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SOUNDLINE

Chris Hein Guitars

E-GUITAR JAZZ-GUITAR STEEL-GUITAR NYLON-GUITAR BANJO MANDOLIN

RECORDING AND PROGRAMMING BY CHRIS HEIN

MORE INFORMATIONS, NEWS & UPDATES:
WWW.CHRISHEIN.NET

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(It was a hard work to write it, please read a little bit)

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Chris Hein Guitars

Thank you for choosing Chris Hein - guitars.
The only thing I hate more than reading manuals, is to write a manual. So I tried to keep it as short as possible.

When you first load up one of the instruments, you'll hear the regular sustain articulation. Thats fine, but to emulate a real sounding guitar, you should go deep into the articulation and controller features.
I designed Chris Hein - Guitars as a toolbox with guitar samples. You find every single noise that a guitar is able to produce.

Although you can control everything within the interface its much more fun to edit controllers with an external hardware-midicontroller. At least CC11 (expression) and CC02 (Bridge/center) offer a large variety of liveness.
Print out page 7 (Keyswitches) & 26 (Controllers) and keep it close to your keyboard.

I hope you like Chris Hein - Guitars. Have fun.
Chris Hein

The distinctive features of Chris Hein Guitars:

The "Chris Hein" instruments distinguish themselves through their exceptionally elaborate programming. Up to 13 dynamic steps and 59 Articulations, as well as 69 predefined MIDI controllers allow for realistic playback in one preset.

Main Features:

- Up to 6.000 samples per instrument
- Up to 59 different articulations
- All playing techniques in one preset with 30 keyswitches
- Up to 13 velocities per note
- 69 intelligent MIDI controllers included
- reverb, delay, chorus, phaser, flanger, compressor, and 3-band EQ included
- Unique control features:
  Chord Mode, Slide Mode, Solo Mode, electric/acoustic blending 4 different release controls, 4 different attack controls, fall control, rattle control, automatic up- and downstroke, seamless blending between bridge and center playing.

Instruments

The base of all the programs in „Chris Hein - Guitars“ is a collection of 9 unique sampled instruments:

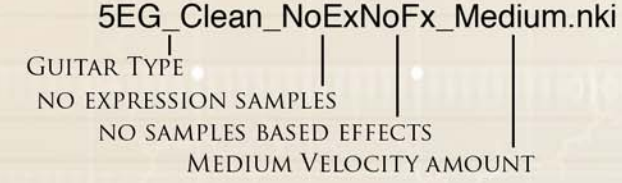
- **E-Guitar Clean** Plectrum
- **E-Guitar Blues Distortion** Plectrum
- **E-Guitar Chorus** Plectrum, stereo
- **Jazz-Guitar** Plectrum
- **Jazz-Guitar** Finger
- **Steel-Guitar** Plectrum
- **Nylon-Guitar** Finger
- **Banjo** Plectrum
- **Mandolin** Plectrum

E-Guitar was recorded clean, without any effects. Blues- and chorus-guitar consist of the same samples which were processed with amp-simulation and various effects. This makes it possible to blend between clean, chorus & blues-guitar to vary the effect. Tip: load e.g. E-Guitar clean and E-Guitar Blues on two different midi channels and blend between both versions with the volume control (CC07)
Due to the fact that Kontakt can not hold more than 4.098 samples in one program, some instruments consists of two programs which are stored as „Multi“. As long as you keep both programs on the same midichannel they behave like one.

The „Full“ - instruments in the folder „All In One“ are the complete programs with all articulations and all available velocities. All other instruments are variants of the „Full-Instruments“ to save computer performance and ram.

Explanation of program-names:

All In One	- Instruments with all available samples
Full	- full size, all velocities
Medium	- medium size, 5-8 velocities
Light	- small size, 3-4 velocities
NoFX	- no samples based effects
NoEx	- no expression samples
Bridge	- only playing close to the bridge,
Center	- only center playing,
Sustain	- sustain articulations only
Picking	- muted picking articulations only



Keyswitches

Key-switches:

The keyswitching method is an elegant approach to accommodate various playing techniques within one patch. It is no longer necessary to individually reload each variant.

A total of up to 59 articulations have been programmed as keyswitches for Chris Hein - Guitars.
The keyswitches are pure control keys. They do not make any sound, but instead trigger complete sound groups to be switched over into another variant.
The keyswitches are allocated to C0 - G#1, in the lower area of your keyboard. The keyswitch is pressed prior to the actual tone. The switchover occurs instantly without any time lag. Some keyswitches contain more than one articulation. You can reach these articulations through various controls. See the articulation list for each individual instrument for details.

Keyswitches Notes

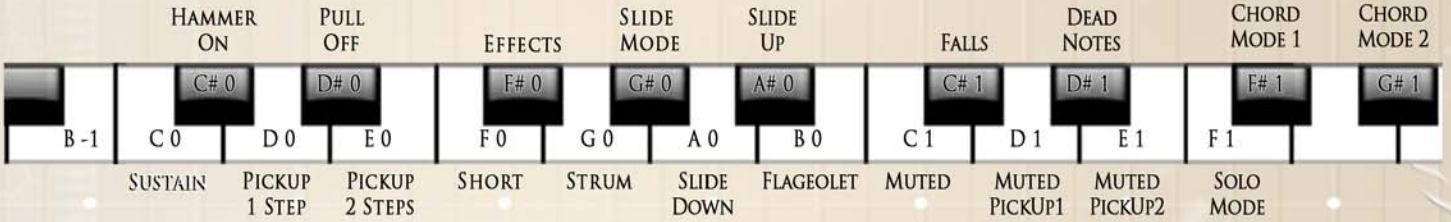
How to create a realistic guitar track:

The reason why CHG makes it possible to create realistic guitar-tracks is the mass of samples and controllers.
So, lets use it:

Play a melody line in neutral preset i.e. „Sustain" (KS-C0). Play the Keyswitch keys during a second pass of the melody line and edit the position of these notes inside the editor of your sequencer. In more complex articulations such as Slideup or Slidedown, you may also edit the notes of the melody. Its possible to switch between all articulations, even solo-mode, slide-mode and the two chord-modes.

In the next melody pass you move some of the controllers with an external midi-fader. You can also draw the controller-data in your sequenzers editor.
Thats my favorite way of editing. Its always good to know how to edit controller data in your sequencer, not only for the use of Chris Hein - Guitars.

CHRIS HEIN - GUITARS KEYSWITCH



THE KEYSWITCH LAYOUT IS QUITE THE SAME FOR ALL INSTRUMENTS

Interface
Overview

General Controls

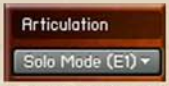
1 Solo/Mute
2 Tune - (CC09)
3 Panorama - (CC10)
4 Volume - (CC07)
5 Level indicator

Expression (CC11)

One of the most powerfull features in CHG. Most guitars have different variants of their articulations. You can switch between these variants with the expression knob. E-Guitar Muted e.g. has seven different variants of the complete keyboard-layout, from close mute to open, each with seven velocities.

On Hammer-On and Pull-Off, the expression knob blends to a nice feedback effect. Play a thrill in Solo-Mode (F1) and raise the expression knob.
For best results, connect an expression foot-pedal.

Interface Details



Articulation

You can either choose the articulation manually from the drop-down menu or use the corresponding keyswitch which is displayed in the menu.
During playing, the actual articulation is shown in this menu.

Harmonizer

Adds a second note to the note that is played. You can choose between different intervals.
H_Time - Sets a delay for the harmonized notes.

Electric / Acoustic (CC03) (Jazz Guitar only)

The Jazz-Guitar is recorded in stereo. The left channel contains the electric signal, while the right channel contains the acoustic signal, recorded via microphone. You can seamlessly blend between electric and acoustic sound.

Alternation Mode (plectrum guitars only)

All plectrum guitars have down- and upstroke samples. You can choose between different alternation-modes:
Strict - automatic alternation between down- and upstroke samples.
Automatic - Down- and upstroke alternation, starting with downstroke. After an adjustable time, between two notes, alternation starts with downstroke again.
Downstroke - Strict downstroke playing, no alternation.
Upstroke - Strict Upstroke playing, no alternation.
By CC65 - Manual alternation via midicontroller CC65.
Alt Time - Sets the time interval for automatic mode in ms. After the selected time interval, alternation starts with downstroke.

Center - Bridge Playing (CC02)

This function simulates the position of the right hand of a real guitar player. Most articulations are sampled twice. One is played in the center, one is played close to the bridge. Due to the precise sample-cut you can seemlessly blend between those playing styles. You could use a breath controller like the Yamaha BC3 to control Center-Bridge Playing.

Interface
Details Chord-Mode

Chord - Mode: (keyswitch F#1, G#1)

One of the most innovative functions in CHG is the chord mode. Which is an easy way to play a realistic rhythm guitar.

To enter the chord-mode simply press the corresponging keyswitch
There are two slightly different Chord-modes available:
(F#1). - No Sound when pressing the Chord-detection-keys.
(G#1) - The keys that are pressed sound on chord-detection-keys.

In chord-mode the keyboard is devided into 4 sections:
Keyswitches: (C0-F#1) instantly changes articulation modes
Chord Keys: (B2-B4) play chord here
Chord-Strumming Keys: (C5-E6) activates the chords
Single Note-Strumming Keys: (F6-C7) single Note Strumming

Chord-Mode 1 ┐ ┌ Chord-Mode 2

Keyswitches | Chord-detection-keys | Chord Struming | SingleNote Struming

Chord-Detection

When you play a chord in the chord key area, the built-in chord detection recognizes the chord you play and voices the chord in the way a real guitar player would do. For example: if you play E-G#-H the chord detection recognizes E-major and sets the voices to the six guitar strings: E-B-E-G-H-E. Of course it is possible to play different voicings; for exmaple: if you play G#-B-E, its still E-Major, but the chord detection sets the voices to G#-E-G#-B-E-G# The chord detection recognizes the chord instantly. So, you play the chord slightly before activating the chord with the strumming keys, just Like you would do with the keyswitches.

You don't have to hold the chord keys. Once pressed, the chord detection works, and you have your left hand free. To add some of the effects sounds here and there, or to use your expression slider.

Interface
Details Chord-Mode

„Strumming Keys“

The strumming keys are available in 16 different articulations. Additionally there are 6 single note keys, one for each corresponding guitar string. These keys can be used for additional single notes or to play finger picking chord pattern.
When using the SingleNote-Strumming, you hear the articulation of the last Strumming-Key you have pressed.
Downstrokes are located on the white keys,
upstroke are located on the black keys.

"Chord-Mode Controls“

Speed: Controls the strumming speed.
Random: Adds randomness to the strumming speed.

Harmonic / strict - Bass: If harmonic bass is selected, the lowest note of the chord stays on the root key, while if strict bass is selected, the lowest key of the chord follows the chord.
Release Note Off: When Pressing this button the colour changes to orange and forces the sound to stop when you release the strumming key. When the button is not pressed, the chord keeps sounding until you press another strumming key, which allows for a nice legato strumming.
Auto-Velocity: This popup menu lets you decide how many strings perform the strumming. Setting it to 6,5,4 or 3 strings, forces the sound to play with the corresponding amount of tones. If set to Auto-Velo, the amount of strings depends on the velocity of the left hand. If you play the chords very soft, only 3 strings sound, while the louder you play the chords, the more strings sound.

Interface
Details Slide Mode

„Slide Mode 1“ (Keyswitch G#0)

Play a note in any articulation, press the keyswitch-key G#0 to enter the slide mode 1 instantly. Now play another note, and the sound you'll hear slides from the first note to the second note. Depending on the guitar, the slide mode 1 has a range of 1-7 or 1-12 half steps up and down.

„Slide-Mode 2“ (Keyswitch A0 & A#0)

Press the keyswitch A0 to enter the slide mode 2 instantly. Play a note, the slide starts immediatly. Play another note to stop the slide whenever you want.
A0 selects slide-mode2 up
A#0 selects slide-mode2 down

The Slide Speed is adjustable through the user interface or CC 05. In Slide Mode 2 you can decide wether the second note that stops the slide is a sustain note or a hammer-on note, which has a softer attack.

Interface
Special Effects

Attack - Controls:

Short notes at the beginning of the sound that can be used to give more variations to the attack of each note.

Attack 1 - Adds a special scratch note to give some variations to the attack.
Attack 2 - Adds a dead note to create a harder attack
Attack 3 - Adds a strum note to create a harder attack
Min/Max Velo - Adjusts the dynamic range

Release - Controls:

When Releasing a note, these control can be used to give a realistic behavior of the note-off sound.

Squeek - The sound of sliding over the guitar strings can be added.
Strum - A clicky release
Stop-Noise - Stopping the sound by hitting the strings with the right hand.
Note-Off - A natural note of sound.

Sound - Controls:

Special Sound - Controls

Fall - Adds a slide-down upon releasing a note
Rattle - Very bad played note that can be added to avoid overly perfect playing.
Flageolet - Adds the flageolet sound. Not realistic, but a nice effect.
Feedback - (only on E-Guitars) adds a natural feedback sound.
Atmosphere - Adds the resonance of the guitar body. This simulates the sound of the empty strings not being damped during playing. Provides a nice, natural reverb.

Equalizer

Three independent EQs with presets

Preset - Setups for bass, middle & highs
Frequency - Sets the frequency to be adjusted.
Gain - Controls the volume of the selected frequency.
Bandwidth - Controls the bandwidth of the selected frequency.

Interface
Special Effects

Reverb

Preset - Different pre-programmed effects to choose from.
Level - Volume of the Reverb Effect.
Time - Lenghts of the Reverb Effect.
Pre-Delay - Delay before the reverb starts.
Damping - Brightness of the Reverb.

Delay

Preset - Different pre-programmed effects to choose from.
Level - Volume of the Delay Effect.
Time - Lengths of the Repetitions.
Feedback - Number of repetitions.
Damping - Brightness of the Delay.

Chorus

Preset - Different pre-programmed effects to choose from.
Level - Volume of the Chorus Effect.
Speed - Speed of the modulation.
Dept - Intensity of the modulation.
Phase - Direction of the modulation.

Flanger

Preset - Different pre-programmed effects to choose from.
Feedback - Repetition of the effect.
Speed - Speed of the modulation.
Dept - Intensity of the modulation.
Level - Volume of the modulation.

Interface
Special Effects

Phaser

Preset - Different pre-programmed effects to choose from.
Feedback - Repetition of the effect.
Speed - Speed of the modulation.
Dept - Intensity of the modulation.
Level - Volume of the modulation.

Compressor - pro

Preset - Different pre-programmed effects to choose from.
Treshold - Level at which the compression starts.
Ratio - Intensity of the compression.
Attack - Starttime of the compression.
Level - Volume of the compressed signal.

Filter (Wah-Wah)

Preset - Different pre-programmed Lowpass Effects to choose from.
Cut Off - Frequency of the filter.
Resonance - Intensity of the Filter.
Tip: To create a nice Wah-Wah Effect, Set resonance to a certain amount and move the Cut Off up and down.

Every knob in Chris Hein - Guitars can be controlled through external MIDI controller data. (See the controller-list on page 26 for details). Although you can control everything in the interface on screen, you may want to connect a hardware MIDI controller to automate and record controller movements.
However, recording controller messages into your sequenzer is not possible with the knobs in the interface.

E-Guitar Clean, Blues, Clean-Chorus

Articulations 1:

Nr.	Name	Vel.	Samples	Key	CC02	CC11	CC65
01	Sustain Center Down	08	128	C0	0	0-31	0-126
02	Sustain Center Up	08	128	C0	0	0-31	127
03	Sustain Bridge Down	08	128	C0	127	0-31	0-126
04	Sustain Bridge Up	08	128	C0	127	0-31	127
05	Sustain Expr. 1	04	096	C0	-	32-63	-
06	Sustain Expr. 2	04	064	C0	-	64-95	-
07	Sustain Expr. 3	08	128	C0	-	96-127	-
08	Sustain Expr. 4	02	025	C0	-	127	-
09	Hammer On	07	108	C#0	-	0-64	-
10	Hammer On Expr.	03	048	C#0	-	65-127	-
11	Pick Up 1Step Center	08	127	D0	0	0-64	-
12	Pick Up 1Step Bridge	08	119	D0	127	0-64	-
13	Pick Up 1 Expr.	07	112	D0	-	65-127	-
14	Pull Off	06	097	D#0	-	0-64	-
15	Pick Up 2 Steps Center	08	128	E0	0	0-64	-
16	Pick Up 2 Steps Bridge	08	128	E0	127	0-64	-
17	Pick Up 2 Expr.	08	111	E0	-	65-127	-
18	Short Center Down	08	128	F0	0	0-64	0-126
19	Short Center Up	08	128	F0	0	0-64	127
20	Short Bridge Down	08	128	F0	127	0-64	0-126
21	Short Bridge Up	08	128	F0	127	0-64	127
22	Short Expr.	08	126	F0	-	65-127	-
23	Effects	01	103	F#0		-	-
24	Strum Down	04	064	G0		-	0-126
25	Strum Up	04	064	G0		-	127
26	Slide Mode	04	-	G#0		-	--
27	Slide Up 12	04	071	A0		-	-
28	Slide Down 12	03	048	A#0		-	-
29	Flageolet	06	084	B0		-	-
30	Muted Down	08	127	C1		0-21	0-126
31	Muted Up	04	064	C1		0-21	127
32	Muted Expr. 1 Down	07	112	C1		22-42	0-126
33	Muted Expr. 1 Up	07	112	C1		22-42	127
34	Muted Expr. 2 Down	07	112	C1		43-63	0-126
35	Muted Expr. 2 Up	07	112	C1		43-63	127
36	Muted Expr. 3 Down	07	112	C1		64-84	0-126
37	Muted Expr. 3 Up	07	112	C1		64-84	127
38	Muted Expr. 4 Down	07	112	C1		85-105	0-126
39	Muted Expr.4 Up	07	112	C1		85-105	127

E-Guitar Clean, Blues, Clean-Chorus

Articulations 2:

Nr.	Name	Vel.	Samples	Key	CC02	CC11	CC65
40	Muted Expr 5 Down	07	128	C1	-	106-126	0-126
41	Muted Expr 5 Ups	07	128	C1	-	106-127	127
42	Muted Expr 6 Noises	01	055	C1	-	127	-
43	Falls	09	144	C#1	-	127	-
44	Mute PickUp 1 Center	08	127	D1	0	0-42	-
45	Mute PickUp 2 Bridge	08	128	D1	127	0-42	-
46	Mute PickUp 1 Expr1 C	08	128	D1	0	43-84	-
47	Mute PickUp 1 Expr 1 B	08	128	D1	127	43-84	-
48	Mute PickUp 1 Expr 2 C	07	112	D1	-	85-127	-
49	Deadnotes Down	08	127	D#1	-	-	0-126
50	Deadnotes Up	08	127	D#1	-	-	127
51	Mute PickUp 2 Center	08	127	E1	0	0-42	-
52	Mute PickUp 2 Bridge	08	128	E1	127	0-42	-
53	Mute PickUp 2 Expr 1 C	08	128	E1	0	43-84	-
54	Mute PickUp 2 Expr 1 B	08	128	E1	127	43-84	-
55	Mute Pick Up 2 Expr 2	07	112	E1	-	85-127	-
56	Solo Mode	-	-	F1	-	-	-
57	Chord Mode	-	-	F#1	-	-	-
58	2String Funk Bend C	04	040	G1	0	-	-
59	2String Funk Bend B	04	039	G1	127	-	-

Sample Based Controls

60	Fall-Control	09	144	CC20
61	Squeeks Rel.Trigger	01	041	CC21
62	Strum Rel. Trigger	04	064	CC22
63	Stopnoise Rel.Trigger	01	057	CC23
64	Note Off Rel. Trigger	05	067	CC24
65	Attack 1 -Scratch	09	126	CC27
66	Attack 2 -Dead-Note	04	064	CC26
67	Attack 3 - Scratch2	06	096	CC25
68	Feedback-Control	03	048	CC28
69	Flageolet-Control	01	014	CC30

Jazz - Guitar Plectrum

Articulations:

Nr.	Name	Vel.	Samples	Key	CC02	CC11	CC65
01	Sustain Center Down	10	159	C0	0	0-42	0-126
02	Sustain Center Up	10	159	C0	0	0-42	127
03	Sustain Bridge Down	10	158	C0	127	0-42	0-126
04	Sustain Bridge Up	10	158	C0	127	0-42	127
05	Sustain Expression 1	08	128	C0	-	43-84	-
06	Sustain Expression 2	04	048	C0	-	85-127	-
07	Hammer On	09	134	C#0	-	0-64	-
08	Hammer on Expression	08	128	C#0	-	65-127	-
09	PickUp1 Step Center	10	159	D0	0	-	-
10	PickUp1 Step Bridge	10	158	D0	127	-	-
11	Pull Off	08	118	D#0	-	0-64	-
12	Pull Off Expression	08	128	D#0	-	65-127	-
13	PickUp2 Steps Center	10	160	E0	0	-	-
14	PickUp2 Steps Bridge	10	160	E0	127	-	-
15	Short Center Down	10	160	F0	0	0-64	0-126
16	Short Center Up	10	159	F0	0	0-64	127
17	Short Bridge Down	10	160	F0	127	0-64	0-126
18	Short Bridge Up	10	160	F0	127	0-64	127
19	Short Expression	08	128	F0	-	65-127	-
20	Effects	10	193	F#0	-	-	-
21	Strum	06	054	G0	-	-	-
22	Slide Mode	---	----	G#0	-	-	-
23	Slide Down	08	112	A0	-	-	-
24	Slide Up	08	112	A#0	-	-	-
25	Flagolet	10	063	B0		-	-
26	Muted Center Down	10	160	C1	0	0-64	0-126
27	Muted Center Up	10	160	C1	0	0-64	127
28	Muted Bridge Down	10	160	C1	127	0-64	0-126
29	Muted Bridge Up	10	160	C1	127	0-64	127
30	Muted Expression	08	128	C1	-	65-127	-
31	Falls	12	180	C#1	-	-	-
32	Mute PickUp1 Step	11	162	D1	-	-	-
33	Deadnotes Down	10	160	D#1	-	-	0-126
34	Deadnotes Up	10	160	D#1	-	-	127
35	Mute PickUp 2 Steps	10	160	E1	-	-	-
36	Solo Mode	---	----	F1	-	-	-
37	Chord Mode	---	----	F#1	-	-	-

	Sample Based Controls			
38	Fall-Control	12	180	CC20
39	Squeeks	01	057	CC21
40	Stopnoise	04	112	CC23
41	Note Off	07	097	CC24
42	Attack-Controls 1	10	160	CC25
43	Attack-Controls 2	10	120	CC26
44	Attack-Controls 3	10	160	CC27
45	Rattle	03	027	CC28
46	Rattle Short	03	021	CC29
47	Flageolet-Control	10	063	CC30

Jazz - Guitar Finger

Articulations:

Nr.	Name	Vel.	Samples	Key	CC02	CC11	CC65
01	Sustain Center	13	209	C0	0	0-42	-
02	Sustain Bridge	08	128	C0	127	0-42	-
03	Sustain Expression 1	08	128	C0	-	43-84	-
04	Sustain Expression 2	04	048	C0	-	85-127	-
05	Hammer On	09	134	C#0	-	0-64	-
06	Hammer On Expression	08	128	C#0	-	65-127	-
07	PickUp 1 Step Center	13	202	D0	0	-	-
08	PickUp 1 Step Bridge	08	128	D0	127	-	-
09	Pull Off	08	118	D#0	-	0-64	-
10	Pull Off Expression	08	128	D#0	-	65-127	-
11	PickUp 2 Steps Center	13	188	E0	0	-	-
12	PickUp 2 Steps Bridge	08	127	E0	127	-	-
13	Short Center	12	180	F0	0	0-64	-
14	Short Bridge	08	128	F0	127	0-64	-
15	Short Expression	08	128	F0	-	65-127	-
16	Effects	08	193	F#0	-	-	-
17	Strum	06	054	G0	-	-	-
18	Slide Mode	--	--	G#0	-	-	-
19	Slide Down	04	070	A0	-	-	-
20	Slide Up	08	112	A#0	-	-	-
21	Flageolet	10	063	B0	-	-	-
22	Muted Center	12	189	C1	0	0-64	-
23	Muted Bridge	08	128	C1	127	0-64	-
24	Muted Expression	08	128	C1	-	65-127	-
25	Falls	12	180	C#1	-	-	-
26	Mute PickUp 1 Step Center	08	128	D1	0	-	-
27	Mute PickUp 1 Step Bridge	08	128	E1	127	-	-
28	Deadnotes	10	160	D#1	-	-	-
29	Mute PickDown 1Step	10	160	E1	-	-	-
30	Solo Mode	--	--	F1	-	-	-
31	Chord Mode	--	--	F#1	-	-	-

Sample Based Controls

32	Fall-Control	07	105	CC20
33	Squeeks	01	057	CC21
34	Strum Rel.Trigger	06	054	CC22
35	Stopnoise Rel. Trigger	04	112	CC23
36	Note Off Rel.Trigger	06	097	CC24
37	Attack-Controls 1	06	096	CC25
38	Attack-Controls 2	10	120	CC26
39	Attack-Controls 3	10	160	CC27
40	Rattle	03	027	CC28
41	Atmosphere	01	051	CC29
42	Flageolet-Control	10	063	CC30

Steel - Guitar

Articulations:

Nr.	Name	Vel.	Samples	Key	CC02	CC11	CC65
01	Sustain Center Down	11	163	C0	0	0-64	0-126
02	Sustain Center Up	11	164	C0	0	0-64	127
03	Sustain Bridge Down	11	163	C0	127	0-64	0-126
04	Sustain Bridge Up	11	163	C0	127	0-64	127
05	Sustain Expr. 1	03	044	C0	-	65-127	-
06	Hammer On	07	105	C#0	--	0-64	-
07	Hammer On Expr.	03	044	C#0	-	65-127	-
08	Pick Up 1Step Center	11	165	D0	0	-	-
09	Pick Up 1Step Bridge	11	165	D0	127	-	-
10	Pull Off	07	104	D#0	-	-	-
11	Pick Up 2 Steps Center	11	165	E0	0	-	-
12	Pick Up 2 Steps Bridge	11	165	E0	127	-	-
13	Short Center Down	11	165	F0	0	-	0-126
14	Short Center Up	11	165	F0	0	-	127
15	Short Bridge Down	11	163	F0	127	-	0-126
16	Short Bridge Up	11	165	F0	127	-	127
17	Effects	05	097	F#0	-	-	-
18	Strum	08	048	G0	-	-	-
19	Slide Mode	-	-	G#0	-	-	-
20	Slide Up 07	03	048	A0	-	-	-
21	Slide Down 07	03	045	A#0	-	-	-
22	Flageolet	08	088	B0	-	-	-
23	Muted Center Down	11	163	C1	0	-	0-126
24	Muted Center Up	11	163	C1	0	-	127
25	Muted Bridge Down	11	164	C1	127	-	0-126
26	Muted Bridge Up	11	165	C1	127	-	127
27	Fall	08	120	C#1	-	-	-
28	Muted PickUp1	10	149	D1	-	-	-
29	Dead Note Down	08	120	D#1	-	-	0-126
30	Dead Note Up	08	120	D#1	-	-	127
31	Muted Pickup2	10	150	E1	-	-	-
	Sample Based Controls						
32	Fall-Control	08	120	CC20			
33	Squeeks Rel.Trigger	01	056	CC21			
34	Strum Rel. Trigger	08	048	CC22			
35	Stopnoise Rel.Trigger	01	028	CC23			
36	Note Off Rel. Trigger	04	060	CC24			
37	Attack 1 -Scratch	08	120	CC25			
38	Attack 2 -Dead-Note	08	120	CC26			
39	Attack 3 - Strum	08	048	CC27			
40	Rattle-Control	01	018	CC28			
41	Atmosphere	01	051	CC29			
42	Flageolet-Control	08	088	CC30			
43	Feedback-Control	03	044	CC31			

Nylon - Guitar

Articulations:

Nr.	Name	Vel.	Samples	Key	CC02	CC11	CC65
01	Sustain Center	10	150	C0	0	0-42	
02	Sustain Bridge	10	150	C0	127	0-42	-
03	Sustain Expression 1	07	103	C0	-	43-84	-
04	Sustain Expression 2	06	084	C0	0	85-127	-
05	Hammer On	08	118	C#0	127	0-64	-
06	Hammer On Expression	06	084	C#0	-	65-127	-
07	Pick Up 1Step Center	10	147	D0	0	-	-
08	Pick Up 1Step Bridge	10	150	D0	127	0-64	-
09	Pull Off	08	120	D#0	0	65-127	-
10	Pull Off Expression	06	084	D#0	127	-	-
11	Pick Up 2 Steps Center	10	150	E0	-	-	-
12	Pick Up 2 Steps Bridge	10	150	E0	-	-	-
13	Short Center	10	150	F0	-	0-42	-
14	Short Bridge	10	150	F0	-	0-42	-
15	Short Expression 1	07	105	F0	-	43-84	-
16	Short Expression 2	07	105	F0	-	85-127	-
17	Effects	08	111	F#0	-	-	-
18	Strum	08	120	G0	-	-	-
19	Slide Mode	--	--	G#0	-	-	-
20	Slide Up 7	03	112	A0	-	-	-
21	Slide Down 7	03	104	A#0	-	-	-
22	Flageolet	07	066	B0	-	-	-
23	Muted	08	120	C1		0-42	-
24	Muted Expression 1	07	106	C1		43-84	-
25	Muted Expression 2	07	105	C1		85-127	-
26	Falls	06	090	C#1		-	-
27	Muted PickUp 1	08	119	D1		-	-
28	Muted Pickup 2	08	120	E1		-	-
29	Dead Notes	08	120	D#1		-	-
30	Solo-Mode	-	-	F1		-	-
31	Chord-Mode	-	-	F#1		-	-
	Sample Based Controls						
32	Fall-Control	06	090	CC20			
33	Squeeks Rel.Trigger	01	054	CC21			
34	Strum Rel. Trigger	08	120	CC22			
35	Stopnoise Rel.Trigger	01	052	CC23			
36	Note Off Rel. Trigger	06	088	CC24			
37	Attack 1 -Strum	08	120	CC25			
38	Attack 2 -Dead-Note	08	120	CC26			
39	Rattle-Control	03	027	CC28			
40	Atmosphere	01	043	CC29			
41	Flageolet-Control	07	066	CC30			

Banjo

Articulations:

Nr.	Name	Vel.	Samples	Key	CC02	CC11	CC65
01	Sustain Center Down	10	150	C0	0	0-64	0-126
02	Sustain Center Up	10	150	C0	0	0-64	127
03	Sustain Bridge Down	10	150	C0	127	0-64	0-126
04	Sustain Bridge Up	10	150	C0	127	0-64	127
05	Sustain Expr. 1	06	089	C0	-	65-127	-
06	Hammer On	07	105	C#0	--	0-64	-
07	Hammer On Expr.	06	089	C#0	-	65-127	-
08	Pick Up 1Step Center	10	149	D0	0	-	-
09	Pick Up 1Step Bridge	10	149	D0	127	-	-
10	Pull Off	08	119	D#0	-	-	-
11	Pick Up 2 Steps Center	09	135	E0	0	-	-
12	Pick Up 2 Steps Bridge	09	133	E0	127	-	-
13	Short Center Down	10	145	F0	0	0-64	0-126
14	Short Center Up	10	145	F0	0	0-64	127
15	Short Bridge Down	10	147	F0	127	0-64	0-126
16	Short Bridge Up	10	147	F0	127	0-64	127
17	Short Expr.1	09	135	F0	-	65-127	-
18	Effects	10	114	F#0	-	-	-
19	Strum	09	135	G0	-	-	-
20	Flageolet	07	091	B0	-	-	-
21	Muted Center Down	09	134	C1	0	-	0-126
22	Muted Center Up	09	135	C1	0	-	127
23	Muted Bridge Down	09	135	C1	127	-	0-126
24	Muted Bridge Up	09	135	C1	127	-	127
25	Fall	09	126	C#1	-	-	-
26	Muted PickUp1 Center	09	135	D1	0	-	-
27	Muted PickUp1 Bridge	09	134	D1	127	-	-
28	Dead Note	06	090	D#1	-	-	-
29	Muted Pickup2 Center	09	135	E1	0	-	-
30	Muted PickUp2 Bridge	09	135	E1	127	-	-
31	Solo-Mode	-	-	E1	-	-	-
32	Chord-Mode	-	-	F#1	-	-	-
	Sample Based Controls						
33	Fall-Control	09	126	CC20			
34	Squeeks Rel.Trigger	01	054	CC21			
35	Stopnoise soft	02	106	CC22			
36	Stopnoise loud	01	053	CC23			
37	Note Off Rel. Trigger	06	068	CC24			
38	Attack 1 -Scratch	01	015	CC25			
39	Attack 2 -Dead-Note	09	135	CC26			
40	Attack 3 - Strum	06	090	CC27			
41	Atmosphere	02	086	CC29			
42	Flageolet-Control	07	091	CC30			

Mandolin

Articulations:

Nr.	Name	Vel.	Samples	Key	CC02	CC11	CC65
01	Sustain Center Down	08	127	C0	0	0-64	0-126
02	Sustain Center Up	08	127	C0	127	0-64	127
03	Sustain Bridge Down	08	121	C0	0	0-64	0-126
04	Sustain Bridge Up	07	105	C0	127	0-64	127
05	Tremolo Expr.	05	082	C0	-	65-127	-
06	Hammer On	06	090	C#0	-	-	-
07	Pick Up 1Step	08	127	D0	-	-	-
08	Pull Off	06	094	D#0	-	-	-
09	Pick Up 2 Steps	08	128	E0	-	-	-
10	Short Center Down	08	109	F0	0	-	0-126
11	Short Center Up	08	110	F0	0	-	127
12	Short Bridge Down	08	115	F0	127	-	0-126
13	Short Bridge Up	08	115	F0	127	-	127
14	Effects	08	086	F#0	-	-	-
15	Strum	08	072	G0	-	-	-
16	Slide Mode	-	-	G#0	-	-	-
17	Tremolo Slide Up 12	04	034	A0	-	-	-
18	Tremolo Slide Down 12	03	027	A#0	-	-	-
19	Flageolet	08	038	B0	-	-	-
20	Muted	08	125	C1	-	-	-
21	Falls	08	123	C#1	-	-	-
22	Tremolo	05	082	D1	-	-	-
23	Solo-Mode	-	-	F1	-	-	-
24	Chord-Mode	-	-	F#1	-	-	-

Sample Based Controls

25	Fall-Control	08	123	CC20
25	Squeeks Rel.Trigger	01	056	CC21
26	Strum Rel. Trigger	08	072	CC22
27	Stopnoise Rel.Trigger	01	056	CC23
28	Note Off Rel. Trigger	06	093	CC24
29	Attack 1 -Mute	08	125	CC25
30	Attack 2 -Strum	08	072	CC26
31	Atmosphere	01		CC29
32	Flageolet-Control	08	036	CC30

Articulation Details

C0 Sustain:
Straight picked note from very soft to pulled Slap. Down and Upstroke samples available on all plectrum guitars.

C#0 Hammer On:
A Legato Sound produced by picking one note with the right hand and hammering a second note without using the right hand.

D0 Pickup 1:
Glides into the tone. 1 half step.

D#0 Pull off:
A Legato Sound produced by picking one note with the right hand and releasing the string without using the right hand.

E0 Pickup 2:
Glides into the tone. 2 half steps.

F0 Short:
Straight picked note from very soft to pulled Slap. Very dynamic short notes. perfect for faster melodies. Down and Upstroke samples available.

F#0 Effects:
A variety of different effect sounds, some with velocities.

G0 Strum:
Single note strums without tone. Perfect in the chord mode or as dead notes in a melody.

G#0 Slide mode 1:
Play a note, as soon as you play another note while holding the first note, a slide from the first note is sounding. Adjust slide speed with the corresponding slider or CC05.

A0 Slide Up:
A slide Up of one octave sounds when you play a note. stop the slide anytime you want by pressing another note. Adjust the slidespeed with the corresponding slider or CC05. You can also choose between sustain or hammer-on sound for the stop key.

Articulations
Details

A#0 Slide Down:
A slide Down of one octave sounds when you play a note. Stop the slide anytime you want by pressing another note. Adjust the slide speed with the corresponding slider or CC05. You can also choose between sustain or hammer-on sound for the stop key.

B0 Flagolets:
Overtones. Great to play chords. Use enough chorus and reverb when playing this patch.

C1 Palm Mutes:
A Muted, short and funky Sound. Down and upstroke samples available. On e-Guitar you have access to 7 different pickings from dead note trough palm mute to an open sustain sound. Use expression (cc11) to blend between these articulations.
On E-Guitars, a total of 1.200 samples have been programmed on this keyswitch.

C#1 Falls:
A short fall down. Also available as Fall Control on release trigger.

D1 Palm Mute Pickup 1:
Palm Mute sound, Glides into the tone. 1 half step.

D#1 Dead Notes:
Very short muted sound with only a touch of tone. Put these little notes in the holes of your melody.

E1 Palm Mute Pickup 2:
Palm Mute sound glides into the tone. 2 half steps.

F1 Solo Mode:
Play and hold a note. When you play a second note higher than the first, the hammer-on sounds. If the second note is lower than the first, you'll hear the pull-of. Perfect for legato playing and realistic trills.

E#1 Chord Mode:
Play chords in the range between B1-B4. activate the sound with the „action keys" from C5-D#6. Play the single notes of the chord with the white keys E6-C7. See seperate description for further details.

Instant Effects:
The following effects are available in every keyswitch:
A1 - Squeeks
A#1 - Struming/Deadnotes

MIDICONTROLLER
OVERVIEW

GENERAL-CONTROLS:

ACOUSTIC / ELECTRIC	CC03
BRIDGE / NECK	CC02
EXPRESSION	CC11
UP- / DOWNSTROKE	CC65
VOLUME	CC07
PAN	CC10
TUNE	CC09
VIBRATO	CC01
VELOCITY MIN.	CC31
VELOCITY MAX.	CC32

ATTACK-CONTROLS:

ATTACK CONTROL 1	CC25
ATTACK CONTROL 2	CC26
ATTACK CONTROL 3	CC27

RELEASE-CONTROLS:

SQUEEK CONTROL	CC21
STRUM REL.TRIGGER	CC22
STOP NOISE RELTRIG.	CC23
NOTE OFF REL TRIG.	CC24

SOUND-CONTROLS;

FALL CONTROL	CC20
RATTLE CONTROL 1	CC28
ATMOSPHERE LEVEL	CC29
FLAGEOLET CONTROL	CC30

CHORD-MODE-CONTROLS:

CHORD-SPEED	CC55
RANDOM CHORD-SPEED	CC56
REL NOTE OFF	CC57
HARMONIC BASS	CC58
STRINGS	VELOCITY

HARMONIZE-CONTROLS:

INTERVAL	CC50
HARMONIZE TIME	CC51

ALTERNATION-CONTROL:

ALTERNATION MODE	CC52
ALTERNATION TIME	CC53
DOWNSTROKE ONLY	CC65 (1-126)
UPSTROKE ONLY	CC65 (127)

SLIDE-MODE-CONTROLS:

SLIDE SPEED:	CC05
SLIDE STOP SUSTAIN	CC54

FILTER:

FILTER CUT OFF	CC91
FILTER RESONANCE	CC92

EQ 1:

EQ 1 FREQUENCY	CC70
EQ 1 BANDWITH	CC71
EQ 1 LEVEL	CC72

EQ 2:

EQ 2 FREQUENCY	CC73
EQ 2 BANDWITH	CC74
EQ 2 LEVEL	CC75

EQ 3:

EQ 3 FREQUENCY	CC76
EQ 3 BANDWITH	CC77
EQ 3 LEVEL	CC78

REVERB:

PRESET	CC93
REVERB LEVEL	CC101
REVERB PRE DELAY	CC102
REVERB TIME	CC103
REVERB DAMPING	CC105

DELAY:

PRESET	CC94
DELAY LEVEL	CC107
DELAY TIME	CC108
DELAY DAMPING	CC109
DELAY FEEDBACK	CC111

CHORUS:

PRESET	CC95
CHORUS LEVEL	CC112
CHORUS DEPTH	CC113
CHORUS SPEED	CC114
CHORUS PHASE	CC115

FLANGER:

PRESET	CC96
FLANGER FEEDBACK	CC86
FLANGER SPEED	CC84
FLANGER DEPT	CC83
FLANGER LEVEL	CC85

PHASER:

PRESET	CC97
PHASER FEEDBACK	CC89
PHASER SPEED	CC88
PHASER DEPT	CC87
PHASER LEVEL	CC90

COMPRESSOR PRO:

PRESET	CC98
COMP. TRESHOLD	CC79
COMP. RATIO	CC80
COMP. ATTACK	CC81
COMP. LEVEL	CC82

MIDI Controller Details

"Electric/Acoustic" (CC03) (Only on Jazz-Guitar.)
Blends seemlessly between electric and acoustic signal. The Jazz-Guitar is recorded in stereo. One channel contains the electric pickup signal, the other channel was recorded via a Neumann U87 microphone.

"Center/Bridge" (CC02)
Blends seamlessly between center and bridge playing. This simulated the right-hand-position of a guitarist.

"Expression" (CC11)
On most guitars you find different variants of the same articulation. E.G. On the E-Guitar picking you have 7 different variants from close to open picking. The variants are available through CC11 Expression. For perfect control connect an expression pedal to your masterkeyboard. The expression variants are available on sustain, shorts, hammer-on and pull-off. See the instruments articulation lists for details about expression.

"Alternation" (CC52, 53, 65)
All plectrum guitars are recorded with individual up- and downstroke samples. There are different modes to control the up- and downstrokes.
Strict: Alternates the stroke direction each note you play.
Automatic (CC52): Alternates the strokes in a certain time range.
Alternation Time (CC53): Lets you adjust a time range in milliseconds. Notes being played in this time range alter the stroke direction. After that time, stroke direction begins with downstroke again.
Downstroke (CC65): If CC65 is set between 0-126 only the Downstrokes sound.
Upstroke (CC65) If CC65 is set to 127, only the upstroke samples sound.

Slide-Mode Controls:
Slide Speed (CC05) Lets you adjust the speed of the slides
Slide Stop sustain (CC54) In slide mode 2 (Key A0) the slide begins as soon as you press a note. Use CC54 to decide if the stopping note should be a sustain or a hammer on sound, wich has a softer attack.

MIDI CONTROLLER
RELEASE/ATTACK CONTROLS

RELEASE-CONTROLS:
THE RELEASE CONTROLS CAN BE USED TO ALTER THE RELEASE OF EACH NOTE. THIS GIVES MORE LIFE AND REALISM TO THE SOUND. THESE EFFECTS APPEAR WHEN YOU RELEASE THE NOTE (REL.TRIGGER)

"SQUEEKS - CONTROL RELEASE TRIGGER" (CC21)
THE SOUND OF THE FINGERS GLIDING OVER THE STRINGS IS ADDED WHEN RELEASING THE KEY WITH THIS CONTROLLER.

"STRUM NOISE - RELEASE TRIGGER" (CC22)
THE SOUND OF STRUMMING THE STRINGS TO STOP THE NOTE CAN BE ADDED WHEN RELEASING THE KEY.

"STOP NOISE - RELEASE TRIGGER" (CC23)
THE SOUND OF HITTING THE STRINGS TO STOP THE NOTE CAN BE ADDED WHEN RELEASING THE KEY.

"NOTE OFF - RELEASE TRIGGER" (CC24)
A REALISTIC NOTE OFF SOUND CAN BE ADDED WHEN RELEASING THE KEYBOARD KEY. SIX DYNAMICS ARE AVAILABLE. OVERALL VOLUME CAN BE ADJUSTED SEAMLESSLY.

ATTACK-CONTROLS:
THE ATTACK CONTROLS CAN BE USED TO ALTER THE ATTACK OF EACH NOTE. THIS GIVES MORE LIFE AND REALISM TO THE SOUND.

"ATTACK 1" (CC25)
A HARD, SCRATCHY ATTACK CAN BE ADDED WITH THIS SLIDER. ITS PRODUCED BY MOVING A PLECTRUM OVER THE STRINGS.

"ATTACK 2" (CC26)
THE DEAD NOTES HAVE BEEN PROGRAMMED ON THE ATTACK OF THE SOUND TO PROVIDE A HARDER ATTACK.

"ATTACK 3" (CC27)
THE STRUM NOTES HAVE BEEN PROGRAMMED ON THE ATTACK OF THE SOUND TO PROVIDE A HARDER ATTACK.

MIDI Controller
Sound - Controls

Sound-Controls:

"Fall - Control" Release Trigger (CC20)
When releasing the note, the sound slides down.

"Rattle" release trigger (CC28)
The sound of the string, rattling on the frets. These very badly played notes can be added to avoid overly perfect playing.

"Atmosphere" (CC29)
The resonance of the guitar body was captured seperately. You can add this atmospheric sound like a natural reverb.

"Flageolet Control" (CC30)
The flageolet overtones can be added with this controller. It fattens the sound and creates interesting Effects on staccato notes. Not realistic - but nice.

Harmonize-Controls" (CC50, 53)
The harmonizer adds a certain interval to the notes.
Interval (CC50): Select the interval with this controller.
Harmonize Time (CC53): Sets a delay in ms to the harmonizer.

"Velocity min/max" (CC31/32)
If you find the up to 13 dynamics too much, you can control the velocity range with these sliders. You find them in the attack-control page in the interface.
Velocity min (CC31) sets the minimum velocity
Velocity max (CC32) sets the maximum velocity

"General-Controls"
Volume (CC07) Sets the volume of the complete instrument.
Panorama (CC10) Adjusts left - right pan.
Tune (CC09) All instruments are perfectly tuned to A=440Hz If you like to detune the instrument, use this controller. CC09 can also be used as an alternative to the pitchbend.
Vibrato (CC01 Modwheel) Controls the vibrato.

Chris Hein
recording/programming

Chris Hein has almost 20 years of experience with samples. In 1986 he had already produced the legendary "Studio- Sample" series for Metra-Sound.

In 1985 he belonged to the first computer pioneers, who used the Commodore C-64 for computer music. His work for Emagic (C-Lab) on the Frankfurt Music Exhibition set the course for his successful work as a sound arranger. With the SX-64, the world's first laptop, he travelled to various music studios in Europe.

From Atari to Mac, he eventually settled down with the foundation of "Hine Studio" and created innumerable sounds for CD-Productions, Film- & TV music, industrial shows and musicals. The focus of his work concentrated always on the re-production of real orchestras with virtual instruments. The contract musicals "A world for Deinhardt" (1994) and the great musical productions "The Enchanted Forrest" (1996) and "Goa" (2000) consists exclusively from sample sounds. Today his studio contains an impressive collection of 18 samplers of various types.

In 1997 Chris Hein established the Film & Media production company "Wizard-Media GmbH".

Also available from Chris Hein:

Chris Hein-Horns

Alto - Saxophon
played by: Marc Leymann

Tenor - Saxophon
played by: Marc Leymann

Bb - Trumpet
played by: Andy Haderer

Bb - Trombone
played by: Ludwig Nuss

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  Dirty Notes, Dead Notes
  Real Vibrato
  Air-Stream – Control
  Growl – Control
  Spit – Control
  Keys-Control
  Breath Release Trigger
  Vibrato via sustain pedal

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