

**Vienna Instruments**  
**Solo Download Instruments**  
**Lithophone**  
**Full Library**

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## Introduction

Welcome to the Vienna Symphonic Library, and thank you for purchasing one of our Solo Download Instruments! This document contains the mapping information for the "Full" version of the Vienna Instruments Lithophone. You will find in it a comprehensive survey of the articulations/Patches content, a listing of abbreviations, and the mapping list proper which gives details for every Patch, Matrix, and Preset.

## "Full" Library

As opposed to the "Standard" versions of our Solo Download Instruments, the "Full" versions are identical with the corresponding instruments of a DVD Collection, i.e., they contain exactly the same samples, Patches, Matrices and Presets as the latter without any restrictions.

Installing a Download Instrument's Full version copies that instrument's sample content to a separate folder on your hard disk, so that it is not necessary to keep its Standard version installed – you may either delete it from your hard disk or at least remove it from the Directory Manager's list of activated instruments. In the Vienna Instruments Browser, the path of the Full version will be the same as that of the corresponding DVD Instrument, so that you can still see both versions as separate entries if you keep the Standard version installed.

## Data paths and Patch name conventions

Since the Full versions of Download Instruments conform to the corresponding DVD Instruments, the data paths in your Vienna Instruments browser will be different than those of Standard Download or Special Edition Instruments. For instance, the path of the Standard Download Library of Flute 1 is "02D Flute-1", and all Patches can be found in this folder regardless of the articulation group they belong to. The Patch number is also marked with a "D" so that you immediately know it is a Download Instrument. In the Vienna Special Edition, Flute 1 is located in the folder "11 Flutes" together with the other flutes. Here, the Patch number is marked with an "S". The Full Download of Flute 1 is located in the subfolder "32 Flute" of the section "Woodwind Patches", which again contains subfolders grouping the Patches according to type, e.g., "01 SHORT + LONG NOTES", "02 DYNAMICS", etc. Patch names of the Full Download Library may differ from the corresponding ones of the Standard Download Library.

While Full Download Instruments contain all articulations of the corresponding DVD Instruments, their Patches are not divided into Standard and Extended content. The list of articulations further down which gives a summary of the Library's contents.

Special Patch configurations which sometimes are part of a Standard Download Instrument may be found in a reserved folder called "98 RESOURCES" in the Full Instrument. E.g., Flute 1 Standard contains the Patch "22D FL1 legato-sus"; in Flute 1 Full, this Patch is called "01 FL1\_perf\_leg\_sustain" and is located in the Resources' subfolder "03 Perf Speed variation". (Apart from that, it also contains more samples.) Other articulations that can be found in the Resources folder are isolated dynamics repetitions in the subfolder "01 Perf Rep dyn" – e.g., the five repetitions of a legato crescendo, divided into separate Patches – and extracted velocity layers of sustained notes in the subfolder "02 Long Notes – Single Layer".

## Patch information

The Patch information includes articulation type, playing range, number of samples used, RAM requirements, the number of velocity layers and alternations, AB switching possibilities, etc., as well as Patch specific information if necessary.

Where the type of articulation requires a special mapping (e.g., natural harmonics patches), the mapping layout will be shown in a detailed graphic.

**Major and minor runs** are always mapped to the keys of their scale, as are **arpeggios** to the keys of the broken chord played. **Grace notes** and **mordents** are mapped to their target note, i.e., the note the articulation ends with. Due to their nature, all **upward and downward articulations** (e.g., fixed glissandos and octave runs) have different mapping ranges – the upward movements ending the involved interval below the Patch's upper mapping range, while downward movements end the interval above its lower mapping range. (Please note that not all of the articulations mentioned above may be contained in your Collection.)

The Patch information also lists a Patch's velocity layers in detail. Velocity layer switches generally are the same for patches with the same number of layers but may occasionally be adapted to the instrument's requirements:

Layers	Layer 1	Layer 2	Layer 3
2	1–88	89–127	
3	1–55	56–108	109–127

## Interval performances

Interval performances are one of the outstanding features of our Vienna Instruments. They allow you to play authentic legato without any programming tricks. In our Silent Stage, all intervals from minor second to the octave were recorded for every instrument – up and down, of course; that makes 24 interval samples per note for one velocity alone! When you load an interval performance Patch and play a line on your keyboard, the software automatically joins the right samples with their interval transitions again, and you hear a perfect legato. By the way, this technique is not only used for legato but also for other articulations like the strings' portamento, marcato, or détaché and spiccato articulations.

Interval performances also contain at least two legato repetitions for every note which alternate automatically whenever you strike a key more than once. There also are preconfigured thresholds for legato and repetition notes: The legato threshold – i.e., the maximum break between notes where legato is played – is 50 ms. Otherwise, a sustained starting note will sound so that you can easily start a new phrase without leaving the legato Patch. For note repetitions, the threshold is 200 ms: a break up to that duration will yield a legato repetition; if the break is longer, a new starting note. But of course, it's mingling legato with other articulations which makes a piece really come alive.

Due to their nature, all interval performances are monophonic; otherwise, the software would have to be able to decide which source note belongs to which target note. To circumvent this, you can open two VI instances of the same instrument on separate MIDI tracks without any additional strain on your RAM.

*Note:* the Vienna Instruments PRO player software also allows you to play polyphonic Interval performances.

Another variety of interval performance you will come across is the “perf-leg\_sus” Patch. These Patches also contain normal legatos, only the target note of each interval is crossfaded into a looped sustain. They can be used for slower pieces with long notes; however, you should use them with circumspection, since plain legatos sound more lively because they not only render the interval transitions as they were played, but also have different target samples for every interval instead of the same sustained note: When you play, e.g., c–e and then c#–e with normal legato, you will get two different “e” tones; with sus-legato you won't.

## Matrix information

Each Matrix listing contains information regarding the Patches used for the Matrix, the number of horizontal and vertical dimensions, and switching properties. A mapping table shows the Cell positions for each of the Matrix' Patches.

**A/B switching** normally is set to A0 for upward/crescendo, and B0 for downward/diminuendo. However, some bass instruments go below that range so that the A/B keys have to be adapted accordingly. For example, the A/B switches for double bass are A0 and A#0 because the instrument's lower range extends to B0.

In order to facilitate working with **MIDI controller switches** like the Modulation wheel, the switching positions are not distributed equally across the controller range if they control more than two Matrix rows or columns; generally, the switching range will be narrower at the extreme positions because they are easy to set, and wider in the middle where it is harder to find the desired setting.

**Speed controller switches** naturally are adjusted to the Patches involved, and have been tested carefully as to their playability. However, if you find that they do not fit your playing, or want to try out other settings, you can change this as well as any other controller's settings at the **Control edit** page, and save the result in your Custom Matrix folder.

## Preset information

The Preset information lists the Matrices used in the Preset as well as its keyswitches. All other information can be gathered from the Matrix and Patch listings, so there's not really much to say here. Please note that the Matrices of a Preset can also be switched with MIDI Program Changes (VI: 101–112; VI PRO: 1–127) instead of keyboard notes, and if you like to keep

your keyboard free for playing instead of switching, you can disable Preset keyswitching and only use MIDI Program Changes. Vienna Instruments PRO also allows you to define a MIDI Control for Preset keyswitching.

## Abbreviations

Here's a list of abbreviations in Patch names, which will help you to determine a Patch's content even without the help of the Vienna Instruments browser. Please note that not all of the abbreviations may occur in the manual on hand.

Abbreviation	Meaning	Abbreviation	Meaning
acc	accelerando	me	medium (mallet)
all	combination of all the instruments of a type	mute	muted or damped
bow	played with a bow	nail	fingernail
cent	center	pont	bridge
chrom	chromatic	port	portato
cres	crescendo	RS	release samples
finger	finger	sec	secco
flutter	flutter tonguing	so	soft (mallet)
FX	effect	stac	staccato
gliss	glissando	pont	sul ponticello (played near the bridge)
ha	hard (mallet)	sus	sustained

## Articulations

### Elements – Lithophone

#### 11 LITHOPHONE

Soft mallets:  
 Single hits normal and secco, full and lower range  
 Rolls  
 Chord tremolos  
 Sul ponticello normal and secco  
 Glissandos

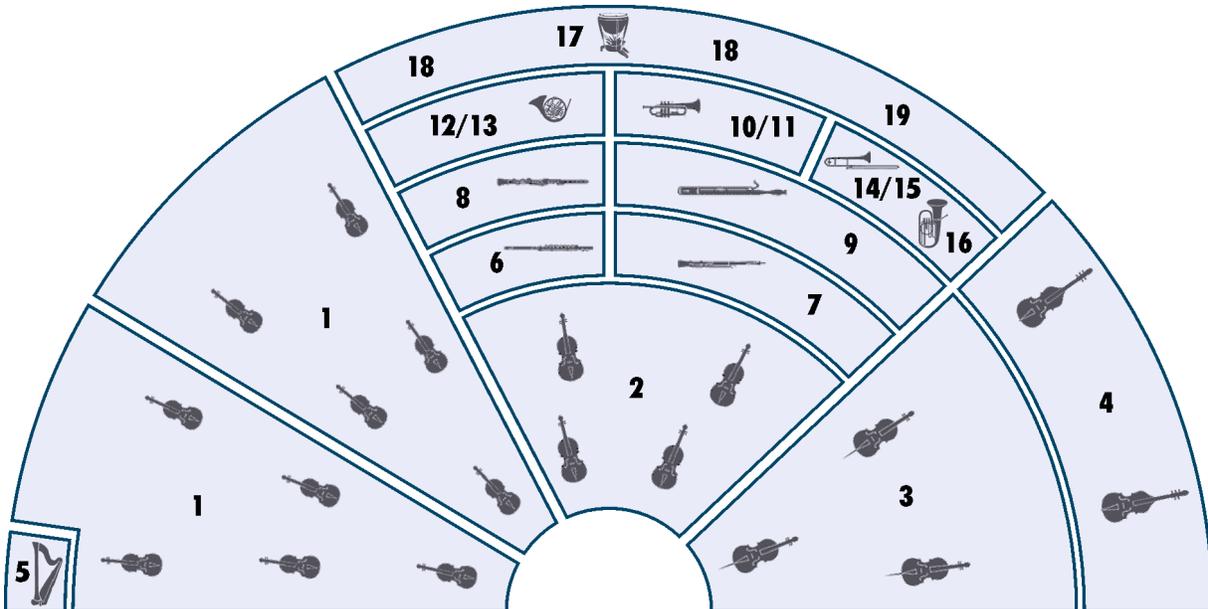
Medium mallets:  
 Lower range  
 Single notes normal and secco  
 Chord tremolos

Hard mallets:  
 Single notes normal and secco, full and higher range  
 Chord tremolos, full and higher range

Effects:  
 Finger strokes normal and secco  
 Nail strokes normal and accented  
 Small and large stones on slabs  
 3mm needle center strokes and plucked  
 5mm needle side strokes and ponticello  
 "Shattering" tremolo portato and accented  
 Bowed, p and f

## The orchestra

There are several ways of setting up an orchestra, depending on the era of the piece played, the type of the piece and the instruments it requires, and even on the preference of the conductor. The figure below shows one of the more common setups, which can be taken as a guideline for mixing a composition, properly positioning the instruments in the stereo field and adding reverb according to the size of the concert hall you want your piece to be played in.



- |   |                         |       |                              |
|---|-------------------------|-------|------------------------------|
| 1 | 1st and 2nd violin      | 9     | Bassoon, contrabassoon       |
| 2 | Viola                   | 10/11 | Trumpet                      |
| 3 | Cello                   | 12/13 | Horn                         |
| 4 | Double bass             | 14/15 | Trombone                     |
| 5 | Harp                    | 16    | Tuba                         |
| 6 | Concert flute, piccolo  | 17    | Timpani                      |
| 7 | Oboe, English horn      | 18    | Drums, cymbals               |
| 8 | Clarinet, bass clarinet | 19    | other percussion instruments |

## Pitch

For designating pitch, the Vienna Symphonic Library uses International Pitch Notation (IPN), which was agreed upon internationally under the auspices of the Acoustical Society of America. In this system the international standard of A=440 Hz is called A4 and middle C is C4. All pitches are written as capital letters, their respective octave being indicated by a number next to it. The lowest C on the piano is C1 (the A below that is A0), etc.

You can tune your Vienna Instruments to other players, or adjust it to tunings of earlier musical periods by setting the Perform page's Master Tune option within a range of 420 to 460 Hz.

# Elements – Lithophone

## Patches

### 11 LITHOPHONE

Range: F2–D7

Sounding stones made of basalt, granite, marble and other minerals were used in many ancient cultures for ceremonial and religious purposes. These days, the lithophone is the most commonly known stone instrument, which Carl Orff introduced to orchestral arrangements. There are 15 small round slabs of limestone chromatically arranged on rubber pegs. The lithophone recorded by the Vienna Symphonic Library was newly developed at the Technical University of Zurich, and modelled after the marimba. Unlike to common lithophones, it consists of deeply resonant slabs of serpentine (ranging in size from 17 to 84 cm!) which are equipped with resonating tubes. The unmistakable, round stone sound remains prominent over the instrument's nearly 5 octave range.

#### The musician

The lithophone was played by the percussionist Felix Perret. Perret, who was born in Switzerland, after his studies entered deeply into the world of jazz and improvised music. He plays in various formations, solo projects, and orchestras, and he is committed to several festivals for New Music, as well as to jazz and improvised music.

Since 1999, Felix Perret has been working with the lithophone, which was developed by Prof. W.A. Meier and his team in Zurich, and is unique in the world for its maturity of sound and technical design. Since then, several pieces have been composed for the stone instrument which draws lots of attention at international symposia and festivals.

<b>01 LI Soft Mallet - all</b> Single notes: Soft mallet, normal, full range 3 velocity layers 2 Alternations	Samples: 324	RAM: 20 MB
<b>02 LI Soft Mallet - all secco</b> Single notes: Soft mallet, secco, full range 2 velocity layers	Samples: 108	RAM: 6 MB
<b>03 LI Soft Mallet - all roll</b> Phrases: Soft mallet rolls, full range 2 velocity layers Release samples	Samples: 216	RAM: 13 MB
<b>04 LI Soft Mallet - all roll-chords</b> Phrases: Soft mallet rolls for chord tremolos, full range 2 velocity layers Release samples	Samples: 216	RAM: 13 MB
<b>05 LI Hard Mallet - all</b> Single notes: Hard mallet, normal, full range 3 velocity layers 2 Alternations	Samples: 324	RAM: 20 MB
<b>06 LI sul-ponticello - all</b> Single notes: Sul ponticello, normal, full range 2 velocity layers	Samples: 108	RAM: 6 MB

<p><b>07 LI sul-ponticello - all secco</b>                  Single notes: Sul ponticello, secco, full range                  2 velocity layers</p>	<p>Samples: 108</p>	<p>RAM: 6 MB</p>	
<p><b>08 LI glissandi</b>                  Phrases: Glissandos, p and f                  Slow, medium, and fast, up and down                  1 velocity layer</p> <p><b>Mapping:</b>                  C, D: low range, up/down; E, F: medium range, up/down; G, A: high range, up/down                  C2–A2: piano, slow                  C3–A3: piano, medium                  C4–A4: piano, fast                  C5–A5: piano, sliding glissando                  C6–A6: forte, fast                  C7–A7: forte, sliding glissando</p>	<p>Range: C2–A7</p>	<p>Samples: 36</p>	<p>RAM: 2 MB</p>
<p><b>11 LI Soft Mallet - low</b>                  Single notes: Soft mallet, normal, lower range                  3 velocity layers                  2 Alternations</p>	<p>Range: F2–D4</p>	<p>Samples: 108</p>	<p>RAM: 6 MB</p>
<p><b>12 LI Soft Mallet - low secco</b>                  Single notes: Soft mallet, secco, lower range                  2 velocity layers</p>	<p>Range: F2–D4</p>	<p>Samples: 36</p>	<p>RAM: 2 MB</p>
<p><b>13 LI Medium Mallet - low</b>                  Single notes: Medium mallet, normal, lower range                  2 velocity layers                  2 Alternations</p>	<p>Range: F2–D4</p>	<p>Samples: 72</p>	<p>RAM: 4 MB</p>
<p><b>14 LI Medium Mallet - low secco</b>                  Single notes: Medium mallet, secco, lower range                  2 velocity layers</p>	<p>Range: F2–D4</p>	<p>Samples: 36</p>	<p>RAM: 2 MB</p>
<p><b>15 LI Medium Mallet - low roll-chords</b>                  Phrases: Medium mallet rolls for chord tremolos, lower range                  2 velocity layers                  Release samples</p>	<p>Range: G2–C4</p>	<p>Samples: 72</p>	<p>RAM: 4 MB</p>
<p><b>16 LI Hard Mallet - high</b>                  Single notes: Hard mallet, normal, higher range                  2 velocity layers                  2 Alternations</p>	<p>Range: A#3–D7</p>	<p>Samples: 148</p>	<p>RAM: 9 MB</p>
<p><b>17 LI Hard Mallet - high secco</b>                  Single notes: Hard mallet, secco, higher range</p>	<p>Range: A#3–D7</p>	<p>Samples: 74</p>	<p>RAM: 4 MB</p>

2 velocity layers

<b>18 LI Hard Mallet - high roll-chords</b> Phrases: Hard mallet rolls for chord tremolos, higher range 2 velocity layers Release samples	Range: C4–C7	Samples: 148	RAM: 9 MB
<b>21 LI finger</b> Single notes: Finger strokes, normal 1 velocity layer		Samples: 54	RAM: 3 MB
<b>22 LI finger secco</b> Single notes: Finger strokes, secco 1 velocity layer		Samples: 54	RAM: 3 MB
<b>23 LI nail</b> Single notes: Nail strokes, normal 1 velocity layer		Samples: 54	RAM: 3 MB
<b>24 LI nail accent</b> Single notes: Nail strokes, accented 1 velocity layer		Samples: 54	RAM: 3 MB
<b>25 LI stone small</b> Single notes, with small stones placed on the Lithophone slabs 1 velocity layer		Samples: 54	RAM: 3 MB
<b>26 LI stone big</b> Single notes, with larger stones placed on the Lithophone slabs 1 velocity layer		Samples: 54	RAM: 3 MB
<b>27 LI Needle 3mm-cent</b> Single notes: 3 mm needle, center strokes 1 velocity layer		Samples: 54	RAM: 3 MB
<b>28 LI Needle 3mm-FX</b> Effects: 3 mm needle, placed on the slab and plucked to create a singing sound 1 velocity layer		Samples: 54	RAM: 3 MB
<b>29 LI Needle 5mm-side</b> Single notes: 5 mm needle, side strokes 1 velocity layer		Samples: 54	RAM: 3 MB
<b>30 LI Needle 5mm-pont</b> Single notes: 5 mm needle, sul ponticello 1 velocity layer		Samples: 54	RAM: 3 MB
<b>31 LI Shatter port</b> Phrases: "Shattering" tremolo, portato 1 velocity layer		Samples: 54	RAM: 3 MB
<b>32 LI Shatter accent</b> Phrases: "Shattering" tremolo, accented 1 velocity layer		Samples: 54	RAM: 3 MB

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**33 LI Bow piano**

Range: F2–C7

Samples: 106

RAM: 6 MB

Single notes: Bowed, piano

1 velocity layer

Release samples

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**34 LI Bow forte**

Samples: 106

RAM: 6 MB

Single notes: Bowed, forte

1 velocity layer

Release samples

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**99 RELEASE**

This section contains release samples for various patches of the other sections. Please do not try to load them into a Vienna Instruments matrix – you will not be able to hear anything when you try to play them.

## Matrices

### 07 Lithophone Mallets

Samples: 1414

RAM: 88 MB

Soft mallets, full range: single notes normal and secco, rolls and chord tremolos

Medium mallets, low range: single notes normal and secco, chord tremolos

Hard mallets, high range: single notes normal and secco, chord tremolos

Matrix switches: Horizontal: Keyswitches, C1–D#1 Vertical: Modwheel, 3 zones

	C1	C#1	D1	D#1
soft mallet, full range	normal	secco	rolls	chord tremolo
medium mallet, low range	normal	secco	chord tremolo	chord tremolo
hard mallet, high range	normal	secco	chord tremolo	chord tremolo

### 08 Lithophone FX

Samples: 860

RAM: 53 MB

Effect sounds: Fingers normal and secco, nail normal and accent, small and large stone, 3mm needle center and effect, 5mm needle side and ponticello, shatter portato and accented, bowed piano and forte

Matrix switches: Horizontal: Keyswitches, C1–F#1 Vertical: Modwheel, 2 zones

	C1	C#1	D1	D#1	E1	F1	F#1
V1	finger norm	nail norm	stone small	3mm needle center	5mm needle side	shatter portato	bowed piano
V2	finger secco	nail accent	stone large	3mm needle effect	5mm needle ponticello	shatter accent	bowed forte

## Presets

### Lithophone VSL Preset

Samples: 2274

RAM: 142 MB

07 Lithophone Mallets

08 Lithophone FX

Keyswitches: G1–G#1