

SESSION GUITARIST

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# *Electric Sunburst*

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Special thanks to the Beta Test Team, who were invaluable not just in tracking down bugs, but in making this a better product.

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# 1 Welcome to **ELECTRIC SUNBURST**

Thank you for purchasing SESSION GUITARIST – ELECTRIC SUNBURST, an electric guitar strumming, riff and arpeggio pattern based sample library powered by KONTAKT. This document will provide you with instructions and advice on how to use the library, as well as some additional information.

We hope that you will be truly inspired by using SESSION GUITARIST – ELECTRIC SUNBURST.

## 1.1 About **SESSION GUITARIST – ELECTRIC SUNBURST**

SESSION GUITARIST – ELECTRIC SUNBURST, or ELECTRIC SUNBURST, as we will call it in this manual, is a pattern-based guitar library designed for ease of use in songwriting and music production. Its samples originate from a carefully selected instance of the iconic single-cut-away, double humbucker electric guitar. The instrument was recorded through Universal Audio Solo 610 preamps, whose bold transient reproduction and tube saturation prepared the guitar for further effects processing with virtual amps, cabinets and effects. To enable you to freely combine the two pickups, the individual signals were routed through two separate outputs and recorded through two separate preamps. In addition, for greater sonic variability, a small membrane condenser microphone was mounted directly above the strings to capture the sound of the plectrum hitting the strings.

The signals were then converted by the SPL Madison analog-to-digital converter, and fed into an RME MADiface XT via MADI. Thanks to the superior tonal balance of the instrument, it was not necessary to add further effects like EQ or compression. When playing the instrument through high quality guitar amp and cabinet emulations, the sound will be as true to the original as technically possible.

The ELECTRIC SUNBURST library consists of one single KONTAKT instrument, containing a total of 154 patterns covering a wide selection of musical genres and playing styles, such as strumming, picking of arpeggiated chords with fingers and plectrum, and pre-recorded riffs. On top of that, all the included arpeggio patterns can also be performed in flageolet playing technique with both plectrum and fingers. The included patterns were performed live by professional studio guitarists Andreas Dombert, Joschi Joachimsthaler and Christoph Bernewitz. The

patterns are grouped as “songs”, each of which contains 6-8 patterns that go together well. You can select patterns via key-switches and play them as chords on your MIDI keyboard. Pattern playback will always stay in sync with your host project.

Regarding sound options, ELECTRIC SUNBURST delivers the full flexibility of the original instrument: selection and volume control of the included pickups, individual tone control per pickup, and a microphone signal that can be added to enhance the pickup signals. These combined source signals are routed through a signal chain of up to seven audio effects, comprising a selection of guitar effects pedals, amps, and cabinets, as well as professional-grade reverb and delay units. Like its acoustic predecessor, STRUMMED ACOUSTIC 2, ELECTRIC SUNBURST provides a true doubling mode. Depending on the selected pattern, it can be played over a pitch range of almost four octaves.

The key feature of ELECTRIC SUNBURST is its revolutionary playback engine. You can seamlessly switch between different patterns, and also alter the dynamics in real-time, thus creating true-to-life musical performances. In contrast to most pattern-based instruments, the number of available chord types is virtually endless. Because all nuances of the original performance, such as exact timing and dynamics, are preserved, you will notice that the instrument feels very natural and organic. All of the integrated patterns can be played over a wide tempo range in an outstanding sound quality.

## 1.2 Document Conventions

This document uses particular formatting to point out special facts and to warn you of potential issues. The icons introducing the following notes let you see what kind of information can be expected:



The speech bubble icon indicates a useful tip that may often help you to solve a task more efficiently.



The exclamation mark icon highlights important information that is essential for the given context.



The red cross icon warns you of serious issues and potential risks that require your full attention.

Furthermore, the following formatting is used:

- Text appearing in (drop-down) menus (such as *Open...*, *Save as...* etc.) in the software and paths to locations on your hard disk or other storage devices is printed in *italics*.
  - Text appearing elsewhere (labels of buttons, controls, text next to checkboxes etc.) in the software is printed in **blue**. Whenever you see this formatting applied, you will find the same text appearing somewhere on the screen.
  - Important names and concepts are printed in **bold**.
  - References to keys on your computer's keyboard you'll find put in square brackets (e.g., "Press [Shift] + [Enter]").
- ▶ Single instructions are introduced by this play button type arrow.
- Results of actions are introduced by this smaller arrow.

## 2 Using **ELECTRIC SUNBURST**

The **ELECTRIC SUNBURST** instrument is designed to be played using a MIDI keyboard. The patterns are triggered and selected by MIDI, allowing for fast arranging.

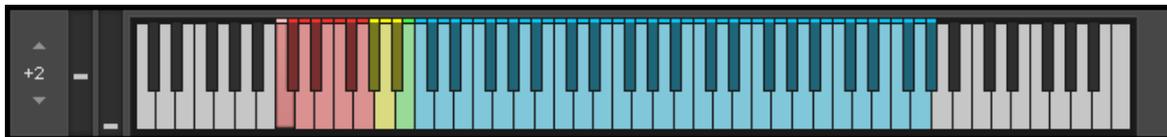
Patterns will automatically sync to the master, or host tempo. The patterns in this library can be played at any tempo between ca. 60-65 bpm and up to 160 bpm and even above. Since there is no time-stretching involved in the process, you will always hear the patterns in the highest possible quality.



The patterns are based on actual recordings by a professional studio guitarist, so they sound best in the typical tempo range preferred by most guitarists.

### 2.1 Pattern Selection and Playback

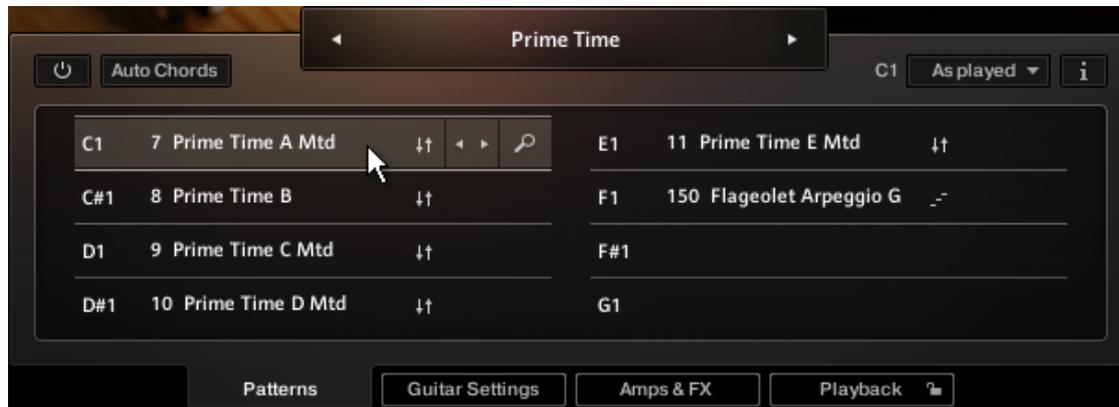
Up to eight patterns can be assigned to chromatic keyswitches from C1 to G1 (this process is described in section [↑3.2, The Pattern Browser](#)). These keyswitches are displayed as red keys in the **KONTAKT** on-screen keyboard. If no pattern is assigned to a slot, the corresponding key will have no color.



The **KONTAKT** on-screen keyboard displaying the keyswitches for patterns (red), endings (yellow), and slides (green). Chords can be played in the blue key range.

- To **select a pattern using your MIDI keyboard**, press the corresponding keyswitch MIDI note.

- To **select a pattern via the user interface**, click on the pattern you wish to use.



- To **play a pattern**, play chords on your MIDI keyboard. After releasing the keys, playback will be stopped within a specified note duration (see the Latch Mode section in chapter [↑6, The Playback Page](#)).
- To **stop the playback**, either trigger one of the three endings (see section [↑2.3, Playing Endings and Slides](#)) via keyswitch, or release all keys on your keyboard.

Because the transitioning from one pattern/chord to another is always legato (without breaks), it is best to make changes a little before the intended position, so that the engine is able to anticipate and add any requested effects (e.g. fret noise). The switch will occur seamlessly at the nearest possible position. Find more information in chapter [↑7, Tips and Tricks](#).



If available, “Chase Events” should be enabled in your DAW settings; this will ensure that the engine gets proper note information on sequencer start or cycle jumps.

## 2.2 Playing Strummed or Arpeggiated Chords and Riffs

ELECTRIC SUNBURST offers three different pattern types and each type reacts to incoming MIDI notes in a slightly different manner:

- **Strumming patterns:** Strumming patterns are based on recorded loops. If you play more than one single note, additional single notes will be added on top of the originally recorded loop. For best results, do not play too many notes a time.
- **Arpeggio patterns:** When playing arpeggio patterns, the playback engine analyzes the incoming chord and allocates the individual notes to different strings of the guitar. The more notes you press on the keyboard, the more sophisticated the resulting arpeggio will sound. Therefore, playing up to six notes at a time can lead to interesting variations. Depending on the selected pattern, several notes of an incoming MIDI voicing will be performed as hammer-ons and pull-offs on a single string.
- **Riffs:** Riffs come as pre-recorded performances. However, they adapt to incoming chords by chromatically adjusting individual notes of the riff to the incoming chord. For example, if the preset riff contains minor thirds and sevenths, pressing a Cma7 voicing on the keyboard will cause the playback engine to adapt the pattern in such a manner, that the minor third is replaced by a major third and the minor seventh is replaced by a major seventh.

ELECTRIC SUNBURST recognizes all intervals, as well as a great variety of chords, including major, minor, no-third, diminished, augmented, half-diminished, various suspensions, options and alterations, and even slash chords (e.g. C/E, D/C, Dmi7/F, Ami/E, etc.). You can also hold a chord or a interval with your left hand while playing a melody on top with your right hand, or the other way round: say you hold a fifth interval in your right hand while you play different bass notes in your left hand, which is especially well suited for the arpeggio patterns. Generally, the instrument tries to play everything in the very pitch range you press it. This leads to a virtually endless number of available chords and voicings.



The chord detection engine does not like overlapping notes, because an overlap would technically mean that two different chords exist at the same time. To avoid those overlaps, fully release a chord, or some notes of it, shortly before you play new ones.

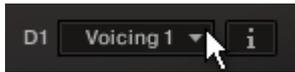
When playing arpeggio patterns, you can trigger slide transitions between different chords or voicings by hard pressing the newly added keys: The next suitable note of an arpeggio pattern will start with a slide if it is being played with a velocity greater than 110.

If you are less familiar with playing chords on a piano or keyboard, you have two additional options:

- make use of an intelligent voicing generator, and/or
- activate the Auto Chords mode.

## The Voicing Generator and Auto Chords

- To **enable or disable the voicing generator**, select a pattern, and then click on the Voicing drop-down menu.



Each pattern offers five individual, pre-defined voicings that suit it well. If you press only one single key, you will hear the unaltered voicing preset. If you press thirds, sixths, sevenths and/or other options, the voicing preset will be adapted accordingly.

- To **take full control of your voicings**, disable the voicing generator by selecting “as played”.
- To **enable or disable the Auto Chords mode**, click on the little power button next to the [Auto Chords](#) button. The Auto Chords mode can be combined with the voicing generator and provides the most basic chords (major and minor as well as some options), auto-mapped and auto-transposed on the white keys.



The Chords Panel with the key set to G major. Thus, the root pitch G is mapped to the original C key; all other pitches are mapped (transposed) consequently.

- To **show or hide the Auto Chords Panel**, click on the [Auto Chords](#) button.



- To **set the key of your song**, select the key and mode from the drop-down menus. This will transpose/shift the chord layout such that, in case of a major key, the root pitch will always be assigned to the original C key; in case of a minor key, the root pitch will always be mapped to the original A key.

- To **play chords in the Auto Chords mode**, simply click or play a single white key anywhere in the chord range (see keyboard layout of section [↑2.1, Pattern Selection and Playback](#)). This will play the chord labeled on that key. In other words, no matter which key and mode you choose, you can always play the seven diatonic pitches (plus the diminished seventh pitch) with the white keys from C to B (plus the B flat key, which is represented as a white key as well).
- To **add options or suspensions**, click, or play and hold, any of the labeled black keys. To remove an option or suspension, click the corresponding key again, or release that key on your MIDI keyboard.
- To **exclude the Auto Chords settings from Songs or snapshots**, click the lock icon in the top left corner of the Auto Chords Panel (see section [↑2.6, Locking Parameters When Loading Snapshots or Songs](#)).



Although only one octave is displayed in the Auto Chords Panel, you can play the full range of the instrument even in Auto Chords mode. However, the most powerful mode is the standard chord mode, where chords, intervals, options, or tensions are played on the very pitches you press on the keyboard

## 2.3 Playing Endings and Slides

In addition to the actual patterns, ELECTRIC SUNBURST provides a variety of endings, as well as slide sounds and additional palm hits on the guitar's body and strings of the guitar. The corresponding sets of keys are marked yellow and green on the KONTAKT on-screen keyboard.

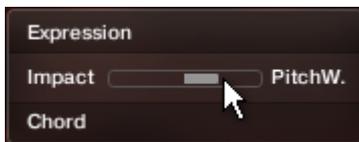
- To **trigger an ending with the current chord**, play any of the three keyswitches from G#1 up to Bb1 with the intended intensity (i.e. velocity). These ending keys are marked yellow in KONTAKT's on-screen keyboard. When an ending is played back, the current pattern playback will be stopped.
- To **trigger an ending with a different chord**, hit the new chord just before triggering the desired ending keyswitch. As a result, only the ending chord will be played back with the new chord.
- To **play a slide sound**, play the B1 key, marked in green, with the intended intensity (i.e. velocity).



Only the volume of Slides and Endings can be altered via input velocity. To alter the dynamics of patterns, use the Pitch Wheel (see section [↑2.4, Controlling the Dynamics of the Performance](#)).

## 2.4 Controlling the Dynamics of the Performance

The patterns included in ELECTRIC SUNBURST ignore the velocity information coming from your MIDI keyboard or host software/DAW. Instead, you can continuously control the dynamics of the performance with the bipolar (i.e. positive and negative) [Impact](#) slider.



The Impact feature

It works like this: With positive Impact settings, the guitarist will play more intensely, whereas negative Impact values will produce softer results. Using this feature, you can add a lot to the overall musicality of the performance.

- To **adjust the Impact slider with the mouse**, drag the [Impact](#) slider. The default center position can be recalled via [Cmd] + click.
- To **adjust the Impact slider via MIDI**, move the pitchbend wheel on your MIDI keyboard. The default center position of the [Impact](#) slider should correspond with the default center position of your pitchbend wheel.



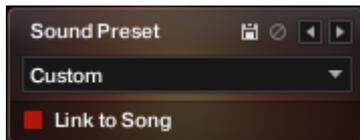
The [Impact](#) slider, or the pitch wheel automation in your sequencer, can also be used to smoothen transitions between patterns with differing overall dynamics in order to create a more natural performance.



While the velocity coming from your keyboard doesn't affect the dynamics of the performance, you can use it to trigger slide transitions when playing arpeggio patterns. When playing a chord change, try hitting a chord very hard (i.e. velocity > 100). A slide transition will be added at the next suitable position.

## 2.5 Loading/Saving Sound Presets

With ELECTRIC SUNBURST, you can customize the sound both easily and effectively. Each sound preset includes all parameters of the “Guitar Settings” page as well as the “Amps & FX” page (see chapters [↑4, The Guitar Settings Page](#) and [↑5, The Amps & FX Page](#)). You can load sound presets from the [Sound Preset](#) drop-down menu in the top right corner of the instrument.



The Sound Preset box in the top right corner of the instrument

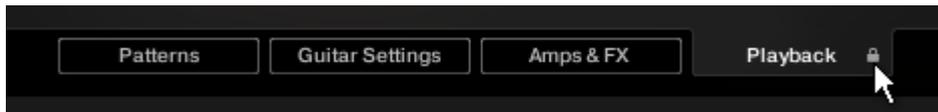
- To **load a factory or user sound preset**, either
  - select a preset from the drop-down menu, or
  - cycle through all presets by clicking the little triangular left and right arrow buttons.
- To **save a new user sound preset**, enter a preset name into the field and click on the floppy disk icon. This will store the current sound settings (see chapter [↑4, The Guitar Settings Page](#)), including the [Voicing](#) and [Impact](#) slider positions, into a new user preset.
- To **overwrite a user sound preset**, click on the floppy-disk icon again, after you've changed sound settings, without changing the preset name itself.
- To **delete a user sound preset**, select it from the drop-down menu, then click the circular Delete button.
- **Linking sound presets to Song presets:** When you check the [Link to Song](#) checkbox, each loading of a Song preset (see section [↑3.1, The Song Browser](#)) will recall and apply a specific factory sound preset.



Any modification or deletion of user sound presets is being performed on a global level. This means that all these changes will be persistent, even if you close the instrument without saving it.

## 2.6 Locking Parameters When Loading Snapshots or Songs

Normally, when you load snapshots or Songs (see section [↑3.1, The Song Browser](#)) of the instrument, all parameters will be set accordingly. Thus, snapshots and Songs are stored and recalled globally. To prevent the Playback and/or Auto Chords parameters from being changed by loading snapshots or Songs, click the lock icon on the [Playback](#) tab.



When the Playback parameters are locked, they will not be changed by snapshots or Songs.

## 2.7 Defining the Downbeat after Signature Changes

Since there is no way for the instrument to recognize signature changes or insertions of half a bar etc. present in your DAW session, its pattern playback would get out of sync in those cases. To solve this problem, you can use the global transport offset feature to compensate for a change of signature or bar length during playback.

- ▶ To define a global transport offset in ticks, send MIDI CC#111.

The value you send (ranging from 0 to 127) will be multiplied by 80 ticks and added as an offset to the host transport. 80 Ticks is the length of a 32th triplet, which is the greatest common divisor for all note values available in the instrument. Twelve 32th triplets equal a quarter note. Therefore, to insert half a 4/4th bar (i.e. shift the playback by two quarters, or  $2 \times 12$  32th triplets), you would need to send MIDI CC#111 with value 24 etc. The following table shows typical values needed for common offsets:

Offset	CC#111 value
No offset	0
One quarter	12
Two quarters	24
Three quarters	36
Four quarters (= one 4/4 bar)	48
Five quarters	60
Six quarters	72
Seven quarters	84
Two 4/4 bars (= no offset)	96
Minus one quarter	84
Minus two quarters	72
Minus three quarters	60
One eighth note	6
One triplet	4

### 3 The Pattern Page

Clicking on the [Patterns](#) tab (at the bottom of the instrument) will not only display the currently loaded patterns, but will also display controls that allow you to modify pattern parameters, or load different patterns or songs.



The Pattern Page

- To **select a pattern for playback**, click on the according pattern slot or press the according keyswitch on your MIDI keyboard.
- To **load a different pattern into a slot**, click on the magnifying glass icon in the current slot or double-click the slot. This will open the pattern browser (see section [↑3.2, The Pattern Browser](#)).
- To **cycle through all patterns within one slot**, click on the little left or right arrow buttons in the current slot.
- To **remove a pattern (i.e. clear a slot)**, [Alt] + click on a slot.

## 3.1 The Song Browser

In ELECTRIC SUNBURST, a Song is a preset that contains up to eight related patterns along with a factory sound preset (see section [↑2.5, Loading/Saving Sound Presets](#)) as well as some settings of the Playback page (see chapter [↑6, The Playback Page](#)). The patterns contained in a Song are loaded into the pattern slots.



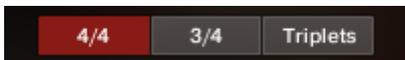
If you want songs to apply their recommended sound settings, activate the [Link to Song](#) feature in the top right box (see section [↑2.5, Loading/Saving Sound Presets](#)). If you deactivate this feature, the current sound settings won't be changed on loading a Song.

To **browse songs and then load a Song**:

1. Click on the current song name; this will open the Song Browser. Alternatively, you can click on the magnifying glass icon to the right of the Song title.



2. Use the three attribute buttons at the top of the browser to refine the list of displayed Songs by including or excluding different signatures. To show all Songs, deselect all attribute buttons.



3. To load a Song, double-click its name or click on the tick button. (If you wish to exit the Song Browser without changing anything, click on the X button instead).



Alternatively, you can cycle through the included Songs, without entering the Song Browser, by clicking on the triangular arrows to the left and right of the current Song name.

## 3.2 The Pattern Browser

Since a preset Song may not meet your exact needs, you may wish to change a slot's pattern, or load additional patterns into specific slots.



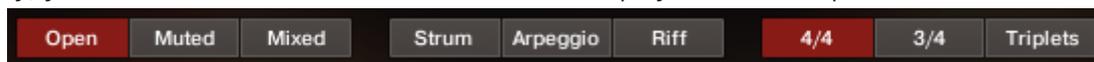
Clicking the magnifying glass icon will open the Pattern Browser

The top area of the Pattern Browser holds a series of buttons that you can use to refine your search, including a Rhythm Search strip, which is a very powerful tool for finding patterns that match your custom rhythm. The body of the Pattern Browser contains a list of all patterns matching the current search criteria. If the list is too long to fit the screen, you can scroll through the list by dragging the scroll handle on the right up or down.



To avoid misconceptions: The Rhythm Search strip is merely a tool to find pre-recorded patterns in the pattern library. It is technically impossible to create your own patterns by entering a certain rhythm, so, despite its look, the Rhythm Search strip should not be confused with a step sequencer.

- To **search a pattern by attributes** (and not by rhythm), make sure the Rhythm Search strip is cleared. If it's not, click the **Clear** button next to the strip. Then refine your search by selecting any of the attributes, such as **Strum**, **Arpeggio**, **Riff**, **4/4** etc. If you want to bypass a category (such as Open/Muted/Mixed), deselect all attributes of that category. Consequently, you would need to deselect all attributes to display all recorded patterns.



- To **search a pattern by attributes and rhythm**, first select/deselect the desired attributes as described above. Then, enter a rhythm on a 16ths note basis into the Rhythm Search strip. With each new rhythm snippet that you enter, the pattern list will be refreshed in real-time, sorted by the similarity of the desired rhythm to the rhythm of all patterns available in the library, in descending order.





There is a powerful shortcut feature to quickly enter a repeating pattern into the Rhythm Search strip: enter the beginning of the pattern and then [Alt] + click on the position of the first repetition. Furthermore, if you [Alt] + click on the first snippet, all other snippets will be activated/deactivated.

### To 'tap in' a desired rhythm:

1. Press the [Record](#) button; you will hear a metronome count-in.
2. Start playing a rhythm on your MIDI keyboard or click on the 'Tap' button. You can start any time, so you can also start with a pickup beat.

→ After 2 bars the recording will automatically stop, and the search results will be listed.

The rhythm search algorithm is very powerful. It will compare the rhythm defined in the Rhythm Search strip not only to the rhythm of the other patterns from start, but also from any possible shifted starting position. This way, patterns with specific start shift offsets might be revealed as musically matching-patterns which otherwise would simply be overlooked. If the perfect start shift offset is different from 0, the value is appended to the pattern name. Upon loading a pattern, that offset will automatically be applied and entered into the Info Panel (see section [↑3.3, The Info Panel](#)). Also, the Rhythm Search algorithm will rate accents higher than non-accentuated snippets. So, if you're searching for accents following a certain rhythm, try entering the accents only.



If you cannot find a desired rhythm straight away, chances are that you can create that particular rhythm by separately searching for the first and second half of the rhythm of a desired pattern, loading the two halves into two different slots and combining them during playback. Alternatively, you can load the same pattern into two different slots and adjust the Start Shift (see section [↑3.3, The Info Panel](#)) of one of them, in order to shift accents to the desired positions.

- To **search for patterns similar to the selected one**, you would need to search for patterns with a rhythm similar to the selected pattern's rhythm. Instead of entering and copying the rhythm manually, you can simply transfer the rhythm of the selected pattern into the Rhythm Search strip by clicking on the [Similar](#) button.



This will start a search and put the selected pattern at the very top of the listed results, since that pattern matches its own rhythm a 100 percent, of course. Rhythmically similar patterns will be listed subsequently.

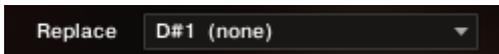
- To **play a preview of a pattern**, click on any of the listed patterns. This will also display the pattern's rhythm structure in the second strip. The preview playback will sync to the host tempo and transport position, if the transport is running. However, only one selectable chord and pitch can be previewed; incoming MIDI chords will be ignored.
- To **stop the preview playback**, simply click on the playing pattern again or, if the host transport is running, stop it.
- To **change the preview chord**, select a pitch and a chord type in the top drop-down menus or value dragger.



- To **load a pattern**, simply double-click the pattern or click the tick button. (If you want to cancel the process, click the X button instead.)



- ▶ To **load a pattern to a different slot** than the currently selected one, choose one of the eight available pattern slots from the drop-down menu in the upper right corner. Confirm by clicking the tick button, or double-click the respective pattern.

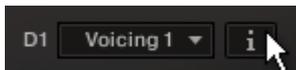


- The selected pattern will now be loaded into the selected slot; a previous pattern of that slot will be replaced. The pattern browser will be closed.

### 3.3 The Info Panel

The Info Panel provides access to various parameters that will modify the length, start position, volume and tempo of any pattern. The values of the Info Panel will always refer to the selected pattern. In other words, if you select a different pattern, the Info Panel will change its content according to the new pattern.

1. To **show or hide the Info Panel**, click on the **i** button.



The Pattern and Mapping tabs are sitting at the top of the Info Panel.



The Info Panel, Pattern Tab

### 3.3.1 The Pattern Tab

- **Shift:** Edit this value to shift the selected pattern's start (entry) position. Alternatively, you can drag the pattern's rhythm display left or right.
- **End:** Edit this value to reduce the selected pattern's length so that it will loop earlier. Alternatively, you can drag the terminating flag left or right.



You can use the End Step feature very creatively. For example, you can trim a 4/4 signature pattern by eight 16th snippets, so that it will perfectly fit a 3/4 signature. You can also trim any pattern to odd signatures, such as 5/8 or 7/8. Combined with the Start Shift feature, you have very powerful tools to create whole new patterns and feels (e.g. start-shift a constant eighths pattern from on-beats to off-beats etc.). Be creative!

- **Vol:** Change this value to adjust the volume of the selected pattern, ranging from -24 dB up to +24 dB in 0.1 dB steps.
- **Fret Pos** (available for arpeggio patterns only): Change this value to make the virtual guitarist play in higher fret positions, which typically results in a more mellow tone.
- **Style** (available for arpeggio patterns only): From this drop-down menu, you can select three different playing techniques: open, muted and flageolet. For some of the patterns you can also choose a pre-defined mixture of them ("mixed"). You can even choose between plectrum and finger picking for each of the playing techniques.

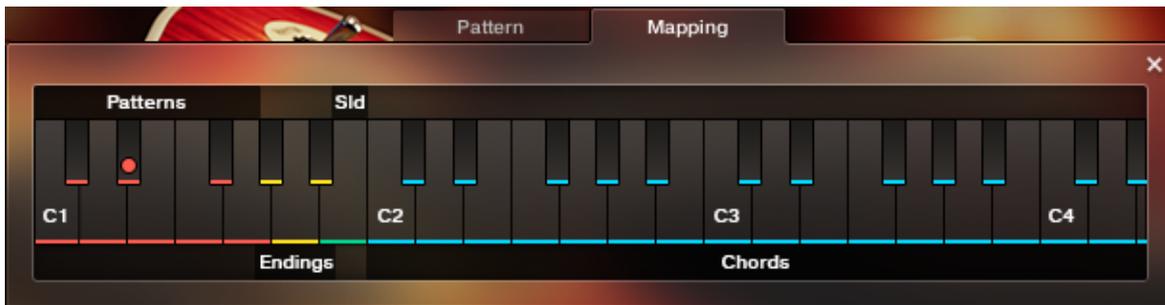
- **Tempo:** With the three tempo choices in the drop-down menu, you can switch the selected pattern's tempo from normal (1:1) to half time (1/2) or double time (×2). Please note that there is also a global time scaling feature on the Playback page (see chapter ↑6, [The Playback Page](#)). Its tempo factor will be multiplied by each pattern's individual tempo factor.



With slow host tempos, switching a pattern to half time may not work if the actual relative tempo falls below the limit of ca. 65 bpm.

### 3.3.2 The Mapping Tab

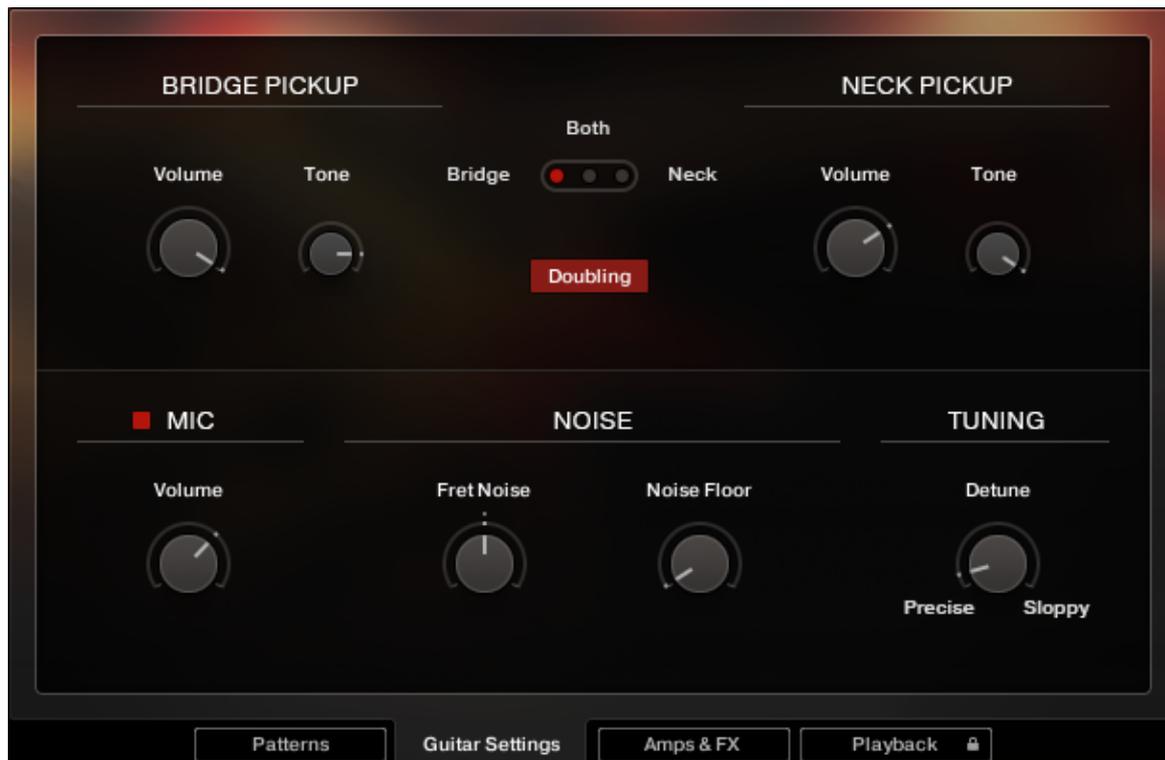
On the [Mapping](#) tab, you are presented with a graphical overview of the keyboard layout. The selected pattern slot is highlighted by a red dot that will change its position as you select different pattern slots. If you play an ending or a slide sound, a colored dot on the corresponding key will light up briefly.



The Info Panel, Mapping Tab

## 4 The Guitar Settings Page

Click on the [Guitar Settings](#) tab (at the bottom of the instrument) to display the Guitar Settings page. This page provides controls that you can use to adjust the sound of the guitar itself, whereas the Amps & FX page provides virtual effect pedals and amplifiers. This page is divided into several sections, each of which is described below.



The Guitar Settings Page

- **Pickup selector:** Use the pickup selector switch to choose either the bridge pickup, neck pickup, or a combination of both pickups. The bridge pickup provides a brighter sound with a stronger attack, while the neck pickup sounds softer.

- **Volume and Tone controls:** Use these controls to adjust the volume and brightness of each pickup individually.
- **Mic signal:** In addition to the two pickup signals, you can dial in the acoustic signal of a microphone which was mounted directly above the strings. The pickup signals and the mic signal are mixed down to a single bus, and are sent to the sound processors found on the Amps & FX page for further processing.



To save memory, make sure to deactivate unused pickup and microphone signals instead of only turning their volume knob down, as each active signal requires a share of your computer's memory.

- **Doubling:** When this button is activated, you will hear two separate guitars playing in unison, one on the left, and one on the right. This creates a very wide stereo image.
- **Fret Noise:** Use this knob to adjust the volume of fret noises, which are automatically added upon changing chords.
- **Noise Floor:** Use this knob to raise the noise floor. The noise floor is switched off while the instrument is not playing.
- **Tuning:** Use this knob to detune the guitar.



Moderate levels of noise, detune, fret noises, and a little dose of mic signal can help add realism, and create a more “tangible” guitar sound.



If you prefer to use external amp simulations instead of using the effects provided on the Amps & FX page (see [↑5, The Amps & FX Page](#)), keep in mind that stereo doubling requires two individual signal chains, i.e. one amp simulation for the left output channel and another one for the right output channel. If in doubt, listen to the stereo width: If the stereo doubled signal collapses to mono when applying external effects, the signal path is not “true stereo”.

## 5 The Amps & FX Page

Clicking on the [Amps & FX](#) tab (at the bottom of the instrument) will open a page where you can apply several studio effects to the signal.



The Amps & FX Page

The effects chain displays the currently loaded effects. Clicking the icon of an effect displays its settings in the inspector section below.

- To **change the order of the effects**, simply drag and drop the respective icon in the effects chain display.
- To **bypass an effect**, click on the red square button next the its name.

- To **bypass the entire FX chain**, click on the red square to left of the [AMPS & FX](#) page title. Please consider that the effects still require processing power, unless the FX chain is cleared.
- To **clear the entire FX chain**, click on the [Clear All](#) button in the upper right corner and confirm.

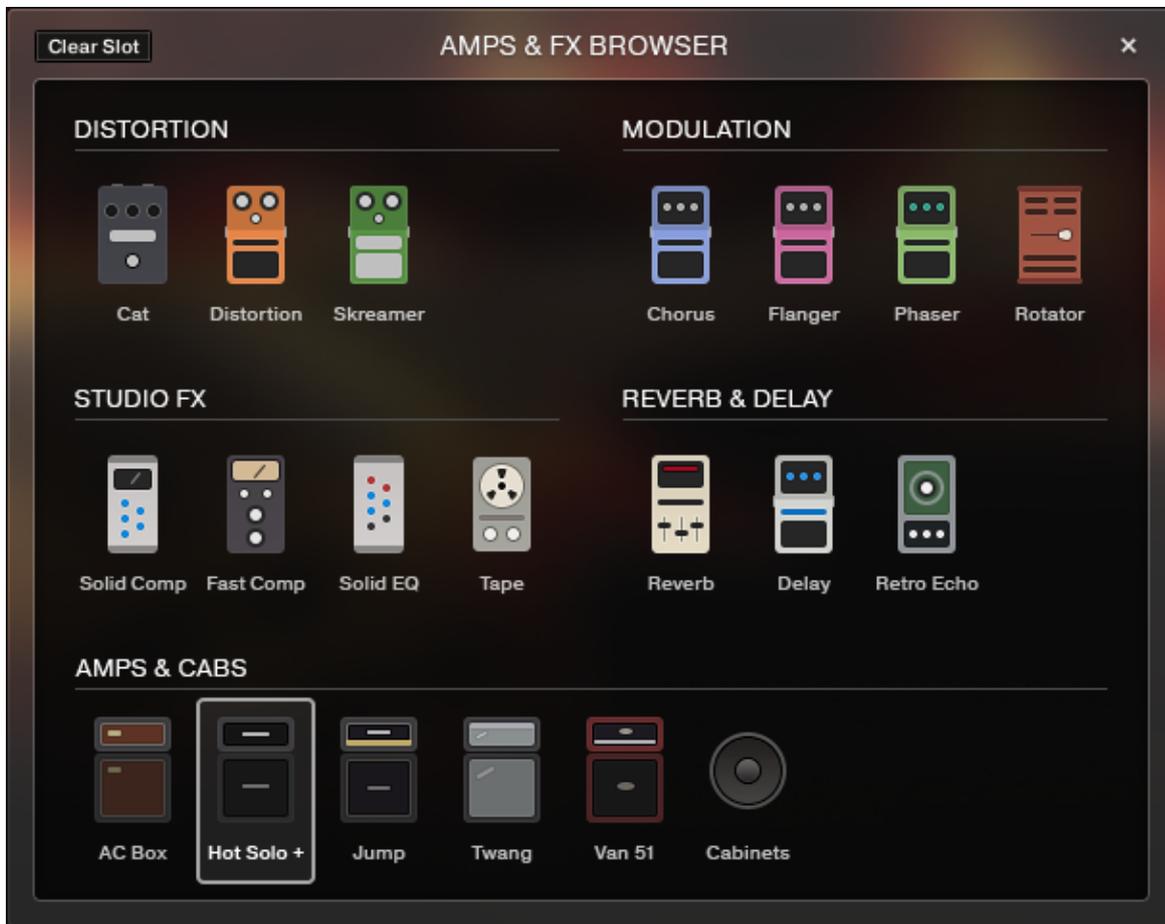
A dark rectangular button with the text "Clear All" in white.

If you want to process the unaltered direct signal with external effect plugins, you can save CPU resources by clearing the entire FX chain. Keep in mind that if stereo doubling is enabled, two individual signal chains are required, i.e. one amp simulation for the left output channel and another one for the right output channel. If in doubt, listen to the stereo width: If the stereo doubled signal collapses to mono when applying external effects, the signal path is not “true stereo”.

- To **remove an effect**, click on the [Clear Slot](#) button on the right side.

A dark rectangular button with the text "Clear Slot" in white.

- To **automate effects parameters**, record the knob movements as automation data via the “write automation” functionality of your sequencer. Alternatively, you can assign MIDI controllers via right-click on the respective knob. However, if you change the loaded effects subsequently, it is recommended to delete previously recorded automation to avoid accidental arbitrary modulation of parameters.
- To **load a different effect into the current slot**, click the magnifier icon next to the inspector heading or click the magnifier icon that appears when hovering the name of an effect slot. This will open the [AMPS & FX BROWSER](#). In that browser, click on the desired effect to load it into the selected slot. If the effect slot wasn’t empty, the loaded effect will automatically replace the previously loaded one.



The Amps &amp; FX Browser

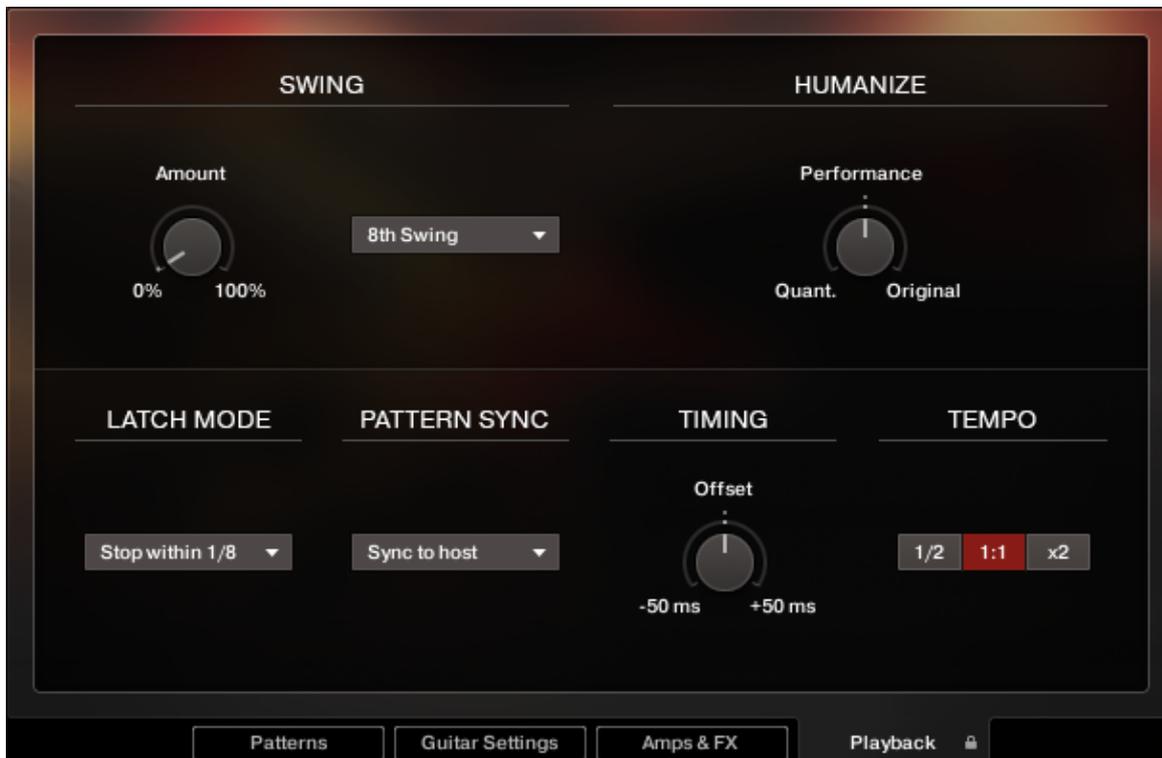


For greater sonic versatility, the included amp models do not include speaker models. Instead, you can freely combine each amp model with each virtual speaker cabinet. Therefore, to simulate a traditional guitar amplifier, make sure that an amp model is always followed by a virtual speaker cabinet in a separate effect slot. It is advisable to study some of the included presets for reference.

## 6 The Playback Page

Clicking on the [Playback](#) tab (at the bottom of the instrument) will open the Playback page. This page contains settings that affect the way the patterns are played back. This page is divided into several sections, each of which is described below.

1. To exclude the Playback settings from Songs or snapshots, click the lock icon on the [Playback](#) tab at the bottom of the instrument (see section [↑2.6, Locking Parameters When Loading Snapshots or Songs](#)).



The Playback Page

- **SWING section:** Use the [Amount](#) knob to set the amount of swing added to each pattern, either on a 8th note or a 16th note basis. A setting of 0% would represent the original state of all patterns.



If the Amount knob doesn't affect the playback, it is very likely that either a triplet pattern is selected, or the timing basis has to be changed from 8th to 16th notes.

- **HUMANIZE section:** Use the [Performance](#) knob to set the amount of quantization added to all patterns. At the right position, the original performance (with some human imperfections) will be played unaltered. At the left position, the performance will be fully quantized.
- **LATCH MODE section:** After you've released all keys, the pattern playback will automatically stop within the note duration specified in the LATCH MODE dropdown menu.



The delayed stopping of the playback enables the engine to perform smooth transitions from one chord to the next, even if the incoming MIDI notes are not played as a seamless legato performance. However, if you want to stop the performance at a specific position in the arrangement, e.g. to perform a break, it is advisable to trigger one of the “ending keys” G#1, A1 or Bb1 at the desired position.

- **PATTERN SYNC section:** Use the drop-down menu to select one of two available sync modes.
  - **Sync to host:** With this mode selected, pattern playback will start in sync with your host sequencer. As ELECTRIC SUNBURST is based on two-bar patterns, make sure to start your song on bar one or any other uneven bar number (e.g. bar 3, bar 5, bar 17).
  - **Start on key:** With this mode selected, pattern playback will start from the beginning as soon as the first chord is being played, ignoring the current host playback position. As long as the playback does not get interrupted (see description of the LATCH MODE section above), this shifted performance will be retained even if you subsequently play chords.
- **TIMING section:** Use the [Offset](#) knob to control the amount of positive or negative lag added to the playback. Positive values, for example, will result in a laid back feel whereas negative values will result in a hasty performance.

- 
- **TEMPO section:** Here, you can select between three tempo ratios  $1/2$  (half time),  $1:1$  (normal time), or  $\times 2$  (double time), which globally affect the pattern playback speed relative to the host tempo. Please note that there is also a local time scaling feature available for each pattern (see section [↑3.3, The Info Panel](#)). The individual patterns' tempo factors will each be multiplied by the global tempo factor.



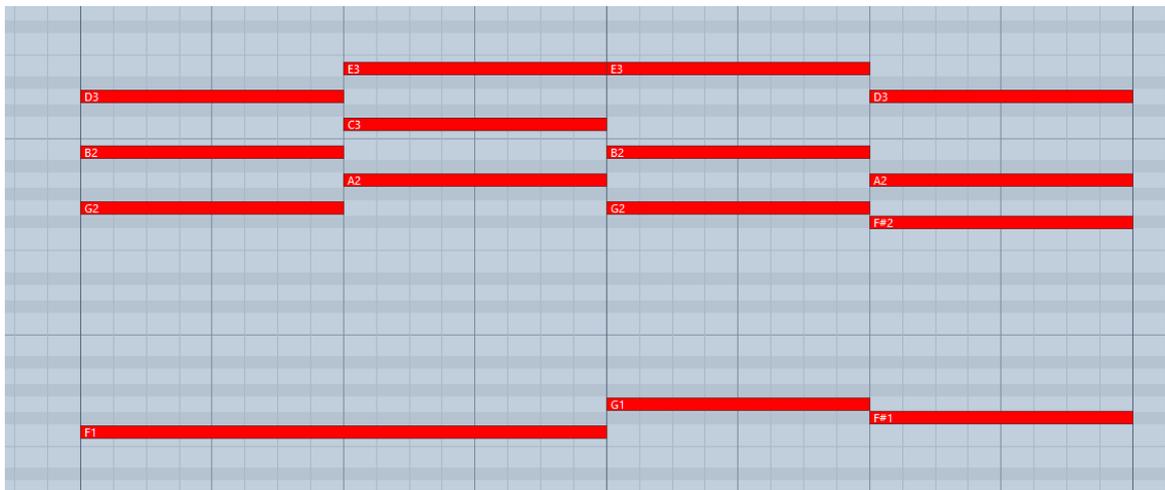
With slow host tempos, switching the global tempo to half time may not work if the actual relative tempo falls below the limit of ca. 65 bpm.

## 7 Tips and Tricks

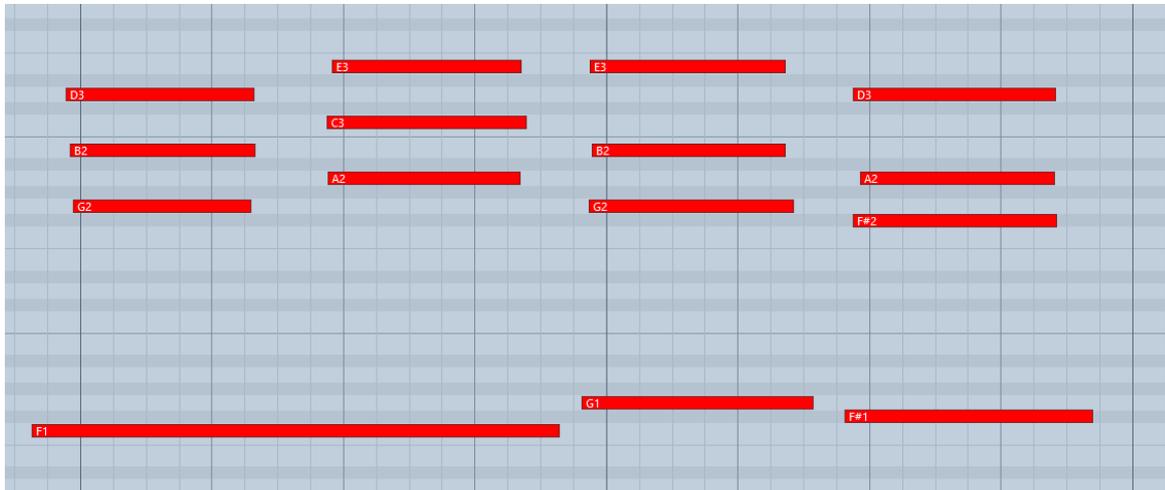
Last, but not least, the developers would like to share a couple of tips to help you get the most out of ELECTRIC SUNBURST:

### Create Natural Transitions between Chords

To create realistic sounding transitions between chords, do not quantize your keyboard performance. Instead, make sure that all chord and pattern changes are played as early as possible. This way, ELECTRIC SUNBURST can anticipate that a chord change or pattern change is about to take place, and perform the transitions between patterns and chords in the most natural way. Depending on the chord progression, an appropriate fret noise is added automatically. These natural transitions would be impossible if you quantized your MIDI data. Don't worry about the timing – triggering the patterns before the beat will not make the performance sound out of time, as the timing is bound to the internal metronome of your sequencer. Also make sure that chords do not overlap, because an overlap would technically mean that two chords are played at the same point in time.



Bad: Quantized MIDI data will cause the chord changes to happen too late for the fret noises to be played back; this will not create realistic transitions.



Good: MIDI notes placed ahead of the quantized position will result in realistic sounding transitions. Note that the key-switches are also triggered slightly before the actual chords.

## Combine Patterns Creatively

We spent a lot of time to make transitions between patterns and chords as smooth and natural as possible. Therefore, if you switch between patterns that have a similar playing style but different rhythms, the transitions will very likely sound as smooth as if the resulting rhythm would have actually been performed this way. So instead of sticking to a single repetitive pattern for a long time, you can enhance realism by switching back and forth between patterns to add variations here and there. In most cases, adding minor rhythmical changes at the end of the second bar does the trick.

## Create Custom Groove Variations

If you'd like to add variations to spice up a pattern using the technique described above, you might find yourself in a situation where the beginning of a pattern contains the bit of rhythmical variation you'd like to use at the end of another pattern. To move the variation into place, click the **i** button (see [↑3.3, The Info Panel](#) for more information) to open the info pane and shift the pattern to the desired position. Another way to get there is to use the “End Step” feature: Shorten the pattern to e.g. 4 steps (= one quarter note). Although the resulting pattern will be very short and thus will sound pretty repetitive in itself, it will contain a predictable strumming pattern that you can switch to anytime to add a variation to another pattern.

### **Use Authentic Humanization**

The Humanize knob does not add random offsets to create some kind of fake realism. Instead, it recreates the exact timing of the guitarist as he recorded all the patterns in the studio. That means, although the differences may be subtle, the “Original” setting feels much more like a real guitarist, because it delivers the actual timing of a real guitarist. To our ears, adding a shuffle value of around 5-15% on top of the humanization creates very appealing results.

### **Use the Impact Slider as a “Drama Controller”**

When moving towards a quiet passage in your song, move the impact slider to the left. As you approach the chorus, slowly move it to the right. If applied correctly, this makes the virtual guitarist play towards a certain musical event, e.g. the chorus or a break. You can also use the pitch wheel to smoothen the transition between patterns which are played at different volumes to a certain degree.

### **Use Multiple Session Guitarist Instruments Simultaneously**

Instead of using just one single pattern at a time, try the following: Open two instances of ELECTRIC SUNBURST. While instance one plays the regular chord progression of the song in the low voicing, instance two plays only an empty fifth chord as a pedal point in a higher register. Combining several different guitars and/or patterns in this manner can really help to open up your arrangement.

## 8 Credits

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**Sound Presets:** Sebastian Müller, Samuel Dalferth, Jonathan Kranz

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