

RandARP

User Guide



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

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Introduction

RandARP is a VST plugin arpeggiator with many randomization features, allowing incoming notes or chords to be manipulated in various rhythmic ways. All standard arpeggiator parameters like number of octaves, note length and note order are included, but the plugin also offers complete randomization of the velocity, gate, shift and swing parameters. In addition, you can specify a note probability and randomize the note order, the octave order, and the number of octaves. All the randomization features allows you to create more interesting and unpredictable arpeggiated sequences.

System Requirements

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

Installation

To install RandARP, simply open the downloaded zip file and extract the dll file to your VST plugin folder (RandARP32.dll if you use a 32-bit host, or RandARP.dll if you use a 64-bit host).

Setting up RandARP in your DAW

RandARP is a MIDI only VST plugin. It does not produce any sound of its own. You need to set it up so it receives MIDI data, and then route the MIDI output to the desired instrument. How easy (or even possible) it is to do this depends on your DAW's MIDI routing capabilities.

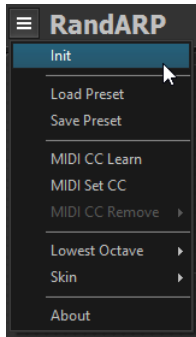
Generally, you should add RandARP to a new MIDI or instrument track. This is the same procedure you would follow adding any VST instrument in your DAW. Then you will have to route the output from RandARP to another VST instrument. If you are not sure how to do this, please refer to your DAW's documentation.

NOTE: For detailed instructions on how to set up MIDI routing in some popular DAWs, please see the [FAQ](#).

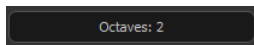
An alternative is to use a modular plugin that lets you route MIDI data between VST plugins, for example [Metaplugin](#), [PatchWork](#) or [Minihost Modular](#).

User Interface

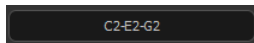
In the upper left corner of the plugin window you find the main menu. From this menu you can initialize the plugin (reset all parameters), load and save presets, configure MIDI CC assignments, customize the octave numbering, and change the current skin.



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

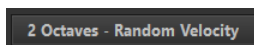


When you are not editing a parameter, the info panel shows the incoming notes (including the octave number).



NOTE: To specify whether the octaves are numbered from -2 to 7 (default), -1 to 8 or 0 to 9, make your selection from the main menu (Lowest Octave).

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.



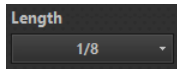
User interface controls

There are five basic types of user interface controls.

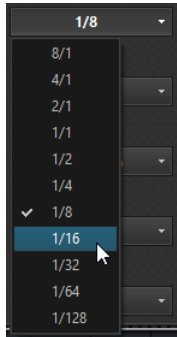
Drop-down lists

For example, Length.

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



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

Knobs

For example, Octaves.



Click and drag down to decrease the value, or drag up to increase the value. To slow down the selection, hold down the Shift key while you drag (fine tuning). You can also use the mouse wheel to change the value.

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

Numeric input boxes

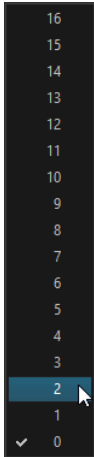
For example, Rest.



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.

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

On/Off switches

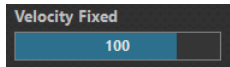
For example, Latch.



Simply click to turn the switch on or off.

Slider boxes

For example, Velocity Fixed.

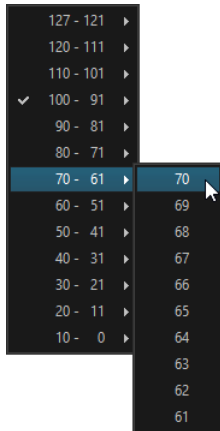


There are three ways to change the value:

- Click with the mouse, then drag to the left (to decrease the value) or to the right (to increase 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.

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- Right-click and select a value from the popup menu.



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

Editing Parameters

Most of the RandARP's parameters can be randomized. This allows you to create more interesting and unpredictable arpeggiated sequences.

Rate

The rate determines the length of each step. Possible values go from 1/128 (128th notes) and up to 8/1 (each step lasts 8 bars). The actual length of each note can be customized with the Gate parameter.

By default, the arpeggiator rate is synced to the host. Use the Speed parameter to scale the step length from 0.25x and up 4x of the rate.

Type

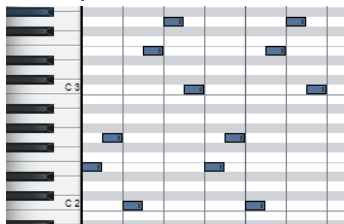
You can choose between normal, dotted or triplet times.

Note Order

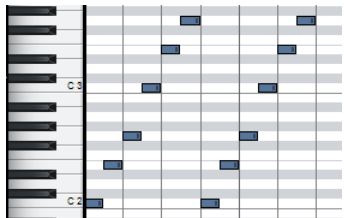
There are 16 different note order modes available which determine the way RandARP outputs notes. All example screenshots below show the result of a C major chord arpeggiated over two octaves.

NOTE: In most cases, the order of the notes depends on both the Note Order parameter and the Octave Order parameter.

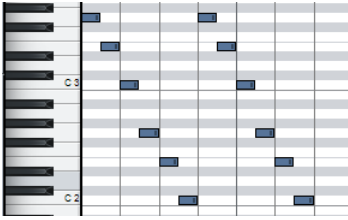
- **As Played** - The notes are generated in the same order you played them. In this example, E, G and C were played:



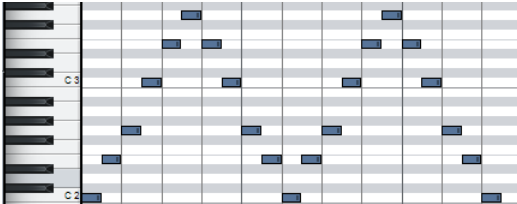
- **Up** - The notes are generated from the lowest to the highest note.



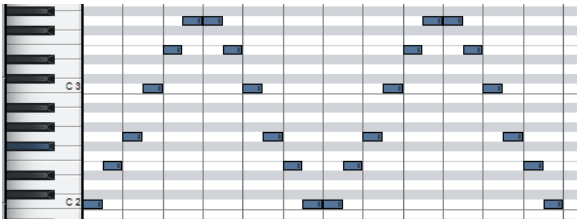
- **Down** - The notes are generated from the highest to the lowest note.



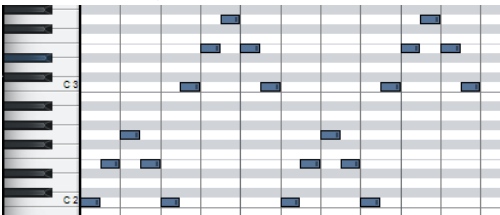
- **Up->Down** - Notes are generated from the lowest to the highest note, then down from the highest to the lowest. This will ignore the Octave Order parameter.



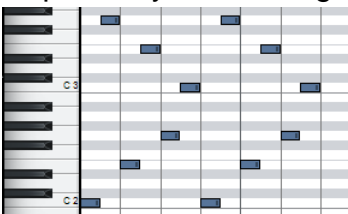
- **Up->Down 2** - Same as Up->Down, but the highest and lowest notes are duplicated. This will ignore the Octave Order parameter.



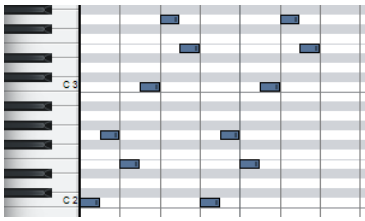
- **Up->Down Oct** - Notes are generated from the lowest to the highest, then down from the highest to the lowest, within each octave.



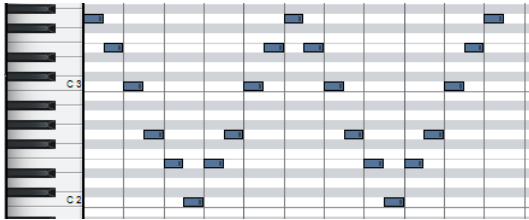
- **Up-><-Down** - Every other note is started from the lowest and highest note, respectively. This will ignore the Octave Order parameter.



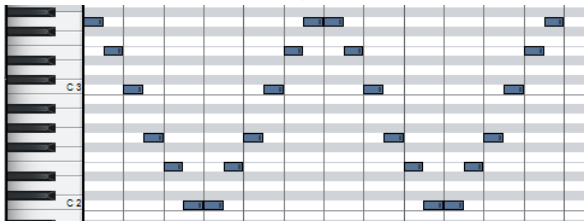
- **Up-><-Down Oct** - Same as Up-><-Down, but within each octave.



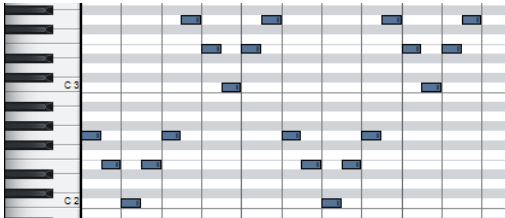
- **Down->Up** - Notes are generated from the highest to the lowest note, then up from the lowest to the highest. This will ignore the Octave Order parameter.



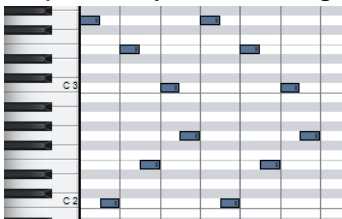
- **Down->Up 2** - Same as Down->Up, but the highest and lowest notes are duplicated. This will ignore the Octave Order parameter.



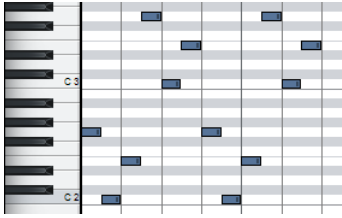
- **Down->Up Oct** - Notes are generate from the highest to the lowest, then up from the lowest to the highest, within each octave.



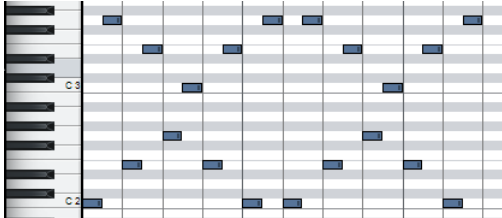
- **Down-><-Up** - Every other note is started from the highest and lowest note, respectively. This will ignore the Octave Order parameter.



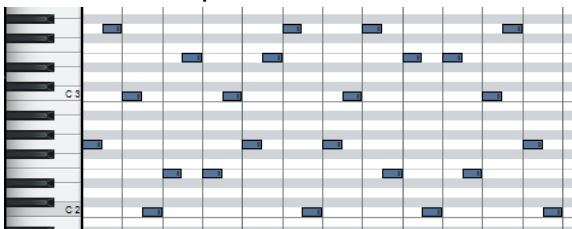
- **Down-><-Up Oct** - Same as Up-><-Down, but within each octave.



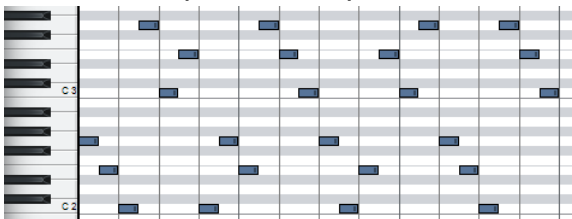
- **Xross** - Combines Up-><-Down with Down-><-Up, resulting in a pattern resembling an X. This will ignore the Octave Order parameter.



- **Random** - Completely randomizes the order of the notes. A new random pattern is generated when the sequence completes (for example, with three input notes and Octaves set to 2, a sequence consists of six notes). This will ignore the Octave Order parameter.



- **Random Once** - Same as Random, but the random pattern repeats until the input notes changes. Note that this option gives the same result as Random when the number of octaves is randomized.
- **Random Oct** - Randomizes the note order within each octave. Gives the same result as Random when Octaves is set to 1. A new random pattern is generated when the sequence completes.



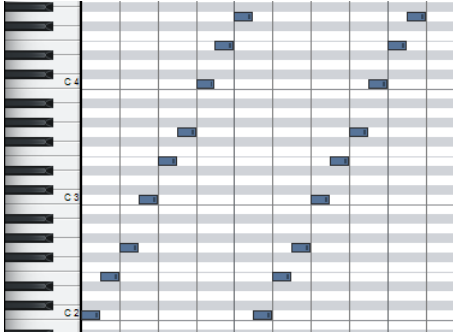
- **Random Oct Once** - Same as Random Oct, but the random pattern repeats until the input notes changes. Note that this option gives the same result as Random Oct when the number of octaves is randomized.

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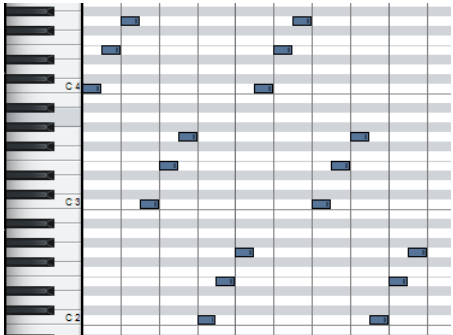
There are 7 different octave order modes available which determines the how the octaves generated by RandARP are ordered. All example screenshots below show the result of a C major chord arpeggiated over three octaves with Note Order set to Up.

NOTE: This parameter has no effect when Octaves is set to 1.

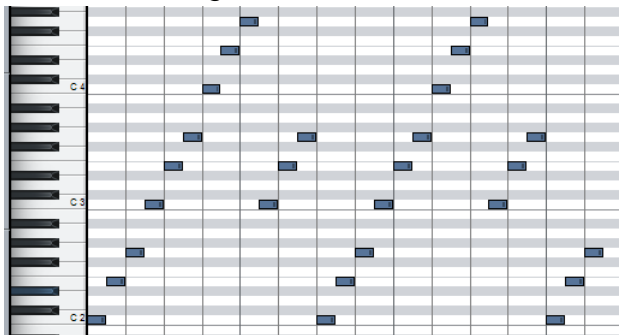
- **Up** - The octaves are ordered from the lowest to the highest.



- **Down** - The octaves are ordered from the highest to the lowest.

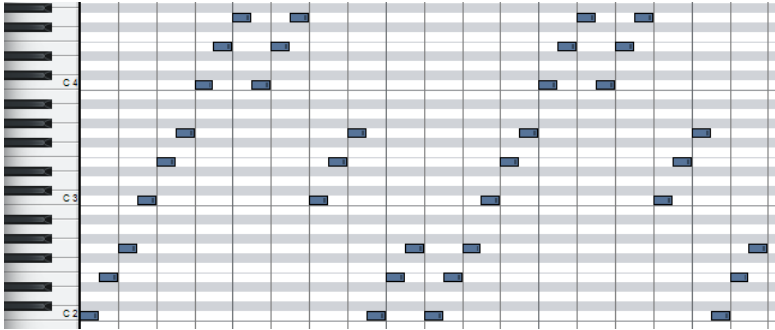


- **Up->Down** - The octaves are ordered from the lowest to the highest, then down to the lowest again.

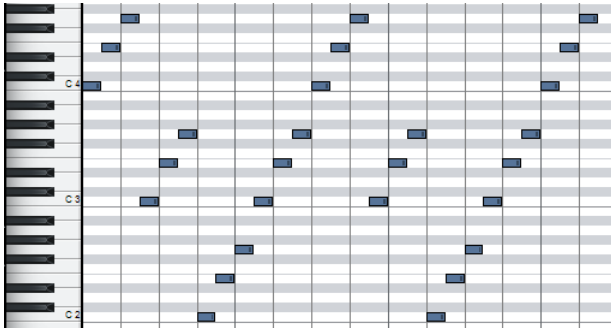


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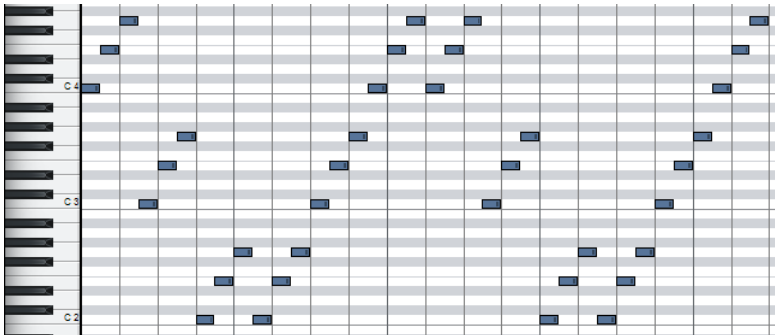
- **Up->Down 2** - Same as Up->Down, but the lowest and highest octaves are duplicated.



- **Down->Up** - The octaves are ordered from the highest to the lowest, then up to the highest again.

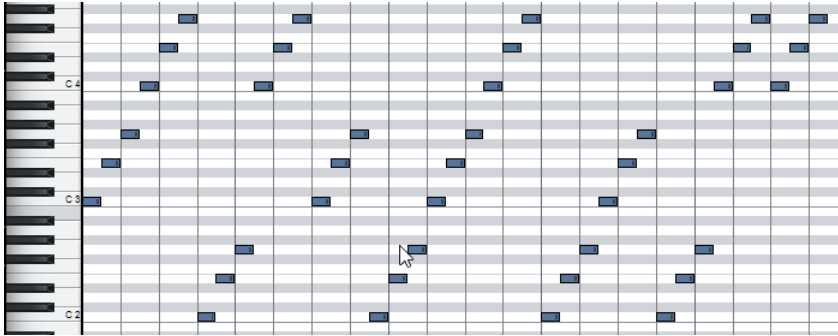


- **Down->Up 2** - Same as Down->Up, but the highest and lowest octaves are duplicated.



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- **Random** - The octave order is totally randomized. A new random pattern is generated when the sequence completes.



- **Random Once** - Same as Random, but the random pattern repeats until the input notes changes. Note that this option gives the same result as Random when the number of octaves is randomized.

Velocity Mode

This determines the velocity of the generated notes.

- **As Played** - The generated notes will have the same velocity as the input notes.
- **First** - Velocity is taken from the first input note.
- **Last** - Velocity is taken from the last input note.
- **Highest** - Velocity is taken from the input note with the highest velocity.
- **Lowest** - Velocity is taken from the input note with the lowest velocity.
- **Average** - Velocity is calculated from the average velocity of all input notes.
- **Fixed** - Velocity is based on the Velocity Fixed parameter.

NOTE: Not all synth patches respond to velocity.

Velocity Fixed

This controls the velocity of the generated notes when Velocity Mode is set to Fixed.

Transpose

The notes generated by RandARP can be transposed up or down 36 semitones (3 octaves).

Rest

The number of steps to wait before the sequence is restarted after it has completed.

Reset

When Reset is selected, the sequence will always restart when you change notes.

Latch

When Latch is selected, RandARP will continue to generate notes for the last pressed chord even after all input keys are released, until another key is pressed.

Speed

Use the Speed parameter to scale the step length from 0.25x and up 4x of the arpeggiator rate. By default, the rate is synced to the host (when Speed is equal to 1). When Speed is less or greater than 1, the arpeggiator is in "free mode" and is no longer synced to the host's tempo/grid.

For example, if Rate is 1/8 and Speed is 0.50, the length of each step is now a quarter note. If Rate is 1/8 and Speed is 2, the length of each step a sixteenth note. But you can of course use Speed to set up a step length to be in-between standard rates, for example 1.10 which will give you a step rate that is 10% faster than the selected rate.

Octaves

This specifies how many octaves the generated notes will span (from 1, and up to 5).

Octaves Random

You can apply randomization to make the note output more unpredictable. When you use randomization, the random value is added to the octaves value to create the actual number of octaves. For example, if you set Octaves to 1 and the random value to 2, the number of octaves will vary between 1 and 3. The number of octaves is recalculated each time the sequence restarts.

Velocity

You can scale the velocity by a specified percentage. The scaling can be set to a value between -100% and +100%.

Velocity Random

You can apply randomization to make the velocity scaling more unpredictable. When you use randomization, the random value is added to the scale value to create the actual scaling percentage. For example, if you set the scaling value to -20% and the random value to 40, the actual scaling value will vary between -20% and 20%.

Gate

The Gate parameter sets the length of each note as a percentage of the step length (determined by the Rate parameter). For example, when Gate is set to 100% the note length is the same as the step length. When Gate is set to -50% the note length is half

of the step length, and when Gate is set to +200% the note length is twice the step length. Setting Gate to above 100% will create overlapping notes (legato mode).

Gate Random

Use randomization to make the note length more unpredictable. When you use randomization, the random value is added to the gate value to create the actual gate percentage. For example, if you set Gate to 100% and the random value to 20, the actual note length will vary between 100% and 120% of the step length.

Shift

Shift specifies the amount the notes are shifted (or moved) left (negative values) or right (positive values). Setting shift to the minimum value of -50% will shift the notes half of the step length to the left (will play early), while setting shift to the maximum value of +50% will shift the notes half of the step length to the right (will play late).

NOTE: The Shift parameter has no effect when "free mode" (Speed <> 1) is enabled.

Shift Random

Use randomization to make the note shifting more unpredictable. When you use randomization, the random value is added to the shift value to create the actual shift percentage. For example, if you set Shift to -5% and the random value to 10, the actual shift percentage will vary between -5% and +5%. Shift combined with random will create a "sloppy" feel. In general, it is recommend to not set the randomization too high.

Swing

Swing specifies how much every other note is delayed. Setting swing to the maximum value of 100% will delay the note by half the step length. The note is also shortened by the same amount.

Swing Random

Use randomization to make the swing more unpredictable. When you use randomization, the random value is added to the swing value to create the actual swing percentage. For example, if you set Swing to 10% and the random value to 10, the actual swing percentage will vary between 10% and 20%. In general, it is recommend to not set the randomization too high as this will create a "sloppy" feel.

Note Probability

This determines the probability of a note being generated, in percent. Usually, you would want to keep this fairly high (above 90%). This setting works best with short notes (1/16th notes, or shorter) in combination with a delay.

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

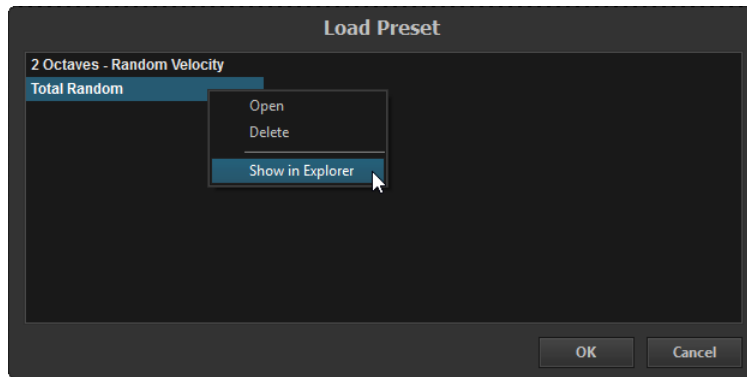
1. Either open the main menu and choose **Load Preset**, or click the preset button.
You see the 'Load Preset' panel.
2. Select the preset you want to load and click **OK** (or you can simply double-click the preset name).
The preset button now shows the name of the preset you just opened.

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\\RandARP\\Presets' in your 'Documents' folder.

MIDI Control / Automation

RandARP 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 RandARP'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 Velocity knob) 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), or you use [CCStepper](#) to control parameters in RandARP.

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.

