Xsample AI Library

Virtual instruments for Composers & Musicians

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- List of the 61 room impulses
- List of the 64 room impuls combinations

License Agreement
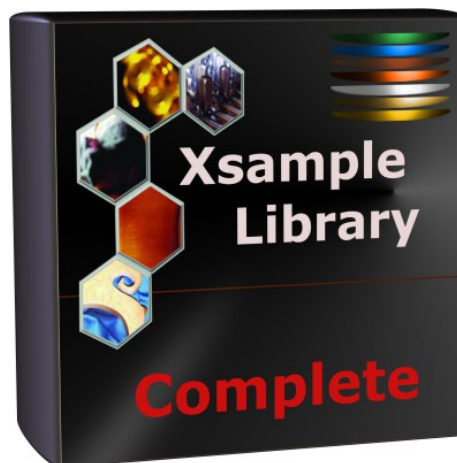
Product content:

Kontakt Patches
Samples
61 IR Samples (room impulses)
Finale Human Playback Preferences (as far as the instrument is supported from Finale)
Sibelius Sound Set / House Style
TouchOSC Layout
PDF documentation for the complete Library (english / german)
PDF Notation Guide Part I & II for the complete Library

Preface

This new version of the Xsample Library is an extension of the previous Xsample products in operation and scope. All products are based on the same instruments. The library is available as a complete product, in four separate parts or as a modular library with a total of 44 parts.
The instruments of the Xsample Library are designed so that they can be used flexibly in different work situations: Whether you work with a music notation software such as Finale or Sibelius, or you produce with Cubase or Logic or you want to improvise or perform live.

Finale "Human Playback" preferences are included and for Sibelius is a "sound set" in the package. For the operation of these adjustments, as well as the TouchOSC layout, Xsample can not take any responsibility, since the operation is dependent on the interaction of the various programs.

Xsample „Features"

- Finale Human Playback preferences and Sibelius Sound Set
- easy and comfortably playable instruments
- „all in one" instruments (all playing styles clearly in one instrument)
- colored instruments
- fully chromatically sampled and multilayer
- natural and vivid loops for all sustained notes
- seamless dynamics and timbre by xfades:
  continuous sound from ppp to fff
- Stereo- and Mono- Version (switchable in the instrument)
- Room Walker script for effects within a virtual two-dimensional space
- 61 IR Samples (room impulses)
- A variety of new modulators
- TouchOSC Layout

Technical data

Complete Library: 23198 Samples / 14,3 GB
88 Multis with preset ensembles (.nkm)
205 instrument-Kontakt-patches (.nki / .nkb / .nkm)

Hardware & software requirements

- Full version of Native Instruments Kontakt (Version 5.3 or higher)
- Keyboard with 88 keys, modwheel, pitch bend and sustain-pedal
- Recommended are additional configurable MIDI controller (for CC#2 and CC#4) or an iPad/Android tablet with TouchOSC (Layout in the package)

The instruments and playing styles

Part I: Woodwinds

Piccolo Flute 348 Samples – 94,1 MB	Standard (senza vibrato), staccato, flutter tongue, secco ("spat"), key noises, multiphonics, breath noises
Flute 578 Samples – 204 MB	Standard (vibrato), senza vibrato, staccato, flutter tongue, secco ("spat"), key noises, multiphonics, whistle tones, jet whistle, sounds with much air, only mouth piece, breath noises
Alto Flute 493 Samples – 181 MB	Standard (vibrato), senza vibrato, staccato, flutter tongue, secco ("spat"), key noises, multiphonics, only mouth piece, breath noises
Bass Flute 425 Samples – 142 MB	Standard (vibrato), staccato, flutter tongue, slap tongue, secco ("spat"), key noises, sounds with much air, multiphonics, jet whistle, breath noises
Oboe 401 Samples – 158 MB	Standard (vibrato), senza vibrato, staccato, flutter tongue, key noises, multiphonics, air noises, crow on reed, breath noises and additional playing noises
English Horn 282 Samples – 107 MB	Standard (vibrato), senza vibrato, staccato, flutter tongue, key noises, multiphonics, air noises, crow on reed, breath noises and additional playing noises
Oboe d'amore 224 Samples – 72,7 MB	Standard (vibrato), senza vibrato, staccato, key noises, multiphonics, air noises, crow on reed, breath noises
Clarinet (Eb) 359 Samples – 160 MB	Standard (senza vibrato), staccato, flutter tongue, key noises, glissandi up and down, multiphonics, air noises, breath noises
Clarinet (Bb) 426 Samples – 163 MB	Standard (senza vibrato), staccato, flutter tongue, key noises, multiphonics, air noises, breath noises and additional playing noises
Basset Horn 364 Samples – 159 MB	Standard (senza vibrato), staccato, flutter tongue, key noises, multiphonics, breath noises and additional playing noises
Bass Clarinet 400 Samples – 164 MB	Standard (senza vibrato), staccato, flatter tongue, slap tongue, key noises, multiphonics, glissandi, breath noises and additional playing noises
Bassoon 570 Samples – 220 MB	Standard (vibrato), senza vibrato, staccato, slap tongue, key noises, multiphonics, air noises, crow on reed, "Helicopter", breath noises and additional playing noises
Contrabassoon 478 Samples – 166 MB	Standard (vibrato), senza vibrato, staccato, slap tongue, key noises, multiphonics, air noises, "Helicopter", breath noises and additional playing noises
Alto Saxophone 586 Samples – 255 MB	Standard (vibrato), senza vibrato, staccato, flutter tongue, growling, slap tongue, voice breathing, key noises, multiphonics, air noises, glissandi, breath noises and additional playing noises

Technical data: 5934 Samples / 2,2 GB

The instruments and playing styles - **Part II**: Brass, Timpani & Percussion

Trumpet 1099 Samples – 504 MB	standard senza vibrato, staccato, flutter tongue, standard mute, standard mute staccato, cup mute, cup mute (short), harmon mute, harmon mute staccato, pedal tones, without mouthpiece (soft tone), voice breathing, glissandi up and down, lip trill, effects (mouthpiece strokes, air noises, valve noises and more) and breath noises
Trombone 1027 Samples – 396 MB	standard senza vibrato, staccato, flutter tongue, standard mute, cup mute, bucket mute, voice breathing, glissandi up (harmonicsglissandi) and down (drops), effects (air noises, metal noises, mouthpercussion and more) and breath noises
Timpani (classic) 876 Samples – 621 MB	Low Timpani - C-Timpani – G-Timpani – High Timpani – Piccolo Timpani For all 5 timpani: with standard timpani mallets – damped short strokes – damping noises – tremolo with standard timpani mallets
Timpani (advanced) 550 Samples – 471 MB	Low Timpani - C-Timpani – G-Timpani – High Timpani – Piccolo Timpani For all 5 timpani: with hard mallets – tremolo with hard mallets – with brush – with hand – kettle sounds – wiped on skin – sounds with cymbal on skin (18' and 20')
Percussion 1 436 Samples – 336 MB	Castanets, Chimes, Claves, Cymbals (suspended / bowed), Cymbals Muted, Gran Cassa, Side drum, Tam-tam, Tambourine, Tom-toms, Triangle, Wind Chimes, Woodblocks
Percussion 2 978 Samples – 276 MB	Bird, Bongos, Cabaza, Claps, Conga, Friction Drums, Frog, Hand bell, Hi Hat, Horn, Jews Harps, Kalimba, Kazoo, Lotosflute, Maracas, Metronome, Pasteboard Rattle, Pipe, Rainmaker, Rattle, Scraper, Small Anvil, Snips, Steel Plates, Stones, Talk Drum, Tibet Bowl, Train Pipe, Trill Pipe, Water gongs
Percussion 3 126 Samples – 104 MB	Big Drum, Piatti, Thunder Sheet

Technical data: 5092 Samples / 2,64 GB

The instruments and playing styles - **Part III**: Mallets, Stringed- & Keyed instruments

Marimbaphone 1111 Samples – 266 MB	Standard mallets, standard damped, with finger, finger damped, with sticks, bowed (with double bass bow), wiped
Xylophone 176 Samples – 22,5 MB	Standard mallets, plastic mallets
Vibraphone 240 Samples – 71,4 MB	Standard mallets, xylophone mallets, triangle mallets, harmonics, bowed (with double bass bow)
Glockenspiel 68 Samples – 52 MB	Standard mallets
Crotales 39 Samples – 153 MB	Standard mallets, plastic mallets, bowed (with double bass bow)
Steel Drum (diatonic) 104 Samples – 53,1 MB	Standard mallets, with sticks, glissando effects
Steel Drum (chromatic) 565 Samples – 335 MB	Standard mallets, soft mallets, hard mallets, effects
Concert Harp 482 Samples – 607 MB	Pizzicato, pizzicato damped, harmonics, multi–harmonics, pedal effect sounds, slides, shouts and stroke noises
Cymbalon (Dulcimer) 393 Samples – 618 MB	Standard mallets, wood mallets, tremolo, sordino, harmonics, pizzicato, double pizzicato and effects
8 String Guitar 450 Samples – 291 MB	with finger, with plectrum, slaps, dead notes, slides, strokes, percussion noises
Accordion 915 Samples – 292 MB	8' in cassotto, 8' a cassotto, 4', 16', vibrato, tremolo, bellows shake, staccato (bellow and key staccato), left manual 8' + 16', air noises, strokes, glissandi, draw-stop noises
Steinway B 708 Samples – 3,03 GB	Layers for pedal "up" and pedal "down" sounds, seamless dynamic through layer blending, pedal noises (resonance)
Prepared Piano 397 Samples – 396 MB	various glissandi (with lether, glass), paper on low strings, plectron effects, screws, strokes, with gum and much more... (see → description)
Celesta 61 Samples – 23,7 MB	Standard
Clavichord 147 Samples – 64,5 MB	Standard
Spinet 1 243 Samples – 130 MB	8', 8' Lute stop, effects
Spinet 2 216 Samples – 118 MB	8', 8' Lute stop
Clavicymbel 153 Samples – 65,7 MB	8', 8' Lute stop, 8' prepared (damped)
Toy Piano 132 Samples – 148 MB	Standard, with hand, plucked, effects

Technical data: 6600 Samples / 6,64 GB

The instruments and playing styles - **Part IV**: Strings

Violin 1341 Samples – 717 MB	sustained natural vibrato, tremolo, spiccato, marcato, pizzicato, body resonance, sustained senza vibrato, con sordino vibrato, con sordino, senza vibrato, harmonics, Bartok pizzicato, col legno, finger, sul ponticello, tremolo sul ponticello, tremolo harmonics, harmonics glissando, harmonics glissando tremolo, artificial harmonic glissando, body strokes, pizzicato in peg box, pizzicato behind bridge, rosin noises, bridge bowed
Viola 1047 Samples – 465 MB	sustained natural vibrato, tremolo, spiccato, marcato, pizzicato, body resonance, sustained senza vibrato, con sordino vibrato, con sordino, senza vibrato, harmonics, Bartok pizzicato, col legno, finger, sul ponticello, tremolo sul pont, tremolo harmonics, harmonics gliss, harmonics glissando tremolo, artificial harmonic gliss, body strokes, pizzicato in peg box, pizzicato behind bridge, bowed between stringholder and bridge, scratch string, scroll kiss, bow scratch, bridge bowed, tailpiece bowed
Violoncello 1585 Samples – 765 MB	sustained natural vibrato, tremolo, spiccato, marcato, pizzicato, body resonance, sustained senza vibrato, con sordino vibrato, con sordino, senza vibrato, harmonics, Bartok pizzicato, col legno, finger, sul ponticello short, sul pont, tremolo sul pont, tremolo harmonics, harmonics gliss, harmonics gliss con sordino, harmonics gliss tremolo, gliss, gliss con sordino, body strokes, dead notes, pizz in peg box, pizz behind bridge, rosin noises, bow scratch, tailpiece bowed, spike bowed, various plucks
Double Bass 1538 Samples – 851 MB	sustained natural vibrato, tremolo, spiccato, marcato, pizzicato, body resonance, sustained senza vibrato, con sordino vibrato, con sordino, senza vibrato, harmonics, Bartok pizzicato, col legno, finger, sul ponticello short, sul ponticello, tremolo sul pont, tremolo harmonics, harmonics gliss, harmonics gliss con sordino, harmonics gliss tremolo, harmonic gliss con sordino tremolo, short glissando, bowed and pizz natural harmonics (B, E, A, D, G string), pizz gliss, body strokes, dead notes, pizz in peg box, pizz behind bridge, rosin noises, bow percussion

Technical data: 5511 Samples / 2,72 GB

The colors of the Kontakt instruments

The new colors of the Kontakt instruments are used to get a quick overview of the instruments involved in a Kontakt-rack. The following colors have been assigned to the instruments:

Woodwinds

Brass

Mallets

Percussion

Keyed instruments
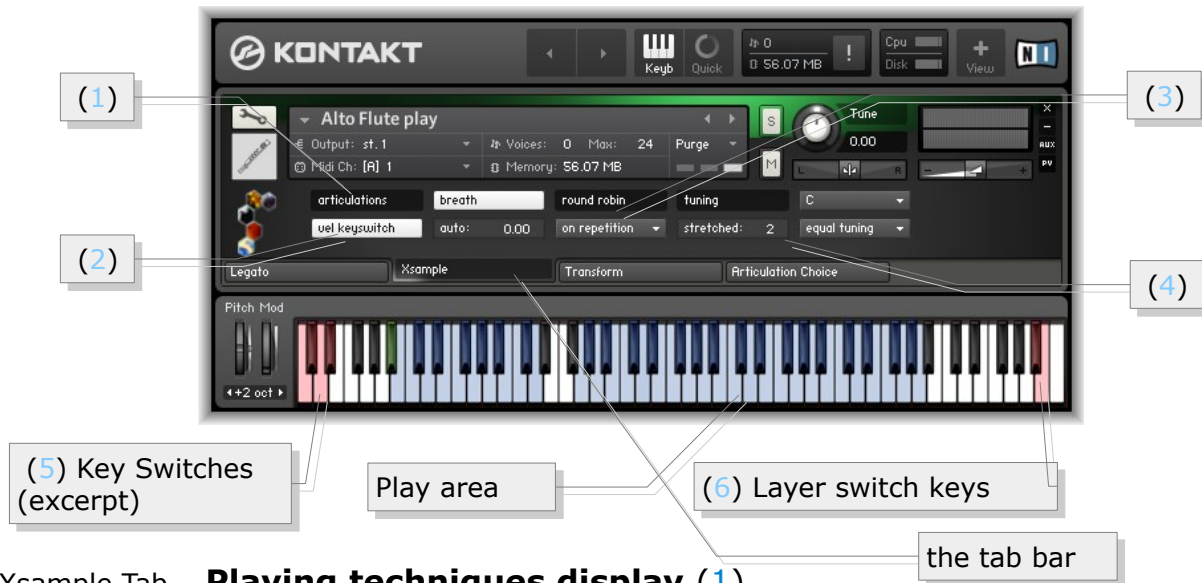
Stringed instruments

Strings

Kontakt rack
Example of the view of a chamber orchestra in classical score arrangement

Description of the GUI functions

The following describes the functions that are available for most Xsample instruments. As an example, here the alto flute:

(1)
(2)
(3)
(4)

(5) Key Switches (excerpt)

Play area

(6) Layer switch keys

the tab bar

Xsample Tab – **Playing techniques display** (1)

The currently selected playing technique is shown in the display. You can use the Key Switches (5) or alternatively a MIDI Controller (cc#0 or for percussion instruments cc#32) for switching. In order to reach the diverse sounds without restricting the play range, the key switches are grouped in up to three layers (strings). The layer change can be reached on either the keys A#7 - C8 (6) or with the Velocity Key Switch Mode (2) through the velocity of the key switches.

Xsample Tab – **Velocity Key Switch** (2)

Xsample offers in the instruments so many sound variations that the key switches must be staggered in "layers". Similar variants are mostly on the same keyswitches, if possible. When the button „vel keyswitch" is selected, layer and keyswitch will be controlled at once. Low velocities for the first layer and high velocities for the second layer. If the button is off, you can reach the layers over the Layer switch keys (6).

Very comfortable you can control the playing techniques with the supplied TouchOSC layout:
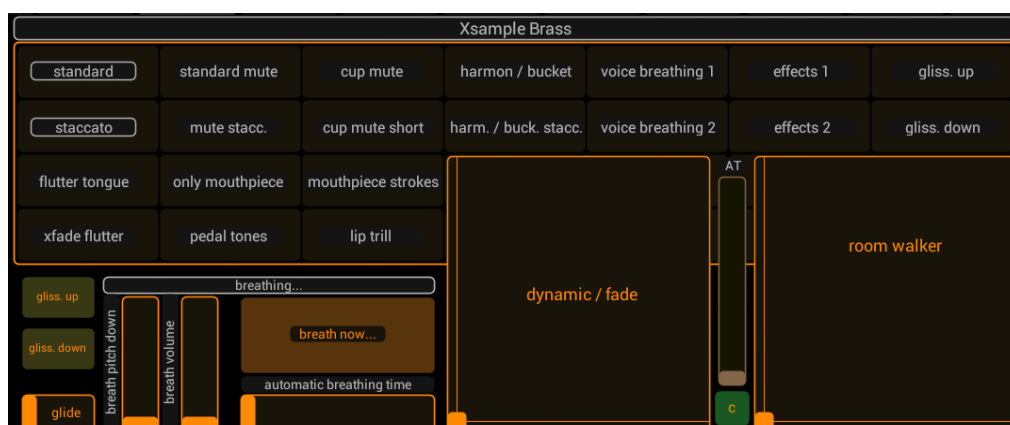
Xsample Tab – **Round Robin Menu** (3)

The drop-down menu below the "round robin"
label contains a selection of different variants of
"Round Robin" modes, a instrument division and
the ensemble mode.

The two random modes (rnd) are a good way to
break through recognizable recurrence pattern.

The different modes can be controlled by CC#82

Off
Turns of the round robin feature. **(CC#82 = 21-41)**

On Repitition
Round Robin is active only when sounds are repeated. **(CC#82 = 0-20)**

On Repitition (rnd)
Round Robin is active only when sounds are repeated.
But the following „sound exchange" is randomly selected. **(CC#82 = 42-62)**

Always
Round Robin is always active. **(CC#82 = 63-83)**

Always (rnd)
Round Robin is always active and plays randomly sound exchanges.
(CC#82 = 84-104)

Always (indiv.)
Round Robin is always active and plays for each tone separately individual
Round Robin cycles. **(CC#82 = 105-115)**

Instrument 1 & Instrument 2
All the sounds of the instrument are divided into 2 parts.
Instrument 1 **(CC#82 = 116-119)** and Instrument 2 **(CC#82 = 120-122)** never play the
same sounds, so that phasing effects are avoided.

Ensemble function (CC#82 = 123-127)

This mode expands the GUI in the ensemble mode to make some special detail settings.

E1 With the voice knob you can make 2 to 5 instruments (CC#91). If *autoload default* (**E6**) is selected, the voices are always automatically combined with suitable default values. If this is not desired, please turn *autoload default* (**E6**) off.

E2 *Panwide* sets the panorama width of the ensemble. (CC#92)

E3 *Alive* generates to all parameters random deviations, so that the ensemble sounds more alive. (CC#93)

E4 With *Detune* you set the maximum detuning in cents for the individual instruments. (CC#94)

E5 Der *Delay*-value allows an individually time shifting sound start. Large values can also be used for interesting delay effects. (CC#95)

E6 As mentioned in section **E1**, the *autoload default* switch ensures that every voice multiplication get suitable values. If the switch is not used, this automatism is turned off.

(TouchOSC Layout / Round Robin area)

Xsample Tab – **Tuning functions** (4)

Stretch

Stretch control on main menu: Spread with values greater than 0 or shrink with values less than 0 the total tuning range. You influence the tone spacing evenly between each tone. (= high notes a little higher, low notes a little lower).

Tuning & base note

In addition, you can set tuning characteristics of different historical and modern tunes. You can also change the basic tone (CC#29) and the tune (CC#30) by selecting separately.

Transform Tab - **Room Walker** (**1 A – 1 E**)

1 A:
Room Walker switch
Presets menu
Presets list

1 C:
Convolution 1 & 2
with room impulses menu
(IR Combinations)

1 E:
Pitch Control
switch

1 B:
Stereo Modeller
(Panorama and
Stereo width)

1 D:
2 Band EQ

Controller Bypass button
(a total of 11)

2:
Stereo / Mono
buttons

3:
Color - effect

4:
Stretch - effect
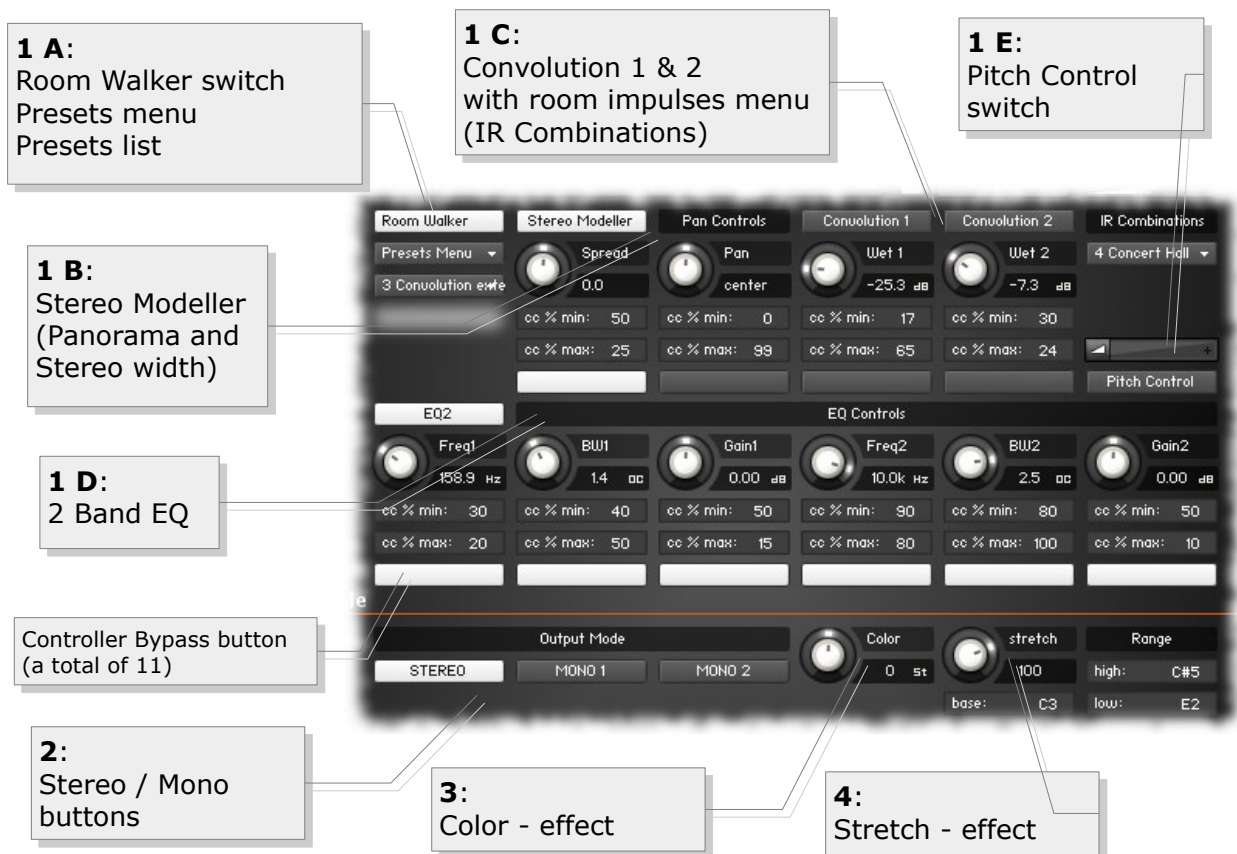
In the upper section you find the "Room Walker" controls. As the name suggests, it is for effects within a two-dimensional space or for moves in a virtual room. CC#11 takes over the room depth and CC#12 the panorama. Basically the Room Walker consist of four insert effects, which can be switched separately on or off:

(**1 B**) Stereo Modeler (pan and stereo width), (**1 C**) Convolution 1 and 2, the (**1 D**) EQ and the (**1 E**) pitch module.

In the "IR Combinations" menu you can choose between 64 room settings based on 61 IR samples (room impulses). In each case, two different spaces are loaded. In addition to this virtual space positioning completely different effects with the Room Walker of course still possible.

Transform Tab - **Room Walker operation**

CC#11 acts as a "Absorbtion - Macro Controller", which controls up to 10 controls on the Room Walker (the white buttons switch the respective controller influencing on or off).

You can set, for example, that the high frequencies decrease as you "go" deeper into the room, at the same time you reduce the stereo width of the instrument and increase the "wet amount" of Convolution 1. The whole is achieved in that a percentage bias value is available for each element.

Example: Gain 2 "cc% min" is set to 50 and "cc% max" to 10. This means that at the zero position of the controller 11 there is no influence (50 = 0 dB). The further the controller 11 is performed, the more attenuated the frequencies.

You can use the Room Walker, as also control all other functions of the Xsample instruments comfortable with the supplied TouchOSC layout.

The Room Walker is operated with an X / Y controller.

To meet „Room Walker" there are some presets in the script: "Moving deep into the room" and "Moving into a tunnel". We hope you enjoy as you travel through space!

Transform Tab - **Room Walker Presets**

You can also create, save and load your own presets. If you load or save complete banks, first the names file is requested, then the data file. It is recommended to set the files to the same name and the names file with the extension "_names" at the end.

If your mouse is over the switches and buttons, you will get additional support for the individual functions in the info pane (i) of Kontakt (Info button must be active).

The following is a list of the individual elements of a preset:

- (1) Stereo Modeller Bypass, Pan and Spread Controller Bypass (white buttons) with respective minimum and maximum values
- (2) Convolution 1 and 2 Bypass, Wet 1 and Wet 2 Controller Bypass (white buttons) with respective minimum and maximum values
- (3) EQ Bypass, Frequency 1-2, Bandwidth 1-2 and Gain 1-2 Controller Bypass (white buttons) with respective minimum and maximum values
- (4) Pitch Control Bypass and Pitch Slider value (Bipolar +/- 1 octave)
- (5) IR Combination (1-64)

Transform Tab - **Room Walker multi instruments**

If you are working with many instruments in a project, your computer processor is of course hugely demanded if each instrument required two Convolution effects. For this case, use the included multi instruments. They allow the use of the Room Walker with the external convolution effects of Kontakt. You can then merge in one multi - many (multi-) Instruments ("merge", press "No"). So you use only two Convolution Effects and yet every instrument can be controlled independently.

Then set the desired MIDI channel of each instrument.
If you now move the controler 11, the controlls for Aux 1 and Aux 2 will move with the automation-setting, and of course the internal Room Walker elements.

Transform Tab - **Output Mode (2)**

In the lower range (output mode) you can set the instrument to "mono". There are the variant Mono 1 (left) or Mono 2 (right). You can use it to try out a simple way how your mix sound with mono instruments. If you use a lot of instruments you may reach more transparency of the mix.

Transform Tab - **Color effect (3)** (-12 → +12)

This allows you to play the instrument with a "Re-Pitch" - effect. Negative values produce a dull, soft sound and positive values give a light to biting sound. A value of +12 makes a guitar, for example, a kind of banjo. A value of -12 makes a violin a kind of cello. The effect range can be limited by the adjustable "Range". In position "0" you hear the original instrument (standard, loaded by the instrument).

Color can be operated remotely via CC # 56

Transform Tab - **Stretch effect (4)** (-200 → +200%)

This effect serves only as a small but interesting gimmick:
All incoming notes will be compressed or stretched by the base notes around. Play, for example, a broken C minor triad several times in a row while at the same time turning the controller of stretch from 100 to 200%.
The effect range can be limited by the adjustable "Range". In position "100%" you can hear the original sound (standard, loaded by the instrument).

Stretch is with CC#57 and Base with CC#55 remote-controllable

Legato Tab

With this function you can achieve a glissando between two notes when you slightly overlap the sounds while playing. In this mode the instrument can play only one voice.
You can activate or deactivate the function using the legato button (on / off). The state of the button is not saved with the instrument. The basic setting of the legato button is off. Alternatively, you can control the legato mode with CC#68. CC#24 controls the intensity.

- CC#68: 0 – 63 = Legato off
- CC#68: 64 – 127 = Legato Mode
    - CC#24: 0 = easy effect (slur)
        – 127 = strong glissando

TouchOSC Layout
(Legato area)

Articulation Choice Tab

Load or unload individual playing techniques

In order to optimize the memory load in your project (reduce), you can unload in this menu sample groups from memory. On this example, the *senza vibrato* and *flutter tongue* samples are not loaded in the instrument.

The settings of the buttons are saved with the instrument.

Instruments specific functions

Woodwinds & Brass

Control of the „breathing sounds"

A breath
With this switch, the breath sounds can be completely switched on or off.

B auto (Timing of the automatic breath (Breath Release))
There are four practical ways to provide your tracks with authentic breathing sounds. To configure the various options there are a button ("breath") and a value adjuster ("auto") on the instrument.

- Manually using the keyboard keys: select exactly the "breath sample" which you want to use. The keyboard area is active in every playing style.
- Manually via a (C) trigger note (either A#1 or A#5 / green highlighted on the Kontakt Keyboard): Playing the trigger note (C) a breath sample will be selected (random) and played.
- Manually using the trigger controller CC# 4 (Foot Controller): When you press the trigger controller a breath sample will be selected (random) and played.
- Automatic: When finishing a phrase a breath sample is automatically selected and played (random). With the value set in (B) „auto", you determine the time that must elapse (0 – 0.63') so that is breathed. A practical value here, for example, 0.3 seconds. Of course, this is not for all cases an appropriate value. You have the option to control with controller CC # 28 this value. If (B) „auto" is „0", then the automatic breath mode is off.
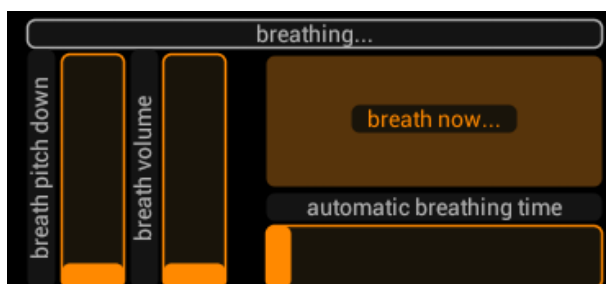
(TouchOSC Layout / Woodwinds breath area)

Overview ranges for breath function and the place of the additional noises

Instrument	Key area	Trigger-Note	Place of the additional noises
Piccolo	C2 - D#3	A#1	
Flute	C#3 - A#3	A#1	
Alto Flute	B1 - D3	A#1	
Bass Flute	C2 - B2	A#1	
Oboe	C2 - D#3	A#1	Key d#1: f5 - c8
Oboe d'amore	C2 - D#3	A#1	
English Horn	C2 - D#3	A#1	Key d#1: a5 - c7
Clarinet (Eb)	B1 - C#3	A#1	
Clarinet (Bb)	B1 - C#3	A#1	Key d#1: f5 - g#6
Basset Horn	E6 - G7	A#1	
Bass Clarinet	B5 - D7	A#5	Key d#1: d3 - f4
Bassoon	B5 - D7	A#5	Key d1: e3 - g4
Contrabassoon	B5 - D7	A#5	Key d#1: c3 – d#4
Alto Saxophone	C2 - C3	A#1	Key d#1: e5 – g6
Trumpet	B1 - D3	A#1	
Trombone	A0 - C#1 and B6 - A7	A#6	

The breath instrument (woodwinds / brass)
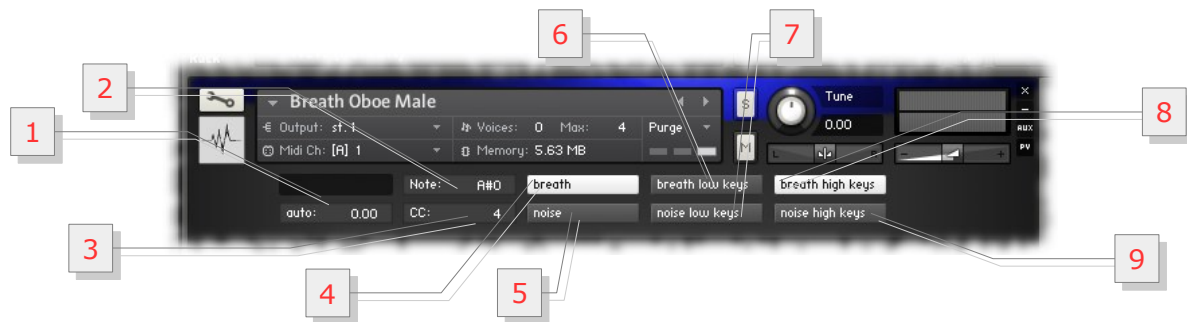
These instruments makes it possible to use the breathing sounds with other instruments. You must load the instruments on the same MIDI channel.

1 As with the other winds, the auto function controls the timing offset from release to breathe / noise. All keys are active. Value 0 disables the automatic.

2 The value *Note* determines which tone serves the manual breather / noise function (corresponding to the green note).

3 The value *CC* specifies which MIDI Controller takes the manually breath function (CC#4).

4 With the *breath*-switch you turn generally breath sounds as *breath release* on or off.

5 With the *noise*-switch you turn generally noise sounds as n*oise release on or off*.

6 *Breath low keys* turns the low key area (L) to breath sounds.

7 *Noise low keys* turns the low key area (L) to noise sounds.

8 *Breath high keys* turns the high key area (H) to breath sounds.

9 *Noise high keys* turns the high key area (H) to noise sounds.

(L) low key area   (H) high key area
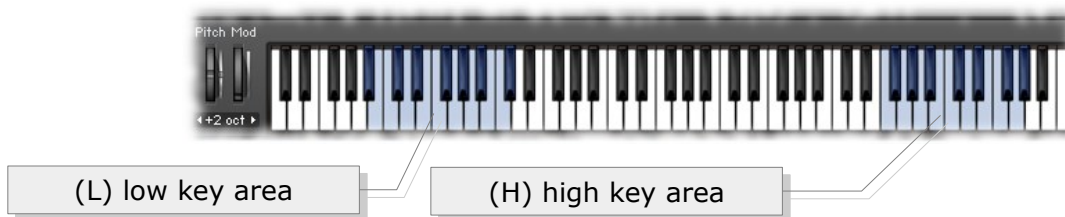
Patch-Types

- Single Instrument (nki) and multi. Multis allow the use of Room Walker with Kontakts external convolution effects (see Room Walker).
- At the woodwinds and strings, there are also two additional setups: score and play. **Score** is suitable for notation programs and **play** for life playing on the keyboard or producing with a sequencer.

Woodwinds (play version – controller & active key switches)

key	style switch	A0	A#0	B0	C1	C#1	D1	D#1	E1	F1	F#1	G1
A#7	**1. layer switch**	standard cc#1 *	standard velocity	staccato (xfade secco cc1) velocity	flutter tongue cc#1	xfade secco → key noises velocity	multiphonics + air noises cc#1	key noises (+ crow on reed) velocity	whistle tones	slap tongue velocity	helicopter velocity	various glissandi velocity
CC#1	volume / phrasing / switch	volume	phrasing	(standard / secco) [piccolo / flute]	volume	-	volume	-	volume	-	-	volume
CC#2	phrasing	phrasing	-	-	phrasing	-	phrasing	-	phrasing	-	-	-
AT	vibrato	[vibrato / tune]	[vibrato / tune]	-	-	-	tune	-	-	-	-	-
velocity	volume		volume	volume	-	volume / xfade	-	volume	-	volume	volume	-
B7	**2. layer switch**	senza vibrato cc#1	senza vibrato velocity	xfade vibrato → senza vibrato cc2 / cc1	xfade vibrato → senza vibrato cc2 / velocity	-	-	-	-	-	-	-
CC#1	volume / phrasing / switch	volume	phrasing	volume	senza / natural vibrato							
CC#2	phrasing	phrasing	-	senza / natural vibrato	phrasing							
AT	vibrato	[vibrato / tune]	[vibrato / tune]	-	-							
velocity	volume	-	volume	-	volume							
MIDI controller	**general function**	standard articulations					special articulations					

styles		KS	piccolo	flute	alto flute	bass flute	oboe	oboe d'amore	english horn	bassoon	contra bassoon	clarinet (Eb)	clarinet (Bb)	basset horn	bass clarinet	alto sax
L 1 A#7	standard cc1	**A0**	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	standard velocity	**A#0**	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	staccato (xfade secco cc1) velocity	**B0**	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	flutter tongue cc1	**C1**	x	x	x	x	x		x			x	x	x	x	x
	xfade secco – key noises velocity	**C#1**	x	x	x	x										
	multiphonics + air noises cc1	**D**	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	key noises (+ crow on reed) velocity	**D#1**	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	whistle tones	**E**		x												
	slap tongue velocity	**F**				x				x	x				x	x
	helicopter velocity	**F#1**								x	x					
	various glissandi cc1	**G1**													x	x
L 2 B7	senza vibrato cc1	**A0**		x	x		x	x	x	x	x					x
	senza vibrato velocity	**A#0**		x	x		x	x	x	x	x					x
	xfade vib. → senza vib. cc2/cc1	**B0**		x	x		x	x	x	x	x					x
	xfade vib. → senza vib. cc2/velocity	**C1**		x	x		x	x	x	x	x					x
AT → vibrato (tune)			x		x					x	x	x	x	x	x	x
secco staccato			x	x	x											
crow on reed							x	x	x	x						

Brass (Trumpet - controller & key switches)

key cc#0	style switch	A0	A#0	B0	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
		0	1	2	3	4	5	6	7	8	9	10	11	12
A#7	1. layer switch	senza vibrato cc#1 *	senza vibrato vel.	flutter tongue cc#1	standard mute cc#1	cup mute cc#1	harmon mute cc#1	voice breathing cc#1	effects 1 velocity	gliss. 1 cc#1	gliss. 2 cc#1	mouth piece strokes velocity	lip trill cc#1	pedal tones cc#1
cc#1	volume / phrasing	volume	phrasing	volume	volume	volume	volume	volume	-	volume	volume	phrasing	volume	volume
cc#2	phrasing	phrasing	-	phrasing	phrasing	phrasing	phrasing	phrasing	phrasing	phrasing	phrasing	-	phrasing	phrasing
AT	vibrato	vibrato	vibrato	-	vibrato	vibrato	vibrato	vibrato	-	-	-	-	-	vibrato
velocity	volume / up / down	-	volume	-	-	-	-	-	volume	up / down	up / down	volume	-	-
cc#0		13	14	15	16	17	18	19	20	21	22	23	24	25
B7	2. layer switch	staccato velocity	staccato velocity	xfade senza vib. - flutter tongue cc#2	standard mute staccato velocity	cup mute short velocity	harmon mute staccato velocity	voice breathing cc#1	effects 2 velocity	gliss. 1 cc#1	gliss. 2 cc#1	mouth piece strokes velocity	lip trill cc#1	only with mouth piece cc#1
cc#1	volume / phrasing	-	-	volume	-	-	-	volume	-	volume	volume	phrasing	volume	volume
cc#2	phrasing	-	-	senza vib. - flutter tongue	-	-	-	phrasing	phrasing	phrasing	-	phrasing	phrasing
AT	vibrato	-	-	vibrato	-	-	-	vibrato	-	-	-	-	vibrato
velocity	volume / up / down	volume	volume		volume	volume	volume	-	volume	up / down	up / down	volume	-	-

Brass (Trombone - controller & key switches)

key cc#0	style switch	A5	A#5	B5	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6	A6
		0	1	2	3	4	5	6	7	8	9	10	11	12
A#7	1. layer switch	senza vibrato cc#1 *	senza vibrato velocity	flutter tongue cc#1	standard mute cc#1	cup mute cc#1	bucket mute cc#1	voice breathing 1 cc#1	effects velocity	harmonic gliss. up cc#1	gliss. down (drop) cc#1	-	-	-
cc#1	volume / phrasing	volume	phrasing	volume	volume	volume	volume	volume	-	volume	volume	-	-	-
cc#2	phrasing	phrasing	-	phrasing	phrasing	phrasing	phrasing	phrasing	phrasing	phrasing	phrasing	-	-	-
AT	vibrato	vibrato	vibrato	-	vibrato	vibrato	vibrato	-	-	-	-	-	-	-
velocity	volume / up / down	-	volume	-	-	-	-	-	volume	-	-	-	-	-
cc#0		13	14	15	16	17	18	19	20	21	22	23	24	25
B7	2. layer switch	staccato velocity	staccato velocity	xfade senza vib. - flutter tongue cc#2	standard mute staccato velocity	cup mute cc#1	bucket mute cc#1	voice breathing 2 cc#1	effects velocity	harmonic gliss. up cc#1	gliss. down (drop) cc#1	-	-	-
cc#1	volume / phrasing	-	-	volume	-	volume	volume	volume	-	volume	volume	-	-	-
cc#2	phrasing	-	-	senza vib. - flutter tongue	-	phrasing	phrasing	phrasing	phrasing	phrasing	phrasing	-	-	-
AT	vibrato	-	-	vibrato	-	vibrato	vibrato	-	-	-	-	-	-	-
velocity	volume / up / down	volume	volume		volume	-	-	-	volume	-	-	-	-	-

AT = after touch / channel pressure

*„release switches" for Clarinet (Eb) & Brass: cc#60 gliss. up / cc#61 gliss. down

Instruments specific functions – **Timpani**

Interaction between classic & advanced instrument

The two-part instruments are built into each interleaved. The classic instrument includes only playing techniques on the keys A0 – B0 (CC#0 →0–2) and the advanced instrument on C1 – F#1 (CC#0 →3–9). Outside this range, the instrument is silent. This supplement works when you put the instruments on the same MIDI channel.

Timpani (key switches & controller)

style switch	key	A0	A#0	B0	C1	C#1	D1	D#1	E1	F1	F#1
	cc#0	0	1	2	3	4	5	6	7	8	9
timpani		standard mallets velocity	tremolo cc#1	damped (short) velocity	hard mallets velocity	hard mallets tremolo cc#1	hand (a mano) velocity	with brushes velocity	wiped velocity	shell strokes velocity	tremolo with cymbal on vellum velocity
		classic	classic	classic	advanced	advanced	advanced	advanced	advanced	advanced	advanced
cc#1		-	xfade	-	-	xfade	-	-	-	-	volume
cc#4		damp	damp	-	damp	damp	damp	damp	damp	damp	damp

cc#1: volume and timbre (color dynamic) with modwheel (CC#1)
**velocity:** color dynamic over velocity

Very comfortable you can control the playing techniques with the supplied TouchOSC layout:

A Timpani Setup

Between the five timpani there are overlapping pitch ranges. With the setup you decide at what point the transition of the timpani should be. There are 6 different settings.

For more information, see Notation Guide Part II. The change of the setup can be done via the menu in the instrument or via CC#2.
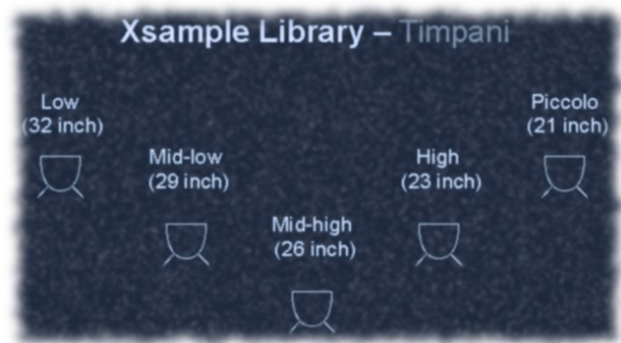
B Damping

The damping controller adjusts the volume of natural damping noise (release switch). Alternatively, these effects are also accessible via MIDI controller.

CC#4 turns this effect completely on or off and CC#22 controls the strength of the effect.

Patch-Types

- Multis: Allow the use of Room Walker with Kontakts external convolution effects (see Room Walker).
- Reduced versions: This patch is marked with an appended "R" (Timpani classic R) and contain less alternating samples. (see also Articulation Choice load and unload individual playing techniques)
- Classic / Advanced: The Classic patch contains standard playing techniques, the Advanced patch enlarge the instrument with more specific playing techniques.
  In order to use the instrument in its entirety, please load both instruments on the same MIDI channel. (see also interaction Classic and Advance instrument)
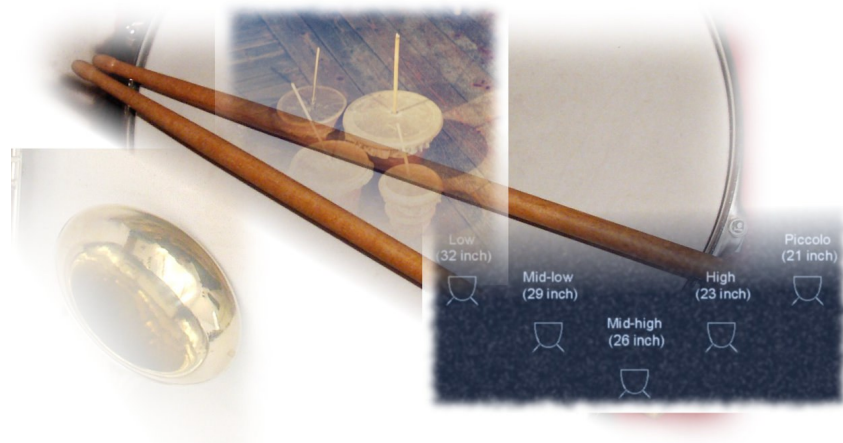
Instruments specific functions – **Percussion**

Patch-Types

- 1. Percussion „Single" instruments (*.nki)
  These instruments contain only one percussion instrument.
  The layout is rather aimed at notation applications.
- 2. Percussion Bank instruments (*.nkb)
  These instruments include all the "Single" instruments, selectable by program changes.
- 3. Percussion 1 A – B, Percussion 2 A – D
  These instruments include several percussion instruments in one ".nki"
- 4. Percussion Multis: These instruments contain individual instruments or multiple instruments to use the Room Walker with Kontakt's external convolution effects.

Content of the multiple instruments

- Percussion 1 A: Tom Toms, Triangle, Gran Cassa, Tamtam, Woodblocks, Claves, Chimes, Windspiel
- Percussion 1 B: Tambourine, Snare Drum, Castanets
- Percussion 2 A: Tibet Bowl, Pipe, Trill Pipe, Rainmaker, Metronom, Lotosflute, Horn, Frog, Cabasa, Maracas, Bird
- Percussion 2 B: Scraper, Amboss, Watergongs
- Percussion 2 C: Friction Drums, Hi Hat
- Percussion 2 D: Snips, Claps, Conga, Bongos, Talk Drum, Stones, Rattle, Pasteboard Rattle

Percussion MIDI Banks

As a very practical addition Xsample offers an assortment of percussion instruments in MIDI banks. In a MIDI bank multiple instruments are combined in on instrument for use on one MIDI channel.
By sending program change commands you can switch between the different instruments. This particularly useful organization is also usable in Finale and Sibelius. So very easily one score line represent several percussion instruments. (See also general advices Sibelius).
In the following tables you will find the bank assignments of the included MIDI percussion Banks (*. nkb files).
Please note that there is a Gran Cassa (= Big Drum) Percussion in 1 and an alternative Big Drum (= Gran Cassa) in Percussion 3. Both versions have the same program change course (1).

Percussion 1

Instrument	Prg change	Instrument	Prg change
Gran Cassa	0	Chimes (bar)	9
Side drum	1	Wind chimes	10
Cymbals (suspended / bowed)	2		11
Tamtam	3		12
Tom Toms	4	Castanets	13
Tambourine	5	Claves	14
	6		15
	7		16
Triangle	8	Cymbals (muted)	17

Percussion 2

Instrument	Prg change	Instrument	Prg change
-	0	Steel plates	16
-	1	-	17
-	2	Tibet bowl	18
-	3	Hand bell	19
-	4	Talk Drum	20
-	5	Friction Drums	21
Conga	6	Water Gongs	22
Bongos	7	Rainmaker	23
-	8	Lotosflute	24
-	9	Train pipe / Trill Pipe	25
-	10	Bird / Toy	26
Hi Hat	11	Frog (Toy)	27
Small Anvil	12	Horn	28
-	13	Metronom	29
-	14	Rattle / Scraper	30
Cabaza / Maracas	15		

Percussion 3

Instrument	Prg change	Instrument	Prg change
Big Drum (= Gran Cassa 2)	0	Thunder Sheet	32
Piatti	31		

Percussion 1 – 2

Instrument	Prg change	Instrument	Prg change
Gran Cassa	0	Steel plates	16
Side drum	1	Cymbals (muted)	17
Cymbals (suspended / bowed)	2	Tibet bowl	18
Tamtam	3	Hand bell	19
Tom Toms	4	Talk Drum	20
Tambourine	5	Friction Drums	21
Conga	6	Water Gongs	22
Bongos	7	Rainmaker	23
Triangle	8	Lotosflute	24
Chimes (bar)	9	Train pipe / Trill Pipe	25
Wind chimes	10	Bird / Toy	26
Hi Hat	11	Frog (Toy)	27
Small Anvil	12	Horn	28
Castanets	13	Metronom	29
Claves	14	Rattle / Scraper	30
Cabaza / Maracas	15		

Percussion 1 - 3

Instrument	Prg change	Instrument	Prg change
Big Drum (= Gran Cassa 2)	0	Steel plates	16
Side drum	1	Cymbals (muted)	17
Cymbals (suspended / bowed)	2	Tibet bowl	18
Tamtam	3	Hand bell	19
Tom Toms	4	Talk Drum	20
Tambourine	5	Friction Drums	21
Conga	6	Water Gongs	22
Bongos	7	Rainmaker	23
Triangle	8	Lotosflute	24
Chimes (bar)	9	Train pipe / Trill Pipe	25
Wind chimes	10	Bird / Toy	26
Hi Hat	11	Frog (Toy)	27
Small Anvil	12	Horn	28
Castanets	13	Metronom	29
Claves	14	Rattle / Scraper	30
Cabaza / Maracas	15	Piatti	31
		Thunder Sheet	32

Percussion (key switches & controller)

key	style switch play	A0	A#0	B0	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
cc#32	style switch score	0	1	2	3	4	5	6	7	8	9	10	11
chimes		-	-	-	-	-	-	-	-				
cc#1	release control	release control											
kalimba		-	-	-	-	-	-	-	-				
cc#1	xfade	open / closed											
cymbals (KS)		single hits velocity	bowed velocity	rolls cc#1	-	-	-	-	-				
cc#1	damping / volume	damped		volume (rolls)									
hi hat (KS)		stick + foot velocity	-	-	steel brushes velocity	-	-	-	-				
kazoo		-	-	-	-	-	-	-	-				
cc#1	filter	highpass											
sidedrum (KS)		single hits velocity	-	rolls cc#1	steel brushes velocity	without snare velocity	rim click velocity	rim click without snare velocity	-				
cc#1	volume			volume (rolls)									
steel plates (KS)		single hits velocity	bowed velocity	water sounds velocity	single hits velocity	-	-	-	-				
cc#1	damping / release control	damped	release control	-	release control								
velocity	velocity / xfade	velocity	velocity	velocity	velocity / xfade								
tom-toms (KS)		single hits velocity	-	-	steel brushes velocity	-	-	-	soft mallets velocity				
watergongs		-	-	-	-	-	-	-	-				
cc#1	release control	release control											
wind chimes		-	-	-	-	-	-	-	-				
cc#1	release control	release control											
jews harps (KS)		A velocity		B velocity	C velocity		D velocity				F velocity		G velocity	G# velocity
cc#1	switch	-		-	-		-				low / high			high / low
big drum (KS)		standard mallets	rub tones	rolls standard mallets cc#1	steel brush	hard mallets	with hand	stroked & wiped with hand	rod strokes & only rods				
cc#1	volume			volume (rolls)									
piatti (KS)		standard	wiped	tremolo	-	-	-	-	-				
cc#1	switch	switch to damp											
thunder sheet (KS)		standard	-	tremolo	-	hard mallets	a mano	finger	-				

Instruments specific functions – **Mallets**

key switches & controller

key	style switch play	A0	A#0	B0	C1	C#1	D1	D#1	E1	F1
cc#32	style switch score	0	1	2	3	4	5	6	7	8
crotales		standard mallets velocity	bowed velocity	plastic mallets velocity	-	-	-	-	-	-
cc#1	release control	release control	release control	release control						
glockenspiel		standard mallets velocity	-	-	-	-	-	-	-	-
velocity	damping control	standard / damped								
marimbaphone		standard mallets velocity	bowed velocity	-	-	-	-	wiped velocity	finger velocity	sticks velocity
cc#1	damping control	standard / damped	-					-	standard / damped	-
xylophone		standard mallets velocity	-	plastic mallets velocity	-	-	-	-	-	-
cc#1	damping	standard / damped		standard / damped						
vibraphone		standard mallets velocity	bowed velocity	-	xylo mallets velocity	triangle mallets velocity	harmonics velocity	-	-	-
cc#1	damping / release control	standard / damped	release control	-	standard / damped	standard / damped	-			
cc#2	vibrato	vibrato	vibrato		vibrato	vibrato	vibrato			
cc#22	vib. speed	speed	speed		speed	speed	speed			
diatonic steel drum		standard mallets velocity	sticks velocity	metal glissando fx / cc#1	-	-	-	-	-	-
cc#1	release control	release control	release control	release control						
chromatic steel drum		standard mallets velocity	-	soft mallets velocity	hard mallets velocity	-	-	-	-	-
cc#1	release control	release control		release control	release control					

Mallets Midi Bank

Instrument	Prg change	Instrument	Prg change
Marimbaphone	0	Glockenspiel	3
Xylophone	1	Crotales	4
Vibraphone	2		
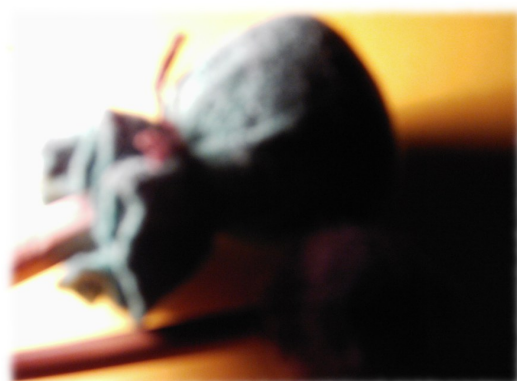
Instruments specific functions – **Stringed instruments**

Concert Harp (key switches & controller)

key	style switch	**A0**	**A#0**	**B0**	**C1**
cc#0		0	1	2	3
concert harp		standard velocity	damped velocity	harmonics velocity (multi harmonics velocity)	pedal effects, strokes & slides velocity
cc#1	release control	release control	-	release control	-
cc#4	switch	-	-	multi harmonics (a3 → d#5)	-

8 String Guitar (key switches & controller)

style switch	key	**A0**	**A#0**	**B0**	**C1**	**C#1**	**D1**	**D#1**	**E1**	**F1**	**F#1**
	cc#0	0	1	2	3	4	5	6	7	8	9
8 string guitar		position 1 (open strings)	position 2	position 3	position 4	position 5	position 6	dead notes	slides one	slides two	strokes
cc#1		xfade **	xfade	xfade	xfade	xfade	xfade	-	-	-	-
cc#2		switch*	switch	switch	switch	switch	switch	-	-	-	-
cc#15		slap bypass	slap bypass	slap bypass	slap bypass	slap bypass	slap bypass	-	-	-	-

* cc#2 switches the playable area from G#5 (**1**) to: slides 1 / slides 2 / dead notes / strokes

** cc#1 Transition from „finger" to „plectrum", high velocities: „slaps"

Slide

The MIDI controller CC#4 can switch also between the 6 different fret positions. The slide knob (**2**) controls the volume of the fret noises that can be heard during changing.

For the recordings of this instrument Xsample used an historical instrument from an instrument museum.

Cymbalon / Dulcimer (key switches & controller)

For this instrument there are a lot of names. Cymbal, Cimbalom, Cymbalon, Santur or in english Dulcimer or in german "Hackbrett", to name only some.

For the recordings Xsample used a Cymbal from Belarus.

style switch	key	A0	A#0	B0	C1	C#1	D1	D#1	E1
	cc#0	0	1	2	3	4	5	6	7
dulcimer		standard velocity	tremolo cc#1	harmonics velocity	pizzicato velocity	double pizz velocity	wood velocity	sordino velocity	effects velocity
cc#1		-	xfade	-	-	-	-	-	-
cc#2		release control	release control	release control	release control	release control	release control	release control	release control

Instruments specific functions – **Keyed instruments**

Celesta

CC#1 switches to a patch with a higher dynamic range.

Clavichord

For the recordings of this instrument Xsample used an historical instrument from an instrument museum.

With Channel Pressure (AT) you can simulate the manual key vibrato of a clavichord.

Clavicymbel (key switches & controller)

style switch	key	**A0**	**A#0**	**B0**
	cc#0	0	1	2
clavicymbel		8'	8' lute stop	8' prepared
cc#22		bright	bright	bright

Controls the brightness to velocity of the sound. With value 127 there is no influence of velocity. cc#22

The instrument is a rare historical instrument, which can be played dynamically in contrast to a spinet.

Spinet 1 & 2 (key switches & controller)

style switch	key	**A0**	**A#0**	**B0**
	cc#0	0	1	2
spinet		8'	8' lute stop	effects (only spinet 1)
cc#22		quill volume	quill volume	-

Volume of the sound of the rebounded quills (release switch) cc#22

For the recordings of the Xsample spinet 1 a "Sassmann" spinet was used.

Steinway B (& Prepared Piano)

Controls the volume of the pedal noises (resonance) cc#22

Steinway B – **Patch-Types**

In addition to the standard patch "Steinway B.nki" there is also a variant "Steinway B curve variation.nki", which has a slightly compressed dynamic range. This patch is more suitable for notation programs.

Prepared Piano (key switches / playing style descriptions)

For the recordings a Kawai GS40 piano was used.

key	cc#0	description
C7	0	strokes a0-c#2, leather gliss: d2-g#3, glass gliss: a3-a4, vase gliss: a#4-f#5, wiped: g5-g#6, pedal fade: a6-a#6
C#7	1	prepared with paper on low strings: a0-f2, prepared with screws (1): f#2-c#5, leather gliss: d5-g#6, pedal fade: a6-a#6
D7	2	prepared with gum*: a0-g2, glass gliss: g#2-g#3, trill with gliss on strings: a3-d5, plectron effects: d#5-f#6, pedal fade: a6-a#6
D#7	3	plectron: a0-a#2 modwheel: fade to strings gliss (vertical), random: b2-c#6, vase gliss: d6-g#6, pedal fade: a6-a#6
E7	4	take off screws: a0-c2, screws gliss: c#2-g#2, screws (2)**: a2-g#3, screws (1): a3-e6, pedal fade: a6-a#6

playing style	description
glissandi (glass)	vertical and horizontal glissandi on strings inside the piano with a glass
glissandi (leather)	vertical glissandi on strings inside the piano
glissandi (vase)	vertical and horizontal glissandi on strings inside the piano with a vase
paper on low strings	a paper is placed on low strings and played on keyboard (pedal up)
pedal fade	plucked low strings (with fingers / pedal down), then the pedal goes slowly up
plectron	low strings plucked with a plectron
plectron effects	various plucks with a plectron on strings behind the bridge
random	eraser thrown on strings inside the piano
screws glissandi	various vertical glissandi with a screw on steel strings
screws set 1 and set 2	middle register of the piano prepared with various screws, played on keyboard, screws 2 has additional pedal down samples
screws take off	various sounds when removing the screws from the strings
strokes	a0-f1: strokes with sticks on various places inside the piano (pedal down) f#1-d2: strokes with soft mallets on various places inside the piano (pedal down)
trill with glissandi on strings	trill on keyboard (left hand) and vertical glissandi with the right hand on strings inside the piano
wiped	wiped steel strings (very high tones...!)
with gum	low strings prepared with gum, with additional pedal down samples (sustain pedal) and staccato samples (modwheel)

Accordion (key switches & controller)

	Key	CC#0	Sign	Playing Style
Layer 1	A0	0	⊖	8' a cassotto *
	A#0	1	⊖	8' a cassotto + 4' *
	B0	2	⊖	16' + 8' a cassotto + 4' *
	C1	3	⊖	16' + 8' a cassotto + 8' in cassotto + 4' *
	C#1	4	⊖	8' a cassotto + 8' in cassotto + 4' *
	D1	5	⊖	8' a cassotto + 8' in cassotto (tremolo) *
	D#1	6	⊖	8' in cassotto *
	E1	7	⊖	8' in cassotto + 4' *
	F1	8	⊖	4' *
	F#1	9	⊖	16' + 4' *
	G1	10	⊖	16' *
	G#1	11	⊖	16' + 8' in cassotto *
	A1	12	⊖	16' + 8' a cassotto + 8' in cassotto *
	A#1	13	⊖	16' + 8' in cassotto + 4' *
	B1	14	⊖	16' + 8' a cassotto *
	C2	15	⊖	8' a cassotto bellows shake
	C#2	16	⊖	left manual 8'
	D2	17	⊖	left manual 16' + 8'
	D#2	18	⊖	left manual 16'
Layer 2	A0	19	⊖	8' a cassotto vibrato
	A#0	20	⊖	8' in cassotto vibrato
	B0	21	⊖	16' vibrato
	C1	22	⊖	left manual 16' vibrato
	C#1	23		draw-stop noises
	D1	24		bellows-strokes
	D#1	25		bellows noises (air)
	E1	26		glissandi on keys with finger nails

*
- Sustain Pedal (cc#64) switches to sampled staccato (bellow-staccato / key-staccato)
- cc#2 (breath controller) switches to a special crescendo release sample (0 = off / 127 = on)

For the recording of the instrument Xsample used a Hohner Gola from 1954.

Accordion – **Patch-Types**

In addition to the standard patch "Accordion Hohner Gola.nki" there is also the variant "Accordion Hohner Gola EQ.nki". The patches differ in the way the sound dynamics (cc#1) is controlled:

- Accordion Hohner Gola.nki → cc#1 combination filter / volume
- Accordion Hohner Gola EQ.nki → cc#1 combination EQ / volume

With „channel pressure" or a fast move of the modwheel you can emulate a vibrato. The Pitch Bender also creates a filter-effect, which can be achieved also on a real accordion.

With this button the detuning can be adjusted (8' in cassotto / 8' a cassotto).
(tremolo) cc#22

Toy Piano (key switches & controller)

style switch	key	**A0**	**A#0**	**B0**	**C1**
	cc#0	0	1	2	3
toy piano		standard velocity	with hand	plucked	effects
cc#1		release control	release control	release control	release control

Instruments specific functions – **Strings**

key switches & controller - play version

key	style switch	A0	A#0	B0	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
cc#0		0	1	2	3	4	5	6	7	8	9	10	11	12
A#7	1. layer switch	vibrato cc#1	vibrato velocity	vibrato con sordino cc#1	vibrato con sordino velocity	tremolo cc#1	harmonics velocity	harmonics glissando velocity	spicc. / marcato cc#1 switch velocity	pizzicato / plucks / bartok pizz. cc#1 switch velocity	col legno velocity	finger, body strokes, dead notes velocity	sul pont. short velocity	body resonance velocity
cc#1	volume / phrasing / switch	volume	phrasing	volume	phrasing	volume	phrasing	-	spiccato / marcato	pizz. / plucks / bartok pizz.	-	-	-	-
cc#2	phrasing	phrasing	-	phrasing	-	phrasing	-	phrasing	-	-	-	-	-	-
AT	vibrato	-	-	-	-	-	-	-	-	vibrato	vibrato	vibrato	vibrato	vibrato
velocity	volume	-	volume	-	volume	-	volume	volume	volume	volume	volume	volume	volume	volume
cc#0		13	14	15	16	17	18	19	20	21	22	23	24	25
B7	2. layer switch	senza vibrato cc#1	senza vibrato velocity	senza vibrato con sordino cc#1	senza vibrato con sordino velocity	tremolo sul pont. cc#1	natural harmonics velocity [bass]	glissandi velocity [cello] / harm. gliss. c.s. velocity [bass]	-	-	-	-	sul pont. velocity	all effects velocity
cc#1	volume / phrasing / switch	volume	phrasing	volume	phrasing	volume	phrasing	-					phrasing	-
cc#2	phrasing	phrasing	-	phrasing	-	phrasing	-	phrasing					-	-
AT	vibrato	vibrato	vibrato	vibrato	vibrato	-	-	-					vibrato	vibrato
velocity	volume	-	volume	-	volume	-	volume	volume					volume	volume
cc#0		26	27	28	29	30	31	32	33	34	35	36	37	38
C8	3. layer switch	xfade vibrato – senza vibrato cc#2 / cc#1	xfade vibrato – senza vibrato cc#1 / velocity	xfade con sord. vibrato – senza vibrato cc#2 / cc#1	xfade con sord. vibrato – senza vibrato cc#1 / velocity	tremolo harmonics velocity	natural harmonics pizzicato velocity [bass]	-	-	-	-	-	xfade sul pont. - tremolo sul pont. cc#2 / velocity	-
cc#1	volume / phrasing / switch	volume	senza vib. / vibrato	volume	senza vib. / vibrato	phrasing	-						phrasing	
cc#2	phrasing	senza vib. / vibrato	phrasing	senza vib. / vibrato	phrasing	-	-						sul pont. / tremolo sul pont.	
AT	vibrato	vibrato	vibrato	vibrato	vibrato	-	vibrato						vibrato	
velocity	volume	-	volume	-	volume	volume	volume						volume	
MIDI controller	general function	standard long notes			con sordino long notes	tremolo	harmonics	glissandi	spiccato	pizzicato	col legno	finger	sul pont	special
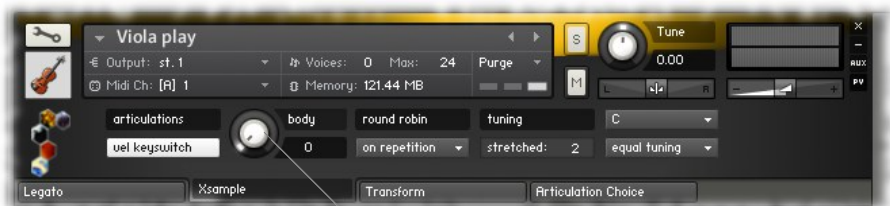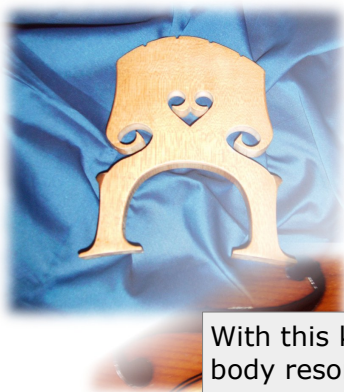
With this knob you can control the volume of string and body resonance sounds. (0 = off)

(this affects the „key switches" Layer 1 from E1 to G#1) cc#22

Controller overview

Function	Controller
Sound dynamics (seamless xfades) / phrasing / playing techniques changes	CC# 1
Phrasing / transitions (xfades) / playing techniques changes	CC# 2
Artificial vibrato (senza vibrato patches)	Channel Pressure (AT)
Movement triggers breathing sound when breath function is on	CC# 4
Volume breathing sound	CC# 26
Octave down breathing sound	CC# 27
Timing control automatic breathing / value 0 = off	CC# 28
Legato (on / off)	CC# 68
Legato intensity	CC# 24
Glissando (up) / Clarinet (Eb) & Brass (release switch)	CC# 60
Glissando (down) / Clarinet (Eb) & Brass (release switch)	CC# 61
Volume	CC# 7
Pan	CC# 10
Control of the tonal center note of the selected tuning (Menu)	CC# 29
Selection of tuning (Menu)	CC# 30
Switch playing techniques	CC# 0 / CC# 32
Pedal	CC# 64
Round Robin switch	CC# 82
0 – 20 on repetition	
21 – 41 off	
42 – 62 on repetition (random)	
63 – 83 always	
84 – 104 always (random)	
105 – 115 always (indiv.)	
116 – 119 Instrument 1	
120 – 122 Instrument 2	
123 – 127 Ensemble	
Amount of voices (Ensemble Mode)	CC# 91
Pan width (Ensemble Mode)	CC# 92
Alive (Ensemble Mode)	CC# 93
Detune (Ensemble Mode)	CC# 94
Delay (Ensemble Mode)	CC# 95
Envelope Attack	CC# 17
Envelope Decay	CC# 19
Envelope Release	CC# 18
Pitchbend range (from standard +-1 (0) semitone to +- 1 octave)	CC# 46

Velocity to pitch	CC# 44
Pan Modulation	CC# 45
Pan Modulation (Speed)	Channel Pressure (AT)
Pitch Modulation	CC# 42
Pitch Modulation influence through channel pressure (intensity)	CC# 43
Octave down	CC# 40
Octave up	CC# 41
Room Walker Absorbtions Makro Controller	CC# 11
Room Walker Pan	CC# 12
Room Walker Pitch intensity	CC# 67
Room Walker Pitch Control Bypass	CC# 69
Transform Color	CC# 56
Transform Stretch	CC# 57
Transform Base Note	CC# 55
Aux Send 1 (optional for Multis / TouchOSC Layout)	CC# 50
Aux Send 2 (optional for Multis / TouchOSC Layout)	CC# 51
Aux Send 3 (optional for Multis / TouchOSC Layout)	CC# 52
Aux Send 4 (optional for Multis / TouchOSC Layout)	CC# 53

Functions marked in red are operated exclusively via MIDI controller. All other functions you can control also on the GUI of the instrument.

Functions for adventurous (pale yellow colored controller)

If you have an external MIDI controller or work with the TouchOSC layout, you have the option to alienate the instruments with different controllers.

- Transpose with CC#27 e. g. the breathing sounds of wood or brass instruments by up to an octave or transpose the sounds in total with CC#40/41.
- Use the envelope controller to create unusual sounds (e. g. a piano with long attack (CC #17), extremely short sounds (CC#19), or extremely long releasing sounds (CC#18)).
- Or modulate with extreme values the pitch of an instrument. This results in "metallic-sounding" sounds (CC#42). Subtle changes are also possible.
- Or move the instrument from left to right with a pan modulation (CC#45).
- Or create an extremely out of tune instrument with CC#44. The pitch is determined by the velocity (up to an octave).
- Combine these effects with the possibilities of the Room Walker and / or the Transform Color function.

Appendix - List of the 61 room impulses

IR Sample	Länge
Beautyverb	8,255''
Big_Church	4,960''
C_Chamber_Early_1	0,848''
C_Chamber_Early_2	1,393''
C_Club_Medium	2,081''
C_Club_Small	1,608''
C_Concert_Hall_Large	5,144''
C_Concert_Hall_Medium_1	2,345''
C_Concert_Hall_Medium_2	3,061''
C_Concert_Hall_Small	1,457''
C_Large_Church	4,606''
C_Medium_Church	3,048''
C_Room_Medium	1,351''
C_Room_Small	0,850''
C_Wood_Chamber	3,364''
Comb	2,707''
Combed_Cloud	3,912''
Crystals	7,970''
Cyclo	3,925''
Dual_Crystal_1	6,119''
Dual_Crystal_2	5,453''
Flanging	2,011''
Galaxyverb	9,000''
Hall_1	3,417''
Hall_2	2,906''
Hall_Early	0,975''
Hydro_gliss	5,108''
Long_Crisps	6,588''
Long_Distance	3,215''
P3_Auditorium_Large	5,400''
P3_Auditorium_Medium	4,158''
P3_Auditorium_Small	2,926''
P3_Concert_Large	4,396''
P3_Concert_Medium	3,597''
P3_Concert_Small	2,446''
P3_Damped_Hall	2,366''
P3_Early_1	0,620''
P3_Early_2	0,899''
P3_Early_3	0,618''
P3_Echoy	5,038''
P3_Like_Reverse	5,270''
P3_Long_Modulated	6,607''
P3_Nice_Hall	3,901''
P3_Plate_Large	3,839''
P3_Plate_Medium	1,643''
P3_Plate_Small	1,250''
P3_Theatre	3,478''
P3_Warm_Hall_Large	5,858''
P3_Warm_Hall_Medium	3,049''
P3_Warm_Hall_Small	2,210''
P3_Watery_2	4,350''
P3_Watery_Hall	8,378''
P3_Woody	4,440''
Plasma	4,984''
Roll	2,845''
Room_1	1,131''
Room_2	1,310''
Smear	5,337''
Space_Tunnel	7,293''
Tunnel	5,485''
Watery	4,235''

grey: < 2'' / pale yellow: > 5''

Appendix - List of the 64 room impuls combinations

Name	Convolution 1	Länge	Convolution 2	Länge
1 Medium Church	C_Medium_Church	3,048"	C_Chamber_Early_1	0,848"
2 Large Church 1	C_Large_Church	4,606"	C_Chamber_Early_1	0,848"
3 Large Church 2	C_Large_Church	4,606"	C_Wood_Chamber	3,364"
4 Concert Hall	C_Concert_Hall_Large	5,144"	C_Club_Small	1,608"
5 Medium Concert Hall 1	C_Concert_Hall_Medium_2	3,061"	C_Room_Medium	1,351"
6 Medium Concert Hall 2	C_Concert_Hall_Medium_1	2,345"	C_Room_Small	0,850"
7 Small Concert Hall	C_Concert_Hall_Small	1,457"	C_Chamber_Early_1	0,848"
8 Wood Chamber 1	C_Wood_Chamber	3,364"	C_Room_Small	0,850"
9 Wood Chamber 2	C_Wood_Chamber	3,364"	C_Concert_Hall_Large	5,144"
10 Medium Club	C_Club_Medium	2,081"	C_Chamber_Early_2	1,393"
11 Medium Room	C_Room_Medium	1,351"	C_Chamber_Early_2	1,393"
12 Roomy Hall 1	Room_1	1,131"	Hall_1	3,417"
13 Roomy Hall 2	Room_2	1,310"	Hall_2	2,906"
14 Into Church	Big_Church	4,960"	Hall_Early	0,975"
15 Galaxy Church	Big_Church	4,960"	Galaxyverb	9,000"
16 Galaxy Beauty	Beautyverb	8,255"	Galaxyverb	9,000"
17 Big Plasma Verb	Galaxyverb	9,000"	Plasma	4,984"
18 Smear Verb	Smear	5,337"	Roll	2,845"
19 Crystal Flange	Dual_Crystal_2	5,453"	Flanging	2,011"
20 Hydro Distance	Hydro_gliss	5,108"	Long_Distance	3,215"
21 Tunnel Distance	Tunnel	5,485"	Long_Distance	3,215"
22 Smear Tunnel	Space_Tunnel	7,293"	Smear	5,337"
23 Crisps Comb	Comb	2,707"	Long_Crisps	6,588"
24 Crystal Cyclo	Cyclo	3,925"	Dual_Crystal_1	6,119"
25 Beauty Watery	Watery	4,235"	Beautyverb	8,255"
26 Like Reverse	P3_Like_Reverse	5,270"	P3_Early_1	0,620"
27 Echoy	P3_Echoy	5,038"	P3_Early_2	0,899"
28 Long Modulated	P3_Long_Modulated	6,607"	P3_Early_3	0,618"
29 Nice Hall	P3_Nice_Hall	3,901"	P3_Early_2	0,899"
30 Metallic Hall 1	P3_Warm_Hall_Small	2,210"	P3_Plate_Large	3,839"
31 Metallic Hall 2	P3_Plate_Medium	3,049"	P3_Plate_Small	1,250"
32 Theatre	P3_Warm_Hall_Small	2,210"	P3_Theatre	3,478"
33 Watery 1	P3_Watery_2	4,350"	P3_Plate_Medium	1,643"
34 Watery 2	P3_Watery_Hall	8,378"	P3_Plate_Medium	1,643"
35 Warm Hall Medium	P3_Warm_Hall_Medium	3,049"	P3_Early_1	0,620"
36 Warm Hall Large	P3_Warm_Hall_Large	5,858"	P3_Early_1	0,620"
37 Damped Hall	P3_Damped_Hall	2,366"	P3_Early_2	0,899"
38 Auditorium Large	P3_Auditorium_Large	5,400"	P3_Concert_Small	2,446"
39 Auditorium Medium	P3_Auditorium_Medium	4,158"	P3_Concert_Small	2,446"
40 Auditorium Small	P3_Auditorium_Small	2,926"	P3_Concert_Small	2,446"
41 Concert Small	P3_Concert_Small	2,446"	P3_Early_2	0,899"
42 Concert Medium	P3_Concert_Medium	3,597"	P3_Early_2	0,899"
43 Concert Large	P3_Concert_Large	4,396"	P3_Damped_Hall	2,366"
44 Woody	P3_Woody	4,440"	P3_Early_3	0,618"
45 Long dark modulated Hall	P3_Damped_Hall	2,366"	P3_Long_Modulated	6,607"
46 Echoy long modulated	P3_Long_Modulated	6,607"	P3_Echoy	5,038"
47 Metallic Reversy	P3_Plate_Large	3,839"	P3_Like_Reverse	5,270"
48 Early Water 1	P3_Early_1	0,620"	P3_Watery_2	4,350"
49 Early Water 2	P3_Early_1	0,620"	P3_Watery_Hall	8,378"
50 Small Early	P3_Early_3	0,618"	P3_Early_1	0,620"
51 Small Chamber	C_Chamber_Early_1	0,848"	C_Room_Small	0,850"
52 Medium Early	P3_Early_2	0,899"	Hall_Early	0,975"
53 Room Plate	Room_1	1,131"	P3_Plate_Small	1,250"
54 Medium Room 2	Room_2	1,310"	C_Room_Medium	1,351"
55 Small Chamber 2	C_Chamber_Early_2	1,393"	C_Concert_Hall_Small	1,457"
56 Club Plate	C_Club_Small	1,608"	P3_Plate_Medium	1,643"
57 Flanging Club	Flanging	2,011"	C_Club_Medium	2,081"
58 Warm Hall Medium	P3_Warm_Hall_Small	2,210"	C_Concert_Hall_Medium_1	2,345"
59 Damped Concert Hall	P3_Damped_Hall	2,366"	P3_Concert_Small	2,446"
60 Comb Roll	Comb	2,707"	Roll	2,845"
61 Small Auditorium Hall	Hall_2	2,906"	P3_Auditorium_Small	2,926"
62 Warm Church	C_Medium_Church	3,048"	P3_Warm_Hall_Medium	3,049"
63 Medium Distance Hall	C_Concert_Hall_Medium_2	3,061"	Long_Distance	3,215"
64 Wood Hall	C_Wood_Chamber	3,364"	Hall_1	3,417"

grey: < 2'' / pale yellow: > 5''

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