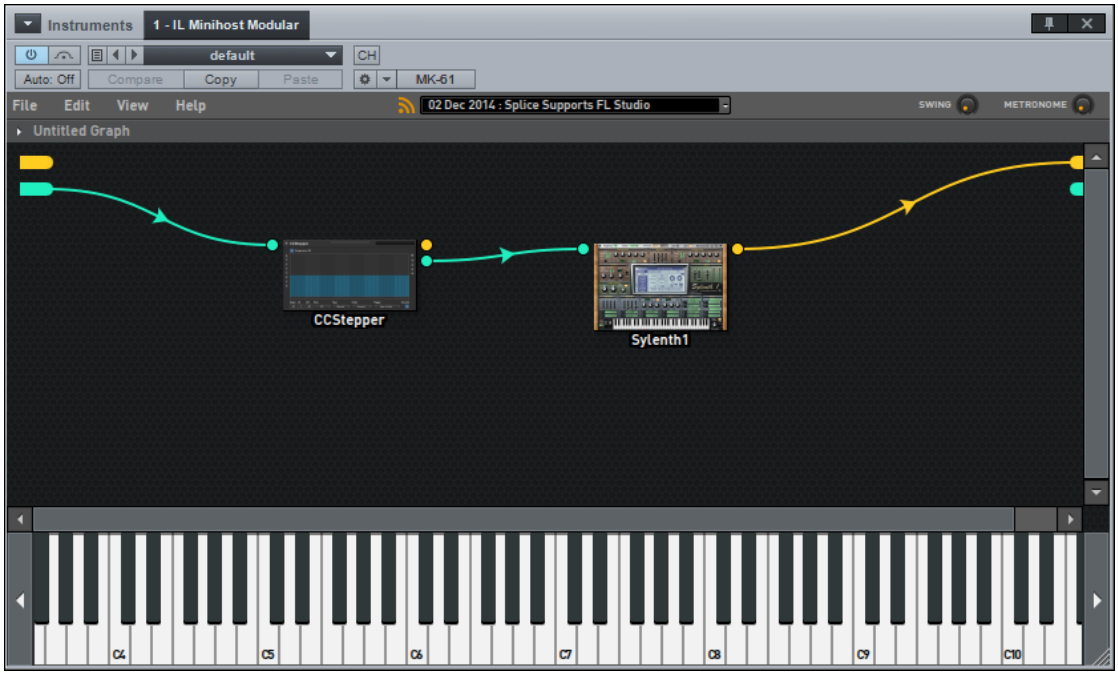
Setting up CCStepper in your DAW

CCStepper is a MIDI only VST plugin. It does not produce any sound of its own. You need to route the MIDI output to the synth/effect you want to control, and set it up so it receives MIDI data if you want to trigger the sequence by incoming MIDI notes. How easy (or even possible) it is to do this depends on your DAW's MIDI routing capabilities.

NOTE: CCStepper will generate MIDI CC data (Continuous Controller messages), not MIDI notes! MIDI CC can for example be used to control a synth's filter or the delay time of a delay. For more information about MIDI CC messages, see electronicmusic.wikia.com.

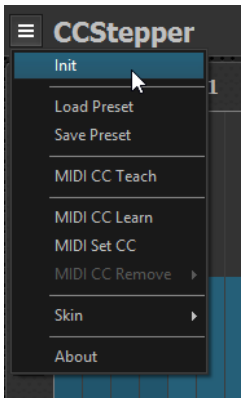
Generally, you should add CCStepper to a new MIDI or instrument track. This is the same procedure you would follow adding any VST instrument in your DAW. Then you will have to route the output from CCStepper to another VST instrument, effect or external hardware. If you are not sure how to do this, please refer to your DAW's documentation.

An alternative is to use the excellent (and free) Minihost Modular plugin from Image Line. Minihost Modular can be used to extend the capabilities of your DAW software with its powerful modular environment.

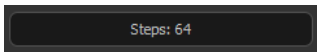


User Interface

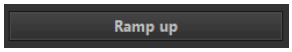
In the upper left corner of the plugin window you find the main menu. From this menu you can initialize the plugin (reset all parameters), load and save presets, configure MIDI CC assignments, and change the current skin.



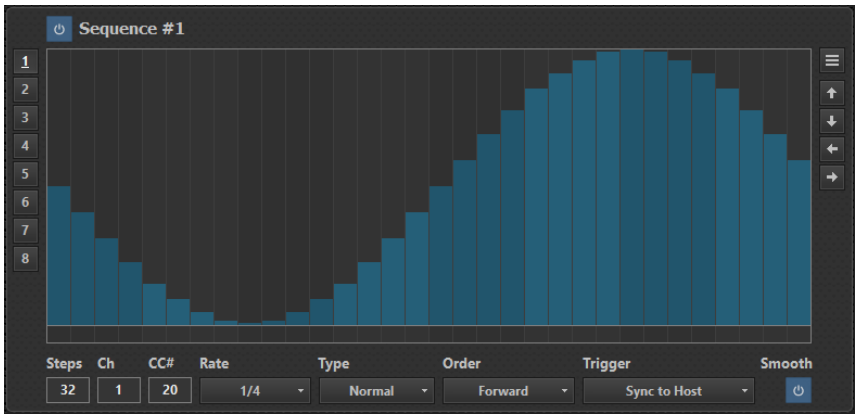
In the upper right corner you see the info panel. This shows information about the parameter you are editing.



In the middle you see the preset button. This shows the name of the current preset (if it is named). Click this button to open the 'Load Preset' panel. For more information on how to work with presets, see the "Presets" section.



Below you find the main section with all the parameters you can edit, including the step sequencer. You find more information on this in the "Editing Parameters" section.

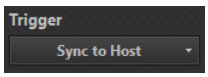


User interface controls

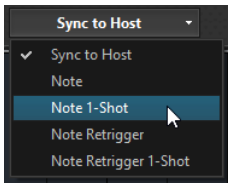
There are three basic types of user interface controls. How to edit the actual sequencer will be explained in the next section ("Editing Parameters").

Drop-down lists

For example, Trigger.



To select a value, simply click, then select from the drop-down list.



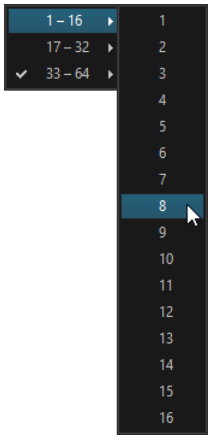
Hold down the Ctrl key and click on the list to select the default value.

Numeric input boxes

For example, Steps.

There are three ways to change the value:

- Click with the mouse, then drag up (to increase the value) or down (to decrease the value). To slow down the selection, hold down the Shift key while you drag (fine tuning).
- Position the mouse cursor over the control, then use the mouse wheel.
- Right-click and select a value from the popup menu.



Hold down the Ctrl key and click to select the default value.

On/Off switches

For example, Smooth.

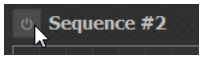
Simply click to turn the switch on or off.

Editing Parameters

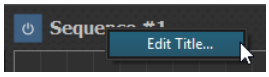
Selecting sequence

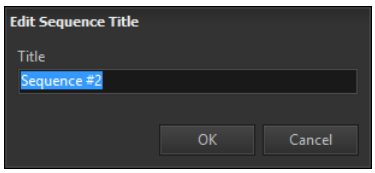
CCStepper lets you create up to 8 independent sequences. You change the active sequence with the buttons numbered 1 to 8 to the left. If a sequence is active (Switch parameter is on), the number is underlined.

By default, only sequence #1 is active. To activate or deactivate a sequence, click the on/off switch to the left of the sequence title.



You can edit the sequence title by right-clicking the title and then choosing **Edit Title** from the popup menu (or simply double-click the title).





Setting number of steps, rate and other parameters

Steps

This is the number of steps in the sequence. Can be from 1 step and up to 64 steps (1 step can be useful if you randomize the step value).

Channel (Ch)

The MIDI channel (1 to 16) to send the CC data through.

CC#

The MIDI Control Change message number (0 - 127). Some of these are predefined, for example #1 to control the mod wheel. By default, CC# 20-27 is used for sequence 1 through 8.

Use CC Teach/MIDI Learn to link a CC message number of a sequence to a specific parameter in the synth/effect you want to control. For more information about this, see the "MIDI CC Teach" section.

Rate

This is step rate that determines the length of each step. The quarter note (1/4) will advance the sequencer one step per beat, an eighth note (1/8) is twice as fast, etc. Possible values go from 1/128 (128th notes) and up to 32/1 (each step lasts 32 bars).

Type

You can choose between normal, dotted or triplet times.

Order

This determines the order of the steps:

- **Forward** - From the first to the last step.
- **Forward<** - From the first to the last step, then back to the first step.
- **Backward** - From the last step to the first step.
- **Backward>** - From the last step to the first step, then back to the last step.
- **Each 2nd** - Will skip every other step. For sequences with an even number of steps, only step 1, 3, 5, ... will be executed. For sequences with an odd number of steps, the first run through will execute step 1, 3, 5, ..., the next run through will execute step 2, 4, 6, ..., then step 1, 3, 5, ... again, and so on.
- **Each 3rd** - Every third step will execute.
- **Each 4th** - Every fourth step will execute.
- **Random** - The steps are chosen totally at random. The same step may be chosen twice in a row.
- **Random Unique** - The order of the steps are randomized, but the same step is not chosen in the same run through. For example, if you have a sequence with 4 steps, and step 2 is chosen first, the next step will be either 1, 3 or 4.

Trigger

This controls how the sequence is triggered:

- **Sync to Host** - The sequence is synced to the host and will run as long as the host's transport is running.
- **Note** - The sequence is triggered when a MIDI note is received. The sequence will continue to run for as long as the note is playing.
- **Note 1-Shot** - The sequence will start when a MIDI note is received, but will stop at the last step (or when the note stops).
- **Note Retrigger** - Same as the Note option, but the sequence will restart when a new note is received.
- **Note Retrigger 1-Shot** - Same as the Note 1-Shot option, but the sequence will restart when a new note is received.

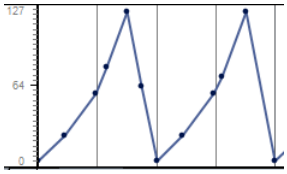
NOTE: CCStepper will not send out any CC data unless the host transport is running.

Smooth

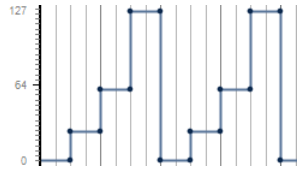
When Smooth is activated, the steps in the sequence are "smoothed out", resulting in a more natural LFO-like performance.

Here is an example with a sequence of 4 steps.

Smooth is on:



Smooth is off:



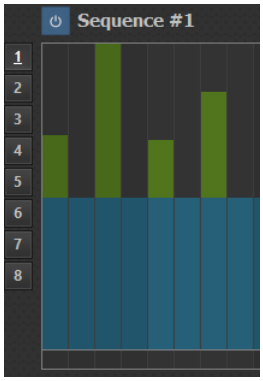
Editing the sequence data

You set the value of each step in the sequencer with the mouse. Each step can have a value between 0 and 127. Simply click, and drag up or down. While you hold down the mouse you can also drag to the left or right to set the value of multiple steps. To slow down the selection, hold down the Shift key while you drag (fine tuning).

Alternatively you can also use the mouse wheel to set a step value (makes it easier to set an exact value).

Randomize values

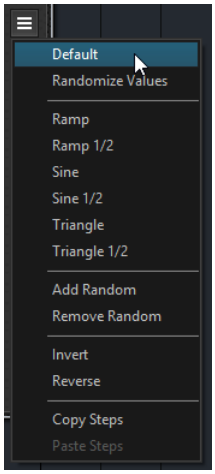
CCStepper gives you the ability to randomize the value of each step. To add a randomization range, hold down the Alt key while you change the value. The random range has a different color.



For example, if the "normal" value is 63 (blue in example above) and the "random" value is 127 (green), the actual value generated by CCStepper will vary between 63 and 127.

Sequence menu

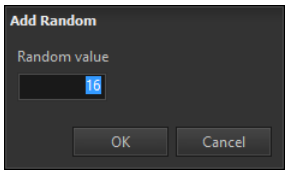
To the right of the sequencer you find the sequence menu.



This menu gives you various options to edit the active sequence. First of all, you can reset all steps values to the default value (63) by choosing **Default**, and create new values by random by choosing **Randomize Values**. Note that both commands will remove all randomization values.

You can create various step shapes with the **Ramp**, **Sine** and **Triangle** options (the 1/2 options will create step values in the 0 - 63 range instead of 0 - 127).

Add Random lets you add the same random value to all steps.



Remove Random will remove all random values.

Invert and **Reverse** will invert and reverse the sequence respectively.

Copy Steps will copy the steps to the Windows clipboard. You can then paste the steps into another sequence with **Paste Steps**.

Increase/decrease step values

You can use the up and down arrow buttons to the right of the sequencer to increase or decrease all step values (hold down the Alt key to edit the random values). Hold down the Ctrl key to add or subtract 5 instead of 1 for each click.

Shift steps left/right

You can use the left and right arrow buttons to the right to shift the steps to the left or to the right. Hold down the Ctrl key to shift the steps 5 steps at a time.

Presets

To save a preset

1. Open the main menu and choose **Save Preset**.
2. Type the name you want to give the preset, and click **OK**.
   The preset button shows the name of the preset you just saved.

NOTE: If you name the preset "**init**", it is automatically used when you choose Init from the main menu to reset the plugin parameters, or when you create a new instance of the plugin.

To load a preset

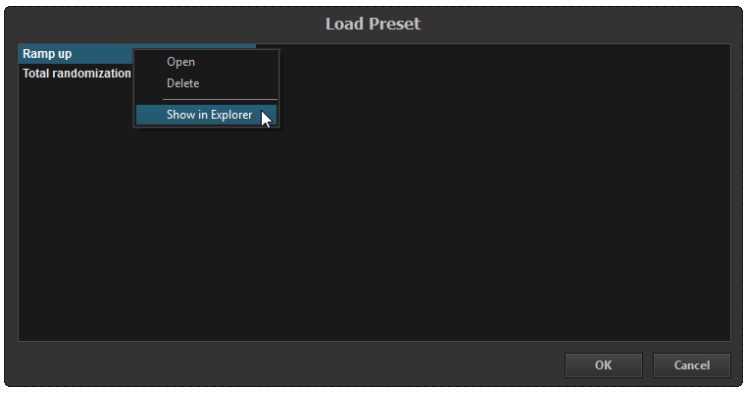
1. Either open the main menu and choose **Load Preset**, or click the preset button.
   You see the 'Load Preset' panel.
2. Select the preset you want to load and click **OK** (or you can simply double-click the preset name).
   The preset button now shows the name of the preset you just opened.

To delete a preset

1. Open the 'Load Preset' panel.
2. Right-click the preset you want to delete, and choose **Delete** from the popup menu.

To open the presets folder

1. Open the 'Load Preset' panel.
2. Right-click the preset list and choose **Show in Explorer** from the popup menu.



The presets are stored in a folder named '\CodeFN42\CCStepper\Presets' in your 'Documents' folder.

MIDI CC Teach

Use the Teach CC function to link the MIDI CC data CCStepper outputs to the desired parameter in the softsynth, effect or hardware device you want to control.

To use the CC Teach feature

1. Make sure the DAW's transport is stopped.
2. Make sure the CC# parameter is set to the correct CC number.
3. In the synth/effect you want to control, make sure you turn MIDI learn on. This is usually done by right-clicking the parameter (knob, slider, etc.) and choosing 'MIDI Learn' from the popup menu.
4. Open the main menu in CCStepper and choose **MIDI CC Teach**.
5. The knob/slider/etc you want to control should now move.
6. Open the main menu again, and choose **MIDI CC Teach** again to turn the CC teach feature off.

MIDI Control / Automation

CCStepper can be remote-controlled / automated via MIDI messages from a hardware controller, or from your DAW. MIDI learn is used to assign MIDI CC (continuous controller) messages to CCStepper's parameters (controls).

NOTE: You can assign the same MIDI CC to different parameters, but you cannot assign different MIDI CCs to the same parameter.

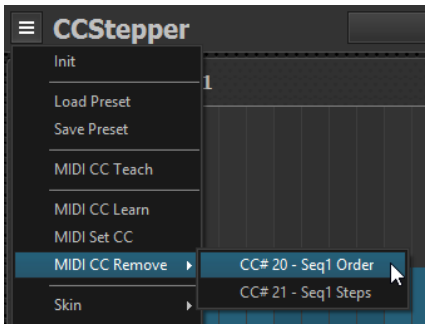
To assign a MIDI CC message with MIDI learn

1. Open the main menu and choose **MIDI CC Learn**.
2. Click on the control (for example the Rate list) you want to remote-control.
3. Move a knob or fader on your MIDI device, or make sure the MIDI device in your DAW is sending out the correct MIDI CC message.

To assign a specific MIDI CC message

1. Open the main menu and choose **MIDI Set CC**.
2. Click on the control you want assign the CC message to.
3. Enter the CC message number (from 0 to 127) and click **OK**.

This is useful if you if you know the CC message number to assign, for example a standard CC message (like CC #1 for the mod wheel).

To remove a MIDI CC assignment

1. Open the main menu and choose **MIDI CC Remove**.
   This will open a sub-menu that shows all currently assigned MIDI CC messages. Choose the MIDI CC assignment you want to remove.