StringWERK

e instruments

User manual by musicandtext.com

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1 Welcome to StringWERK

StringWERK, a highly inspiring and authentic string section for Reason, provides a new level of realism and playability to Rack Extensions.

Bringing a new warmth and intimacy to your tracks, StringWERK is easy to use and captures perfectly the sound and playing of a small premier string ensemble, ideal for pop and rock productions.

StringWERK boasts a variety of exciting string articulations and presets, but it's far from a simple sample library: it's an inspirational production tool and performance instrument in its own right.

StringWERK consists of 4 violins, 3 violas, 2 cellos and 2 basses. It is simple to use, the instrument groups are mapped across the full keyboard range, with double bass on the lower keys and violins at the top end.

Out of the box, StringWERK is loaded with articulations logically grouped in 3 preset patches: Sustain, Expressive, and Short, and features true legato transition samples for gloriously smooth legato lines as well as release samples for realistic note release.

The 4th preset patch is the unique Animator, working your chords and transforming them into energetic and musical staccato, spiccato and pizzicato phrases - choose from a large number of presets or create your own groove.

In addition you get 37 combinator patches to use as presets or edit to taste, combining Reason's synth and processing units with the new wizardry of StringWERK.

We hope you enjoy using StringWERK and we would be delighted to hear your feedback and ideas!

2 StringWERK — Key Features

- **Inspirational studio strings section for Reason**
- **Loaded with articulations including sustain, accented sustain, staccato, spiccato, pizzicato, tremolo, trills, crescendo, sforzando, slides - grouped in three presets and selectable via keyswitch or controller**
- **Polyphonic and Legato mode with true legato samples**
- **Authentic release samples**
- **Versatile dynamics control via velocity or modulation wheel**
- **Editable Animator for seamless custom rhythm phrases**
- **Effects section with EQ, Compressor, Delay and a Convolution Reverb**
- **37 combinators across four categories combining Reason's synth and processing units with the craftsmanship of StringWERK**

3 Basic Control Types

This chapter introduces the control types that you will use in StringWERK.

On/Off Buttons

Click once to turn on, again to turn off. All buttons change their background or center color when actuated, which reflects the new state. Retrigger in the Animator patch and the effect On/Off buttons are examples for this control type.

The Equalizer in On, the Compressor is Off.   Retrigger is Off.

Selector Switches

Selector switches are used to select one of two or more available exclusively usable options and can have different shapes (round, oval or square). Click to select the desired option.

Sustain is selected   Arpeggio direction Down is selected   Slide is selected
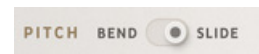
Selector switch examples

Knobs

Knob examples

➔ **To change a knob value, click on it and drag up to move the knob clockwise, or down to move it counter-clockwise.**

➔ **Knobs can be fine-tuned by holding down your computer keyboard's [Shift] key as you move the knob.**

➔ **You can use [Ctrl] + Click (Windows) or [Cmd] + Click (Mac OS X) to reset any available knob to its default value.**

Spin Controls

Spin controls are pairs of two small horizontal or vertical arrows which provide the option for selecting items. Click on either arrow to step through the available items.

• **The left (or down) arrow lets you step backwards through the list.**

• **The right (or up) arrow lets you step forward through the list.**

Spin Control examples

4 Sustain Preset Patch

The Sustain preset patch contains the articulations Sustain and accented Sustain (Accent) and features true Legato samples. Scoops and Falls articulations can be activated at any time using the Pitch bend wheel.

The user interface of all StringWERK preset patches is divided into three main sections:
Articulation on the left, Performance in the middle and Effects on the right.
We will use the Sustain preset patch as an example for the structure.

The Articulation section	The Performance section	The Effects section

Articulation Section

In this section, you can select the desired articulation type and also set up keys on your connected MIDI keyboard or controls on your external MIDI controller for switching between the available articulations. You can even set up the pitch bend wheel to control the Scoop and Fall articulations, no matter which articulation is currently selected.

Selecting an Articulation

Various options are available to select an articulation:

- **You can directly click an articulation switch.**
  The articulation switch will get dark grey, and the respective articulation will become audible when you play.

The Sustain articulation is selected and assigned to C-1, see next page.

- **If you happen to use a large MIDI keyboard, you can press one of the white keys in the C-1 octave to select an articulation. To find out which key you must press, look up the field next to the desired articulation's selector switch.**
  Key articulation assignments can be changed. This is described under this list of options.

- **Most small keyboards do not have a C-1 octave. In this case you can simply transpose your keyboard downwards to get access to the keyswitch notes.**

- **You can also use the C-1 octave on Reason's on-screen keyboard for articulation switching.**

- **If you have a programmable external MIDI control device, you can assign the C-1 MIDI note numbers to its controls.**
  For the white keys in the C-1 octave, these are usually the MIDI note numbers 12, 14, 16, 17, 19, 21and 23.

- **You can also manually insert the switching note in your Reason track.**

Changing Key Assignment

You can assign any white key in the C-1 octave (C, D, E, F, G, A, B) to an articulation.

➜ **To do this, click the up- or downward pointing arrow of the spin control to the right of the respective articulation button. If you select the same MIDI key for several articulations, only the topmost of these will be used.**
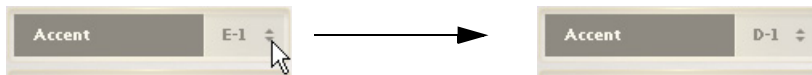
Example: Clicking the downward spin control once changed the assigned key.

Pitch Switch

This switch - available in all preset patches - lets you set up the pitch wheel functionality.
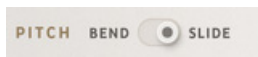
- **When you set the switch to the Slide position, you can use the pitch wheel to activate the articulations Scoops and Falls during play.**

  Scoop and Falls articulations are used often in soul and disco music. Pitch bend up will trigger a scoop on the next note/chord you play, pitch bend down will trigger a fall on the next note/chord. Letting go of the wheel, so that it snaps back to its center position, will bring you back to the previously used articulation.

- **When you set the switch to the Bend position, the pitch bend wheel will behave as usual, i.e. will bend the pitch by up to +/- two semitones.**

Performance Section

At the top of this section you find the usual Reason controls for selecting, searching and saving patches.

Dynamic

In the preset patches Sustain, Expressive and Short, under the heading Dynamic, you can find a selector switch pair named Velocity and Mod Wheel. You can use one or the other to control dynamic.

- **With velocity on, the dynamic of the strings sound will depend on your keyboard velocity, this works great in particular when you play short articulations.**

- **Using the modulation wheel, you get a more precise control, especially when applied to sustained articulations, which lets the strings sound even more natural.**
  Note that you can change the dynamic of a note even while you are holding it, something not possible with velocity dynamics and perfect for dynamic movements on long notes.

➜ **Try out and decide for yourself what serves your working method best.**

Dynamic Display
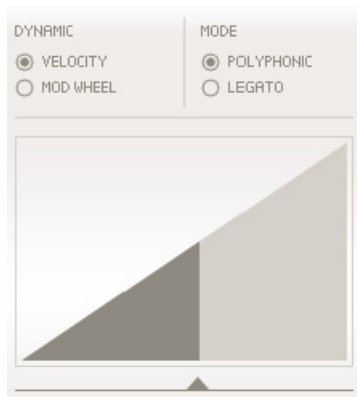
This view only-display in the center of the Performance section reflects the velocity or modulation data of your performance.

Mode - Polyphonic or Legato

The Sustain preset patch features a second selector switch pair under the Mode heading.

➜ **By clicking one of these switches - thereby disabling the other - you can toggle between polyphonic mode and monophonic legato play. StringWERK utilizes genuine legato samples for all intervals to create smooth and realistic sounding string lines.**

Attack and Release knobs

The Attack and Release knobs let you adjust the instrument's envelope.

- **The more you increase Attack, the softer and slower a note or chord you play will set in.**

- **The more you increase Release, the longer the decay phase of a note or chord you play.**

  StringWERK utilizes genuine release samples. Therefore, its string decay sounds are very realistic. These samples are active when you set the Release knob to its default setting.

➜ **To set the knob - or any other knob in StringWERK - to its default setting use [Ctrl] + Click (Windows) or [Cmd] + Click (Mac OS X). When you shorten or lengthen the Release setting, the release samples are switched off.**

Effects Section

This section is home to the internal effects Equalizer, Compressor, Delay, the Convolution Reverb as well as StringWERK's Master volume knob.

Note On

The small Note On "LED " at the top of this section lights up when MIDI notes arrive at this preset patch.

Effect On/Off Buttons

Located next to its name, each effect has its own On/Off button.
If this is set to Off, the audio signal bypasses the effect.

Equalizer

The StringWERK Equalizer lets you decrease or increase the levels of low mid and high frequencies in the string sound to your liking. The Low, Mid and High knobs are all gain controllers for the corresponding frequency bands with fixed frequency and bandwidth:

Low	100 Hz Shelving filter
Mid	2.4 kHz Peak filter
High	6.8 kHz Shelving filter

Compressor

StringWERK also features a compressor. You can use it to control the dynamics of the resulting audio signal. A compressor narrows the dynamic range of an audio signal. It does this by reducing the level of loud signal peaks. As a result (and when you make up for the loss in output level by increasing output volume using the Master knob) the level of quieter signal parts will be increased compared to the louder peaks.

Threshold

This is used to set the level in dB above which compression sets in. All level peaks below the set threshold level pass unaffected.

Ratio Knob

Ratio determines the amount of gain reduction. It is set as a ratio value, hence the name. For example, if a signal peak exceeds the set Threshold level by 4dB and ratio is set to 4:1, the compressor output signal will only exceed the threshold level by 1dB and the gain level will be reduced by 3dB.

Attack Knob

Use this knob to define the time it takes for the compressor to reach the set ratio value.

Delay
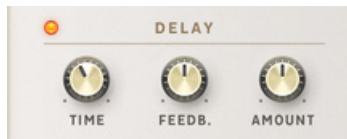
The Delay unit can be used to add echo to your string sound. The unit has three knobs.

Time Knob

The Time knob is used to adjust the desired echo repeat note value and it syncs to Reason´s tempo.

Feedback Knob

The Feedback knob is used to adjust how long the echoes are repeated.

Amount Knob

The Amount knob controls the level of the Delay effect.

Reverb

StringWERK includes a convolution reverb and utilizes a real concert hall impulse response.

Length Knob

This knob is used to adjust the desired reverb length.

Dry/Wet Knob

The Dry/Wet knob is used to adjust the desired ratio between unprocessed (dry) and processed (wet) signals.

Master Volume

This knob is used to control StringWERK's output level.

5 Expressive Preset Patch

The Expressive patch includes the expressive articulations Tremolo, Slow and Fast Sforzando, Semi and Whole Trill as well as Slow and Fast Crescendo.
All articulations available in StringWERK are described in the table on .

Expressive patch

6 Short Preset Patch

As its name implies, the Short patch provides the articulations Staccato, Spiccato and Pizzicato.
To find out more about these articulations, look up .

Short patch

7 Animator Preset Patch

The Animator, located in the window center, is a powerful tool to create instant rhythmic phrases. All articulations available in StringWERK are described in the table on page 13.

Animator patch

Animator Specific Details

Use the Arpeggio Type switches to select the desired Arpeggio type.
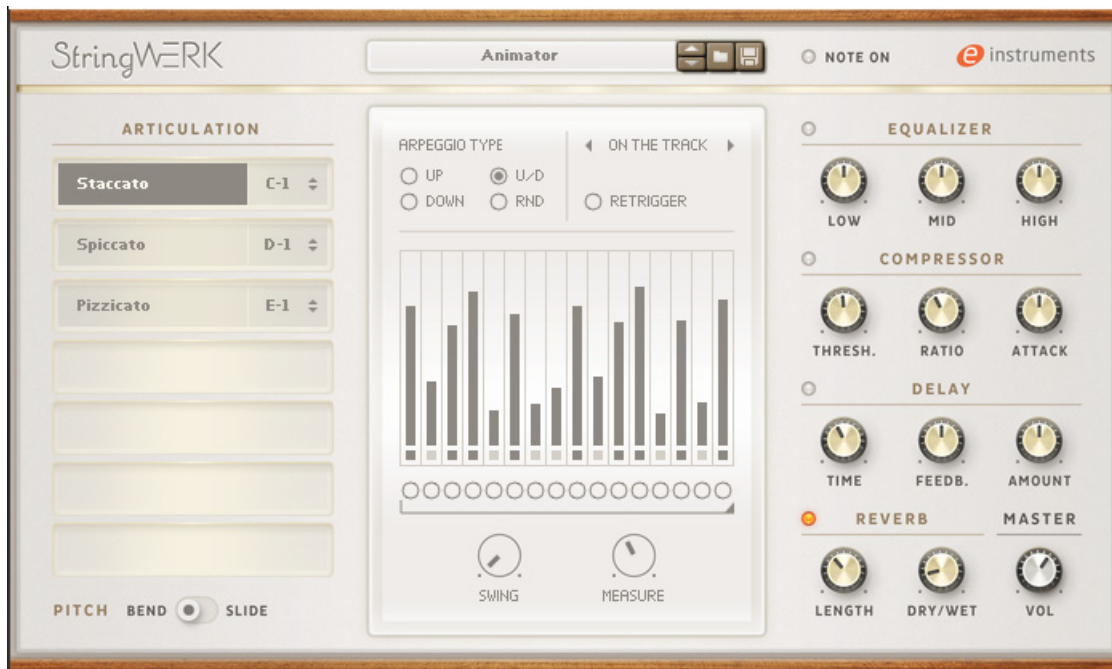
Use these spin controls to select one of the available presets.

Use this On/Off button to select the Retrigger mode.

You can point on each of these Sliders and drag vertically to set the velocity level for each step in the sequence or arpeggio.

Each of these buttons can be set to chord (button dark grey) or arpeggio play (button light grey).

Use the Swing knob to introduce a swing factor.

During playback, the current step within sequence or arpeggio playback gets visible here.

Point and drag this triangle to set up a loop bracket that includes the number of desired sequence/arpeggio steps.

Use the Measure knob to set up the note value for all steps. Available: quarter, eighth, sixteenth notes and triplets.
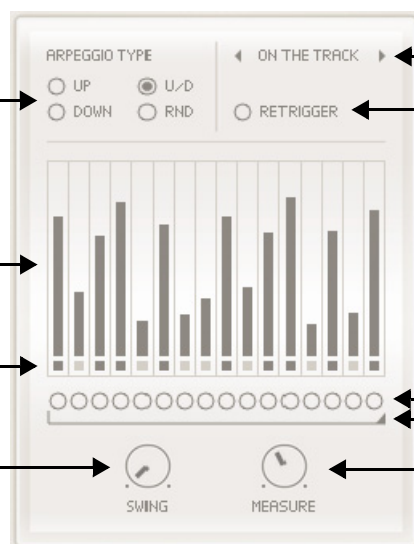
Arpeggio Type

An arpeggio is a playing technique where the notes of a chord are separately played in sequence rather than simultaneously. The Animator features four different types of arpeggio and you can select one of the selector switches to define the type of arpeggio the Animator should play.

Arpeggio Type section

The available options:

Up	The notes are played starting with the lowest until the highest note has been reached, then starting again with the lowest and so forth.
Down	The notes are played starting with the highest until the lowest note has been reached, then starting again with the highest and so forth.
Up and Down (U/D)	The notes are played starting with the lowest note until the highest note has been reached, then immediately turning direction towards the lowest note, there again turning direction and so forth. Note: Each note - also those at the highest and lowest positions - is only played once.
Random (RND)	The notes are played in random order.

Preset Selector

The Animator features 29 factory presets that you can select using the preset selector spin controls.

Preset selector spin controls

Retrigger Button

This button can be used to to determine the starting state of an animator phrase.

- **If you activate the Retrigger function, the Animator restarts the phrase beginning on step 1 as soon as you press any new key on your keyboard. This can be used very effectively, for example, if a piece of music contains inserted measures in another meter.**

- **When you deactivate Retrigger, the Animator continues to play the phrase, and you can introduce new notes.**

- **In both modes, retriggering will happen as soon as you release all keys and then play a new note or chord.**

➤ If you happen to own a sustain pedal, you can use it to hold the Animator notes.

Preset Editing

Preset editing works like this:

1. **Select one of the available presets and edit it by changing parameters.**
   As soon as you start to change the first parameter, the patch name is changed to Custom. The same happens when you start with the Init patch.

2. **To store the preset, just save the Animator patch under a new name.**

Sliders, Chord/Arpeggio Buttons, Current Step Display & Loop Bracket

Using the Sliders, you can adjust the level of each individual step in the Animator sequence and thereby create the desired dynamics, rhythms, and rests.

➜ **To edit the velocity of a step in the sequence, click at the desired vertical position or drag the respective Slider there.**
   You can also simply drag across bars, thereby creating a velocity curve in one go.

Sliders

Chord/Arpeggio Buttons

Current Step Display

Loop Bracket handle
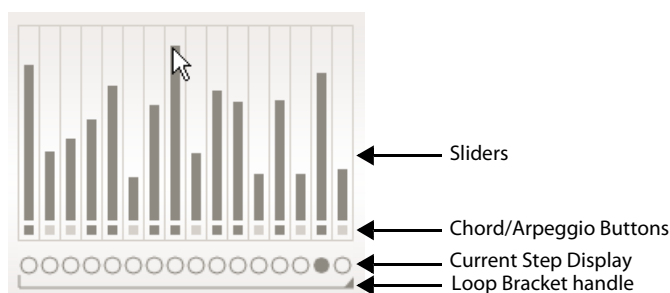
The small square Chord/Arpeggio buttons below the Sliders let you define the status of each step:
single arpeggio note or chord (provided you play - or have recorded one).

➜ **Click on each button as desired.**
   The square button will change its colour:

- **Dark grey means that the step will play all currently played notes as a chord.**

- **Light grey means that the step will play one of the currently played notes, based on the selected arpeggio type.**
   Which note it will be is controlled by the selected arpeggio type.

The Loop Bracket is used to set up the number of steps in the Animator sequence.

➜ **Drag the small triangle on the right of the Loop Bracket to the desired end position.**

Measure Knob

The Measure knob lets you define a note value for the arpeggio or chord sequence.

➜ **Click and drag upwards or downwards to select the desired value.**
   The available values will get visible.
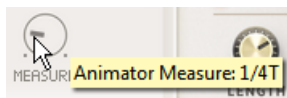
These note values are available:

Value	Corresponding note value	Value	Corresponding note value
1/4	Quarter notes	1/8T	Triplet eighth notes
1/4T	Triplet quarter notes	16	Sixteenth notes
1/8	Eighth notes	16T	Triplet sixteenth notes

Swing Knob

With the Swing knob, you can alter an even rhythm to a shuffle or swing rhythm.

➤ Swing always relates to the currently selected Measure knob value.
Example: When you set the Measure knob value to eighth note (1/8) and the Swing knob value to 100%, two successive steps will not be played as eighth notes but rather as a triplet quarter note (1/4T) followed by a triplet eighth note (1/8T).

➔ **Adjust the Swing control knob, and you will see a percentage value below the knob.**
You can set a percentage value between 0% and 100%.

8 String Articulations Types

Articulation	Available in Patch	Explanation
Sustain	Sustain	Sustains one or more notes. This articulation variant is effective to create thick, atmospheric passages. This articulation type features gentle and therefore nearly seamless transitions, which you can support by a similar playing technique.
Accent	Sustain	During this articulation variant, the played note(s) are accented at the start and then sustained at a steady and slightly softer volume. This articulation is somewhat similar to sustain, however it has a more greatly accented transient effect at the start of the pitch.
Legato	Sustain	Italian: tied together. During this musical articulation style, the notes of a melody are played as if tied to one another without an acoustic rest or interruption between the notes. Here you have to overlay the first played note with the next note within an octave. StringWERK features true legato samples for all intervalls up to an octave for realistic note transitions.
Tremolo	Expressive	Italian: trembling. String instruments playing this articulation use their bow to quickly play up-bow and down-bow on a single pitch.
Sforzando Slow	Expressive	Italian: Strong emphasis. The Sforzando articulation starts loud, then suddenly quietens and finally increases to an abrupt end.
Sforzando Fast	Expressive	
Trill Semi	Expressive	A fast and continuous change between two notes that have an interval of a semitone. A musician plays a trill by quickly moving her/his fingers on the string instrument's fingerboard.
Trill Whole	Expressive	A fast and continuous change between two notes that have an interval of a whole tone. A musician plays a trill by quickly moving her/his fingers on the string instrument's fingerboard.
Crescendo Slow	Expressive	Italian: growing = growing louder. This articulation achieves a continual increase in volume. The variants that are available here have a relatively abrupt end when the crescendo ceases. The volume, which increases to its climax, can be reached either quickly (Cresc Fast) or slowly (Cresc Slow). Both speeds are pre-determined.
Crescendo Fast	Expressive	
Staccato	Short & Animator	Italian: separated. Staccato is an articulation technique characterized by an accented start of each pitch and a short, truncated end. This technique can feature constantly changing bowing directions.
Spiccato	Short & Animator	Italian: bouncing. During this articulation technique, the musician places the bow upon the strings after each separated note in a bouncing manner. The bow returns lightly like a spring to the strings after each stroke.
Pizzicato	Short & Animator	Italian: plucked. During this articulation technique, the strings are not bowed, but rather plucked by the musician's fingers. The bow is normally still held in the plucking hand, as pizzicato passages are often alternated with bowed passages.
Fall	All Main Patches	A drop of the pitch level. Instead of fully intoning the note, its starting pitch is simply suggested only to be dropped by a whole tone. Fall and Scoop are often used in jazz and pop music. In StringWERK, you can use them by setting the Pitch switch to Slide and turning your Pitch Wheel downwards or upwards.
Scoop	All Main Patches	An increase of the pitch level. Instead of fully intoning the note, its starting pitch is simply suggested only to be increased by a whole tone.

9 Credits

Produced and engineered by Thomas Koritke

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