VIENNA SYMPHONIC LIBRARY

Vienna Instruments
Brass II

Mapping Documentation

**Piccolo Trumpet
Bass Trumpet
Triple Horn
Bass Trombone
Contrabass Trombone
Contrabass Tuba
Wagner Tuba
Cimbasso
Horn ensemble (8 players)**

Contents

Contents

Introduction

This document contains the mapping list for the Brass II Collection of Vienna Instruments. You will find in it a comprehensive survey of the articulations/patches for the Standard and the Extended Libraries of each instrument, a listing of abbreviations, and the mapping list proper which gives details for every Patch, Matrix, and Preset in the collection.

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.)

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 settings in the **Map Control** tab of the *Vienna Instruments* player's Advanced View, 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: 1–12; 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.

Library updates

If you purchased your Instrument Collection via download or on the *Vienna Hard Drive*, all previous library updates will already be included; if you own a DVD Collection, you can download the updates from your personal User Area. A general description of *Vienna Instruments PRO 2* Matrices and Presets included in these updates can be found in the Appendix "Vienna Instruments PRO 2 Matrices and Presets" on page 148.

Articulations

Instrument/group	Level 1 (Standard) content	Level 2 (Extended) content
51 Trumpet Piccolo		
01 SHORT + LONG NOTES	Staccato Portato short Sustained with light and without vibrato	Portato short with soft attack Portato medium, normal, marcato, and with soft attack Portato long, with light vibrato, marcato and soft attack; with strong vibrato, normal and soft attack; without vibrato, normal, marcato, and with soft attack Sustained with strong and progressive vibrato
02 DYNAMICS	Crescendo-diminuendo with vibrato, 5 and 9 sec. Fortepiano, sforzato	Crescendo and diminuendo with vibrato, 1, 1.5, 2, 3, and 5 sec. Crescendo and diminuendo without vibrato, 1, 1.5, 2, 3, 4, and 6 sec. Crescendo-diminuendo without vibrato, 4, 8, and 12 sec. Sforzatissimo
03 FLATTER + TRILLS	Flutter tonguing, normal and crescendo Trills, minor and major 2nd, fast	Trills, minor and major 2nd, slow and accelerando
10 PERF INTERVAL	Legato without vibrato, normal and sustain crossfading	Legato with vibrato, normal and with sustain crossfading Marcato
11 PERF INTERVAL FAST	Legato	Marcato
12 PERF TRILL		Trills, legato, minor to major 2nd
13 PERF REPETITION	Legato slow Portato Staccato	Legato fast Dynamics, legato slow and fast, staccato
14 FAST REPETITION		Staccato, 9 repetitions, 140–180, and 200 BPM Normal and dynamics
15 UPBEAT REPETITION		1 and 3 upbeats, 80–140, 160, 180, and 200 BPM 2 upbeats, 90–140, 160, 180, and 200 BPM
16 GRACE NOTES		Grace notes, minor and major 2nd, up and down
17 SCALE RUNS		Octave runs, legato Major, C to B key, up and down
18 MORDENTS		Mordents, legato, up and down 6 variations each
53 Bass trumpet		
01 SHORT + LONG NOTES	Staccato Portato short Sustained with light and without vibrato	Portato short with soft attack Portato medium with and without vibrato, marcato, and with soft attack Portato long, with normal (2 variations), progressive, and without vibrato, marcato and soft attack Sustained with normal, progressive, and without vibrato

Instrument/group	Level 1 (Standard) content	Level 2 (Extended) content
02 DYNAMICS	Crescendo-diminuendo without vibrato, 4 and 6 sec. Fortepiano, sforzato	Medium crescendo and diminuendo with vibrato, 1.5, 3, and 5 sec.; without vibrato, 1, 1.5, 2, 3, and 4 sec. Strong crescendo and diminuendo with vibrato, 3, 4, and 6 sec.; without vibrato, 1, 1.5, 2, 3, 4, and 6 sec. Crescendo-diminuendo with vibrato, 6 sec.; without vibrato, 8 sec. Sforzatissimo
03 FLATTER + TRILLS	Flutter tonguing, normal and crescendo Trills, minor and major 2nd	
10 PERF INTERVAL	Legato without vibrato	Legato without vibrato, sustain crossfading Legato with vibrato, normal and with sustain crossfading Marcato
11 PERF INTERVAL FAST	Legato	Marcato
12 PERF REPETITION	Legato slow Portato Staccato fast	Legato fast Staccato slow Legato dynamics Portato, staccato slow and fast crescendo
13 FAST REPETITION		Staccato, 9 repetitions, 150 to 180, and 200 BPM Normal and crescendo
14 UPBEAT REPETITION		1–3 upbeats, 80–140, 160, 180, and 200 BPM
15 GRACE NOTES		Grace notes, minor and major 2nd, up and down
55 Horn-Triple		
01 SHORT + LONG NOTES	Staccato Portato short Sustained	Portato medium
02 DYNAMICS	Crescendo-diminuendo, 2 and 4 sec. Fortepiano, sforzato	Light crescendo and diminuendo, 1.5, 2, 3, and 4 sec. Medium crescendo and diminuendo, 1.5, 2, 3, 4, and 6 sec. Strong crescendo and diminuendo, 2, 3, 4, and 6 sec. Crescendo-diminuendo, 3 and 8 sec. Sforzatissimo
03 FLATTER	Flutter tonguing normal and crescendo	
10 PERF INTERVAL	Legato	Marcato
11 PERF INTERVAL FAST	Legato	Marcato
12 PERF TRILL		Trills, legato, minor to major 2nd
13 PERF REPETITION	Legato Portato Staccato	Dynamics for all repetitions
14 FAST REPETITION		Staccato, 9 repetitions, 140 to 180 BPM Normal and dynamics
15 UPBEAT REPETITION		1–3 upbeats, 90–140, 160, 180, and 200 BPM
16 GLISSANDI		Performance glissandos, minor 3rd to octave Fixed glissandos, 4th to octave, up and down Slow octave glissando

Instrument/group	Level 1 (Standard) content	Level 2 (Extended) content
57 Bass trombone		
01 SHORT + LONG NOTES	Staccato Portato short Sustained with and without vibrato	Portato medium, normal and soft attack, and marcato Portato long, with and without vibrato, with soft attack, and marcato
02 DYNAMICS	Fortepiano, sforzato	Light crescendo and diminuendo, 1.5, and 2 sec. Medium crescendo and diminuendo, 1.5, 2, 3, and 4 sec. Strong crescendo and diminuendo, 4 and 6 sec. Sforzatissimo
03 FLATTER	Flutter tonguing normal and crescendo	
10 PERF INTERVAL	Legato	Legato with sustain crossfading Marcato
11 PERF INTERVAL FAST	Legato	
11 PERF REPETITION	Portato Staccato fast	Staccato slow Dynamics for all repetitions
12 FAST REPETITION		Staccato, 9 repetitions, 150 to 190 BPM Normal and dynamics
13 UPBEAT REPETITION		1–3 upbeats, 80–150 BPM
14 GRACE NOTES		Grace notes, minor and major 2nd, up and down
58 Contrabass trombone		
01 SHORT + LONG NOTES	Staccato Portato medium Sustained	Portato medium, marcato Portato long
02 DYNAMICS	Crescendo-diminuendo, 4 and 6 sec. Fortepiano, sforzato	Light crescendo and diminuendo, 1, 1.5, and 2 sec. Medium crescendo and diminuendo, 3, 4, and 6 sec. Strong crescendo and diminuendo, 3 and 4 sec. Sforzatissimo
03 FLATTER + FX	Flutter tonguing normal and crescendo	Arpeggios, up/down and down/up Duphonic playing, var. A and B
10 PERF INTERVAL	Legato	Legato with sustain crossfading Marcato
11 PERF REPETITION	Portato slow Staccato	Portato fast Dynamics, portato slow and fast
12 UPBEAT REPETITION		1–3 upbeats, 80–150 BPM
13 GLISSANDI		Performance glissandos, minor 2nd to major 3rd Fixed glissandos, minor 2nd to 4th, up and down
60 Contrabass tuba		
01 SHORT + LONG NOTES	Staccato Portato medium Sustained	Portato medium, soft and hard attack Portato long, soft and hard attack
02 DYNAMICS	Fortepiano, sforzato	Medium crescendo and diminuendo, 1, 1.5, 2, 3, 4, and 6 sec. Strong crescendo and diminuendo, 3, 4, and 5 sec. Sforzatissimo

Instrument/group	Level 1 (Standard) content	Level 2 (Extended) content
03 FLATTER + TRILLS	Flutter tonguing Trills, minor and major 2nd	
04 MUTE BASIC		Portato medium and long Sustained Crescendo and diminuendo, 3 and 4 sec. Sforzato Flutter tonguing, crescendo
10 PERF INTERVAL	Legato	Legato with sustain crossfading Marcato
11 PERF INTERVAL FAST	Legato	Marcato
12 PERF TRILL		Trills, legato, minor to major 2nd
13 PERF REPETITION	Portato slow, staccato fast	Portato fast, staccato slow
14 UPBEAT REPETITION		1–3 upbeats, 80–150 BPM
15 GRACE NOTES		Grace notes, minor and major 2nd, up and down
61 Wagner tuba		
01 SHORT + LONG NOTES	Staccato Portato short Sustained	Portato medium and long
02 DYNAMICS	Crescendo-diminuendo, 4 and 6 sec. Fortepiano, sforzato	Medium crescendo and diminuendo, 1.5, 2, 3, 4, and 6 sec. Strong crescendo and diminuendo, 3, 4, and 6 sec. Sforzatissimo
03 FLATTER	Flutter tonguing normal and crescendo	
10 PERF INTERVAL	Legato	Marcato
11 PERF INTERVAL FAST	Legato	Marcato
12 PERF TRILL		Trills, legato, minor to major 2nd
13 PERF REPETITION	Legato slow Portato Staccato slow	Legato fast Staccato fast Dynamics for all repetitions
14 UPBEAT REPETITION		1 upbeat, 80–140, 160, and 180 BPM 2 and 3 upbeats, 80–140, 160, 180, and 200 BPM
62 Cimbasso		
01 SHORT + LONG NOTES	Staccato Portato medium Sustained	Portato medium, marcato Portato long, normal and marcato
02 DYNAMICS	Fortepiano, sforzato	Light crescendo and diminuendo, 1, 1.5, and 2 sec. Medium crescendo and diminuendo, 2, 3, 4, and 6 sec. Strong crescendo and diminuendo, 2, 3, and 4 sec. Sforzatissimo
03 FLATTER	Flutter tonguing normal and crescendo	
10 PERF INTERVAL	Legato	Legato with sustain crossfading Marcato
11 PERF INTERVAL FAST	Legato	Marcato
12 PERF TRILL		Trills, legato, minor to major 2nd
13 PERF REPETITION	Portato Staccato fast	Staccato slow Dynamics for all repetitions
14 UPBEAT REPETITION		1–3 upbeats, 80–150 BPM
15 GRACE NOTES		Grace notes, minor and major 2nd, up and down

Instrument/group	Level 1 (Standard) content	Level 2 (Extended) content
65 Horns - a8		
01 SHORT + LONG NOTES	Staccato Portato short Sustained	Portato medium Sustained, blared
02 DYNAMICS	Crescendo-diminuendo, 6 sec. Fortepiano, sforzato	Medium crescendo and diminuendo, 2, 3, and 5 sec. Sforzatissimo
03 FLATTER + TRILLS	Flutter tonguing, normal and crescendo Trills, minor and major 2nd	Minor and major chords
10 PERF INTERVAL	Legato	
11 PERF REPETITION	Legato Portato Staccato	Dynamics for all repetitions
12 FAST REPETITION		Staccato, 9 repetitions, 140 to 180 BPM Normal and dynamics
13 UPBEAT REPETITION		1–3 upbeats, 80–140, and 160 BPM
14 GLISSANDI		Performance glissandos, medium and fast, minor 3rd to octave Fixed glissandos, 4th to octave, up and down Slow octave glissando

Abbreviations

Instruments

Abbreviation	English	German
BTB	Bass trombone	Bassposaune
BTr	Bass trumpet	Basstrompete
CI	Cimbasso	Cimbasso
CTB	Contrabass trombone	Kontrabassposaune
CTU	Contrabass tuba	Kontrabasstuba
HO2	Triple horn	Tripelhorn
HO-8	Horn ensemble (8 players)	
PTr	Piccolo trumpet	Piccolotrompete
WTU	Wagner tuba	Wagnertuba

Articulations and other abbreviations

Abbreviation	Meaning	Abbreviation	Meaning
+	faster articulation (runs and arpeggios)	lo	long
		ma	major
150, 160, …	150, 160, … BPM (beats per minute)	marc	marcato
1s, 2s, …	tone length 1 sec., 2 sec., …	me	medium
acc	accelerando	mi	minor
all	combination of all Patches of a category	mord	mordent
		mu	muted
arp	arpeggio	muA, muB	muted, variation A/B
blare	"blared" tones (horn)	nA	normal attack
cre	crescendo	noVib	without vibrato
dim	diminuendo	perf-rep	repetition performance
dm	diminished (arpeggios)	por	portato
dyn	dynamics (crescendo and diminuendo)	run	octave run
		sA	soft attack
dyn5, dyn9	dynamics, 5/9 repetitions	sl	slow
fa	fast	sta, stac	staccato
faT	fast triplets	sto	stopped (horns)
fA	fast attack	str	strong
fA_auto	attack automation (normal/fast attack)	sus	sustained
		T	triplets
fast-rep	fast repetitions	tune	"tuning in" articulation
flatter	flutter tonguing	UB	upbeat
fx	effect sound	UB-a1, -a2	1, 2 upbeats
gliss	glissando	v1, v2 …	1st, 2nd, … variation
hA	hard attack	Vib	with (medium) vibrato
leg	legato	Vib-progr	progressive vibrato
li	light	XF	cell crossfade Matrix

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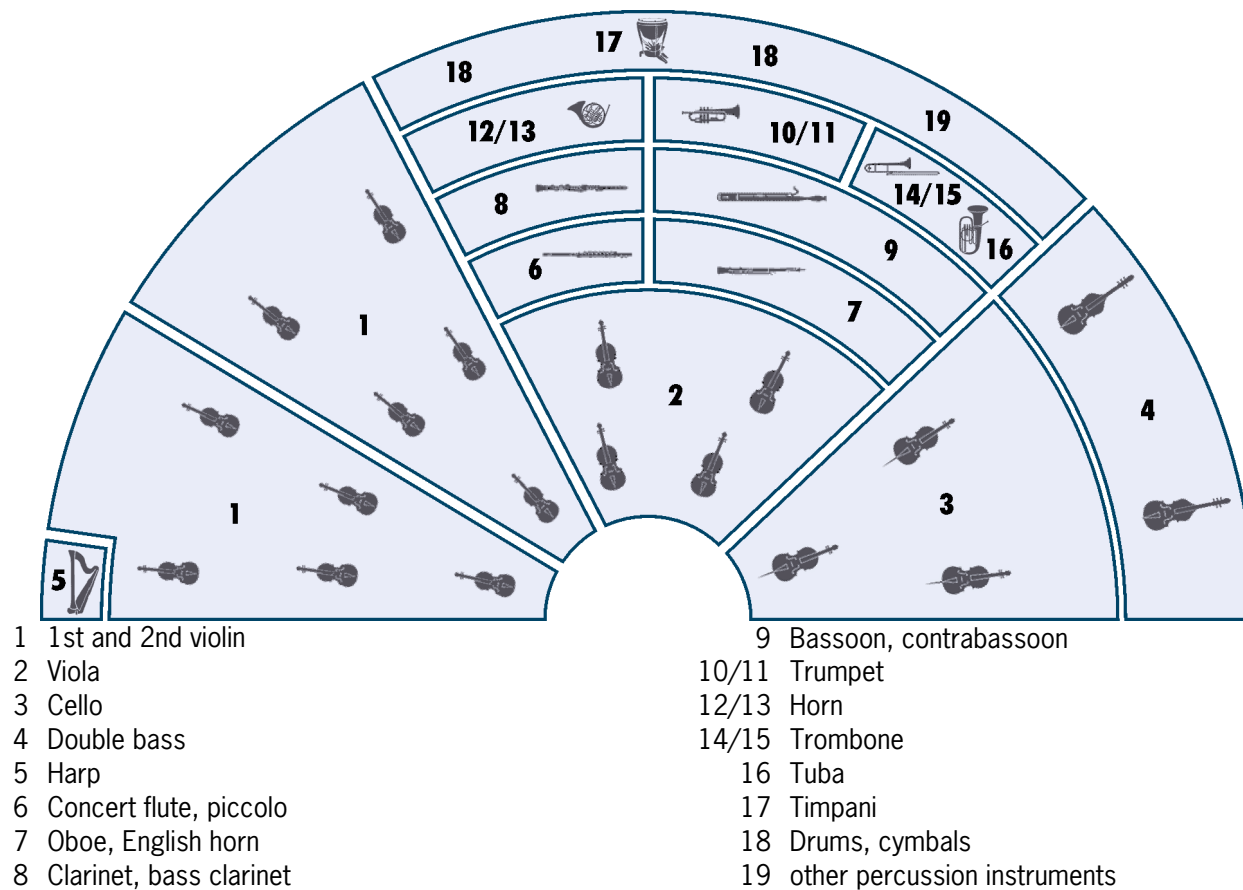
Pitch

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.

51 Trumpet Piccolo

Description

The name piccolo trumpet is given to all trumpets pitched from D through high Bb. Today, the piccolo trumpet is used for orchestral playing mainly when the trumpet part is permanently in a very high register, e.g. for the performance of baroque clarino parts in Bach and Handel.

Range and notation

The piccolo trumpet in high Bb has a range of D4–G6. It is notated in treble clef. It is a transposing instrument and sounds a minor seventh higher than written.

Sound characteristics

The piccolo trumpet has a sound which exhibits all the typical characteristics of the trumpet, although it is brighter and clearer than the C trumpet. The instrument's easy response means that the full sound is achieved immediately after blowing. The sound develops best between C5 and C6.

Combination with other instruments

The extreme clarity and brilliance of the piccolo trumpet makes it ideal as a solo instrument, but in 20th century orchestration piccolo trumpets of various pitches are often used to flesh out the sound, e.g. in unison with the oboes.

Patches

01 SHORT + LONG NOTES   Range: C4–F6

Single notes
Level 1: Staccato
Portato short
Sustained with light and without vibrato
Level 2: Portato short with soft attack
Portato medium, normal, marcato, and with soft attack
Portato long, with light vibrato, marcato and soft attack; with strong vibrato, normal and soft attack; without vibrato, normal, marcato, and with soft attack
Sustained with strong and progressive vibrato

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01 PTr_staccato   **Samples: 168   RAM: 10 MB**   **Level 1**

Staccato
3 velocity layers
4 Alternations

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02 PTr_portato_short   **Samples: 166   RAM: 10 MB**   **Level 1**

Portato, short
3 velocity layers
4 Alternations

---

03 PTr_portato_short_soft   **Samples: 166   RAM: 10 MB**   **Level 2**

Portato, short, soft attack
3 velocity layers
4 Alternations

---

04 PTr_portato_medium   **Samples: 166   RAM: 10 MB**   **Level 2**

Portato, medium
3 velocity layers
4 Alternations

---

05 PTr_portato_medium_marc   **Samples: 112   RAM: 7 MB**   **Level 2**

Portato, medium, marcato
2 velocity layers
4 Alternations

---

06 PTr_portato_medium_soft   **Samples: 168   RAM: 10 MB**   **Level 2**

Portato, medium, soft attack
3 velocity layers
4 Alternations

---

07 PTr_portato_long-marc_Vib-light   **Samples: 112   RAM: 7 MB**   **Level 2**

Portato, long, marcato, with light vibrato
2 velocity layers
Release samples
2 Alternations

08 PTr_portato_long-soft_Vib-light		**Samples: 168**	**RAM: 10 MB**	**Level 2**

Portato, long, soft attack, with light vibrato
3 velocity layers
Release samples
2 Alternations

09 PTr_portato_long-norm_Vib-strong		**Samples: 168**	**RAM: 10 MB**	**Level 2**

Portato, long, normal, with strong vibrato
3 velocity layers
Release samples
2 Alternations

10 PTr_portato_long-soft_Vib-strong		**Samples: 167**	**RAM: 10 MB**	**Level 2**

Portato, long, soft attack, with strong vibrato
3 velocity layers
Release samples
2 Alternations

11 PTr_portato_long-norm_noVib		**Samples: 168**	**RAM: 10 MB**	**Level 2**

Portato, long, normal, without vibrato
3 velocity layers
Release samples
2 Alternations

12 PTr_portato_long-marc_noVib		**Samples: 112**	**RAM: 7 MB**	**Level 2**

Portato, long, marcato, without vibrato
2 velocity layers
Release samples
2 Alternations

13 PTr_portato_long-soft_noVib		**Samples: 168**	**RAM: 10 MB**	**Level 2**

Portato, long, soft, without vibrato
3 velocity layers
Release samples
2 Alternations

21 PTr_sus_Vib-light	**Range: C4–E6**	**Samples: 155**	**RAM: 9 MB**	**Level 1**

Sustained, with light vibrato
3 velocity layers
Release samples

22 PTr_sus_Vib-strong		**Samples: 165**	**RAM: 10 MB**	**Level 2**

Sustained, with strong vibrato
3 velocity layers
Release samples

23 PTr_sus_Vib-progr	**Range: C4–E6**	**Samples: 156**	**RAM: 9 MB**	**Level 2**

Sustained, progressive vibrato
3 velocity layers
Release samples

24 PTr_sus_noVib		**Samples: 165**	**RAM: 10 MB**	**Level 1**

Sustained, without vibrato
3 velocity layers
Release samples

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02 DYNAMICS	**Range: C4–F6**		

Dynamics
Level 1: Crescendo-diminuendo with vibrato, 5 and 9 sec.
Fortepiano, sforzato
Level 2: Crescendo and diminuendo with vibrato, 1, 1.5, 2, 3, and 5 sec.
Crescendo and diminuendo without vibrato, 1, 1.5, 2, 3, 4, and 6 sec.
Crescendo-diminuendo without vibrato, 4, 8, and 12 sec.
Sforzatissimo

01 PTr_dyn_Vib_1s		**Samples: 54**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, with vibrato, 1 sec.
1 velocity layer
AB switch: crescendo/diminuendo

02 PTr_dyn_Vib_1'5s		**Samples: 54**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, with vibrato, 1.5 sec.
1 velocity layer
AB switch: crescendo/diminuendo

03 PTr_dyn_Vib_2s	**Range: C4–D#6**	**Samples: 50**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, with vibrato, 2 sec.
1 velocity layer
AB switch: crescendo/diminuendo

04 PTr_dyn_Vib_3s	**Range: C4–D#6**	**Samples: 50**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, with vibrato, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

05 PTr_dyn_Vib_5s	**Range: C4–D#6**	**Samples: 50**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, with vibrato, 5 sec.
1 velocity layer
AB switch: crescendo/diminuendo

11 PTr_dyn_noVib_1s		**Samples: 56**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, without vibrato, 1 sec.
1 velocity layer
AB switch: crescendo/diminuendo

12 PTr_dyn_noVib_1'5s		**Samples: 56**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, without vibrato, 1.5 sec.
1 velocity layer
AB switch: crescendo/diminuendo

13 PTr_dyn_noVib_2s		**Samples: 56**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, without vibrato, 2 sec.
1 velocity layer
AB switch: crescendo/diminuendo

14 PTr_dyn_noVib_3s		**Samples: 56**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, without vibrato, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

15 PTr_dyn_noVib_4s	**Range: C4–E6**	**Samples: 52**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, without vibrato, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

16 PTr_dyn_noVib_6s	**Range: C4–E6**	**Samples: 52**	**RAM: 3 MB**	**Level 2**

Crescendo and diminuendo, without vibrato, 6 sec.
1 velocity layer
AB switch: crescendo/diminuendo

21 PTr_pfp_Vib_5s	**Range: C4–D6**	**Samples: 23**	**RAM: 1 MB**	**Level 1**

Crescendo-diminuendo with vibrato, 5 sec.
1 velocity layer

22 PTr_pfp_Vib_9s	**Range: C4–D6**	**Samples: 23**	**RAM: 1 MB**	**Level 1**

Crescendo-diminuendo with vibrato, 9 sec.
1 velocity layer

23 PTr_pfp_noVib_4s	**Range: C4–D6**	**Samples: 23**	**RAM: 1 MB**	**Level 2**

Crescendo-diminuendo without vibrato, 4 sec.
1 velocity layer

24 PTr_pfp_noVib_8s	**Range: C4–E6**	**Samples: 25**	**RAM: 1 MB**	**Level 2**

Crescendo-diminuendo without vibrato, 8 sec.
1 velocity layer

25 PTr_pfp_noVib_12s	**Range: C4–E6**	**Samples: 25**	**RAM: 1 MB**	**Level 2**

Crescendo-diminuendo without vibrato, 12 sec.
1 velocity layer

31 PTr_fp		**Samples: 28**	**RAM: 1 MB**	**Level 1**

Fortepiano
1 velocity layer
2 Alternations

32 PTr_sfz		**Samples: 28**	**RAM: 1 MB**	**Level 1**

Sforzato
1 velocity layer
2 Alternations

03 FLATTER + TRILLS   Range: C4–D6

Flutter tonguing and trills
Level 1: Flutter tonguing, normal and crescendo
Trills, minor and major 2nd, fast
Level 2: Trills, minor and major 2nd, slow and accelerando

01 PTr_flatter	Range: C4–A#5	Samples: 38	RAM: 2 MB	Level 1

Flutter tonguing
1 velocity layer
Release samples

02 PTr_flatter_cre	Range: C4–A#5	Samples: 20	RAM: 1 MB	Level 1

Flutter tonguing, crescendo
1 velocity layer

11 PTr_trill-slow_1		Samples: 94	RAM: 5 MB	Level 2

Trills, slow, minor 2nd
2 velocity layers
Release samples

12 PTr_trill-slow_2		Samples: 92	RAM: 5 MB	Level 2

Trills, slow, major 2nd
2 velocity layers
Release samples

13 PTr_trill-fast_1		Samples: 92	RAM: 5 MB	Level 1

Trills, fast, minor 2nd
2 velocity layers
Release samples

14 PTr_trill-fast_2		Samples: 92	RAM: 5 MB	Level 1

Trills, fast, major 2nd
2 velocity layers
Release samples

15 PTr_trill-acc_1		Samples: 92	RAM: 5 MB	Level 2

Trills accelerando, minor 2nd
2 velocity layers
Release samples

16 PTr_trill-acc_2		Samples: 92	RAM: 5 MB	Level 2

Trills accelerando, major 2nd
2 velocity layers
Release samples

10 PERF INTERVAL   Range: C4–F6

Interval performances
Level 1: Legato without vibrato, normal and sustain crossfading
Level 2: Legato with vibrato, normal and with sustain crossfading
Marcato

| 01 PTr_perf-legato_noVib | | Samples: 617 | RAM: 38 MB | **Level 1** |

Legato without vibrato
2 velocity layers
Release samples

| 02 PTr_perf-legato_noVib_sus | | Samples: 617 | RAM: 38 MB | **Level 1** |

Legato without vibrato
Sustain crossfading
2 velocity layers
Release samples

| 03 PTr_perf-legato_Vib | | Samples: 613 | RAM: 38 MB | **Level 2** |

Legato, with vibrato
2 velocity layers
Release samples

| 04 PTr_perf-legato_Vib_sus | | Samples: 613 | RAM: 38 MB | **Level 2** |

Legato, with vibrato
Sustain crossfading
2 velocity layers
Release samples

| 05 PTr_perf-marcato | Range: C4–E6 | Samples: 666 | RAM: 41 MB | **Level 2** |

Marcato
2 velocity layers
Release samples

11 PERF INTERVAL FAST

Fast interval performances
Level 1: Legato
Level 2: Marcato

| 01 PTr_perf-legato_fa | Range: C4–F6 | Samples: 723 | RAM: 45 MB | **Level 1** |

Legato, fast
2 velocity layers
Release samples

| 02 PTr_perf-marcato_fa | Range: C4–E6 | Samples: 766 | RAM: 47 MB | **Level 2** |

Marcato, fast
2 velocity layers
Release samples

12 PERF TRILL   Range: C4–F6

Multi interval performances
Level 2: Trills, legato, minor to major 2nd

01 PTr_perf-trill   Samples: 1161 RAM: 72 MB   Level 2

Performance trills, legato, minor to major 2nd
2 velocity layers
Release samples

13 PERF REPETITION

Repetition performances
Level 1: Legato slow
Portato
Staccato
Level 2: Legato fast
Dynamics, legato slow and fast, staccato

01 PTr_perf-rep_leg-sl   Range: C4–F6   Samples: 150   RAM: 9 MB   Level 1

Repetition performances: Legato, slow
2 velocity layers

02 PTr_perf-rep_leg-fa   Range: C4–F6   Samples: 180   RAM: 11 MB   Level 2

Repetition performances: Legato, fast
2 velocity layers

03 PTr_perf-rep_por   Range: C4–E6   Samples: 216   RAM: 13 MB   Level 1

Repetition performances: Portato
2 velocity layers

04 PTr_perf-rep_sta   Range: C4–E6   Samples: 216   RAM: 13 MB   Level 1

Repetition performances: Staccato
2 velocity layers

21 PTr_perf-rep_dyn6_leg-sl   Range: C4–D6   Samples: 150   RAM: 9 MB   Level 2

Repetition performances: Legato dynamics, slow, 6 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

22 PTr_perf-rep_dyn6_leg-fa   Range: C4–D6   Samples: 144   RAM: 9 MB   Level 2

Repetition performances: Legato dynamics, fast, 6 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

23 PTr_perf-rep_dyn9_sta   Range: C4–E6   Samples: 216   RAM: 13 MB   Level 2

Repetition performances: Staccato dynamics, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

14 FAST REPETITION   Range: D4–E6
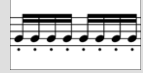
Fast repetitions
Level 2: Staccato, 9 repetitions, 140–180, and 200 BPM
Normal and dynamics

01 PTr_fast-rep_140 (150/160/170/180/200)	**Samples: 88**	**RAM: 5 MB**	**Level 2**

Fast repetitions: 140–180, and 200 BPM
2 velocity layers
Release samples

11 PTr_fast-rep_140_dyn (150/160/170/180/200)	**Samples: 44**	**RAM: 2 MB**	**Level 2**

Fast repetitions: Dynamics, 140–180, and 200 BPM
1 velocity layer
AB switch: crescendo/diminuendo

15 UPBEAT REPETITION

Upbeat repetitions
Level 2: 1 and 3 upbeats, 80–140, 160, 180, and 200 BPM
2 upbeats, 90–140, 160, 180, and 200 BPM

A Single Upbeat   Range: D4–F6

01 PTr_UB-a1_80 (90/100/110/120/130/140/160/180/200)	**Samples: 50**	**RAM: 3 MB**	**Level 2**

1 upbeat, 80–140, 160, 180, and 200 BPM
2 velocity layers

B Double Upbeats   Range: D4–F6

02 PTr_UB-a2_90 (100/110/120/130/140/160/180/200)	**Samples: 48**	**RAM: 3 MB**	**Level 2**

2 upbeats, 90–140, 160, 180, and 200 BPM
2 velocity layers

C Triple Upbeats   Range: D4–F6

01 PTr_UB-a3_80 (90/100/110/120/130/140/160/180/200)	**Samples: 48**	**RAM: 3 MB**	**Level 2**

3 upbeats, 80–140, 160, 180, and 200 BPM
2 velocity layers

16 GRACE NOTES   Range: C4–F6

Phrases
Level 2: Grace notes
Minor and major 2nd
Up and down
Mapped to target note

01 PTr_grace-1   **Samples: 166   RAM: 10 MB   Level 2**

Grace notes, minor 2nd
2 velocity layers
Release samples
AB switch: up/down

02 PTr_grace-2   **Samples: 162   RAM: 10 MB   Level 2**

Grace notes, major 2nd
2 velocity layers
Release samples
AB switch: up/down

17 SCALE RUNS

Phrases
Level 2: Octave runs, legato
Major, C to B key
Up and down

Legato major

01 PTr_run-leg_C-ma (through to B-ma)   **Samples: 16   RAM: 1 MB   Level 2**

Octave runs, legato, C to B major
1 velocity layer
AB switch: up/down

18 MORDENTS

Phrases
Level 2: Mordents, legato
Up and down
6 variations each
The samples are mapped to the target note

01 PTr_mord-leg_v1   **Range: C4–D6   Samples: 48   RAM: 3 MB   Level 2**

Mordents, legato
Single mordent, minor 2nd
2 velocity layers
AB switch: up/down

02 PTr_mord-leg_v2	**Range: C4–D#6**	**Samples: 48**	**RAM: 3 MB**	**Level 2**

Mordents, legato
Single mordent, major 2nd
2 velocity layers
AB switch: up/down

03 PTr_mord-leg_v3	**Range: C4–D#6**	**Samples: 48**	**RAM: 3 MB**	**Level 2**

Mordents, legato
Minor 2nd - minor 2nd
2 velocity layers
AB switch: up/down

04 PTr_mord-leg_v4	**Range: C4–E6**	**Samples: 48**	**RAM: 3 MB**	**Level 2**

Mordents, legato
Minor 2nd - major 2nd
2 velocity layers
AB switch: up/down

05 PTr_mord-leg_v5	**Range: C4–E6**	**Samples: 48**	**RAM: 3 MB**	**Level 2**

Mordents, legato
Major 2nd - minor 2nd
2 velocity layers
AB switch: up/down

06 PTr_mord-leg_v6	**Range: C4–F6**	**Samples: 48**	**RAM: 3 MB**	**Level 2**

Mordents, legato
Major 2nd - major 2nd
2 velocity layers
AB switch: up/down

98 RESOURCES

Resources
Level 2: Isolated dynamics repetitions: Legato slow and fast, staccato
Single layer long notes

01 Perf Rep dyn	**Range: C4–D6**

01 PTr_rep_cre6_leg-sl-1 (2/3/4/5/6)	**Samples: 13**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, slow, crescendo, 1st to 6th note
1 velocity layer

01 PTr_rep_dim6_leg-sl-1 (2/3/4/5/6)	**Samples: 12**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, slow, diminuendo, 1st to 6th note
1 velocity layer

02 PTr_rep_cre6_leg-fa-1 (2/3/4/5/6)		**Samples: 12**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, fast, crescendo, 1st to 6th note
1 velocity layer

02 PTr_rep_dim6_leg-fa-1 (2/3/4/5/6)		**Samples: 12**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, fast, diminuendo, 1st to 6th note
1 velocity layer

04 PTr_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)	**Range: C4–E6**	**Samples: 12**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, crescendo, 1st to 9th note
1 velocity layer

04 PTr_rep_dim9_sta-1 (2/3/4/5/6/7/8/9)	**Range: C4–E6**	**Samples: 12**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, diminuendo, 1st to 9th note
1 velocity layer

02 Long Notes - Single Layer	**Range: C4–F6**			

01 PTr_sus_p_noVib		**Samples: 56**	**RAM: 3 MB**	**Level 2**

Sustained, piano, without vibrato
1 velocity layer
Release samples

02 PTr_sus_mf_noVib		**Samples: 56**	**RAM: 3 MB**	**Level 2**

Sustained, mezzoforte, without vibrato
1 velocity layer
Release samples

03 PTr_sus_f_noVib		**Samples: 53**	**RAM: 3 MB**	**Level 2**

Sustained, forte, without vibrato
1 velocity layer
Release samples

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

Matrix - LEVEL 1

L1 PTr Articulation Combi   Samples: 914   RAM: 57 MB   Level 1

Single note articulations

Staccato, portato short, sustained with light and without vibrato, crescendo-diminuendo with vibrato 5 and 9 sec., fortepiano and sforzato, flutter tonguing normal and crescendo, fast trills half and whole tone

Matrix switches: Horizontal: Keyswitches, C1–F1   Vertical: Modwheel, 2 zones

	C1	C#1	D1	D#1	E1	F1
V1	stac	sus light vib.	pfp vib. 5s.	fp	flutter	trill fast half
V2	port. short	sus no vib.	pfp vib. 9s.	sfz	flutter cres.	trill fast whole

L1 PTr Perf-Legato Speed   Samples: 827   RAM: 51 MB   Level 1

Interval performances

Legato with sustain crossfading, normal without vibrato, and fast

Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	sus-XF	normal no vib.	fast

L1 PTr Perf-Repetitions Combi   Samples: 582   RAM: 36 MB   Level 1

Repetition performances

Legato slow

Portato

Staccato

Matrix switches: Vertical: Modwheel, 3 zones

	repetitions
V1	legato slow
V2	portato
V3	staccato

Matrix - LEVEL 2 A - Advanced

01 PTr Perf-Universal   Samples: 1616   RAM: 101 MB   Level 2

Interval performances

Legato without vibrato, sustain crossfading, normal, and fast

Marcato normal and fast

Speed controller

Matrix switches: Horizontal: Speed, 3 zones   Vertical: Modwheel, 2 zones

	H1	H2	H3
legato no vib.	slow	normal	fast
marcato	normal	normal	fast

02 PTr Perf-Trill Speed   **Samples: 1265 RAM: 79 MB**   **Level 2**

Multi interval performances
Legato without vibrato, and trills
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
V1	legato	trills

03 PTr Short+Long notes - All   **Samples: 1141 RAM: 71 MB**   **Level 2**

Single notes
Staccato, portato short and medium, portato long with soft attack and light vibrato, and normal with strong and without vibrato
Sustained with light, strong, progressive, and without vibrato

Matrix switches: Horizontal: Keyswitches, C1–E1   Vertical: Modwheel, 4 zones

	C1	C#1	D1	D#1	E1
V1	staccato	port. short	port.med.	port.long light vib.	sus. light vib.
V2	%	%	%	port.long strong vib.	sus. strong vib.
V3	%	%	%	port.long light vib.	sus. prog. vib.
V4	%	%	%	port.long no vib.	sus. no vib.

Matrix - LEVEL 2 B - Standard

11 PTr Perf-Legato Speed   **Samples: 827   RAM: 51 MB**   **Level 2**

Interval performances
Legato with sustain crossfading, normal without vibrato, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	sus-XF	normal no vib.	fast

12 PTr Perf-Marcato Speed   **Samples: 870   RAM: 54 MB**   **Level 2**

Interval performances^mMarcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
marcato	normal	fast

13 PTr Short notes   **Samples: 836   RAM: 52 MB**   **Level 2**

Single notes
Staccato, portato short and medium, portato long with soft attack and light vibrato, portato long with normal attack, with strong and without vibrato

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
V1	staccato	port. short	port. medium	port.long light vib.	port.long strong vib.	port.long no vib.

14 PTr Long notes - All   **Samples: 389**   **RAM: 24 MB**   **Level 2**

Single notes
Sustained with light, strong, progressive, and without vibrato

Matrix switches: Horizontal: Keyswitches, C1–D#1

	C1	C#1	D1	D#1
sustained	light vibrato	strong vibrato	prog. vibrato	no vibrato

15 PTr Dynamics - Small   **Samples: 206**   **RAM: 12 MB**   **Level 2**

Dynamics
Crescendo and diminuendo with vibrato, 2, 3, and 5 sec.
Fortepiano and sforzato

Matrix switches: Horizontal: Keyswitches, C1–D1   Vertical: Modwheel, 3 zones

	C1	C#1	D1
dyn. vib.	2 sec.	3 sec.	5 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%

16 PTr Dynamics - Large   **Samples: 599**   **RAM: 37 MB**   **Level 2**

Dynamics
Crescendo and diminuendo with and without vibrato, 1.5, 2, 3, and 5 (4) sec.
Crescendo-diminuendo with vibrato, 5 and 9 sec.
Crescendo-diminuendo without vibrato, 4, 8, and 12 sec.
Fortepiano and sforzato

Matrix switches: Horizontal: Keyswitches, C1–D#1   Vertical: Modwheel, 5 zones

	C1	C#1	D1	D#1
dyn. vib.	1.5 sec.	2 sec.	3 sec.	5 sec.
dyn. no vib.	1.5 sec.	2 sec.	3 sec.	4 sec.
pfp vib.	5 sec.	5 sec.	9 sec.	9 sec.
pfp no vib.	4 sec.	8 sec.	12 sec.	12 sec.
fp/sfz	fp	fp	sfz	sfz

17 PTr Flatter   **Samples: 58**   **RAM: 3 MB**   **Level 2**

Flutter tonguing
Normal, crescendo, and normal/crescendo with Cell crossfading

Matrix switches: Horizontal: Keyswitches, C1–D1

	C1	C#1	D1
flutter	normal	crescendo	Cell XF

18 PTr Trills - slow   **Samples: 186**   **RAM: 11 MB**   **Level 2**

Trills, slow: Half and whole tone

Matrix switches: Vertical: Modwheel, 2 zones

	trills slow
V1	half tone
V2	whole tone

19 PTr Trills - fast **Samples: 184** **RAM: 11 MB** **Level 2**

Trills, fast: Half and whole tone

Matrix switches: Vertical: Modwheel, 2 zones

	trills fast
V1	half tone
V2	whole tone

20 PTr Trills - accelerando **Samples: 184** **RAM: 11 MB** **Level 2**

Trills, accelerando: Half and whole tone

Matrix switches: Vertical: Modwheel, 2 zones

	trills accel.
V1	half tone
V2	whole tone

21 PTr Trills - All **Samples: 554** **RAM: 34 MB** **Level 2**

Trills slow, fast, and accelerando
Half and whole tone

Matrix switches: Horizontal: Keyswitches, C1–D1   Vertical: Modwheel, 2 zones

	C1	C#1	D1
half tone	slow	fast	accelerando
whole tone	slow	fast	accelerando

Matrix - LEVEL 2 C - Repetitions

31 PTr Perf-Repetitions - Combi **Samples: 762** **RAM: 47 MB** **Level 2**

Repetition performances
Slow and fast legato, portato, staccato

Matrix switches: Horizontal: Keyswitches, C1–D#1

	C1	C#1	D1	D#1
V1	legato slow	legato fast	portato	staccato

32 PTr Perf-Repetitions - Speed **Samples: 762** **RAM: 47 MB** **Level 2**

Repetition performances
Slow and fast legato, portato, staccato
Speed controller

Matrix switches: Horizontal: Speed, 4 zones

	H1	H2	H3	H4
V1	legato slow	legato fast	portato	staccato

33 PTr Fast-Repetitions **Samples: 348** **RAM: 21 MB** **Level 2**

Fast repetitions: Staccato, 140–180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
speed/BPM	140	150	160	170	180	200

34 PTr Upbeats a1   Samples: 488   RAM: 30 MB   **Level 2**

Repetitions: 1 upbeat, 80–140, 160, 180, 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–A1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
speed/BPM	80	90	100	110	120	130	140	160	180	200

35 PTr Upbeats a2   Samples: 480   RAM: 30 MB   **Level 2**

Repetitions: 2 upbeats, 80–140, 160, 180, 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–A1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
speed/BPM	80	90	100	110	120	130	140	160	180	200

36 PTr Upbeats a3   Samples: 480   RAM: 30 MB   **Level 2**

Repetitions: 3 upbeats, 80–140, 160, 180, 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–A1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
speed/BPM	80	90	100	110	120	130	140	160	180	200

37 PTr Upbeats all   Samples: 1448   RAM: 90 MB   **Level 2**

Repetitions: 1–3 upbeats, 80–140, 160, 180, 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–A1   Vertical: Modwheel, 3 zones

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
1 upbeat	80	90	100	110	120	130	140	160	180	200
2 upbeats	80	90	100	110	120	130	140	160	180	200
3 upbeats	80	90	100	110	120	130	140	160	180	200

Matrix - LEVEL 2 D - Scale+Phrase

41 PTr Scale runs-legato - Major   Samples: 93   RAM: 5 MB   **Level 2**

Octave runs, legato, C to B major
AB switch up/down

Matrix switches: Horizontal: Keyswitches, C1–B1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1	A#1	B1
legato maj.	C	C#	D	D#	E	F	F#	G	G#	A	A#	B

51 PTr Mordents-legato   Samples: 288   RAM: 18 MB   **Level 2**

Mordents, legato, var. 1 to 6
AB switch up/down

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
variation	mord. min.2nd	mord. maj.2nd	min.2nd - min.2nd	min.2nd - maj.2nd	maj.2nd - min.2nd	maj.2nd - maj.2nd

52 PTr Grace notes - All   Samples: 166   RAM: 10 MB   **Level 2**

Grace notes, minor and major 2nd
AB switch up/down

Matrix switches: Horizontal: Keyswitches, C1–C#1

	C1	C#1
interval	min. 2nd	maj. 2nd

Matrix - LEVEL 2 E - Keyswitch Vel

71 PTr Legato slow - cre6   **Samples: 78   RAM: 4 MB   Level 2**

Slow legato notes: Crescendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
velocity	1st	2nd	3rd	4th	5th	6th

72 PTr Legato fast - cre6   **Samples: 72   RAM: 4 MB   Level 2**

Fast legato notes: Crescendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
velocity	1st	2nd	3rd	4th	5th	6th

73 PTr Staccato - cre9   **Samples: 108   RAM: 6 MB   Level 2**

Staccato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

74 PTr Combi - cre6   **Samples: 150   RAM: 9 MB   Level 2**

Slow and fast legato: Crescendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1   Vertical: Modwheel, 2 zones

	C1	C#1	D1	D#1	E1	F1
legato slow	1st	2nd	3rd	4th	5th	6th
legato fast	1st	%	%	%	%	%

75 PTr Legato slow - dim6   **Samples: 72   RAM: 4 MB   Level 2**

Slow legato notes: Diminuendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
velocity	1st	2nd	3rd	4th	5th	6th

76 PTr Legato fast - dim6   **Samples: 72   RAM: 4 MB   Level 2**

Fast legato notes: Diminuendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
velocity	1st	2nd	3rd	4th	5th	6th

77 PTr Staccato - dim9   **Samples: 108**   **RAM: 6 MB**   **Level 2**

Staccato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

78 PTr Combi - dim6   **Samples: 144**   **RAM: 9 MB**   **Level 2**

Slow and fast legato: Diminuendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1   Vertical: Modwheel, 2 zones

	C1	C#1	D1	D#1	E1	F1
legato slow	1st	2nd	3rd	4th	5th	6th
legato fast	1st	%	%	%	%	%

Presets

PTr VSL Preset Level 1   **Samples: 2214**   **RAM: 138 MB**   **Level 1**

L1 PTr Perf-Legato Speed
L1 PTr Articulation Combi
L1 PTr Perf-Repetitions Combi
Preset keyswitches: C2–D2

PTr VSL Preset Level 2   **Samples: 3912**   **RAM: 244 MB**   **Level 2**

01 PTr Perf-Universal
02 PTr Perf-Trill Speed
L1 PTr Articulation Combi
31 PTr Perf-Repetitions - Combi
73 PTr Staccato - cre9
Preset keyswitches: C2–E2

53 Bass trumpet

Description

The bass trumpet was introduced to the orchestra by Richard Wagner in his "Ring of the Nibelung" to symbolize the fortitude and dominance of his heroes. The instrument is found chiefly in late Romantic orchestral works by Wagner, Strauss, Stravinsky and Janacek. In today's orchestral practice the bass trumpet is played by a trombonist because the instrument's mouthpiece is similar in size to the trombone's.

Range and notation

The bass trumpet in Bb has a range from E2–C5. It is notated in treble clef; being a transposing instrument it is written a major ninth higher than it sounds.

Sound characteristics

The bass trumpet has a mighty, full and dark timbre, which exhibits the typical trumpet characteristics in all registers. In the low register it is similar to the timbre of the tenor trombone, although it lacks the latter's warmth and fullness.

Combination with other instruments

Generally the bass trumpet is used in combination with other trumpets and brass instruments, for example in octaves as the bottom trumpet part, as the fundamental note of a trumpet chord or as the highest voice together with trombones. The enormous dynamic intensity of a note played fortissimo in the lower register corresponds roughly to three trumpets or four horns.

Patches

01 SHORT + LONG NOTES   Range: D2–C#5

Single notes
Level 1: Staccato
Portato short
Sustained with light and without vibrato
Level 2: Portato short with soft attack
Portato medium with and without vibrato, marcato, and with soft attack
Portato long, with normal (2 variations), progressive, and without vibrato, marcato and soft attack
Sustained with normal, progressive, and without vibrato

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01 BTr_staccato   **Samples: 198   RAM: 12 MB   Level 1**

Staccato
3 velocity layers
4 Alternations

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02 BTr_portato_short   **Samples: 198   RAM: 12 MB   Level 1**

Portato, short
3 velocity layers
4 Alternations

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03 BTr_portato_short_soft   **Samples: 198   RAM: 12 MB   Level 2**

Portato, short, soft attack
3 velocity layers
4 Alternations

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04 BTr_portato_medium_Vib   **Samples: 198   RAM: 12 MB   Level 2**

Portato, medium, with vibrato
3 velocity layers
4 Alternations

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05 BTr_portato_medium_noVib   **Samples: 198   RAM: 12 MB   Level 2**

Portato, medium, without vibrato
3 velocity layers
4 Alternations

---

06 BTr_portato_medium_marc   **Samples: 66   RAM: 4 MB   Level 2**

Portato, medium, marcato
2 velocity layers
2 Alternations

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07 BTr_portato_medium_soft   **Samples: 198   RAM: 12 MB   Level 2**

Portato, medium, soft attack
3 velocity layers
4 Alternations

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08 BTr_portato_long-1_Vib	**Samples: 212**	**RAM: 13 MB**	**Level 2**

Portato, long, with vibrato, var. 1
3 velocity layers
Release samples
2 Alternations

09 BTr_portato_long-2_Vib	**Samples: 212**	**RAM: 13 MB**	**Level 2**

Portato, long, with vibrato, var. 2
3 velocity layers
Release samples
2 Alternations

10 BTr_portato_long_Vib-progr	**Samples: 212**	**RAM: 13 MB**	**Level 2**

Portato, long, with progressive vibrato
3 velocity layers
Release samples
2 Alternations

11 BTr_portato_long_noVib	**Samples: 212**	**RAM: 13 MB**	**Level 2**

Portato, long, without vibrato
3 velocity layers
Release samples
2 Alternations

12 BTr_portato_long_marc	**Samples: 146**	**RAM: 9 MB**	**Level 2**

Portato, long, marcato
2 velocity layers
Release samples

13 BTr_portato_long_soft	**Samples: 212**	**RAM: 13 MB**	**Level 2**

Portato, long, soft attack
3 velocity layers
Release samples
2 Alternations

21 BTr_sus_Vib	**Samples: 212**	**RAM: 13 MB**	**Level 1**

Sustained, with vibrato
3 velocity layers
Release samples

22 BTr_sus_Vib-progr	**Range: E1–C#5**	**Samples: 160**	**RAM: 10 MB**	**Level 2**

Sustained, with progressive vibrato
2 velocity layers
Release samples

23 BTr_sus_noVib	**Samples: 212**	**RAM: 13 MB**	**Level 1**

Sustained, without vibrato
3 velocity layers
Release samples

02 DYNAMICS   Range: D2–C#5

Dynamics
Level 1: Crescendo-diminuendo without vibrato, 4 and 6 sec.
Fortepiano, sforzato
Level 2: Medium crescendo and diminuendo with vibrato, 1.5, 3, and 5 sec.; without vibrato, 1, 1.5, 2, 3, and 4 sec.
Strong crescendo and diminuendo with vibrato, 3, 4, and 6 sec.; without vibrato, 1, 1.5, 2, 3, 4, and 6 sec.
Crescendo-diminuendo with vibrato, 6 sec.; without vibrato, 8 sec.
Sforzatissimo

01 BTr_dyn-me_Vib_1'5s	**Samples: 132**	**RAM: 8 MB**	**Level 2**

Medium crescendo and diminuendo, with vibrato, 1.5 sec.
2 velocity layers
AB switch: crescendo/diminuendo

02 BTr_dyn-me_Vib_3s	**Samples: 132**	**RAM: 8 MB**	**Level 2**

Medium crescendo and diminuendo, with vibrato, 3 sec.
2 velocity layers
AB switch: crescendo/diminuendo

03 BTr_dyn-me_Vib_5s	**Samples: 132**	**RAM: 8 MB**	**Level 2**

Medium crescendo and diminuendo, with vibrato, 5 sec.
2 velocity layers
AB switch: crescendo/diminuendo

11 BTr_dyn-me_noVib_1s	**Samples: 132**	**RAM: 8 MB**	**Level 2**

Medium crescendo and diminuendo, without vibrato, 1 sec.
2 velocity layers
AB switch: crescendo/diminuendo

12 BTr_dyn-me_noVib_1'5s	**Samples: 132**	**RAM: 8 MB**	**Level 2**

Medium crescendo and diminuendo, without vibrato, 1.5 sec.
2 velocity layers
AB switch: crescendo/diminuendo

13 BTr_dyn-me_noVib_2s	**Samples: 132**	**RAM: 8 MB**	**Level 2**

Medium crescendo and diminuendo, without vibrato, 2 sec.
2 velocity layers
AB switch: crescendo/diminuendo

14 BTr_dyn-me_noVib_3s	**Samples: 132**	**RAM: 8 MB**	**Level 2**

Medium crescendo and diminuendo, without vibrato, 3 sec.
2 velocity layers
AB switch: crescendo/diminuendo

15 BTr_dyn-me_noVib_4s	**Samples: 132**	**RAM: 8 MB**	**Level 2**

Medium crescendo and diminuendo, without vibrato, 4 sec.
2 velocity layers
AB switch: crescendo/diminuendo

21 BTr_dyn-str_Vib_3s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, with vibrato, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

22 BTr_dyn-str_Vib_4s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, with vibrato, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

23 BTr_dyn-str_Vib_6s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, with vibrato, 6 sec.
1 velocity layer
AB switch: crescendo/diminuendo

31 BTr_dyn-str_noVib_1s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, without vibrato, 1 sec.
1 velocity layer
AB switch: crescendo/diminuendo

32 BTr_dyn-str_noVib_1'5s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, without vibrato, 1.5 sec.
1 velocity layer
AB switch: crescendo/diminuendo

33 BTr_dyn-str_noVib_2s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, without vibrato, 2 sec.
1 velocity layer
AB switch: crescendo/diminuendo

34 BTr_dyn-str_noVib_3s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, without vibrato, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

35 BTr_dyn-str_noVib_4s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, without vibrato, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

36 BTr_dyn-str_noVib_6s	**Samples: 66**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, without vibrato, 6 sec.
1 velocity layer
AB switch: crescendo/diminuendo

40 BTr_pfp_Vib_6s	**Range: D#1–C#5**	**Samples: 40**	**RAM: 2 MB**	**Level 2**

Crescendo-diminuendo with vibrato, 6 sec.
1 velocity layer

41 BTr_pfp_noVib_4s	**Range: D#1–C#5**	**Samples: 40**	**RAM: 2 MB**	**Level 1**
Crescendo-diminuendo without vibrato, 4 sec. 1 velocity layer				

42 BTr_pfp_noVib_6s	**Range: D#1–C#5**	**Samples: 40**	**RAM: 2 MB**	**Level 1**
Crescendo-diminuendo without vibrato, 6 sec. 1 velocity layer				

43 BTr_pfp_noVib_8s	**Range: D#1–C#5**	**Samples: 40**	**RAM: 2 MB**	**Level 2**
Crescendo-diminuendo without vibrato, 8 sec. 1 velocity layer				

51 BTr_fp		**Samples: 33**	**RAM: 2 MB**	**Level 1**
Fortepiano 1 velocity layer 2 Alternations				

52 BTr_sfz		**Samples: 33**	**RAM: 2 MB**	**Level 1**
Sforzato 1 velocity layer 2 Alternations				

53 BTr_sffz		**Samples: 33**	**RAM: 2 MB**	**Level 2**
Sforzatissimo 1 velocity layer 2 Alternations				

03 FLATTER + TRILLS — Range: D2–C#5

Flutter tonguing and trills
Level 1: Flutter tonguing, normal and crescendo
Trills, minor and major 2nd

01 BTr_flatter		**Samples: 66**	**RAM: 4 MB**	**Level 1**
Flutter tonguing 1 velocity layer Release samples				

02 BTr_flatter_cre		**Samples: 33**	**RAM: 2 MB**	**Level 1**
Flutter tonguing, crescendo 1 velocity layer				

11 BTr_trill_1		**Samples: 132**	**RAM: 8 MB**	**Level 1**
Trills, minor 2nd 2 velocity layers Release samples				

12 BTr_trill_2 Samples: 126   RAM: 7 MB   Level 1

Trills, major 2nd
2 velocity layers
Release samples

10 PERF INTERVAL Range: D2–C#5

Interval performances
Level 1: Legato without vibrato
Level 2: Legato without vibrato, sustain crossfading
Legato with vibrato, normal and with sustain crossfading
Marcato

01 BTr_perf-legato_noVib Samples: 794   RAM: 49 MB   Level 1

Legato without vibrato
2 velocity layers
Release samples

02 BTr_perf-legato_noVib_sus Samples: 794   RAM: 49 MB   Level 2

Legato without vibrato
Sustain crossfading
2 velocity layers
Release samples

03 BTr_perf-legato_Vib Samples: 794   RAM: 49 MB   Level 2

Legato, with vibrato
2 velocity layers
Release samples

04 BTr_perf-legato_Vib_sus Samples: 794   RAM: 49 MB   Level 2

Legato, with vibrato
Sustain crossfading
2 velocity layers
Release samples

05 BTr_perf-marcato Samples: 860   RAM: 53 MB   Level 2

Marcato
2 velocity layers
Release samples

11 PERF INTERVAL FAST   Range: D2–C#5

Fast interval performances
Level 1: Legato
Level 2: Marcato

01 BTr_perf-legato_fa	Samples: 920	RAM: 57 MB	**Level 1**

Legato, fast
2 velocity layers
Release samples

02 BTr_perf-marcato_fa	Samples: 990	RAM: 61 MB	**Level 2**

Marcato, fast
2 velocity layers
Release samples

12 PERF REPETITION   Range: D2–C#5

Repetition performances
Level 1: Legato slow
Portato
Staccato fast
Level 2: Legato fast
Staccato slow
Legato dynamics
Portato, staccato slow and fast crescendo

01 BTr_perf-rep_leg-sl	Samples: 170	RAM: 10 MB	**Level 1**

Repetition performances: Legato, slow
2 velocity layers

02 BTr_perf-rep_leg-fa	Samples: 204	RAM: 12 MB	**Level 2**

Repetition performances: Legato, fast
2 velocity layers

03 BTr_perf-rep_por	Samples: 306	RAM: 19 MB	**Level 1**

Repetition performances: Portato
2 velocity layers

04 BTr_perf-rep_sta-sl	Samples: 306	RAM: 19 MB	**Level 2**

Repetition performances: Staccato, slow
2 velocity layers

05 BTr_perf-rep_sta-fa	Samples: 306	RAM: 19 MB	**Level 1**

Repetition performances: Staccato, fast
2 velocity layers

| **21 BTr_perf-rep_dyn6_leg-sl** | **Samples: 204** | **RAM: 12 MB** | **Level 2** |

Repetition performances: Legato dynamics, slow, 6 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

| **22 BTr_perf-rep_dyn6_leg-fa** | **Samples: 204** | **RAM: 12 MB** | **Level 2** |

Repetition performances: Legato dynamics, fast, 6 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

| **23 BTr_perf-rep_cre9_por** | **Samples: 153** | **RAM: 9 MB** | **Level 2** |

Repetition performances: Portato crescendo, 9 repetitions
1 velocity layer

| **24 BTr_perf-rep_cre9_sta-sl** | **Samples: 153** | **RAM: 9 MB** | **Level 2** |

Repetition performances: Staccato crescendo, slow, 9 repetitions
1 velocity layer

| **25 BTr_perf-rep_cre9_sta-fa** | **Samples: 153** | **RAM: 9 MB** | **Level 2** |

Repetition performances: Staccato crescendo, fast, 9 repetitions
1 velocity layer

13 FAST REPETITION   Range: D2–C#5

Fast repetitions
Level 2: Staccato, 9 repetitions, 150 to 180, and 200 BPM
Normal and crescendo

| **01 BTr_fast-rep_150 (160/170/180/200)** | **Samples: 132** | **RAM: 8 MB** | **Level 2** |

Fast repetitions: 150 to 180, and 200 BPM
2 velocity layers
Release samples

| **11 BTr_fast-rep_150_cre (160/170/180/200)** | **Samples: 33** | **RAM: 2 MB** | **Level 2** |

Fast repetitions
Crescendo, 150 to 180, and 200 BPM
1 velocity layer

14 UPBEAT REPETITION

Upbeat repetitions
Level 2: 1–3 upbeats, 80–140, 160, 180, and 200 BPM

A Single Upbeat	**Range: D2–C#5**

01 BTr_UB-a1_80 (90/100/110/120/130/140/160/180/200)   **Samples: 66**   **RAM: 4 MB**   **Level 2**
1 upbeat, 80–140, 160, 180, and 200 BPM
2 velocity layers

B Double Upbeats	**Range: D2–C#5**

01 BTr_UB-a2_80 (90/100/110/120/130/140/160/180/200)   **Samples: 66 RAM: 4 MB**
Level 2

2 upbeats, 80–140, 160, 180, and 200 BPM
2 velocity layers

C Triple Upbeats	**Range: D2–C#5**

01 BTr_UB-a3_80 (90/100/110/120/130/140/160/180/200)   **Samples: 66 RAM: 4 MB**
Level 2

3 upbeats, 80–140, 160, 180, and 200 BPM
2 velocity layers

15 GRACE NOTES

Phrases
Level 2: Grace notes
Minor and major 2nd
Up and down
Mapped to target note

01 BTr_grace-1   **Range: D2–C5   Samples: 208   RAM: 13 MB   Level 2**
Grace notes, minor 2nd
2 velocity layers
Release samples
AB switch: up/down

02 BTr_grace-2   **Range: D2–C#5   Samples: 208   RAM: 13 MB   Level 2**
Grace notes, major 2nd
2 velocity layers
Release samples
AB switch: up/down

16 FX

01 BTr_duophonic	**Range: D2–D#3**	**Samples: 6**	**RAM: 1 MB**	**Level 2**

Effects: Duophonic playing (tone and voice)
1 velocity layer

02 BTr_duophonic-gliss	**Range: G2–F#3**	**Samples: 10**	**RAM: 1 MB**	**Level 2**

Effects: Duophonic playing, glissandos
1 velocity layer
AB switch: up/down

03 BTr_FX-rip	**Range: D3–F4**	**Samples: 13**	**RAM: 1 MB**	**Level 2**

Effects: Rips (sliding into the note)
1 velocity layer

04 BTr_falls	**Range: G#3–E5**	**Samples: 27**	**RAM: 1 MB**	**Level 2**

Effects: Falls (sliding down at the end of the note)
Play ranges: Short falls G#3–E5, long falls C4–D5
1 velocity layer
AB switch: fall short/long

05 BTr_falls-chrom	**Range: C4–D5**	**Samples: 18**	**RAM: 1 MB**	**Level 2**

Effects: Falls, chromatic
1 velocity layer
AB switch: fall short/long

98 RESOURCES

Resources
Level 2: Isolated dynamics repetitions: Legato slow and fast, staccato
Single layer long notes

01 Perf Rep dyn	**Range: D2–C#5**			

01 BTr_rep_cre6_leg-sl-1 (2/3/4/5/6)		**Samples: 17**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, slow, crescendo, 1st to 6th note
1 velocity layer

01 BTr_rep_dim6_leg-sl-1 (2/3/4/5/6)		**Samples: 17**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, slow, diminuendo, 1st to 6th note
1 velocity layer

02 BTr_rep_cre6_leg-fa-1 (2/3/4/5/6)		**Samples: 17**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, fast, crescendo, 1st to 6th note
1 velocity layer

02 BTr_rep_dim6_leg-fa-1 (2/3/4/5/6)		**Samples: 17**	**RAM: 1 MB**	**Level 2**

Extracted repetitions

Legato, fast, diminuendo, 1st to 6th note
1 velocity layer

03 BTr_rep_cre9_por-1 (2/3/4/5/6/7/8/9)	Samples: 17	RAM: 1 MB	Level 2

Extracted repetitions: Portato, crescendo, 1st to 9th note
1 velocity layer

04 BTr_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)	Samples: 17	RAM: 1 MB	Level 2

Extracted repetitions: Staccato, crescendo, 1st to 9th note
1 velocity layer

02 Long Notes - Single Layer   Range: D2–C#5

01 BTr_sus_p_noVib	Samples: 73	RAM: 4 MB	Level 2

Sustained, piano, without vibrato
1 velocity layer
Release samples

02 BTr_sus_mf_noVib	Samples: 73	RAM: 4 MB	Level 2

Sustained, mezzopiano, without vibrato
1 velocity layer
Release samples

03 BTr_sus_f_noVib	Samples: 73	RAM: 4 MB	Level 2

Sustained, forte, without vibrato
1 velocity layer
Release samples

03 Perf Speed variation

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

Matrix - LEVEL 1

L1 BTr Articulation Combi   Samples: 1210 RAM: 75 MB   Level 1

Single note articulations
Staccato, portato short, sustained with and without vibrato, crescendo-diminuendo with vibrato 6 sec., fortepiano and sforzato, flutter tonguing normal and crescendo, trills half and whole tone

	C1	C#1	D1	D#1	E1	F1
V1	stac	sus vib.	pfp vib. 6s.	fp	flutter	trill half
V2	port. short	sus no vib.	pfp vib. 6s.	sfz	flutter cres.	trill whole

L1 BTr Perf-Legato Speed   Samples: 1048 RAM: 65 MB   Level 1

Interval performances
Legato with sustain crossfading, normal without vibrato, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	sus-XF	normal no vib.	fast

L1 BTr Perf-Repetitions Combi   Samples: 782   RAM: 48 MB   Level 1

Repetition performances
Legato slow
Portato
Staccato fast

Matrix switches: Vertical: Modwheel, 3 zones

	repetitions
V1	legato slow
V2	portato
V3	staccato fast

Matrix - LEVEL 2 A - Advanced

O1 BTr Perf-Universal   Level 2

Interval performances
Legato with sustain crossfading, normal without vibrato, and fast
Marcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones   Vertical: Modwheel, 2 zones

	H1	H2	H3
legato	sus-XF	normal no vib.	fast
marcato	normal	normal	fast

O2 BTr Short+Long notes   Samples: 1480 RAM: 92 MB   Level 2

Single notes
Staccato, portato short, portato medium with and without vibrato, portato long with normal, progressive, and without vibrato
Sustained with normal, progressive, and without vibrato

Matrix switches: Horizontal: Keyswitches, C1–E1   Vertical: Modwheel, 3 zones

	C1	C#1	D1	D#1	E1
V1	staccato	port. short	port.med. vib.	port.long vib.	sus. vib.
V2	%	%	port.med. vib.	port.long prog.vib.	sus. prog. vib.
V3	%	%	port.med. no vib.	port.long no vib.	sus. no vib.

Matrix - LEVEL 2 B - Standard

11 BTr Perf-Legato Speed   Samples: 1048 RAM: 65 MB   **Level 2**

Interval performances
Legato with sustain crossfading, normal without vibrato, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	sus-XF	normal no vib.	fast

12 BTr Perf-Marcato Speed   Samples: 1118 RAM: 69 MB   **Level 2**

Interval performances^mMarcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
marcato	normal	fast

13 BTr Short notes   Samples: 1103 RAM: 68 MB   **Level 2**

Single notes
Staccato, portato short, portato long and medium with and without vibrato

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
V1	staccato	port.short	port.med. vib.	port.med. no vib.	port.long vib.	port.long no vib.

14 BTr Long notes - All   Samples: 391   RAM: 24 MB   **Level 2**

Single notes
Sustained with normal, progressive, and without vibrato

Matrix switches: Horizontal: Keyswitches, C1–D1

	C1	C#1	D1
sustained	vibrato	prog. vibrato	no vibrato

15 BTr Dynamics - Small   Samples: 495   RAM: 30 MB   **Level 2**

Dynamics
Medium crescendo and diminuendo with vibrato, 1.5, 3, and 5 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C1–D1   Vertical: Modwheel, 4 zones

	C1	C#1	D1
dyn.med. vib.	1.5 sec.	3 sec.	5 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%

16 BTr Dynamics - Large   **Samples: 1209   RAM: 75 MB**   **Level 2**

Dynamics

Medium crescendo and diminuendo with and without vibrato, 1.5, 3, and 5 (4) sec., strong crescendo and diminuendo without vibrato, 2, 3, and 4 sec.

Crescendo-diminuendo without vibrato, 4, 6, and 8 sec.

Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C1–D1   Vertical: Modwheel, 5 zones

	C1	C#1	D1
dyn.med. vib.	1.5 sec.	3 sec.	5 sec.
dyn.med. no vib.	1.5 sec.	3 sec.	4 sec.
dyn.str. no vib.	2 sec.	3 sec.	4 sec.
pfp no vib.	4 sec. v.1	6 sec. v.2	8 sec.
fp/sfz/sffz	fp	sfz	sffz

17 BTr Flatter   **Samples: 99   RAM: 6 MB**   **Level 2**

Flutter tonguing

Normal, crescendo, and normal/crescendo with Cell crossfading

Matrix switches: Horizontal: Keyswitches, C1–D1

	C1	C#1	D1
flutter	normal	crescendo	Cell XF

18 BTr Trills - normal   **Samples: 258   RAM: 16 MB**   **Level 2**

Trills, minor and major 2nd

Matrix switches: Vertical: Modwheel, 2 zones

	H1
interval	min. 2nd
V2	maj. 2nd

19 BTr FX   **Samples: 73   RAM: 4 MB**   **Level 2**

Effects: Duophonic playing normal and glissando, rips, and falls normal and chromatic

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
V1	duophonic	duophon.gliss.	rips	falls normal	falls chromatic

Matrix - LEVEL 2 C - Repetitions

31 BTr Perf-Repetitions - Combi   **Samples: 1275 RAM: 79 MB**   **Level 2**

Repetition performances

Slow and fast legato, portato, slow and fast staccato

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
V1	legato slow	legato fast	portato	staccato slow	staccato fast

32 BTr Perf-Repetitions - Speed   **Samples: 969**   **RAM: 60 MB**   **Level 2**

Repetition performances
Slow and fast legato, portato, slow staccato
Speed controller

Matrix switches: Horizontal: Speed, 4 zones

	H1	H2	H3	H4
V1	legato slow	legato fast	portato	staccato slow

33 BTr Fast-Repetitions   **Samples: 396**   **RAM: 24 MB**   **Level 2**

Fast repetitions: Staccato, 9 repetitions, 150–180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
speed/BPM	150	160	170	180	200

34 BTr Upbeats a1   **Samples: 660**   **RAM: 41 MB**   **Level 2**

Repetitions: 1 upbeat, 80–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–A1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
speed/BPM	80	90	100	110	120	130	140	160	180	200

35 BTr Upbeats a2   **Samples: 660**   **RAM: 41 MB**   **Level 2**

Repetitions: 2 upbeats, 80–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–A1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
speed/BPM	80	90	100	110	120	130	140	160	180	200

36 BTr Upbeats a3   **Samples: 660**   **RAM: 41 MB**   **Level 2**

Repetitions: 3 upbeats, 80–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–A1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
speed/BPM	80	90	100	110	120	130	140	160	180	200

37 BTr Upbeats all   **Samples: 1980** **RAM: 123 MB** **Level 2**

Repetitions: 1–3 upbeats, 80–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–A1   Vertical: Modwheel, 3 zones

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1
1 upbeat	80	90	100	110	120	130	140	160	180	200
2 upbeats	80	90	100	110	120	130	140	160	180	200
3 upbeats	80	90	100	110	120	130	140	160	180	200

Matrix - LEVEL 2 D - Scale+Phrase

51 BTr Grace notes - All   **Samples: 336**   **RAM: 21 MB**   **Level 2**

Grace notes, minor and major 2nd
AB switch up/down

Matrix switches: Horizontal: Keyswitches, C1–C#1

	C1	C#1
interval	min. 2nd	maj. 2nd

Matrix - LEVEL 2 E - Keyswitch Vel

71 BTr Legato slow - cre6   Samples: 102   RAM: 6 MB   Level 2

Slow legato notes: Crescendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
velocity	1st	2nd	3rd	4th	5th	6th

72 BTr Legato fast - cre6   Samples: 102   RAM: 6 MB   Level 2

Fast legato notes: Crescendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
velocity	1st	2nd	3rd	4th	5th	6th

73 BTr Portato - cre9   Samples: 153   RAM: 9 MB   Level 2

Portato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

74 BTr Staccato - cre9   Samples: 153   RAM: 9 MB   Level 2

Staccato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

75 BTr Combi - cre6   Samples: 204   RAM: 12 MB   Level 2

Slow and fast legato: Crescendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1   Vertical: Modwheel, 2 zones

	C1	C#1	D1	D#1	E1	F1
legato slow	1st	2nd	3rd	4th	5th	6th
legato fast	1st	%	%	%	%	%

76 BTr Combi - cre9   Samples: 306   RAM: 19 MB   Level 2

Portato and staccato: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

77 BTr Legato slow - dim6   **Samples: 102   RAM: 6 MB   Level 2**

Slow legato notes: Diminuendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
velocity	1st	2nd	3rd	4th	5th	6th

78 BTr Legato fast - dim6   **Samples: 102   RAM: 6 MB   Level 2**

Fast legato notes: Diminuendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1

	C1	C#1	D1	D#1	E1	F1
velocity	1st	2nd	3rd	4th	5th	6th

79 BTr Combi - dim6   **Samples: 204   RAM: 12 MB   Level 2**

Slow and fast legato: Diminuendo, keyswitch velocity
Keyswitches control 6 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–F1   Vertical: Modwheel, 2 zones

	C1	C#1	D1	D#1	E1	F1
legato slow	1st	2nd	3rd	4th	5th	6th
legato fast	1st	%	%	%	%	%

Presets

BTr VSL Preset Level 1   **Samples: 2894 RAM: 180 MB   Level 1**

L1 BTr Perf-Legato Speed
L1 BTr Articulation Combi
L1 BTr Perf-Repetitions Combi
Preset keyswitches: C6–D6

BTr VSL Preset Level 2   **Samples: 4665 RAM: 291 MB   Level 2**

01 BTr Perf-Universal
01 BTr Perf-Universal
L1 BTr Articulation Combi
31 BTr Perf-Repetitions - Combi
76 BTr Combi - cre9
Preset keyswitches: C6–E6

55 Horn-Triple

Patches

01 SHORT + LONG NOTES   Range: A1–G5

Single notes
Level 1: Staccato
Portato short
Sustained
Level 2: Portato medium

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01 HO2_staccato   **Samples: 360** **RAM: 22 MB** **Level 1**

Staccato
4 velocity layers
4 Alternations

---

02 HO2_portato_short   **Samples: 360** **RAM: 22 MB** **Level 1**

Portato, short
4 velocity layers
4 Alternations

---

03 HO2_portato_medium   **Samples: 358** **RAM: 22 MB** **Level 2**

Portato, medium
4 velocity layers
4 Alternations

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21 HO2_sus   **Samples: 316** **RAM: 19 MB** **Level 1**

Sustained
4 velocity layers
Release samples

02 DYNAMICS   Range: A1–G5

Dynamics
Level 1: Crescendo-diminuendo, 2 and 4 sec.
Fortepiano, sforzato
Level 2: Light crescendo and diminuendo, 1.5, 2, 3, and 4 sec.
Medium crescendo and diminuendo, 1.5, 2, 3, 4, and 6 sec.
Strong crescendo and diminuendo, 2, 3, 4, and 6 sec.
Crescendo-diminuendo, 3 and 8 sec.
Sforzatissimo

01 HO2_dyn-li_1'5s	**Samples: 138**	**RAM: 8 MB**	**Level 2**

Light crescendo and diminuendo, 1.5 sec.
3 velocity layers
AB switch: crescendo/diminuendo

02 HO2_dyn-li_2s	**Samples: 138**	**RAM: 8 MB**	**Level 2**

Light crescendo and diminuendo, 2 sec.
3 velocity layers
AB switch: crescendo/diminuendo

03 HO2_dyn-li_3s	**Samples: 138**	**RAM: 8 MB**	**Level 2**

Light crescendo and diminuendo, 3 sec.
3 velocity layers
AB switch: crescendo/diminuendo

04 HO2_dyn-li_4s	**Samples: 138**	**RAM: 8 MB**	**Level 2**

Light crescendo and diminuendo, 4 sec.
3 velocity layers
AB switch: crescendo/diminuendo

11 HO2_dyn-me_1'5s	**Samples: 180**	**RAM: 11 MB**	**Level 2**

Medium crescendo and diminuendo, 1.5 sec.
2 velocity layers
AB switch: crescendo/diminuendo

12 HO2_dyn-me_2s	**Samples: 180**	**RAM: 11 MB**	**Level 2**

Medium crescendo and diminuendo, 2 sec.
2 velocity layers
AB switch: crescendo/diminuendo

13 HO2_dyn-me_3s	**Samples: 180**	**RAM: 11 MB**	**Level 2**

Medium crescendo and diminuendo, 3 sec.
2 velocity layers
AB switch: crescendo/diminuendo

14 HO2_dyn-me_4s	**Samples: 180**	**RAM: 11 MB**	**Level 2**

Medium crescendo and diminuendo, 4 sec.
2 velocity layers
AB switch: crescendo/diminuendo

15 HO2_dyn-me_6s	**Samples: 92**	**RAM: 5 MB**	**Level 2**

Medium crescendo and diminuendo, 6 sec.
2 velocity layers
AB switch: crescendo/diminuendo

21 HO2_dyn-str_2s	**Samples: 46**	**RAM: 2 MB**	**Level 2**

Strong crescendo and diminuendo, 2 sec.
1 velocity layer
AB switch: crescendo/diminuendo

22 HO2_dyn-str_3s	**Samples: 46**	**RAM: 2 MB**	**Level 2**

Strong crescendo and diminuendo, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

23 HO2_dyn-str_4s	**Samples: 46**	**RAM: 2 MB**	**Level 2**

Strong crescendo and diminuendo, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

24 HO2_dyn-str_6s	**Samples: 46**	**RAM: 2 MB**	**Level 2**

Strong crescendo and diminuendo, 6 sec.
1 velocity layer
AB switch: crescendo/diminuendo

31 HO2_pfp_2s	**Samples: 46**	**RAM: 2 MB**	**Level 1**

Crescendo-diminuendo, 2 sec.
2 velocity layers

32 HO2_pfp_3s	**Samples: 46**	**RAM: 2 MB**	**Level 2**

Crescendo-diminuendo, 3 sec.
2 velocity layers

33 HO2_pfp_4s	**Samples: 46**	**RAM: 2 MB**	**Level 1**

Crescendo-diminuendo, 4 sec.
2 velocity layers

34 HO2_pfp_8s	**Samples: 23**	**RAM: 1 MB**	**Level 2**

Crescendo-diminuendo, 8 sec.
1 velocity layer

41 HO2_fp	**Samples: 45**	**RAM: 2 MB**	**Level 1**

Fortepiano
1 velocity layer
2 Alternations

42 HO2_sfz	**Samples: 45**	**RAM: 2 MB**	**Level 1**

Sforzato
1 velocity layer
2 Alternations

43 HO2_sffz   Samples: 45   RAM: 2 MB   **Level 2**

Sforzatissimo
1 velocity layer
2 Alternations

03 FLATTER   Range: A1–G5

Level 1: Flutter tonguing normal and crescendo

01 HO2_flatter   Samples: 88   RAM: 5 MB   **Level 1**

Flutter tonguing
1 velocity layer
Release samples

02 HO2_flatter_cre   Samples: 45   RAM: 2 MB   **Level 1**

Flutter tonguing, crescendo
1 velocity layer

10 PERF INTERVAL   Range: A1–G5

Interval performances
Level 1: Legato
Level 2: Marcato

01 HO2_perf-legato   Samples: 1206   RAM: 75 MB   **Level 1**

Legato
2 velocity layers
Release samples

02 HO2_perf-marcato   Samples: 1206   RAM: 75 MB   **Level 2**

Marcato
2 velocity layers
Release samples

11 PERF INTERVAL FAST   Range: A1–G5

Fast interval performances
Level 1: Legato
Level 2: Marcato

01 HO2_perf-legato_fa   Samples: 1414   RAM: 88 MB   **Level 1**

Legato, fast
2 velocity layers
Release samples

02 HO2_perf-marcato_fa　　　　　　　　　**Samples: 1414 RAM: 88 MB**　　**Level 2**

Marcato, fast
2 velocity layers
Release samples

12 PERF TRILL　　　　　　　　Range: A1–G5

Multi interval performances
Level 2: Trills, legato, minor to major 2nd

01 HO2_perf-trill　　　　　　　　　　　**Samples: 1996 RAM: 124 MB**　　**Level 2**

Performance trills, legato, minor to major 2nd
2 velocity layers
Release samples

13 PERF REPETITION　　　　　　Range: A1–G5

Repetition performances
Level 1: Legato
Portato
Staccato
Level 2: Dynamics for all repetitions

01 HO2_perf-rep_leg　　　　　　　　　**Samples: 345　RAM: 21 MB**　　**Level 1**

Repetition performances: Legato
3 velocity layers

02 HO2_perf-rep_por　　　　　　　　　**Samples: 621　RAM: 38 MB**　　**Level 1**

Repetition performances: Portato
3 velocity layers

03 HO2_perf-rep_sta　　　　　　　　　**Samples: 621　RAM: 38 MB**　　**Level 1**

Repetition performances: Staccato
3 velocity layers

21 HO2_perf-rep_dyn5_leg　　　　　　**Samples: 230　RAM: 14 MB**　　**Level 2**

Repetition performances: Legato dynamics, 5 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

22 HO2_perf-rep_dyn9_por　　　　　　**Samples: 414　RAM: 25 MB**　　**Level 2**

Repetition performances: Portato dynamics, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

23 HO2_perf-rep_dyn9_sta　　　　　　**Samples: 414　RAM: 25 MB**　　**Level 2**

Repetition performances: Staccato dynamics, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

14 FAST REPETITION   Range: A1–G5

Fast repetitions
Level 2: Staccato, 9 repetitions, 140 to 180 BPM
Normal and dynamics

01 HO2_fast-rep_140 (150/160/170/180)	**Samples: 69**	**RAM: 4 MB**	**Level 2**

Fast repetitions: 140–180 BPM
3 velocity layers
Release samples

11 HO2_fast-rep_140_dyn (150/160/170/180)	**Samples: 46**	**RAM: 2 MB**	**Level 2**

Fast repetitions: Dynamics, 140–180 BPM
1 velocity layer
AB switch: crescendo/diminuendo

15 UPBEAT REPETITION   Range: A1–G5

Upbeat repetitions
Level 2: 1–3 upbeats, 90–140, 160, 180, and 200 BPM

A Single Upbeat   Range: A1–G5

01 HO2_UB-a1_90 (100/110/120/130/140/160/180/200)	**Samples: 69**	**RAM: 4 MB**	**Level 2**

1 upbeat, 90–140, 160, 180, and 200 BPM
3 velocity layers

B Double Upbeats   Range: A1–G5

01 HO2_UB-a2_90 (100/110/120/130/140/160/180/200)	**Samples: 69**	**RAM: 4 MB**	**Level 2**

2 upbeats, 90–140, 160, 180, and 200 BPM
3 velocity layers

C Triple Upbeats   Range: A1–G5

01 HO2_UB-a3_90 (100/110/120/130/140/160/180/200)	**Samples: 69**	**RAM: 4 MB**	**Level 2**

3 upbeats, 90–140, 160, 180, and 200 BPM
3 velocity layers

16 GLISSANDI   Range: A1–F#5

Interval performances/Phrases
Level 2: Performance glissandos, minor 3rd to octave
Fixed glissandos, 4th to octave, up and down
Slow octave glissando
Please note that fixed glissandos have different up and down ranges.

01 HO2_perf-gliss	**Range: A1–G5**	**Samples: 471**	**RAM: 29 MB**	**Level 2**

Glissando, minor 3rd to octave
1 velocity layer
Release samples

11 HO2_gliss-5		**Samples: 40**	**RAM: 2 MB**	**Level 2**

Glissando, 4th
1 velocity layer
AB switch: up/down

12 HO2_gliss-6		**Samples: 38**	**RAM: 2 MB**	**Level 2**

Glissando, diminished 5th
1 velocity layer
AB switch: up/down

13 HO2_gliss-7		**Samples: 38**	**RAM: 2 MB**	**Level 2**

Glissando, 5th
1 velocity layer
AB switch: up/down

14 HO2_gliss-8		**Samples: 36**	**RAM: 2 MB**	**Level 2**

Glissando, minor 6th
1 velocity layer
AB switch: up/down

15 HO2_gliss-9		**Samples: 36**	**RAM: 2 MB**	**Level 2**

Glissando, major 6th
1 velocity layer
AB switch: up/down

16 HO2_gliss-10		**Samples: 34**	**RAM: 2 MB**	**Level 2**

Glissando, minor 7th
1 velocity layer
AB switch: up/down

17 HO2_gliss-11		**Samples: 34**	**RAM: 2 MB**	**Level 2**

Glissando, major 7th
1 velocity layer
AB switch: up/down

18 HO2_gliss-12	**Samples: 34**	**RAM: 2 MB**	**Level 2**

Glissando, octave
1 velocity layer
AB switch: up/down

19 HO2_gliss-12-slow	**Samples: 33**	**RAM: 2 MB**	**Level 2**

Glissando, slow, octave
1 velocity layer
AB switch: up/down

98 RESOURCES

Resources
Level 2: Isolated dynamics repetitions: Legato, portato, and staccato
Single layer long notes

01 Perf Rep dyn	**Range: A1–G5**		

01 HO2_rep_cre5_leg-1 (2/3/4/5)	**Samples: 23**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, crescendo, 1st to 5th note
1 velocity layer

01 HO2_rep_dim5_leg-1 (2/3/4/5)	**Samples: 23**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, diminuendo, 1st to 5th note
1 velocity layer

02 HO2_rep_cre9_por-1 (2/3/4/5/6/7/8/9)	**Samples: 23**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, crescendo, 1st to 9th note
1 velocity layer

02 HO2_rep_dim9_por-1 (2/3/4/5/6/7/8/9)	**Samples: 23**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, diminuendo, 1st to 9th note
1 velocity layer

03 HO2_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)	**Samples: 23**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, crescendo, 1st to 9th note
1 velocity layer

03 HO2_rep_dim9_sta-1 (2/3/4/5/6/7/8/9)	**Samples: 23**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, diminuendo, 1st to 9th note
1 velocity layer

02 Long Notes - Single Layer	**Range: A1–G5**		

01 HO2_sus_p_noVib	**Samples: 90**	**RAM: 5 MB**	**Level 2**

Sustained, piano, without vibrato
1 velocity layer
Release samples

| **02 HO2_sus_mp_noVib** | **Samples: 90** | **RAM: 5 MB** | **Level 2** |

Sustained, mezzopiano, without vibrato
1 velocity layer
Release samples

| **03 HO2_sus_f_noVib** | **Samples: 90** | **RAM: 5 MB** | **Level 2** |

Sustained, forte, without vibrato
1 velocity layer
Release samples

| **04 HO2_sus_ff_noVib** | **Samples: 46** | **RAM: 2 MB** | **Level 2** |

Sustained, fortissimo, without vibrato
1 velocity layer
Release samples

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

Matrix - LEVEL 1

L1 HO2 Articulation Combi   Samples: 1351 RAM: 84 MB   Level 1

Single note articulations
Staccato, portato short, sustained, crescendo-diminuendo 2 and 4 sec., fortepiano and sforzato, flutter tonguing normal and crescendo

	C1	C#1	D1	D#1	E1
V1	staccato	sustained	pfp 2s.	fp	flutter
V2	port. short	sustained	pfp 4s.	sfz	flutter cres.

L1 HO2 Perf-Legato Speed   Samples: 1590 RAM: 99 MB   Level 1

Interval performances
Legato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
legato	normal	fast

L1 HO2 Perf-Repetitions Combi   Samples: 1587 RAM: 99 MB   Level 1

Repetition performances
Legato
Portato
Staccato

Matrix switches: Vertical: Modwheel, 3 zones

	repetitions
V1	legato
V2	portato
V3	staccato

Matrix - LEVEL 2 A - Advanced

O1 HO2 Perf-Universal   Samples: 3090 RAM: 193 MB   Level 2

Interval performances
Legato normal and fast
Marcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones   Vertical: Modwheel, 2 zones

	H1	H2
legato	normal	fast
marcato	normal	fast

02 HO2 Perf-Trill Speed   Samples: 2262   RAM: 141 MB   Level 2

Multi interval performances
Legato and trills
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
V1	legato no vib.	trills

03 HO2 Short+Long notes - All   Samples: 1394   RAM: 87 MB   Level 2

Single notes
Staccato, portato short and medium, and sustained

Matrix switches: Horizontal: Keyswitches, C1–D#1

	C1	C#1	D1	D#1
V1	staccato	port. short	port.med.	sustained

Matrix - LEVEL 2 B - Standard

11 HO2 Perf-Legato Speed   Samples: 1590   RAM: 99 MB   Level 2

Interval performances
Legato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
legato	normal	fast

12 HO2 Perf-Marcato Speed   Samples: 1590   RAM: 99 MB   Level 2

Interval performances
Marcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
marcato	normal	fast

13 HO2 Dynamics - Small   Samples: 675   RAM: 42 MB   Level 2

Dynamics
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C1–D1   Vertical: Modwheel, 4 zones

	C1	C#1	D1
dyn.medium	2 sec.	3 sec.	4 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%

14 HO2 Dynamics - Large   **Samples: 1526   RAM: 95 MB**   **Level 2**

Dynamics
Light crescendo and diminuendo, 2, 3, and 4 sec.
Medium and strong crescendo and diminuendo, 2, 3, 4, and 6 sec.
Crescendo-diminuendo, 2, 3, 4, and 8 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C1–D#1   Vertical: Modwheel, 5 zones

	C1	C#1	D1	D#1
dyn.light	2 sec.	3 sec.	4 sec.	4 sec.
dyn.medium	2 sec.	3 sec.	4 sec.	6 sec.
dyn.strong	2 sec.	3 sec.	4 sec.	6 sec.
pfp	2 sec.	3 sec.	4 sec.	8 sec.
fp/sfz/sffz	fp	sfz	sffz	sffz

15 HO2 Flatter   **Samples: 133   RAM: 8 MB**   **Level 2**

Flutter tonguing
Normal, crescendo, and normal/crescendo with Cell crossfading

Matrix switches: Horizontal: Keyswitches, C1–D1

	C1	C#1	D1
flutter	normal	crescendo	Cell XF

Matrix - LEVEL 2 C - Repetitions

31 HO2 Perf-Repetitions - Combi   **Samples: 1587   RAM: 99 MB**   **Level 2**

Repetition performances
Legato, portato, and staccato

Matrix switches: Horizontal: Keyswitches, C1–D1

	C1	C#1	D1
V1	legato	portato	staccato

32 HO2 Perf-Repetitions - Speed   **Samples: 1587   RAM: 99 MB**   **Level 2**

Repetition performances
Legato, portato, and staccato
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
V1	legato	portato	staccato

33 HO2 Fast-Repetitions   **Samples: 414   RAM: 25 MB**   **Level 2**

Fast repetitions: Staccato, 140–180 BPM

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
speed/BPM	140	150	160	170	180

34 HO2 Upbeats a1   **Samples: 621   RAM: 38 MB**   **Level 2**

Repetitions: 1 upbeat, 90–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
speed/BPM	90	100	110	120	130	140	160	180	200

35 HO2 Upbeats a2   **Samples: 621**   **RAM: 38 MB**   **Level 2**

Repetitions: 2 upbeats, 90–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
speed/BPM	90	100	110	120	130	140	160	180	200

36 HO2 Upbeats a3   **Samples: 621**   **RAM: 38 MB**   **Level 2**

Repetitions: 3 upbeats, 90–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
speed/BPM	90	100	110	120	130	140	160	180	200

37 HO2 Upbeats all   **Samples: 1863**   **RAM: 116 MB**   **Level 2**

Repetitions: 1–3 upbeats, 90–140, 160, 180, and 200 BPM

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
1 upbeat	90	100	110	120	130	140	160	180	200
2 upbeats	90	100	110	120	130	140	160	180	200
3 upbeats	90	100	110	120	130	140	160	180	200

Matrix - LEVEL 2 E - Keyswitch Vel

71 HO2 Legato - cre5   **Samples: 115**   **RAM: 7 MB**   **Level 2**

Legato notes: Crescendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
velocity	1st	2nd	3rd	4th	5th

72 HO2 Portato - cre9   **Samples: 207**   **RAM: 12 MB**   **Level 2**

Portato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

73 HO2 Staccato - cre9   **Samples: 207**   **RAM: 12 MB**   **Level 2**

Staccato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

74 HO2 Combi - cre9   **Samples: 414**   **RAM: 25 MB**   **Level 2**

Portato and staccato: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

75 HO2 Legato - dim5   **Samples: 115**   **RAM: 7 MB**   **Level 2**

Legato notes: Diminuendo, keyswitch velocity
Keyswitches control 5 dynamic steps

	C1	C#1	D1	D#1	E1
velocity	1st	2nd	3rd	4th	5th

76 HO2 Portato - dim9   **Samples: 207**   **RAM: 12 MB**   **Level 2**

Portato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

77 HO2 Staccato - dim9   **Samples: 207**   **RAM: 12 MB**   **Level 2**

Staccato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

78 HO2 Combi - dim9   **Samples: 414**   **RAM: 25 MB**   **Level 2**

Portato and staccato: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

Presets

HO2 VSL Preset Level 1 **Samples: 4438 RAM: 277 MB** **Level 1**

L1 HO2 Perf-Legato Speed
L1 HO2 Articulation Combi
L1 HO2 Perf-Repetitions Combi
Preset keyswitches: C6–D6

HO2 VSL Preset Level 2 **Samples: 7408 RAM: 463 MB** **Level 2**

01 HO2 Perf-Universal
02 HO2 Perf-Trill Speed
L1 HO2 Articulation Combi
31 HO2 Perf-Repetitions - Combi
74 HO2 Combi - cre9
Preset keyswitches: C6–E6

57 Bass trombone

Description

From the middle of the 19th century the tenor-bass trombone, having "all round qualities", replaced the bass trombone in orchestras and has been used as the third trombone ever since. In spite of the tenor-bass trombone's wide range, a distinction has been made in recent times between the tenor-bass and bass trombone – both have the same length of tubing, but the bass trombone has a wider bore (from 13.8 mm), a wider bell (from 24.8 cm), an additional valve (either Eb or D) and a larger mouthpiece.

Range and notation

The bass trombone has a range of Bb0–F5. Notation in the tenor and bass clefs, no transposition. All three trombone parts are usually written in tenor clef for the upper register and in bass clef for the lower.

Sound characteristics

Brassy, powerful, overpowering, solid, tense, penetrating, dramatic, hard, full, sinister, soft, round.

In general the slightly wider bore of the bass trombone lends it a somewhat darker timbre and fuller sound. Especially the low notes have a powerful metallic sound, sforzando tones are easily executable. The highest notes are somewhat harder to play than on the tenor trombone.

Combination with other instruments

The bass trombone is notated as the 3rd trombone in orchestral scores and often plays the tenor trombone's lower octave or the contrabass trombone's upper octave. Its sound is effective in multiple octave combinations as well as the fundamental bass. Since it shares its dark timbre with the cello, the double-bass, the bassoon and the contrabassoon it combines well with those instruments. The bass trombone is the carrying instrument, however, the bassoon or cello merely add color.

Patches

01 SHORT + LONG NOTES   Range: C1–E4

Single notes
Level 1: Staccato
Portato short
Sustained with and without vibrato
Level 2: Portato medium, normal and soft attack, and marcato
Portato long, with and without vibrato, with soft attack, and marcato

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01 BTB_staccato   **Samples: 296   RAM: 18 MB   Level 1**

Staccato
4 velocity layers
4 Alternations

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02 BTB_portato_short   **Samples: 296   RAM: 18 MB   Level 1**

Portato, short
4 velocity layers
4 Alternations

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03 BTB_portato_medium   **Samples: 295   RAM: 18 MB   Level 2**

Portato, medium
4 velocity layers
4 Alternations

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04 BTB_portato_medium_soft   **Samples: 296   RAM: 18 MB   Level 2**

Portato, medium, soft attack
4 velocity layers
4 Alternations

---

05 BTB_portato_medium_marc   **Samples: 222   RAM: 13 MB   Level 2**

Portato, medium, marcato
3 velocity layers
4 Alternations

---

06 BTB_portato_long_Vib   **Samples: 259   RAM: 16 MB   Level 2**

Portato, long, with vibrato
4 velocity layers
Release samples
2 Alternations

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07 BTB_portato_long_noVib   **Samples: 259   RAM: 16 MB   Level 2**

Portato, long, without vibrato
4 velocity layers
Release samples
2 Alternations

| **08 BTB_portato_long_soft** | **Samples: 259** | **RAM: 16 MB** | **Level 2** |

Portato, long, soft attack
4 velocity layers
Release samples
2 Alternations

| **09 BTB_portato_long_marc** | **Samples: 185** | **RAM: 11 MB** | **Level 2** |

Portato, long, marcato
3 velocity layers
Release samples
2 Alternations

| **11 BTB_sus_Vib** | **Samples: 222** | **RAM: 13 MB** | **Level 1** |

Sustained, with vibrato
3 velocity layers
Release samples

| **12 BTB_sus_noVib** | **Samples: 296** | **RAM: 18 MB** | **Level 1** |

Sustained, without vibrato
5 velocity layers
Release samples

02 DYNAMICS   Range: C1–E4

Dynamics
Level 1: Fortepiano, sforzato
Level 2: Light crescendo and diminuendo, 1.5, and 2 sec.
Medium crescendo and diminuendo, 1.5, 2, 3, and 4 sec.
Strong crescendo and diminuendo, 4 and 6 sec.
Sforzatissimo

| **01 BTB_dyn-li_1'5s** | **Samples: 222** | **RAM: 13 MB** | **Level 2** |

Light crescendo and diminuendo, 1.5 sec.
3 velocity layers
AB switch: crescendo/diminuendo

| **02 BTB_dyn-li_2s** | **Samples: 222** | **RAM: 13 MB** | **Level 2** |

Light crescendo and diminuendo, 2 sec.
3 velocity layers
AB switch: crescendo/diminuendo

| **11 BTB_dyn-me_2s** | **Samples: 148** | **RAM: 9 MB** | **Level 2** |

Medium crescendo and diminuendo, 2 sec.
2 velocity layers
AB switch: crescendo/diminuendo

| **12 BTB_dyn-me_3s** | **Samples: 148** | **RAM: 9 MB** | **Level 2** |

Medium crescendo and diminuendo, 3 sec.
2 velocity layers
AB switch: crescendo/diminuendo

13 BTB_dyn-me_4s	**Samples: 148**	**RAM: 9 MB**	**Level 2**

Medium crescendo and diminuendo, 4 sec.
2 velocity layers
AB switch: crescendo/diminuendo

21 BTB_dyn-str_4s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

22 BTB_dyn-str_6s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, 6 sec.
1 velocity layer
AB switch: crescendo/diminuendo

31 BTB_fp	**Samples: 37**	**RAM: 2 MB**	**Level 1**

Fortepiano
1 velocity layer

32 BTB_sfz	**Samples: 37**	**RAM: 2 MB**	**Level 1**

Sforzato
1 velocity layer

33 BTB_sffz	**Samples: 37**	**RAM: 2 MB**	**Level 2**

Sforzatissimo
1 velocity layer

03 FLATTER   Range: C2–E4

Level 1: Flutter tonguing normal and crescendo

01 BTB_flatter	**Samples: 100**	**RAM: 6 MB**	**Level 1**

Flutter tonguing
2 velocity layers
Release samples

02 BTB_flatter_cre	**Samples: 25**	**RAM: 1 MB**	**Level 1**

Flutter tonguing, crescendo
1 velocity layer

10 PERF INTERVAL   Range: C1–E4

Interval performances
Level 1: Legato
Level 2: Legato with sustain crossfading
Marcato

01 BTB_perf-legato   Samples: 892   RAM: 55 MB   **Level 1**

Legato
2 velocity layers
Release samples

02 BTB_perf-legato_sus   Samples: 1003   RAM: 62 MB   **Level 2**

Legato with sustain crossfading
2 velocity layers
Release samples

03 BTB_perf-marcato   Samples: 873   RAM: 54 MB   **Level 2**

Marcato
2 velocity layers
Release samples

11 PERF INTERVAL FAST   Range: C1–E4

Fast interval performances
Level 1: Legato

01 BTB_perf-legato_fa   Samples: 1038   RAM: 64 MB   **Level 1**

Legato, fast
2 velocity layers
Release samples

11 PERF REPETITION   Range: C1–E4

Repetition performances
Level 1: Portato
Staccato fast
Level 2: Staccato slow
Dynamics for all repetitions

01 BTB_perf-rep_por   Samples: 513   RAM: 32 MB   **Level 1**

Repetition performances: Portato
3 velocity layers

02 BTB_perf-rep_sta-sl   Samples: 513   RAM: 32 MB   **Level 2**

Repetition performances: Staccato, slow
3 velocity layers

03 BTB_perf-rep_sta-fa	**Samples: 513**	**RAM: 32 MB**	**Level 1**

Repetition performances: Staccato, fast
3 velocity layers

11 BTB_perf-rep_dyn9_por	**Samples: 342**	**RAM: 21 MB**	**Level 2**

Repetition performances: Portato dynamics, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

12 BTB_perf-rep_dyn9_sta-sl	**Samples: 342**	**RAM: 21 MB**	**Level 2**

Repetition performances: Staccato dynamics, slow, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

13 BTB_perf-rep_dyn9_sta-fa	**Samples: 342**	**RAM: 21 MB**	**Level 2**

Repetition performances: Staccato dynamics, fast, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

12 FAST REPETITION	**Range: C1–E4**	

Fast repetitions
Level 2: Staccato, 9 repetitions, 150 to 190 BPM
Normal and dynamics

01 BTB_fast-rep_150 (160/170/180/190)	**Samples: 222**	**RAM: 13 MB**	**Level 2**

Fast repetitions: 150–190 BPM
3 velocity layers
Release samples

11 BTB_fast-rep_150_dyn (160/170/180/190)	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Fast repetitions: Dynamics, 150–190 BPM
1 velocity layer
AB switch: crescendo/diminuendo

13 UPBEAT REPETITION

Repetitions
Level 2: 1–3 upbeats, 80–150 BPM

A Single Upbeat	**Range: C1–E4**		
01 BTB_UB-a1_80 (90/100/110/120/130/140/150)	**Samples: 111**	**RAM: 6 MB**	**Level 2**

1 upbeat, 80–150 BPM
3 velocity layers

B Double Upbeats	**Range: C1–E4**		
01 BTB_UB-a2_80 (90/100/110/120/130/140/150)	**Samples: 111**	**RAM: 6 MB**	**Level 2**

2 upbeats, 80–150 BPM
3 velocity layers

C Triple Upbeats	**Range: C1–E4**		
01 BTB_UB-a3_80 (90/100/110/120/130/140/150)	**Samples: 111**	**RAM: 6 MB**	**Level 2**

3 upbeats, 80–150 BPM
3 velocity layers

14 GRACE NOTES   Range: C1–E4

Phrases
Level 2: Grace notes
Minor and major 2nd
Up and down
Mapped to target note

01 BTB_grace-1	**Samples: 329**	**RAM: 20 MB**	**Level 2**

Grace notes, minor 2nd
3 velocity layers
Release samples
AB switch: up/down

02 BTB_grace-2	**Samples: 327**	**RAM: 20 MB**	**Level 2**

Grace notes, major 2nd
3 velocity layers
Release samples
AB switch: up/down

98 RESOURCES

Resources

Level 2: Isolated dynamics repetitions: Portato, staccato
Single layer long notes

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01 Perf Rep dyn	**Range: C1–E4**			
01 BTB_rep_cre9_por-1 (2/3/4/5/6/7/8/9)		**Samples: 19**	**RAM: 1 MB**	**Level 2**
Extracted repetitions: Portato, crescendo, 1st to 9th note 1 velocity layer				
01 BTB_rep_dim9_por-1 (2/3/4/5/6/7/8/9)		**Samples: 19**	**RAM: 1 MB**	**Level 2**
Extracted repetitions: Portato, diminuendo, 1st to 9th note 1 velocity layer				
02 BTB_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)		**Samples: 19**	**RAM: 1 MB**	**Level 2**
Extracted repetitions: Staccato, crescendo, 1st to 9th note 1 velocity layer				
02 BTB_rep_dim9_sta-1 (2/3/4/5/6/7/8/9)		**Samples: 19**	**RAM: 1 MB**	**Level 2**
Extracted repetitions: Staccato, diminuendo, 1st to 9th note 1 velocity layer				

02 Long Notes - Single Layer	**Range: C1–E4**			
01 BTB_sus_p		**Samples: 74**	**RAM: 4 MB**	**Level 2**
Sustained, piano 1 velocity layer Release samples				
02 BTB_sus_mp		**Samples: 74**	**RAM: 4 MB**	**Level 2**
Sustained, mezzopiano 1 velocity layer Release samples				
03 BTB_sus_mf		**Samples: 74**	**RAM: 4 MB**	**Level 2**
Sustained, mezzoforte 1 velocity layer Release samples				
04 BTB_sus_f		**Samples: 74**	**RAM: 4 MB**	**Level 2**
Sustained, forte 1 velocity layer Release samples				
05 BTB_sus_ff		**Samples: 74**	**RAM: 4 MB**	**Level 2**
Sustained, fortissimo 1 velocity layer Release samples				

03 Perf Speed variation   Range: C1–E4

01 BTB_perf-legato_slow   **Samples: 929**   **RAM: 58 MB**   **Level 1**

Interval performances
Legato, slow
2 velocity layers
Release samples

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

Matrix - LEVEL 1

L1 BTB Articulation Combi
Samples: 1493 RAM: 93 MB   **Level 1**

Single note articulations
Staccato, portato medium, sustained with and without vibrato, medium crescendo and diminuendo 2 and 4 sec., fortepiano and sforzato, flutter tonguing normal and crescendo

Matrix switches: Horizontal: Keyswitches, C6–E6   Vertical: Modwheel, 2 zones

	C6	C#6	D6	D#6	E6
V1	staccato	sus. vib.	dyn.med. 2s.	fp	flutter
V2	port. medium	sus. no vib.	dyn.med. 4s.	sfz	flutter cres.

L1 BTB Perf-Legato Speed
Samples: 1219 RAM: 76 MB   **Level 1**

Interval performances
Legato slow, normal, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	slow	normal	fast

L1 BTB Perf-Repetitions Combi
Samples: 1025 RAM: 64 MB   **Level 1**

Repetition performances
Portato
Staccato fast

Matrix switches: Vertical: Modwheel, 2 zones

	repetitions
V1	portato
V2	staccato fast

Matrix - LEVEL 2 A - Advanced

01 BTB Perf-Universal
Samples: 1933 RAM: 120 MB   **Level 2**

Interval performances
Legato slow, normal and fast
Marcato
Speed controller

Matrix switches: Horizontal: Speed, 3 zones   Vertical: Modwheel, 2 zones

	H1	H2	H3
legato	slow	normal	fast
marcato	%	%	%

02 BTB Short+Long notes

Samples: 1590 RAM: 99 MB **Level 2**

Single notes
Staccato, portato short and medium, portato long and sustained with and without vibrato

Matrix switches: Horizontal: Keyswitches, C6–E6   Vertical: Modwheel, 2 zones

	C6	C#6	D6	D#6	E6
V1	staccato	port. short	port.med.	port.long vib.	sus. vib.
V2	staccato	port.short	port.med.	port.long no vib.	sus. no vib.

Matrix - LEVEL 2 B - Standard

11 BTB Perf-Legato Speed

Samples: 1219 RAM: 76 MB **Level 2**

Interval performances
Legato slow, normal, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	slow	normal	fast

12 BTB Short notes

Samples: 662   RAM: 41 MB **Level 2**

Single notes
Staccato, portato short and medium, portato long with and without vibrato

Matrix switches: Horizontal: Keyswitches, C6–E6

	C6	C#6	D6	D#6	E6
V1	staccato	port.short	port.med.	port.long vib.	port.long no vib.

13 BTB Long notes - All

Samples: 407   RAM: 25 MB **Level 2**

Single notes
Sustained with and without vibrato

Matrix switches: Horizontal: Keyswitches, C6–C#6

	C6	C#6
sustained	vibrato	no vibrato

14 BTB Dynamics - Small

Samples: 555   RAM: 34 MB **Level 2**

Dynamics
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C6–D6   Vertical: Modwheel, 4 zones

	C6	C#6	D6
dyn.medium	2 sec.	3 sec.	4 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%

15 BTB Dynamics - Large   **Samples: 1526 RAM: 95 MB**   **Level 2**

Dynamics
Light crescendo and diminuendo, 1.5 and 2 sec.
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Strong crescendo and diminuendo, 4 and 6 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C6–D6   Vertical: Modwheel, 4 zones

	C6	C#6	D6
dyn.light	1.5 sec.	2 sec.	2 sec.
dyn.medium	2 sec.	3 sec.	4 sec.
dyn.strong	4 sec.	4 sec.	6 sec.
fp/sfz/sffz	fp	sfz	sffz

16 BTB Flatter   **Samples: 125   RAM: 7 MB**   **Level 2**

Flutter tonguing
Normal, crescendo, and normal/crescendo with Cell crossfading

Matrix switches: Horizontal: Keyswitches, C6–D6

	C6	C#6	D6
flutter	normal	crescendo	Cell XF

Matrix - LEVEL 2 C - Repetitions

31 BTB Perf-Repetitions - Combi   **Samples: 1538 RAM: 96 MB**   **Level 2**

Repetition performances
Portato, and staccato slow and fast

Matrix switches: Horizontal: Keyswitches, C6–D6

	C6	C#6	D6
V1	portato	staccato slow	staccato fast

32 BTB Perf-Repetitions - Speed   **Samples: 1538 RAM: 96 MB**   **Level 2**

Repetition performances
Portato, and staccato slow and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
V1	portato	staccato slow	staccato fast

33 BTB Fast-Repetitions   **Samples: 666   RAM: 41 MB**   **Level 2**

Fast repetitions: Staccato, 9 repetitions, 150–190 BPM

Matrix switches: Horizontal: Keyswitches, C6–E6

	C6	C#6	D6	D#6	E6
speed/BPM	150	160	170	180	190

34 BTB Upbeats a1   **Samples: 888   RAM: 55 MB**   **Level 2**

Repetitions: 1 upbeat, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

35 BTB Upbeats a2   **Samples: 888**   **RAM: 55 MB**   **Level 2**

Repetitions: 2 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

36 BTB Upbeats a3   **Samples: 888**   **RAM: 55 MB**   **Level 2**

Repetitions: 3 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

37 BTB Upbeats all   **Samples: 2664**   **RAM: 166 MB**   **Level 2**

Repetitions: 1–3 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6   Vertical: Modwheel, 3 zones

	C6	C#6	D6	D#6	E6	F6	F#6	G6
1 upbeat	80	90	100	110	120	130	140	150
2 upbeats	80	90	100	110	120	130	140	150
3 upbeats	80	90	100	110	120	130	140	150

Matrix - LEVEL 2 D - Scale+Phrase

41 BTB_Grace notes - All   **Samples: 545**   **RAM: 34 MB**   **Level 2**

Grace notes, minor and major 2nd
AB switch up/down

Matrix switches: Horizontal: Keyswitches, C6–C#6

	C6	C#6
interval	min. 2nd	maj. 2nd

Matrix - LEVEL 2 E - Keyswitch Vel

71 BTB Portato - cre9   **Samples: 171**   **RAM: 10 MB**   **Level 2**

Portato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–G#6

	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

72 BTB Staccato - cre9   **Samples: 171**   **RAM: 10 MB**   **Level 2**

Staccato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–G#6

	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

73 BTB Combi - cre9   **Samples: 342**   **RAM: 21 MB**   Level 2

Portato and staccato: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–G#6   Vertical: Modwheel, 2 zones

	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

74 BTB Portato - dim9   **Samples: 171**   **RAM: 10 MB**   Level 2

Portato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–G#6

	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

75 BTB Staccato - dim9   **Samples: 171**   **RAM: 10 MB**   Level 2

Staccato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–G#6

	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

76 BTB Combi - dim9   **Samples: 342**   **RAM: 21 MB**   Level 2

Portato and staccato: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–G#6   Vertical: Modwheel, 2 zones

	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

Presets

BTB VSL Preset Level 1   **Samples: 3552**   **RAM: 222 MB**   Level 1

L1 BTB Perf-Legato Speed
L1 BTB Articulation Combi
L1 BTB Perf-Repetitions Combi
Preset keyswitches: C7–D7

BTB VSL Preset Level 2   **Samples: 5094**   **RAM: 318 MB**   Level 2

01 BTB Perf-Universal
01 BTB Perf-Universal
L1 BTB Articulation Combi
31 BTB Perf-Repetitions - Combi
73 BTB Combi - cre9
Preset keyswitches: C7–E7

58 Contrabass trombone

Description

The contrabass trombone was created to provide sufficient volume for a stable and supportive foundation to the four-part trombone section while blending with its homogeneous overall sound, which was something the tuba could not do. It is used principally for the great octave and the contraoctave.

Range and notation

The contrabass trombone has a range of Ab0–C5. Music for the contrabass trombone is written in bass clef with no transposition. The notation in the upper register is in tenor clef.

Sound characteristics

Hard, metallic, penetrating, powerful, dark, taut, intense, dramatic, heroic, eruptive.

It sounds more intense than the bass trombone. Compared to the tuba the contrabass trombone sounds far more concise, definite and metallic. The sound has a dark and metallic timbre and ranges from a melodious and subdued piano to massive explosions. It is the notes of the low register that are most often used in the orchestra. The upper register (C#4–C5) corresponds to the tenor trombone's pitch. At this pitch the contrabass trombone is more powerful.

Combination with other instruments

The instrument plays the deepest part (4th trombone) in the four-part trombone section, making it possible in orchestral writing to write for a four-part trombone section and include lower pitches. Functions include fundamental bass, thematic tasks, doubling an octave below.

Patches

01 SHORT + LONG NOTES   Range: A0–D4

Single notes
Level 1: Staccato
Portato medium
Sustained
Level 2: Portato medium, marcato
Portato long

01 CTB_staccato   Samples: 234   RAM: 14 MB   **Level 1**

Staccato
3 velocity layers
4 Alternations

02 CTB_portato_medium   Samples: 240   RAM: 15 MB   **Level 1**

Portato, short medium
3 velocity layers
4 Alternations

03 CTB_portato_medium_marc   Samples: 156   RAM: 9 MB   **Level 2**

Portato, medium, marcato
2 velocity layers
4 Alternations

04 CTB_portato_long   Samples: 238   RAM: 14 MB   **Level 2**

Portato, long
3 velocity layers
Release samples
2 Alternations

11 CTB_sus   Samples: 238   RAM: 14 MB   **Level 1**

Sustained
3 velocity layers
Release samples

02 DYNAMICS   Range: A#0–D4

Dynamics
Level 1: Crescendo-diminuendo, 4 and 6 sec.
Fortepiano, sforzato
Level 2: Light crescendo and diminuendo, 1, 1.5, and 2 sec.
Medium crescendo and diminuendo, 3, 4, and 6 sec.
Strong crescendo and diminuendo, 3 and 4 sec.
Sforzatissimo

01 CTB_dyn-li_1s	**Samples: 222**	**RAM: 13 MB**	**Level 2**

Light crescendo and diminuendo, 1 sec.
3 velocity layers
AB switch: crescendo/diminuendo

02 CTB_dyn-li_1'5s	**Samples: 222**	**RAM: 13 MB**	**Level 2**

Light crescendo and diminuendo, 1.5 sec.
3 velocity layers
AB switch: crescendo/diminuendo

03 CTB_dyn-li_2s	**Samples: 222**	**RAM: 13 MB**	**Level 2**

Light crescendo and diminuendo, 2 sec.
3 velocity layers
AB switch: crescendo/diminuendo

11 CTB_dyn-me_3s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Medium crescendo and diminuendo, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

12 CTB_dyn-me_4s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Medium crescendo and diminuendo, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

13 CTB_dyn-me_6s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Medium crescendo and diminuendo, 6 sec.
1 velocity layer
AB switch: crescendo/diminuendo

21 CTB_dyn-str_3s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

22 CTB_dyn-str_4s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

31 CTB_pfp_4s	**Range: A0–D4**	**Samples: 37**	**RAM: 2 MB**	**Level 1**

Crescendo-diminuendo, 4 sec.
1 velocity layer

32 CTB_pfp_6s	**Range: A0–D4**	**Samples: 37**	**RAM: 2 MB**	**Level 1**

Crescendo-diminuendo, 6 sec.
1 velocity layer

41 CTB_fp	**Range: A0–D4**	**Samples: 39**	**RAM: 2 MB**	**Level 1**

Fortepiano
1 velocity layer
2 Alternations

42 CTB_sfz	**Range: A0–D4**	**Samples: 39**	**RAM: 2 MB**	**Level 1**

Sforzato
1 velocity layer
2 Alternations

43 CTB_sffz	**Range: A0–D4**	**Samples: 39**	**RAM: 2 MB**	**Level 2**

Sforzatissimo
1 velocity layer
2 Alternations

03 FLATTER + FX

Flutter tonguing and effects
Level 1: Flutter tonguing normal and crescendo
Level 2: Arpeggios, up/down and down/up
Duphonic playing, var. A and B

01 CTB_flatter	**Range: A1–C5**	**Samples: 70**	**RAM: 4 MB**	**Level 1**

Flutter tonguing
1 velocity layer
Release samples

02 CTB_flatter_cre	**Range: A1–C5**	**Samples: 35**	**RAM: 2 MB**	**Level 1**

Flutter tonguing, crescendo
1 velocity layer

11 CTB_arpeggio	**Range: F2–F3**	**Samples: 24**	**RAM: 1 MB**	**Level 2**

Effects: Arpeggios, up/down and down/up
1 velocity layer
AB switch: up/down

12 CTB_duophonic-A	**Range: C2–G#3**	**Samples: 19**	**RAM: 1 MB**	**Level 2**

Effects: Duophonic playing (tone and voice), variant A
1 velocity layer

13 CTB_duophonic-B	**Range: C2–C3**	**Samples: 11**	**RAM: 1 MB**	**Level 2**

Effects: Duophonic playing, variant B
1 velocity layer

10 PERF INTERVAL   Range: A0–C4

Interval performances
Level 1: Legato
Level 2: Legato with sustain crossfading
Marcato

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01 CTB_perf-legato   **Samples: 951**   **RAM: 59 MB**   **Level 1**

Legato
2 velocity layers
Release samples

---

02 CTB_perf-legato_sus   **Samples: 972**   **RAM: 60 MB**   **Level 2**

Legato
Sustain crossfading
2 velocity layers
Release samples

---

03 CTB_perf-marcato   **Samples: 974**   **RAM: 60 MB**   **Level 2**

Marcato
2 velocity layers
Release samples

---

11 PERF REPETITION

Repetition performances
Level 1: Portato slow
Staccato
Level 2: Portato fast
Dynamics, portato slow and fast

---

01 CTB_perf-rep_por-sl   **Range: A0–D4**   **Samples: 342**   **RAM: 21 MB**   **Level 1**

Repetition performances: Portato, slow
2 velocity layers

---

02 CTB_perf-rep_por-fa   **Range: C1–D4**   **Samples: 306**   **RAM: 19 MB**   **Level 2**

Repetition performances: Portato, fast
2 velocity layers

---

03 CTB_perf-rep_sta   **Range: A1–D4**   **Samples: 234**   **RAM: 14 MB**   **Level 1**

Repetition performances: Staccato
2 velocity layers

---

11 CTB_perf-rep_dyn5_por-sl   **Range: C1–D4**   **Samples: 170**   **RAM: 10 MB**   **Level 2**

Repetition performances: Portato dynamics, slow, 5 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

---

12 CTB_perf-rep_dyn5_por-fa	Range: C1–D4	Samples: 170	RAM: 10 MB	Level 2

Repetition performances: Portato dynamics, fast, 5 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

12 UPBEAT REPETITION

Repetitions
Level 2: 1–3 upbeats, 80–150 BPM

A Single Upbeat

01 CTB_UB-a1_80 (90/100)	Range: A1–D4	Samples: 50	RAM: 3 MB	Level 2

1 upbeat, 80–100 BPM
2 velocity layers

04 CTB_UB-a1_110 (120/130/140/150)	Range: A0–D4	Samples: 74	RAM: 4 MB	Level 2

1 upbeat, 110–150 BPM
2 velocity layers

B Double Upbeats   Range: A0–D4

01 CTB_UB-a2_80 (90/100/110/120/130/140/150)	Samples: 74	RAM: 4 MB	Level 2

2 upbeats, 80–150 BPM
2 velocity layers

C Triple Upbeats   Range: A0–D4

01 CTB_UB-a3_80 (90/100/110/120/130/140/150)	Samples: 74	RAM: 4 MB	Level 2

3 upbeats, 80–150 BPM
2 velocity layers

13 GLISSANDI

Interval performances/Phrases
Level 2: Performance glissandos, minor 2nd to major 3rd
Fixed glissandos, minor 2nd to 4th, up and down
Please note that fixed glissandos have different up and down ranges.

01 CTB_perf-gliss	Range: A0–G3	Samples: 450	RAM: 28 MB	Level 2

Glissando, minor 2nd to major 3rd
1 velocity layer
Release samples

11 CTB_gliss-1	**Range: A0–D#3**	**Samples: 54**	**RAM: 3 MB**	**Level 2**

Glissando, minor 2nd
1 velocity layer
AB switch: up/down

12 CTB_gliss-2	**Range: A0–E3**	**Samples: 46**	**RAM: 2 MB**	**Level 2**

Glissando, major 2nd
1 velocity layer
AB switch: up/down

13 CTB_gliss-3	**Range: A0–E3**	**Samples: 30**	**RAM: 1 MB**	**Level 2**

Glissando, minor 3rd
1 velocity layer
AB switch: up/down

14 CTB_gliss-4	**Range: A0–F#3**	**Samples: 14**	**RAM: 1 MB**	**Level 2**

Glissando, major 3rd
1 velocity layer
AB switch: up/down

15 CTB_gliss-5	**Range: A2–G3**	**Samples: 2**	**RAM: 1 MB**	**Level 2**

Glissando, 4th
1 velocity layer
AB switch: up/down

98 RESOURCES

Resources
Level 2: Isolated dynamics repetitions: Portato
Single layer long notes

01 Perf Rep dyn	**Range: C1–D4**			

01 CTB_rep_cre5_por-1 (2/3/4/59)	**Samples: 17**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, crescendo, 1st to 5th note
1 velocity layer

01 CTB_rep_dim5_por-1 (2/3/4/59)	**Samples: 17**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, diminuendo, 1st to 5th note
1 velocity layer

02 Long Notes - Single Layer	**Range: A0–D4**			

01 CTB_sus_p	**Samples: 79**	**RAM: 4 MB**	**Level 2**

Sustained, piano
1 velocity layer
Release samples

02 CTB_sus_mf	**Samples: 79**	**RAM: 4 MB**	**Level 2**

Sustained, mezzoforte

1 velocity layer
Release samples

03 CTB_sus_f   **Samples: 80**   **RAM: 5 MB**   **Level 2**
Sustained, forte
1 velocity layer
Release samples

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

Matrix - LEVEL 1

L1 CTB Articulation Combi   **Samples: 969   RAM: 60 MB**   **Level 1**

Single note articulations

Staccato, portato medium, sustained, crescendo-diminuendo 4 and 6 sec., fortepiano and sforzato, flutter tonguing normal and crescendo

Matrix switches: Horizontal: Keyswitches, C6–E6   Vertical: Modwheel, 2 zones

	C6	C#6	D6	D#6	E6
V1	staccato	sustained	pfp 4s.	fp	flutter
V2	port. medium	sustained	pfp 6s.	sfz	flutter cres.

L1 CTB Perf-Legato Speed   **Samples: 972   RAM: 60 MB**   **Level 1**

Interval performances

Legato with sustain crossfading and normal

Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
legato	sus-XF	normal

L1 CTB Perf-Repetitions Combi   **Samples: 648   RAM: 40 MB**   **Level 1**

Repetition performances

Portato slow and fast

Matrix switches: Vertical: Modwheel, 2 zones

	repetitions
V1	portato slow
V2	portato fast

Matrix - LEVEL 2 A - Advanced

O1 CTB Perf-Universal   **Samples: 1827 RAM: 114 MB**   **Level 2**

Interval performances

Legato with sustain crossfading and normal

Marcato

Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
legato	sus-XF	normal
marcato	%	%

02 CTB Short+Long notes - All   Samples: 985   RAM: 61 MB   Level 2

Single notes
Staccato, portato medium normal and marcato, portato long, and sustained

Matrix switches: Horizontal: Keyswitches, C6–E6

	C6	C#6	D6	D#6	E6
V1	staccato	port.med. normal	port.med. marcato	port.long	sustained

Matrix - LEVEL 2 B - Standard

11 CTB Perf-Legato Speed   Samples: 972   RAM: 60 MB   Level 2

Interval performances
Legato with sustain crossfading and normal
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
legato	sus-XF	normal

12 CTB Dynamics - Small   Samples: 339   RAM: 21 MB   Level 2

Dynamics
Medium crescendo and diminuendo, 3, 4, and 6 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C6–D6   Vertical: Modwheel, 4 zones

	C6	C#6	D6
dyn.medium	3 sec.	4 sec.	6 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%

13 CTB Dynamics - Large   Samples: 1227   RAM: 76 MB   Level 2

Dynamics
Light crescendo and diminuendo, 1, 1.5, and 2 sec.
Medium crescendo and diminuendo, 3, 4, and 6 sec.
Strong crescendo and diminuendo, 3 and 4 sec.
Crescendo-diminuendo, 4 and 6 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C6–D6   Vertical: Modwheel, 5 zones

	C6	C#6	D6
dyn.light	1 sec.	1.5 sec.	2 sec.
dyn.medium	3 sec.	4 sec.	6 sec.
dyn.strong	3 sec.	4 sec.	4 sec.
pfp	4 sec.	4 sec.	6 sec.
fp/sfz/sffz	fp	sfz	sffz

14 CTB Flatter   Samples: 105   RAM: 6 MB   Level 2

Flutter tonguing
Normal, crescendo, and normal/crescendo with Cell crossfading

Matrix switches: Horizontal: Keyswitches, C6–D6

	C6	C#6	D6
flutter	normal	crescendo	Cell XF

15 CTB FX   **Samples: 54**   **RAM: 3 MB**   **Level 2**

Effects: Arpeggios, duophonic playing (voice and tone) variation A and B

Matrix switches: Horizontal: Keyswitches, C6–D6

	C6	C#6	D6
V1	arpeggio	duophonic-A	duophonic-B

Matrix - LEVEL 2 C - Repetitions

31 CTB Perf-Repetitions - Combi   **Samples: 882**   **RAM: 55 MB**   **Level 2**

Repetition performances
Portato slow and fast, and staccato

Matrix switches: Horizontal: Keyswitches, C6–D6

	C6	C#6	D6
V1	portato slow	portato fast	staccato

32 CTB Perf-Repetitions - Speed   **Samples: 882**   **RAM: 55 MB**   **Level 2**

Repetition performances
Portato slow and fast, and staccato
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
V1	portato slow	portato fast	staccato

33 BTB Upbeats a1   **Samples: 520**   **RAM: 32 MB**   **Level 2**

Repetitions: 1 upbeat, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

34 CTB Upbeats a2   **Samples: 592**   **RAM: 37 MB**   **Level 2**

Repetitions: 2 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

35 CTB Upbeats a3   **Samples: 592**   **RAM: 37 MB**   **Level 2**

Repetitions: 3 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

36 CTB Upbeats all   **Samples: 1704**   **RAM: 106 MB**   **Level 2**

Repetitions: 1–3 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6   Vertical: Modwheel, 3 zones

	C6	C#6	D6	D#6	E6	F6	F#6	G6
1 upbeat	80	90	100	110	120	130	140	150
2 upbeats	80	90	100	110	120	130	140	150
3 upbeats	80	90	100	110	120	130	140	150

Matrix - LEVEL 2 E - Keyswitch Vel

71 CTB Portato - cre5   **Samples: 115**   **RAM: 7 MB**   **Level 2**

Portato notes: Crescendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
velocity	1st	2nd	3rd	4th	5th

72 CTB Portato - dim5   **Samples: 115**   **RAM: 7 MB**   **Level 2**

Portato notes: Diminuendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
velocity	1st	2nd	3rd	4th	5th

Presets

CTB VSL Preset Level 1   **Samples: 2431**   **RAM: 151 MB**   **Level 1**

L1 CTB Perf-Legato Speed
L1 CTB Articulation Combi
L1 CTB Perf-Repetitions Combi
Preset keyswitches: C7–D7

CTB VSL Preset Level 2   **Samples: 3566**   **RAM: 222 MB**   **Level 2**

01 CTB Perf-Universal
01 CTB Perf-Universal
L1 CTB Articulation Combi
31 CTB Perf-Repetitions - Combi
71 CTB Portato - cre5
Preset keyswitches: C7–E7

60 Contrabass tuba

Description

The contrabass tuba is currently made in two tunings: C and Bb. It is used primarily in opera orchestras and in brass and military bands. It is rarely asked for in symphony orchestras.

In some regions of Germany and in Scandinavia, the United Kingdom and the USA, where the bass tuba (in F or Eb) is not in use, the contrabass tuba in C with four valves is common as a kind of all-round instrument: it is played not only in the orchestra but also in chamber music and as a solo instrument.

Range and notation

The contrabass tuba has a range of A0–B3. Music for the bass and contrabass tubas is generally non-transposing and written in bass clef. The instrument is pitched in the contrabass register.

Sound characteristics

Round, calm, hearty, loud, robust, ponderous, sustaining, soothing, earthy, sonorous, majestic, cavernous, rumbling, unfathomable, grave, weighty, broad, resonant.

In all registers the tone is richer, rounder and darker than the bass tuba and less metallic than the bass and contrabass trombones. The actual pitch of the lowest notes is hard to detect. Below F2 the tone is the typical contrabass tuba sound, above it it sounds like a tuba in F.

Combination with other instruments

The contrabass tuba is a contrabass instrument. One of its principal tasks is the doubling of other bass instruments, usually an octave lower. Especially in tutti passages its role is to provide a firm fundamental bass. In especially large brass sections, for example with six or eight horns, two tubas are used, either two bass tubas or a bass and a contrabass tuba.

Patches

01 SHORT + LONG NOTES   Range: A0–C4

Single notes
Level 1: Staccato
Portato medium
Sustained
Level 2: Portato medium, soft and hard attack
Portato long, soft and hard attack

01 CTU_staccato		**Samples: 282**	**RAM: 17 MB**	**Level 1**

Staccato
4 velocity layers
4 Alternations

02 CTU_portato_medium		**Samples: 276**	**RAM: 17 MB**	**Level 1**

Portato, medium
4 velocity layers
4 Alternations

03 CTU_portato_medium_soft		**Samples: 142**	**RAM: 8 MB**	**Level 2**

Portato, medium, soft attack
4 velocity layers
2 Alternations

04 CTU_portato_medium_hard		**Samples: 222**	**RAM: 13 MB**	**Level 2**

Portato, medium, hard attack
3 velocity layers
4 Alternations

05 CTU_portato_long_soft		**Samples: 259**	**RAM: 16 MB**	**Level 2**

Portato, long, soft attack
4 velocity layers
Release samples
2 Alternations

06 CTU_portato_long_hard		**Samples: 220**	**RAM: 13 MB**	**Level 2**

Portato, long, hard attack
3 velocity layers
Release samples
2 Alternations

11 CTU_sus		**Samples: 222**	**RAM: 13 MB**	**Level 1**

Sustained
3 velocity layers
Release samples

02 DYNAMICS   Range: A0–C4

Dynamics
Level 1: Fortepiano, sforzato
Level 2: Medium crescendo and diminuendo, 1, 1.5, 2, 3, 4, and 6 sec.
Strong crescendo and diminuendo, 3, 4, and 5 sec.
Sforzatissimo

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01 CTU_dyn-me_1s   **Samples: 148   RAM: 9 MB   Level 2**

Medium crescendo and diminuendo, 1 sec.
2 velocity layers
AB switch: crescendo/diminuendo

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02 CTU_dyn-me_1'5s   **Samples: 148   RAM: 9 MB   Level 2**

Medium crescendo and diminuendo, 1.5 sec.
2 velocity layers
AB switch: crescendo/diminuendo

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03 CTU_dyn-me_2s   **Samples: 148   RAM: 9 MB   Level 2**

Medium crescendo and diminuendo, 2 sec.
2 velocity layers
AB switch: crescendo/diminuendo

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04 CTU_dyn-me_3s   **Samples: 144   RAM: 9 MB   Level 2**

Medium crescendo and diminuendo, 3 sec.
2 velocity layers
AB switch: crescendo/diminuendo

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05 CTU_dyn-me_4s   **Samples: 144   RAM: 9 MB   Level 2**

Medium crescendo and diminuendo, 4 sec.
2 velocity layers
AB switch: crescendo/diminuendo

---

06 CTU_dyn-me_6s   **Samples: 74   RAM: 4 MB   Level 2**

Medium crescendo and diminuendo, 6 sec.
1 velocity layer
AB switch: crescendo/diminuendo

---

11 CTU_dyn-str_3s   **Samples: 74   RAM: 4 MB   Level 2**

Strong crescendo and diminuendo, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

---

12 CTU_dyn-str_4s   **Samples: 74   RAM: 4 MB   Level 2**

Strong crescendo and diminuendo, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

| **13 CTU_dyn-str_5s** | **Samples: 74** | **RAM: 4 MB** | **Level 2** |

Strong crescendo and diminuendo, 5 sec.
1 velocity layer
AB switch: crescendo/diminuendo

| **21 CTU_fp** | **Samples: 37** | **RAM: 2 MB** | **Level 1** |

Fortepiano
1 velocity layer
2 Alternations

| **22 CTU_sfz** | **Samples: 30** | **RAM: 1 MB** | **Level 1** |

Sforzato
1 velocity layer
2 Alternations

| **23 CTU_sffz** | **Samples: 30** | **RAM: 1 MB** | **Level 2** |

Sforzatissimo
1 velocity layer
2 Alternations

03 FLATTER + TRILLS   Range: C1–C4

Flutter tonguing and trills
Level 1: Flutter tonguing
Trills, minor and major 2nd

| **01 CTU_flatter** | **Samples: 64** | **RAM: 4 MB** | **Level 1** |

Flutter tonguing
1 velocity layer
Release samples

| **11 CTU_trill_1** | **Samples: 126** | **RAM: 7 MB** | **Level 1** |

Trills, minor 2nd
2 velocity layers
Release samples

| **12 CTU_trill_2** | **Samples: 126** | **RAM: 7 MB** | **Level 1** |

Trills, major 2nd
2 velocity layers
Release samples

04 MUTE BASIC   Range: A0–C4

Muted notes
Level 2: Portato medium and long
Sustained
Crescendo and diminuendo, 3 and 4 sec.
Sforzato
Flutter tonguing, crescendo

01 CTU_mu_portato_medium	**Samples: 218**	**RAM: 13 MB**	**Level 2**

Portato, medium
3 velocity layers
4 Alternations

02 CTU_mu_portato_long	**Samples: 180**	**RAM: 11 MB**	**Level 2**

Portato, long
3 velocity layers
Release samples
2 Alternations

03 CTU_mu_sus	**Samples: 148**	**RAM: 9 MB**	**Level 2**

Sustained
2 velocity layers
Release samples

11 CTU_mu_dyn_3s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Medium crescendo and diminuendo, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

12 CTU_mu_dyn_4s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Medium crescendo and diminuendo, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

13 CTU_mu_sfz	**Samples: 37**	**RAM: 2 MB**	**Level 2**

Sforzato
1 velocity layer
2 Alternations

21 CTU_mu_flatter-cre	**Range: D1–C4**	**Samples: 30**	**RAM: 1 MB**	**Level 2**

Flutter tonguing, crescendo
1 velocity layer

10 PERF INTERVAL   Range: A0–C4

Interval performances
Level 1: Legato
Level 2: Legato with sustain crossfading
Marcato

01 CTU_perf-legato   **Samples: 877   RAM: 54 MB   Level 1**

Legato
2 velocity layers
Release samples

02 CTU_perf-legato_sus   **Samples: 803   RAM: 50 MB   Level 2**

Legato
Sustain crossfading
2 velocity layers
Release samples

03 CTU_perf-marcato   **Samples: 966   RAM: 60 MB   Level 2**

Marcato
2 velocity layers
Release samples

11 PERF INTERVAL FAST   Range: A0–C4

Fast interval performances
Level 1: Legato
Level 2: Marcato

01 CTU_perf-legato_fa   **Samples: 945   RAM: 59 MB   Level 1**

Legato, fast
2 velocity layers
Release samples

02 CTU_perf-marcato_fa   **Samples: 1034 RAM: 64 MB   Level 2**

Marcato, fast
2 velocity layers
Release samples

12 PERF TRILL   Range: A0–C4

Multi interval performances
Level 2: Trills, legato, minor to major 2nd

01 CTU_perf-trill   **Samples: 1549 RAM: 96 MB   Level 2**

Performance trills, legato, minor to major 2nd
2 velocity layers
Release samples

13 PERF REPETITION   Range: A#0–C4

Repetition performances
Level 1: Portato slow, staccato fast
Level 2: Portato fast, staccato slow

01 CTU_perf-rep_por-sl	Range: A0–C4	Samples: 335	RAM: 20 MB	**Level 1**

Repetition performances: Portato, slow
2 velocity layers

02 CTU_perf-rep_por-fa		Samples: 306	RAM: 19 MB	**Level 2**

Repetition performances: Portato, fast
2 velocity layers

03 CTU_perf-rep_sta-sl		Samples: 306	RAM: 19 MB	**Level 2**

Repetition performances: Staccato, slow
2 velocity layers

04 CTU_perf-rep_sta-fa		Samples: 306	RAM: 19 MB	**Level 1**

Repetition performances: Staccato, fast
2 velocity layers

14 UPBEAT REPETITION

Repetitions
Level 2: 1–3 upbeats, 80–150 BPM

A Single Upbeat

01 CTU_UB-a1_80 (90/100)	Range: A0–A3	Samples: 66	RAM: 4 MB	**Level 2**

1 upbeat, 80–100 BPM
2 velocity layers

04 CTU_UB-a1_110 (120/130/140/150)	Range: A#0–A#3	Samples: 64	RAM: 4 MB	**Level 2**

1 upbeat, 110–150 BPM
2 velocity layers

B Double Upbeats   Range: A#0–A#3

01 CTU_UB-a2_80 (90/100/110/120/130/140/150)	Samples: 74	RAM: 4 MB	**Level 2**

2 upbeats, 80–150 BPM
2 velocity layers

C Triple Upbeats	**Range: A#0–A#3**

01 CTU_UB-a3_80 (90/100/110/120/130/140/150)		**Samples: 64**	**RAM: 4 MB**	**Level 2**

3 upbeats, 80–150 BPM
2 velocity layers

15 GRACE NOTES	**Range: A0–C4**

Phrases
Level 2: Grace notes
Minor and major 2nd
Up and down
Mapped to target note

01 CTU_grace-1		**Samples: 222**	**RAM: 13 MB**	**Level 2**

Grace notes, minor 2nd
2 velocity layers
Release samples
AB switch: up/down

02 CTU_grace-2		**Samples: 222**	**RAM: 13 MB**	**Level 2**

Grace notes, major 2nd
2 velocity layers
Release samples
AB switch: up/down

98 RESOURCES

Resources
Level 2: Single layer long notes

02 Long Notes - Single Layer	**Range: A0–C4**

01 CTU_sus_p		**Samples: 74**	**RAM: 4 MB**	**Level 2**

Sustained, piano
1 velocity layer
Release samples

02 CTU_sus_mf		**Samples: 74**	**RAM: 4 MB**	**Level 2**

Sustained, mezzoforte
1 velocity layer
Release samples

03 CTU_sus_f		**Samples: 74**	**RAM: 4 MB**	**Level 2**

Sustained, forte
1 velocity layer
Release samples

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

Matrix - LEVEL 1

L1 CTU Articulation Combi   Samples: 1455 RAM: 90 MB   Level 1

Single note articulations
Staccato, portato medium, sustained, crescendo and diminuendo 2 and 4 sec., fortepiano and sforzato, flutter tonguing, and half and whole tone trills

Matrix switches: Horizontal: Keyswitches, C1–F1   Vertical: Modwheel, 2 zones

	C6	C#6	D6	D#6	E6	F6
V1	staccato	sustained	dynamics 2s.	fp	flutter	trill half
V2	port. medium	sustained	dynamics 4s.	sfz	flutter	trill whole

L1 CTU Perf-Legato Speed   Samples: 1089 RAM: 68 MB   Level 1

Interval performances
Legato with sustain crossfading, normal, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	sus-XF	normal	fast

L1 CTU Perf-Repetitions Combi   Samples: 641   RAM: 40 MB   Level 1

Repetition performances
Portato slow
Staccato fast

Matrix switches: Vertical: Modwheel, 2 zones

	repetitions
V1	portato slow
V2	staccato fast

Matrix - LEVEL 2 A - Advanced

O1 CTU Perf-Universal   Samples: 2193 RAM: 137 MB   Level 2

Interval performances
Legato with sustain crossfading, normal, and fast
Marcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones   Vertical: Modwheel, 2 zones

	H1	H2	H3
legato	sus-XF	normal	fast
marcato	normal	normal	fast

02 CTU Perf-Trill Speed

Samples: 1693 RAM: 105 MB **Level 2**

Multi interval performances
Legato and trills
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
V1	legato	trills

03 CTU Short+Long notes

Samples: 928   RAM: 58 MB **Level 2**

Single notes
Staccato, portato medium, portato long with soft attack, and sustained

Matrix switches: Horizontal: Keyswitches, C6–D#6

	C6	C#6	D6	D#6
V1	staccato	port. med.	port.long soft	sustained

Matrix - LEVEL 2 B - Standard

11 CTU Perf-Legato Speed

Samples: 1089 RAM: 68 MB **Level 2**

Interval performances
Legato with sustain crossfading, normal, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	sus-XF	normal	fast

12 CTU Perf-Marcato Speed

Samples: 1178 RAM: 73 MB **Level 2**

Interval performances^mMarcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
marcato	normal	fast

13 CTU Dynamics - Small

Samples: 533   RAM: 33 MB **Level 2**

Dynamics
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C6–D6   Vertical: Modwheel, 4 zones

	C6	C#6	D6
dyn.medium	2 sec.	3 sec.	4 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%

14 CTU Dynamics - Large   **Samples: 1125 RAM: 70 MB**   **Level 2**

Dynamics
Medium crescendo and diminuendo, 1, 1.5, 2, 3, 4, and 6 sec.
Strong crescendo and diminuendo, 3, 4 and 5 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C6–D6   Vertical: Modwheel, 4 zones

	C6	C#6	D6
dyn.medium	1 sec.	1.5 sec.	2 sec.
dyn.medium	3 sec.	4 sec.	6 sec.
dyn.strong	3 sec.	4 sec.	5 sec.
fp/sfz/sffz	fp	sfz	sffz

15 CTU Flatter   **Samples: 64   RAM: 4 MB**   **Level 2**

Single notes: Flutter tonguing

16 CTU Trills - normal   **Samples: 252   RAM: 15 MB**   **Level 2**

Trills, minor and major 2nd

Matrix switches: Vertical: Modwheel, 2 zones

	C1
V1	min. 2nd
V2	maj. 2nd

17 CTU Mute Short+Long   **Samples: 502   RAM: 31 MB**   **Level 2**

Muted tones
Portato medium and long, sustained, and crescendo flutter tonguing

Matrix switches: Horizontal: Keyswitches, C6–D#6

	C6	C#6	D6	D#6
V1	port. med.	port.long	sustained	flutter cres.

18 CTU Mute Dynamics   **Samples: 185   RAM: 11 MB**   **Level 2**

Dynamics
Crescendo and diminuendo, 3 and 4 sec.
Sforzato

Matrix switches: Horizontal: Keyswitches, C6–C#6   Vertical: Modwheel, 2 zones

	C6	C#6
Cres/dim	3 sec.	4 sec
sforzato	%	%

Matrix - LEVEL 2 C - Repetitions

31 CTU Perf-Repetitions - Combi   **Samples: 1253 RAM: 78 MB**   **Level 2**

Repetition performances
Portato slow and fast, staccato slow and fast

Matrix switches: Horizontal: Keyswitches, C6–D#6

	C6	C#6	D6	D#6
V1	portato slow	portato fast	staccato slow	staccato fast

32 CTU Perf-Repetitions - Speed   **Samples: 918**   **RAM: 57 MB**   **Level 2**

Repetition performances
Portato fast, staccato slow and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
V1	portato fast	staccato slow	staccato fast

33 CTU Upbeats a1   **Samples: 518**   **RAM: 32 MB**   **Level 2**

Repetitions: 1 upbeat, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

34 CTU Upbeats a2   **Samples: 542**   **RAM: 33 MB**   **Level 2**

Repetitions: 2 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

35 CTU Upbeats a3   **Samples: 512**   **RAM: 32 MB**   **Level 2**

Repetitions: 3 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

36 CTU Upbeats all   **Samples: 1572** **RAM: 98 MB**   **Level 2**

Repetitions: 1–3 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6   Vertical: Modwheel, 3 zones

	C6	C#6	D6	D#6	E6	F6	F#6	G6
1 upbeat	80	90	100	110	120	130	140	150
2 upbeats	80	90	100	110	120	130	140	150
3 upbeats	80	90	100	110	120	130	140	150

Matrix - LEVEL 2 D - Scale+Phrase

41 CTU Grace notes - All   **Samples: 370**   **RAM: 23 MB**   **Level 2**

Grace notes, minor and major 2nd
AB switch up/down

Matrix switches: Horizontal: Keyswitches, C6–C#6

	C6	C#6
interval	min. 2nd	maj. 2nd

Presets

CTU VSL Preset Level 1 **Samples: 3037 RAM: 189 MB** **Level 1**

L1 CTU Perf-Legato Speed
L1 CTU Articulation Combi
L1 CTU Perf-Repetitions Combi
Preset keyswitches: C7–D7

CTU VSL Preset Level 2 **Samples: 5569 RAM: 348 MB** **Level 2**

01 CTU Perf-Universal
02 CTU Perf-Trill Speed
L1 CTU Articulation Combi
31 CTU Perf-Repetitions - Combi
Preset keyswitches: C7–D#7

61 Wagner tuba

Description

The Wagner tuba, conceived by Richard Wagner for his "Ring of the Nibelung", is made in two sizes, Bb (tenor instrument) and F (bass instrument). In the symphony orchestra two of each instrument have always been used.

Although the instrument's conical tubing means that it belongs to the bugle-horn family (tubas), its playing technique and sound characteristics place it among the horns. It is played by a hornist because it has a horn mouthpiece.

Range and notation

The range of the tenor Wagner tuba in Bb is Eb1–Bb5. Notation is transposing, usually in bass and treble clef. It sounds a major second lower than written.

Sound characteristics

Round, resounding, hearty, robust, sustaining, gentle, soft, war-like, menacing, sonorous, solemn, stately, heroic, substantial.

Overall the Wagner tuba's timbre lies somewhere between the horn, the bass tuba and the trombone. Compared to the horn it sounds more somber and softer, has a less incisive attack. In comparison with the bass tuba it sounds thinner, edgier and more incisive, compared to the trombone milder, softer and darker.

Combination with other instruments

The Wagner tuba is best suited for the evocation of solemn, stately and heroic moods and its timbre bridges the gap between the horns and the low brass as well as between the bass tuba and the trombones. It has enough volume to play themes on its own or an octave above with the bass tuba.

Patches

01 SHORT + LONG NOTES   Range: A#1–G5

Single notes
Level 1: Staccato
Portato short
Sustained
Level 2: Portato medium and long

---

01 WTU_staccato   Samples: 338   RAM: 21 MB   **Level 1**

Staccato
4 velocity layers
4 Alternations

---

02 WTU_portato_short   Samples: 338   RAM: 21 MB   **Level 1**

Portato, short
4 velocity layers
4 Alternations

---

03 WTU_portato_medium   Samples: 338   RAM: 21 MB   **Level 2**

Portato, medium
4 velocity layers
4 Alternations

---

04 WTU_portato_long   Samples: 344   RAM: 21 MB   **Level 2**

Portato, long
4 velocity layers
Release samples
2 Alternations

---

11 WTU_sus   Samples: 344   RAM: 21 MB   **Level 1**

Sustained
4 velocity layers
Release samples

02 DYNAMICS   Range: A#1–G5

Dynamics
Level 1: Crescendo-diminuendo, 4 and 6 sec.
Fortepiano, sforzato
Level 2: Medium crescendo and diminuendo, 1.5, 2, 3, 4, and 6 sec.
Strong crescendo and diminuendo, 3, 4, and 6 sec.
Sforzatissimo

---

01 WTU_dyn-me_1'5s   **Samples: 167**   **RAM: 10 MB**   **Level 2**

Medium crescendo and diminuendo, 1.5 sec.
2 velocity layers
AB switch: crescendo/diminuendo

---

01 WTU_dyn-me_2s   **Samples: 167**   **RAM: 10 MB**   **Level 2**

Medium crescendo and diminuendo, 2 sec.
2 velocity layers
AB switch: crescendo/diminuendo

---

02 WTU_dyn-me_3s   **Samples: 176**   **RAM: 11 MB**   **Level 2**

Medium crescendo and diminuendo, 3 sec.
2 velocity layers
AB switch: crescendo/diminuendo

---

03 WTU_dyn-me_4s   **Samples: 176**   **RAM: 11 MB**   **Level 2**

Medium crescendo and diminuendo, 4 sec.
2 velocity layers
AB switch: crescendo/diminuendo

---

11 WTU_dyn-str_3s   **Range: A#1–F#5**   **Samples: 88**   **RAM: 5 MB**   **Level 2**

Strong crescendo and diminuendo, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

---

12 WTU_dyn-str_4s   **Range: A#1–F#5**   **Samples: 88**   **RAM: 5 MB**   **Level 2**

Strong crescendo and diminuendo, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

---

13 WTU_dyn-str_6s   **Range: A#1–F#5**   **Samples: 88**   **RAM: 5 MB**   **Level 2**

Strong crescendo and diminuendo, 6 sec.
1 velocity layer
AB switch: crescendo/diminuendo

---

21 WTU_pfp_4s   **Samples: 23**   **RAM: 1 MB**   **Level 1**

Crescendo-diminuendo, 4 sec.
1 velocity layer

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22 WTU_pfp_6s   **Samples: 23**   **RAM: 1 MB**   **Level 1**

Crescendo-diminuendo, 6 sec.
1 velocity layer

31 WTU_fp	**Samples: 43**	**RAM: 2 MB**	**Level 1**

Fortepiano
1 velocity layer
2 Alternations

32 WTU_sfz	**Samples: 44**	**RAM: 2 MB**	**Level 1**

Sforzato
1 velocity layer
2 Alternations

33 WTU_sffz	**Samples: 37**	**RAM: 2 MB**	**Level 2**

Sforzatissimo
1 velocity layer
2 Alternations

03 FLATTER   Range: A#1–G5

Level 1: Flutter tonguing normal and crescendo

01 WTU_flatter	**Samples: 86**	**RAM: 5 MB**	**Level 1**

Flutter tonguing
1 velocity layer
Release samples

02 WTU_flatter_cre	**Samples: 43**	**RAM: 2 MB**	**Level 1**

Flutter tonguing, crescendo
1 velocity layer

10 PERF INTERVAL   Range: A#1–F5

Interval performances
Level 1: Legato
Level 2: Marcato

01 WTU_perf-legato	**Samples: 1062**	**RAM: 66 MB**	**Level 1**

Legato
2 velocity layers
Release samples

02 WTU_perf-marcato	**Samples: 1142**	**RAM: 71 MB**	**Level 2**

Marcato
2 velocity layers
Release samples

11 PERF INTERVAL FAST   Range: A#1–F5

Fast interval performances
Level 1: Legato
Level 2: Marcato

01 WTU_perf-legato_fa   **Samples: 1142 RAM: 71 MB**   **Level 1**

Legato, fast
2 velocity layers
Release samples

02 WTU_perf-marcato_fa   **Samples: 1222 RAM: 76 MB**   **Level 2**

Marcato, fast
2 velocity layers
Release samples

12 PERF TRILL   Range: A#1–F5

Multi interval performances
Level 2: Trills, legato, minor to major 2nd

01 WTU_perf-trill   **Samples: 1902 RAM: 118 MB**   **Level 2**

Performance trills, legato, minor to major 2nd
2 velocity layers
Release samples

13 PERF REPETITION   Range: A#1–F5

Repetition performances
Level 1: Legato slow
Portato
Staccato slow
Level 2: Legato fast
Staccato fast
Dynamics for all repetitions

01 WTU_perf-rep_leg-sl   **Samples: 220   RAM: 13 MB**   **Level 1**

Repetition performances: Legato, slow
2 velocity layers

02 WTU_perf-rep_leg-fa   **Samples: 215   RAM: 13 MB**   **Level 2**

Repetition performances: Legato, fast
2 velocity layers

03 WTU_perf-rep_por   **Samples: 396   RAM: 24 MB**   **Level 1**

Repetition performances: Portato
2 velocity layers

04 WTU_perf-rep_sta-sl	**Samples: 396**	**RAM: 24 MB**	**Level 1**

Repetition performances: Staccato, slow
2 velocity layers

05 WTU_perf-rep_sta-fa	**Samples: 594**	**RAM: 37 MB**	**Level 2**

Repetition performances: Staccato, fast
3 velocity layers

11 WTU_perf-rep_dyn5_leg-sl	**Samples: 220**	**RAM: 13 MB**	**Level 2**

Repetition performances: Legato dynamics, slow, 5 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

12 WTU_perf-rep_dyn5_leg-fa	**Samples: 220**	**RAM: 13 MB**	**Level 2**

Repetition performances: Legato dynamics, fast, 5 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

13 WTU_perf-rep_dyn9_por	**Samples: 396**	**RAM: 24 MB**	**Level 2**

Repetition performances: Portato dynamics, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

14 WTU_perf-rep_dyn9_sta-sl	**Samples: 396**	**RAM: 24 MB**	**Level 2**

Repetition performances: Staccato dynamics, slow, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

15 WTU_perf-rep_dyn9_sta-fa	**Samples: 396**	**RAM: 24 MB**	**Level 2**

Repetition performances: Staccato dynamics, fast, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

14 UPBEAT REPETITION

Upbeat repetitions
Level 2: 1 upbeat, 80–140, 160, and 180 BPM
2 and 3 upbeats, 80–140, 160, 180, and 200 BPM

A Single Upbeat	**Range: A#1–F#5**		

01 WTU_UB-a1_80 (90/100/110/120/130/140/160/180)	**Samples: 66**	**RAM: 4 MB**	**Level 2**

1 upbeat, 80–140, 160, and 180 BPM
3 velocity layers

B Double Upbeats	**Range: A#1–F#5**		
01 WTU_UB-a2_80 (90/100/110/120/130/140/160/180/200)	**Samples: 66**	**RAM: 4 MB**	**Level 2**

2 upbeats, 80–140, 160, 180, and 200 BPM
3 velocity layers

C Triple Upbeats	**Range: A#1–F#5**		
01 WTU_UB-a3_80 (90/100/110/120/130/140/160/180/200)	**Samples: 66**	**RAM: 4 MB**	**Level 2**

3 upbeats, 80–140, 160, 180, and 200 BPM
3 velocity layers

98 RESOURCES

Resources
Level 2: Isolated dynamics repetitions: Legato, portato, and staccato
Single layer long notes

01 Perf Rep dyn	**Range: A#1–F5**		
01 WTU_rep_cre5_leg-1 (2/3/4/5)	**Samples: 22**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, crescendo, 1st to 5th note
1 velocity layer

01 WTU_rep_dim5_leg-1 (2/3/4/5)	**Samples: 22**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, diminuendo, 1st to 5th note
1 velocity layer

02 WTU_rep_cre9_por-1 (2/3/4/5/6/7/8/9)	**Samples: 22**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, crescendo, 1st to 9th note
1 velocity layer

02 WTU_rep_dim9_por-1 (2/3/4/5/6/7/8/9)	**Samples: 22**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, diminuendo, 1st to 9th note
1 velocity layer

03 WTU_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)	**Samples: 22**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, crescendo, 1st to 9th note
1 velocity layer

03 WTU_rep_dim9_sta-1 (2/3/4/5/6/7/8/9)	**Samples: 22**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, diminuendo, 1st to 9th note
1 velocity layer

02 Long Notes - Single Layer	**Range: A#1–G5**		

01 WTU_sus_p	**Samples: 87**	**RAM: 5 MB**	**Level 2**

Sustained, piano
1 velocity layer
Release samples

02 WTU_sus_mf	**Samples: 88**	**RAM: 5 MB**	**Level 2**

Sustained, mezzopiano
1 velocity layer
Release samples

03 WTU_sus_f	**Samples: 88**	**RAM: 5 MB**	**Level 2**

Sustained, forte
1 velocity layer
Release samples

04 WTU_sus_ff	**Samples: 81**	**RAM: 5 MB**	**Level 2**

Sustained, fortissimo
1 velocity layer
Release samples

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

Matrix - LEVEL 1

L1 WTU Articulation Combi   **Samples: 1282 RAM: 80 MB**   **Level 1**

Single note articulations
Staccato, portato short, sustained, crescendo-diminuendo 4 and 6 sec., fortepiano and sforzato, flutter tonguing normal and crescendo

Matrix switches: Horizontal: Keyswitches, C1–E1   Vertical: Modwheel, 2 zones

	C1	C#1	D1	D#1	E1
V1	staccato	sustained	pfp 4s.	fp	flutter
V2	port. short	sustained	pfp 6s.	sfz	flutter cres.

L1 WTU Perf-Legato Speed   **Samples: 1310 RAM: 81 MB**   **Level 1**

Interval performances
Legato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
legato	normal	fast

L1 WTU Perf-Repetitions Combi   **Samples: 1012 RAM: 63 MB**   **Level 1**

Repetition performances
Legato slow
Portato
Staccato slow

Matrix switches: Vertical: Modwheel, 3 zones

	repetitions
V1	legato slow
V2	portato
V3	staccato slow

Matrix - LEVEL 2 A - Advanced

O1 WTU Perf-Universal   **Samples: 2612 RAM: 163 MB**   **Level 2**

Interval performances
Legato normal and fast
Marcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones   Vertical: Modwheel, 2 zones

	H1	H2
legato	normal	fast
marcato	normal	fast

02 WTU Perf-Trill Speed
Samples: 2070 RAM: 129 MB   **Level 2**

Multi interval performances
Legato and trills
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
V1	legato no vib.	trills

03 WTU Short+Long notes - All
Samples: 1527 RAM: 95 MB   **Level 2**

Single notes
Staccato, portato short, medium, and long, sustained

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
V1	staccato	port. short	port.med.	port.long	sustained

Matrix - LEVEL 2 B - Standard

11 WTU Perf-Legato Speed
Samples: 1310 RAM: 81 MB   **Level 2**

Interval performances
Legato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
legato	normal	fast

12 WTU Perf-Marcato Speed
Samples: 1390 RAM: 86 MB   **Level 2**

Interval performances
Marcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
marcato	normal	fast

13 WTU Dynamics - Small
Samples: 643 RAM: 40 MB   **Level 2**

Dynamics
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C1–D1   Vertical: Modwheel, 4 zones

	C1	C#1	D1
dyn.medium	2 sec.	3 sec.	4 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%

14 WTU Dynamics - Large   Samples: 953   RAM: 59 MB   Level 2

Dynamics
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Strong crescendo and diminuendo, 3, 4, and 6 sec.
Crescendo-diminuendo, 4 and 6 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C1–D1   Vertical: Modwheel, 4 zones

	C1	C#1	D1
dyn.medium	2 sec.	3 sec.	4 sec.
dyn.strong	3 sec.	4 sec.	6 sec.
pfp	4 sec.	4 sec.	6 sec.
fp/sfz/sffz	fp	sfz	sffz

15 WTU Flatter   Samples: 129   RAM: 8 MB   Level 2

Flutter tonguing
Normal, crescendo, and normal/crescendo with Cell crossfading

Matrix switches: Horizontal: Keyswitches, C1–D1

	C1	C#1	D1
flutter	normal	crescendo	Cell XF

Matrix - LEVEL 2 C - Repetitions

31 WTU Perf-Repetitions - Combi   Samples: 1821   RAM: 113 MB   Level 2

Repetition performances
Slow and fast legato, portato, slow and fast staccato

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
V1	legato slow	legato fast	portato	staccato slow	staccato fast

32 WTU Perf-Repetitions - Speed   Samples: 1227   RAM: 76 MB   Level 2

Repetition performances
Slow and fast legato, portato, slow staccato
Speed controller

Matrix switches: Horizontal: Speed, 4 zones

	H1	H2	H3	H4
V1	legato slow	legato fast	portato	staccato slow

33 WTU Upbeats a1   Samples: 528   RAM: 33 MB   Level 2

Repetitions: 1 upbeat, 90–140, 160, and 180 BPM

Matrix switches: Horizontal: Keyswitches, C1–G1

	C1	C#1	D1	D#1	E1	F1	F#1	G1
speed/BPM	90	100	110	120	130	140	160	180

34 WTU Upbeats a2   Samples: 594   RAM: 37 MB   Level 2

Repetitions: 2 upbeats, 90–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
speed/BPM	90	100	110	120	130	140	160	180	200

35 WTU Upbeats a3   **Samples: 594**   **RAM: 37 MB**   **Level 2**

Repetitions: 3 upbeats, 90–140, 160, 180, and 200 BPM

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
speed/BPM	90	100	110	120	130	140	160	180	200

36 WTU Upbeats all   **Samples: 1716**   **RAM: 107 MB**   **Level 2**

Repetitions: 1–3 upbeats, 90–140, 160, 180, and 200 BPM

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
1 upbeat	90	100	110	120	130	140	160	180	180
2 upbeats	90	100	110	120	130	140	160	180	200
3 upbeats	90	100	110	120	130	140	160	180	200

Matrix - LEVEL 2 E - Keyswitch Vel

71 WTU Legato - cre5   **Samples: 110**   **RAM: 6 MB**   **Level 2**

Legato notes: Crescendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
velocity	1st	2nd	3rd	4th	5th

72 WTU Portato - cre9   **Samples: 198**   **RAM: 12 MB**   **Level 2**

Portato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

73 WTU Staccato - cre9   **Samples: 198**   **RAM: 12 MB**   **Level 2**

Staccato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

74 WTU Combi - cre9   **Samples: 396**   **RAM: 24 MB**   **Level 2**

Portato and staccato: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

75 WTU Legato - dim5

Samples: 110 **RAM: 6 MB** **Level 2**

Legato notes: Diminuendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
velocity	1st	2nd	3rd	4th	5th

76 WTU Portato - dim9

Samples: 198 **RAM: 12 MB** **Level 2**

Portato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

77 WTU Staccato - dim9

Samples: 198 **RAM: 12 MB** **Level 2**

Staccato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

78 WTU Combi - dim9

Samples: 396 **RAM: 24 MB** **Level 2**

Portato and staccato: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

Presets

WTU VSL Preset Level 1

Samples: 3428 **RAM: 214 MB** **Level 1**

L1 WTU Perf-Legato Speed
L1 WTU Articulation Combi
L1 WTU Perf-Repetitions Combi
Preset keyswitches: C6–D6

WTU VSL Preset Level 2

Samples: 6862 **RAM: 428 MB** **Level 2**

01 WTU Perf-Universal
02 WTU Perf-Trill Speed
L1 WTU Articulation Combi
31 WTU Perf-Repetitions - Combi
74 WTU Combi - cre9
Preset keyswitches: C6–E6

62 Cimbasso

Description

In 19th century Italy the term "cimbasso" described the deepest brass voice, which was performed by several different tuba-like instruments during the century. Giuseppe Verdi, who didn't like the timbre of these wide-bored conical bass instruments of his time, had a contrabass trombone with valves and a bell facing forward made in 1881: the modern cimbasso was born.

In today's orchestras the cimbasso is mainly used to perform the deepest brass voice in some Italian operas. Usually it is played by a tuba player because its mouthpiece is the same as the tuba's.

Range and notation

The cimbasso has a range of F1–F4. Its voice is written in bass clef and is non-transposing, analogous to the 4th trombone.

Sound characteristics

Mellow, warm, soft, powerful, compact, metallic, sustaining, resonant.

The overall sound is surprisingly mellow, clear and rich. It is less metallic and much more mellow than the contrabass trombone, as well as more concise and compact than the tuba.

Combination with other instruments

The cimbasso is ideally suited to playing the fourth trombone part. It blends well with all the other brass instruments and with the contrabassoon.

Patches

01 SHORT + LONG NOTES	**Range: D#1–G4**

Single notes
Level 1: Staccato
Portato medium
Sustained
Level 2: Portato medium, marcato
Portato long, normal and marcato

01 CI_staccato	**Samples: 296**	**RAM: 18 MB**	**Level 1**

Staccato
4 velocity layers
4 Alternations

02 CI_portato_medium	**Samples: 296**	**RAM: 18 MB**	**Level 1**

Portato, short medium
4 velocity layers
4 Alternations

03 CI_portato_medium_marc	**Samples: 148**	**RAM: 9 MB**	**Level 2**

Portato, medium, marcato
2 velocity layers
4 Alternations

04 CI_portato_long	**Samples: 259**	**RAM: 16 MB**	**Level 2**

Portato, long
4 velocity layers
Release samples
2 Alternations

05 CI_portato_long_marc	**Samples: 148**	**RAM: 9 MB**	**Level 2**

Portato, long, marcato
2 velocity layers
Release samples
2 Alternations

11 CI_sus	**Samples: 222**	**RAM: 13 MB**	**Level 1**

Sustained
3 velocity layers
Release samples

02 DYNAMICS   Range: D#1–G4

Dynamics
Level 1: Fortepiano, sforzato
Level 2: Light crescendo and diminuendo, 1, 1.5, and 2 sec.
Medium crescendo and diminuendo, 2, 3, 4, and 6 sec.
Strong crescendo and diminuendo, 2, 3, and 4 sec.
Sforzatissimo

01 Cl_dyn-li_1s	**Samples: 222**	**RAM: 13 MB**	**Level 2**

Light crescendo and diminuendo, 1 sec.
3 velocity layers
AB switch: crescendo/diminuendo

02 Cl_dyn-li_1'5s	**Samples: 222**	**RAM: 13 MB**	**Level 2**

Light crescendo and diminuendo, 1.5 sec.
3 velocity layers
AB switch: crescendo/diminuendo

03 Cl_dyn-li_2s	**Samples: 222**	**RAM: 13 MB**	**Level 2**

Light crescendo and diminuendo, 2 sec.
3 velocity layers
AB switch: crescendo/diminuendo

11 Cl_dyn-me_2s	**Samples: 148**	**RAM: 9 MB**	**Level 2**

Medium crescendo and diminuendo, 2 sec.
2 velocity layers
AB switch: crescendo/diminuendo

12 Cl_dyn-me_3s	**Samples: 148**	**RAM: 9 MB**	**Level 2**

Medium crescendo and diminuendo, 3 sec.
2 velocity layers
AB switch: crescendo/diminuendo

13 Cl_dyn-me_4s	**Samples: 148**	**RAM: 9 MB**	**Level 2**

Medium crescendo and diminuendo, 4 sec.
2 velocity layers
AB switch: crescendo/diminuendo

14 Cl_dyn-me_6s	**Samples: 148**	**RAM: 9 MB**	**Level 2**

Medium crescendo and diminuendo, 6 sec.
2 velocity layers
AB switch: crescendo/diminuendo

21 Cl_dyn-str_2s	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Strong crescendo and diminuendo, 2 sec.
1 velocity layer
AB switch: crescendo/diminuendo

| **22 Cl_dyn-str_3s** | **Samples: 74** | **RAM: 4 MB** | **Level 2** |

Strong crescendo and diminuendo, 3 sec.
1 velocity layer
AB switch: crescendo/diminuendo

| **23 Cl_dyn-str_4s** | **Samples: 74** | **RAM: 4 MB** | **Level 2** |

Strong crescendo and diminuendo, 4 sec.
1 velocity layer
AB switch: crescendo/diminuendo

| **31 Cl_fp** | **Samples: 37** | **RAM: 2 MB** | **Level 1** |

Fortepiano
1 velocity layer
2 Alternations

| **32 Cl_sfz** | **Samples: 37** | **RAM: 2 MB** | **Level 1** |

Sforzato
1 velocity layer
2 Alternations

| **33 Cl_sffz** | **Samples: 37** | **RAM: 2 MB** | **Level 2** |

Sforzatissimo
1 velocity layer
2 Alternations

03 FLATTER   Range: F1–G4

Level 1: Flutter tonguing normal and crescendo

| **01 Cl_flatter** | **Samples: 70** | **RAM: 4 MB** | **Level 1** |

Flutter tonguing
1 velocity layer
Release samples

| **02 Cl_flatter_cre** | **Samples: 35** | **RAM: 2 MB** | **Level 1** |

Flutter tonguing, crescendo
1 velocity layer

10 PERF INTERVAL   Range: D#1–G4

Interval performances
Level 1: Legato
Level 2: Legato with sustain crossfading
Marcato

| **01 Cl_perf-legato** | **Samples: 868** | **RAM: 54 MB** | **Level 1** |

Legato
2 velocity layers
Release samples

02 Cl_perf-legato_sus   **Samples: 868**   **RAM: 54 MB**   **Level 2**

Legato
Sustain crossfading
2 velocity layers
Release samples

04 Cl_perf-marcato   **Samples: 966**   **RAM: 60 MB**   **Level 2**

Marcato
2 velocity layers
Release samples

11 PERF INTERVAL FAST   Range: D#1–G4

Fast interval performances
Level 1: Legato
Level 2: Marcato

01 Cl_perf-legato_fa   **Samples: 940**   **RAM: 58 MB**   **Level 1**

Legato, fast
2 velocity layers
Release samples

02 Cl_perf-marcato_fa   **Samples: 1034**   **RAM: 64 MB**   **Level 2**

Marcato, fast
2 velocity layers
Release samples

12 PERF TRILL   Range: D#1–G4

Multi interval performances
Level 2: Trills, legato, minor to major 2nd

01 Cl_perf-trill   **Samples: 1592**   **RAM: 99 MB**   **Level 2**

Performance trills, legato, minor to major 2nd
2 velocity layers
Release samples

13 PERF REPETITION   Range: D#1–D#4

Repetition performances
Level 1: Portato
Staccato fast
Level 2: Staccato slow
Dynamics for all repetitions

01 Cl_perf-rep_por   **Range: D#1–G4**   **Samples: 342**   **RAM: 21 MB**   **Level 1**

Repetition performances: Portato
2 velocity layers

02 Cl_perf-rep_sta-sl   Samples: 306   RAM: 19 MB   Level 2

Repetition performances: Staccato, slow
2 velocity layers

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03 Cl_perf-rep_sta-fa   Samples: 306   RAM: 19 MB   Level 1

Repetition performances: Staccato, fast
2 velocity layers

---

11 Cl_perf-rep_dyn5_por   Range: D#1–G4   Samples: 190   RAM: 11 MB   Level 2

Repetition performances: Portato dynamics, 5 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

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12 Cl_perf-rep_dyn9_sta-sl   Samples: 306   RAM: 19 MB   Level 2

Repetition performances: Staccato dynamics, slow, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

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13 Cl_perf-rep_dyn9_sta-fa   Samples: 306   RAM: 19 MB   Level 2

Repetition performances: Staccato dynamics, fast, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

14 UPBEAT REPETITION

Repetitions
Level 2: 1–3 upbeats, 80–150 BPM

A Single Upbeat   Range: D#1–G4

01 Cl_UB-a1_80 (90/100/110/120/130/140/150)   Samples: 74   RAM: 4 MB   Level 2

1 upbeat, 80–150 BPM
2 velocity layers

B Double Upbeats   Range: D#1–G4

01 Cl_UB-a2_80 (90/100/110/120/130/140/150)   Samples: 74   RAM: 4 MB   Level 2

2 upbeats, 80–150 BPM
2 velocity layers

C Triple Upbeats   Range: D#1–G4

01 Cl_UB-a3_80 (90/100/110/120/130/140/150)   Samples: 74   RAM: 4 MB   Level 2

3 upbeats, 80–150 BPM
2 velocity layers

15 GRACE NOTES   Range: D#1–G4

Phrases
Level 2: Grace notes
Minor and major 2nd
Up and down
Mapped to target note

01 Cl_grace-1	**Samples: 222**	**RAM: 13 MB**	**Level 2**

Grace notes, minor 2nd
2 velocity layers
Release samples
AB switch: up/down

02 Cl_grace-2	**Samples: 218**	**RAM: 13 MB**	**Level 2**

Grace notes, major 2nd
2 velocity layers
Release samples
AB switch: up/down

98 RESOURCES

Resources
Level 2: Isolated dynamics repetitions: Portato, staccato
Single layer long notes

01 Perf Rep dyn

01 Cl_rep_cre5_por-1 (2/3/4/5)	**Range: D#1–G4**	**Samples: 19**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, crescendo, 1st to 5th note
1 velocity layer

01 Cl_rep_dim5_por-1 (2/3/4/5)	**Range: D#1–G4**	**Samples: 19**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, diminuendo, 1st to 5th note
1 velocity layer

02 Cl_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)	**Range: D#1–D#4**	**Samples: 17**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, crescendo, 1st to 9th note
1 velocity layer

02 Cl_rep_dim9_sta-1 (2/3/4/5/6/7/8/9)	**Range: D#1–D#4**	**Samples: 17**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, diminuendo, 1st to 9th note
1 velocity layer

02 Long Notes - Single Layer   Range: D#1–G4

01 Cl_sus_p_noVib	**Samples: 74**	**RAM: 4 MB**	**Level 2**

Sustained, piano, without vibrato
1 velocity layer
Release samples

02 CI_sus_mf_noVib **Samples: 74** **RAM: 4 MB** **Level 2**

Sustained, mezzoforte, without vibrato
1 velocity layer
Release samples

03 CI_sus_f_noVib **Samples: 74** **RAM: 4 MB** **Level 2**

Sustained, forte, without vibrato
1 velocity layer
Release samples

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

Matrix - LEVEL 1

L1 CI Articulation Combi   Samples: 1254 RAM: 78 MB   Level 1

Single note articulations
Staccato, portato medium, sustained, medium crescendo and diminuendo 2 and 4 sec., fortepiano and sforzato, flutter tonguing

Matrix switches: Horizontal: Keyswitches, C6–E6   Vertical: Modwheel, 2 zones

	C6	C#6	D6	D#6	E6
V1	staccato	sustained	dyn.med. 2s.	fp	flutter
V2	port. medium	sustained	dyn.med. 4s.	sfz	flutter

L1 CI Perf-Legato Speed   Samples: 1080 RAM: 67 MB   Level 1

Interval performances
Legato with sustain crossfading, normal, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	sus-XF	normal	fast

L1 CI Perf-Repetitions Combi   Samples: 648   RAM: 40 MB   Level 1

Repetition performances
Portato
Staccato slow

Matrix switches: Vertical: Modwheel, 2 zones

	repetitions
V1	portato
V2	staccato slow

Matrix - LEVEL 2 A - Advanced

01 CI Perf-Universal   Samples: 2184 RAM: 136 MB   Level 2

Interval performances
Legato with sustain crossfading, normal, and fast
Marcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones   Vertical: Modwheel, 2 zones

	H1	H2	H3
legato	sus-XF	normal	fast
marcato	normal	normal	fast

02 CI Perf-Trill Speed

Samples: 1732 RAM: 108 MB **Level 2**

Multi interval performances
Legato and trills
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
V1	legato	trills

03 CI Short+Long notes

Samples: 962   RAM: 60 MB **Level 2**

Single notes
Staccato, portato medium, portato long, and sustained

Matrix switches: Horizontal: Keyswitches, C6–D#6

	C6	C#6	D6	D#6
V1	staccato	port. med.	port.long	sustained

Matrix - LEVEL 2 B - Standard

11 CI Perf-Legato Speed

Samples: 1080 RAM: 67 MB **Level 2**

Interval performances
Legato with sustain crossfading, normal, and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
legato	sus-XF	normal	fast

12 CI Perf-Marcato Speed

Samples: 1178 RAM: 73 MB **Level 2**

Interval performances^mMarcato normal and fast
Speed controller

Matrix switches: Horizontal: Speed, 2 zones

	H1	H2
marcato	normal	fast

13 CI Dynamics - Small

Samples: 555   RAM: 34 MB **Level 2**

Dynamics
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C6–D6   Vertical: Modwheel, 4 zones

	C6	C#6	D6
dyn.medium	2 sec.	3 sec.	4 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%

14 CI Dynamics - Large

Samples: 1443 RAM: 90 MB   **Level 2**

Dynamics
Light crescendo and diminuendo, 1, 1.5, and 2 sec.
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Strong crescendo and diminuendo, 2, 3, and 4 sec.
Fortepiano, sforzato, sforzatissimo

Matrix switches: Horizontal: Keyswitches, C6–D6   Vertical: Modwheel, 4 zones

	C6	C#6	D6
dyn.light	1 sec.	1.5 sec.	2 sec.
dyn.medium	2 sec.	3 sec.	4 sec.
dyn.strong	2 sec.	3 sec.	4 sec.
fp/sfz/sffz	fp	sfz	sffz

15 CI Flatter

Samples: 105 RAM: 6 MB   **Level 2**

Flutter tonguing
Normal, crescendo, and normal/crescendo with Cell crossfading

Matrix switches: Horizontal: Keyswitches, C6–D6

	C6	C#6	D6
flutter	normal	crescendo	Cell XF

Matrix - LEVEL 2 C - Repetitions

31 CI Perf-Repetitions - Combi

Samples: 954 RAM: 59 MB   **Level 2**

Repetition performances
Portato, and staccato slow and fast

Matrix switches: Horizontal: Keyswitches, C6–D6

	C6	C#6	D6
V1	portato	staccato slow	staccato fast

32 CI Perf-Repetitions - Speed

Samples: 954 RAM: 59 MB   **Level 2**

Repetition performances
Portato, and staccato slow and fast
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
V1	portato	staccato slow	staccato fast

33 CI Upbeats a1

Samples: 592 RAM: 37 MB   **Level 2**

Repetitions: 1 upbeat, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

34 CI Upbeats a2

Samples: 592 RAM: 37 MB   **Level 2**

Repetitions: 2 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

35 CI Upbeats a3   **Samples: 586   RAM: 36 MB**   **Level 2**

Repetitions: 3 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6

	C6	C#6	D6	D#6	E6	F6	F#6	G6
speed/BPM	80	90	100	110	120	130	140	150

36 CI Upbeats all   **Samples: 1770 RAM: 110 MB**   **Level 2**

Repetitions: 1–3 upbeats, 80–150 BPM

Matrix switches: Horizontal: Keyswitches, C6–G6   Vertical: Modwheel, 3 zones

	C6	C#6	D6	D#6	E6	F6	F#6	G6
1 upbeat	80	90	100	110	120	130	140	150
2 upbeats	80	90	100	110	120	130	140	150
3 upbeats	80	90	100	110	120	130	140	150

Matrix - LEVEL 2 D - Scale+Phrase

41 CI Grace notes - All   **Samples: 366   RAM: 22 MB**   **Level 2**

Grace notes, minor and major 2nd
AB switch up/down

Matrix switches: Horizontal: Keyswitches, C6–C#6

	C6	C#6
interval	min. 2nd	maj. 2nd

Matrix - LEVEL 2 E - Keyswitch Vel

71 CI Portato - cre5   **Samples: 95   RAM: 5 MB**   **Level 2**

Portato notes: Crescendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–E6

	C6	C#6	D6	D#6	E6
velocity	1st	2nd	3rd	4th	5th

72 CI Staccato - cre9   **Samples: 153   RAM: 9 MB**   **Level 2**

Staccato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–G#6

	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

73 CI Portato - dim5   **Samples: 95   RAM: 5 MB**   **Level 2**

Portato notes: Diminuendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–E6

	C6	C#6	D6	D#6	E6
velocity	1st	2nd	3rd	4th	5th

74 CI Staccato - dim9 **Samples: 153 RAM: 9 MB** **Level 2**

Staccato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C6–G#6

	C6	C#6	D6	D#6	E6	F6	F#6	G6	G#6
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

Presets

CI VSL Preset Level 1 **Samples: 2834 RAM: 177 MB** **Level 1**

L1 CI Perf-Legato Speed
L1 CI Articulation Combi
L1 CI Perf-Repetitions Combi
Preset keyswitches: C7–D7

CI VSL Preset Level 2 **Samples: 5261 RAM: 328 MB** **Level 2**

01 CI Perf-Universal
02 CI Perf-Trill Speed
L1 CI Articulation Combi
31 CI Perf-Repetitions - Combi
72 CI Staccato - cre9
Preset keyswitches: C7–E7

65 Horns - a8

Patches

01 SHORT + LONG NOTES — Range: A#1–E5

Single notes
Level 1: Staccato
Portato short
Sustained
Level 2: Portato medium
Sustained, blared

01 HO-8_staccato		**Samples: 120**	**RAM: 7 MB**	**Level 1**

Staccato
4 velocity layers
2 Alternations

02 HO-8_portato_short		**Samples: 120**	**RAM: 7 MB**	**Level 1**

Portato, short
4 velocity layers
2 Alternations

03 HO-8_portato_medium		**Samples: 120**	**RAM: 7 MB**	**Level 2**

Portato, medium
4 velocity layers
2 Alternations

21 HO-8_sus	**Range: A#1–D5**	**Samples: 152**	**RAM: 9 MB**	**Level 1**

Sustained
4 velocity layers
Release samples

22 HO-8_sus_blare	**Range: A#1–D5**	**Samples: 19**	**RAM: 1 MB**	**Level 2**

Sustained, blared
1 velocity layer

02 DYNAMICS   Range: A#1–E5

Dynamics
Level 1: Crescendo-diminuendo, 6 sec.
Fortepiano, sforzato
Level 2: Medium crescendo and diminuendo, 2, 3, and 5 sec.
Sforzatissimo

01 HO-8_dyn-me_2s		Samples: 80	RAM: 5 MB	Level 2

Medium crescendo and diminuendo, 2 sec.
2 velocity layers
AB switch: crescendo/diminuendo

02 HO-8_dyn-me_3s		Samples: 76	RAM: 4 MB	Level 2

Medium crescendo and diminuendo, 3 sec.
2 velocity layers
AB switch: crescendo/diminuendo

03 HO-8_dyn-me_5s		Samples: 76	RAM: 4 MB	Level 2

Medium crescendo and diminuendo, 5 sec.
2 velocity layers
AB switch: crescendo/diminuendo

11 HO-8_pfp_6s	Range: A#1–D5	Samples: 38	RAM: 2 MB	Level 1

Crescendo-diminuendo, 6 sec.
2 velocity layers

21 HO-8_fp		Samples: 20	RAM: 1 MB	Level 1

Fortepiano
1 velocity layer

22 HO-8_sfz		Samples: 20	RAM: 1 MB	Level 1

Sforzato
1 velocity layer

23 HO-8_sffz		Samples: 20	RAM: 1 MB	Level 2

Sforzatissimo
1 velocity layer

03 FLATTER + TRILLS   Range: A#1–D5

Flutter tonguing, trills, and chords
Level 1: Flutter tonguing, normal and crescendo
Trills, minor and major 2nd
Level 2: Minor and major chords

01 HO-8_flatter		Samples: 38	RAM: 2 MB	Level 1

Flutter tonguing
1 velocity layer
Release samples

02 HO-8_flatter_cre		**Samples: 19**	**RAM: 1 MB**	**Level 1**

Flutter tonguing, crescendo
1 velocity layer

11 HO-8_trill_1		**Samples: 74**	**RAM: 4 MB**	**Level 1**

Trills, minor 2nd
2 velocity layers
Release samples

12 HO-8_trill_2		**Samples: 74**	**RAM: 4 MB**	**Level 1**

Trills, major 2nd
2 velocity layers
Release samples

21 HO-8_chord-major	**Range: A#1–D4**	**Samples: 26**	**RAM: 1 MB**	**Level 2**

Chords, major
1 velocity layer
Release samples

22 HO-8_chord-minor	**Range: A#1–D4**	**Samples: 26**	**RAM: 1 MB**	**Level 2**

Chords, minor
1 velocity layer
Release samples

10 PERF INTERVAL   Range: A#1–D5

Interval performances
Level 1: Legato

01 HO-8_perf-legato		**Samples: 930**	**RAM: 58 MB**	**Level 1**

Legato
2 velocity layers
Release samples

11 PERF REPETITION   Range: A#1–E5

Repetition performances
Level 1: Legato
Portato
Staccato
Level 2: Dynamics for all repetitions

01 HO-8_perf-rep_leg		**Samples: 200**	**RAM: 12 MB**	**Level 1**

Repetition performances: Legato
2 velocity layers

02 HO-8_perf-rep_por		**Samples: 360**	**RAM: 22 MB**	**Level 1**

Repetition performances: Portato
2 velocity layers

| **03 HO-8_perf-rep_sta** | **Samples: 360** | **RAM: 22 MB** | **Level 1** |

Repetition performances: Staccato
2 velocity layers

| **21 HO-8_perf-rep_dyn5_leg** | **Samples: 200** | **RAM: 12 MB** | **Level 2** |

Repetition performances: Legato dynamics, 5 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

| **22 HO-8_perf-rep_dyn9_por** | **Samples: 360** | **RAM: 22 MB** | **Level 2** |

Repetition performances: Portato dynamics, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

| **23 HO-8_perf-rep_dyn9_sta** | **Samples: 360** | **RAM: 22 MB** | **Level 2** |

Repetition performances: Staccato dynamics, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

12 FAST REPETITION   Range: A#1–E5

Fast repetitions
Level 2: Staccato, 9 repetitions, 140 to 180 BPM
Normal and dynamics

| **01 HO-8_fast-rep_140 (150/160/170/180)** | **Samples: 80** | **RAM: 5 MB** | **Level 2** |

Fast repetitions: 140–180 BPM
2 velocity layers
Release samples

| **11 HO-8_fast-rep_140_dyn (150/160/170/180)** | **Samples: 40** | **RAM: 2 MB** | **Level 2** |

Fast repetitions: Dynamics, 140–180 BPM
1 velocity layer
AB switch: crescendo/diminuendo

13 UPBEAT REPETITION

Repetitions
Level 2: 1–3 upbeats, 80–140, and 160 BPM

A Single Upbeat	**Range: A#1–E5**			

01 HO-8_UB-a1_80 (90/100/110/120/130/140/160)	**Samples: 40**	**RAM: 2 MB**	**Level 2**

1 upbeat, 80–140, and 160 BPM
2 velocity layers

B Double Upbeats	**Range: A#1–E5**			

01 HO-8_UB-a2_80 (90/100/110/120/130/140/160)	**Samples: 40**	**RAM: 2 MB**	**Level 2**

2 upbeats, 80–140, and 160 BPM
2 velocity layers

C Triple Upbeats	**Range: A#1–E5**			

01 HO-8_UB-a3_80 (90/100/110/120/130/140/160)	**Samples: 40**	**RAM: 2 MB**	**Level 2**

3 upbeats, 80–140, and 160 BPM
2 velocity layers

14 GLISSANDI   Range: A#1–D5

Interval performances/Phrases
Level 2: Performance glissandos, normal and fast, minor 3rd to octave
Fixed glissandos, 4th to octave, up and down
Slow octave glissando
Please note that fixed glissandos have different up and down ranges.

01 HO-8_perf-gliss	**Samples: 352**	**RAM: 22 MB**	**Level 2**

Glissando, minor 3rd to octave
1 velocity layer
Release samples

02 HO-8_perf-gliss_speed	**Samples: 264**	**RAM: 16 MB**	**Level 2**

Glissando, fast, minor 3rd to octave
1 velocity layer
Release samples

11 HO-8_gliss-5	**Samples: 34**	**RAM: 2 MB**	**Level 2**

Glissando, 4th
1 velocity layer
AB switch: up/down

12 HO-8_gliss-6	**Samples: 32**	**RAM: 2 MB**	**Level 2**

Glissando, diminished 5th
1 velocity layer
AB switch: up/down

13 HO-8_gliss-7	**Samples: 32**	**RAM: 2 MB**	**Level 2**

Glissando, 5th
1 velocity layer
AB switch: up/down

14 HO-8_gliss-8	**Samples: 30**	**RAM: 1 MB**	**Level 2**

Glissando, minor 6th
1 velocity layer
AB switch: up/down

15 HO-8_gliss-9	**Samples: 30**	**RAM: 1 MB**	**Level 2**

Glissando, major 6th
1 velocity layer
AB switch: up/down

16 HO-8_gliss-10	**Samples: 28**	**RAM: 1 MB**	**Level 2**

Glissando, minor 7th
1 velocity layer
AB switch: up/down

17 HO-8_gliss-11	**Samples: 28**	**RAM: 1 MB**	**Level 2**

Glissando, major 7th
1 velocity layer
AB switch: up/down

18 HO-8_gliss-12	**Samples: 28**	**RAM: 1 MB**	**Level 2**

Glissando, octave
1 velocity layer
AB switch: up/down

19 HO-8_gliss-12-fast	**Samples: 26**	**RAM: 1 MB**	**Level 2**

Glissando, fast, octave
1 velocity layer
AB switch: up/down

98 RESOURCES

Resources
Level 2: Isolated dynamics repetitions: Legato, portato, and staccato
Single layer long notes

01 Perf Rep dyn   Range: A#1–E5

01 HO-8_rep_cre5_leg-1 (2/3/4/5)	**Samples: 20**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, crescendo, 1st to 5th note

1 velocity layer

01 HO-8_rep_dim5_leg-1 (2/3/4/5)	**Samples: 20**	**RAM: 1 MB**	**Level 2**

Extracted repetitions
Legato, diminuendo, 1st to 5th note
1 velocity layer

02 HO-8_rep_cre9_por-1 (2/3/4/5/6/7/8/9)	**Samples: 20**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, crescendo, 1st to 9th note
1 velocity layer

02 HO-8_rep_dim9_por-1 (2/3/4/5/6/7/8/9)	**Samples: 20**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Portato, diminuendo, 1st to 9th note
1 velocity layer

03 HO-8_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)	**Samples: 20**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, crescendo, 1st to 9th note
1 velocity layer

03 HO-8_rep_dim9_sta-1 (2/3/4/5/6/7/8/9)	**Samples: 20**	**RAM: 1 MB**	**Level 2**

Extracted repetitions: Staccato, diminuendo, 1st to 9th note
1 velocity layer

02 Long Notes - Single Layer	**Range: A#1–D5**	

01 HO-8_sus_p_noVib	**Samples: 38**	**RAM: 2 MB**	**Level 2**

Sustained, piano, without vibrato
1 velocity layer
Release samples

02 HO-8_sus_mp_noVib	**Samples: 19**	**RAM: 1 MB**	**Level 2**

Sustained, mezzopiano, without vibrato
1 velocity layer
Release samples

03 HO-8_sus_f_noVib	**Samples: 19**	**RAM: 1 MB**	**Level 2**

Sustained, forte, without vibrato
1 velocity layer
Release samples

04 HO-8_sus_ff_noVib	**Samples: 19**	**RAM: 1 MB**	**Level 2**

Sustained, fortissimo, without vibrato
1 velocity layer
Release samples

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

Matrix - LEVEL 1

L1 HO-8 Articulation Combi   Samples: 694   RAM: 43 MB   Level 1

Single note articulations
Staccato, portato short, sustained normal and blared, crescendo-diminuendo 6 sec., fortepiano and sforzato, flutter tonguing normal and crescendo, trills half and whole tone

Matrix switches: Horizontal: Keyswitches, C1–F1   Vertical: Modwheel, 2 zones

	C1	C#1	D1	D#1	E1	F1
V1	stac	sus. normal	pfp 6s.	fp	flutter	trill half
V2	port. short	sus. blared	pfp 6s.	sfz	flutter cres.	trill whole

L1 HO-8 Perf-Legato   Samples: 930   RAM: 58 MB   Level 1

Interval performances
Legato

L1 HO-8 Perf-Repetitions Com   Samples: 920   RAM: 57 MB   Level 1

Repetition performances
Legato
Portato
Staccato

Matrix switches: Vertical: Modwheel, 3 zones

	repetitions
V1	legato
V2	portato
V3	staccato

Matrix - LEVEL 2 B - Standard

11 HO-8 Perf-Legato   Samples: 930   RAM: 58 MB   Level 2

Interval performances
Legato

12 HO-8 Short + Long notes   Samples: 531   RAM: 33 MB   Level 2

Single notes
Staccato, portato short, and medium, and sustained

Matrix switches: Horizontal: Keyswitches, C1–D#1

	C1	C#1	D1	D#1
V1	staccato	port. short	port.medium	sustained

13 HO-8 Dynamics
Samples: 330 **RAM: 20 MB** **Level 2**

Dynamics
Medium crescendo and diminuendo, 2, 3, and 5 sec.
Fortepiano, sforzato, sforzatissimo
Crescendo-diminuendo, 6 sec.

Matrix switches: Horizontal: Keyswitches, C1–D1   Vertical: Modwheel, 5 zones

	C1	C#1	D1
dyn.medium	2 sec.	3 sec.	5 sec.
fp	%	%	%
sfz	%	%	%
sffz	%	%	%
pfp	6 sec.	6 sec.	6 sec.

14 HO-8 Flatter
Samples: 57 **RAM: 3 MB** **Level 2**

Flutter tonguing
Normal, crescendo, and normal/crescendo with Cell crossfading

Matrix switches: Horizontal: Keyswitches, C1–D1

	C1	C#1	D1
flutter	normal	crescendo	Cell XF

15 HO-8 Trills - normal
Samples: 148 **RAM: 9 MB** **Level 2**

Trills, minor and major 2nd

Matrix switches: Vertical: Modwheel, 2 zones

	trills
V1	min. 2nd
V2	maj. 2nd

16 HO-8 Chords
Samples: 52 **RAM: 3 MB** **Level 2**

Chords, major and minor

Matrix switches: Vertical: Modwheel, 2 zones

	chords
V1	major
V2	minor

Matrix - LEVEL 2 C - Repetitions

31 HO-8 Perf-Repetitions - Combi
Samples: 920 **RAM: 57 MB** **Level 2**

Repetition performances
Legato, portato, and staccato

Matrix switches: Horizontal: Keyswitches, C1–D1

	C1	C#1	D1
V1	legato	portato	staccato

32 HO-8 Perf-Repetitions - Speed   **Samples: 920** **RAM: 57 MB**   **Level 2**

Repetition performances
Legato, portato, and staccato
Speed controller

Matrix switches: Horizontal: Speed, 3 zones

	H1	H2	H3
V1	legato	portato	staccato

33 HO-8 Fast-Repetitions   **Samples: 240** **RAM: 15 MB**   **Level 2**

Fast repetitions: Staccato, 140–180 BPM

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
speed/BPM	140	150	160	170	180

34 HO-8 Upbeats a1   **Samples: 312** **RAM: 19 MB**   **Level 2**

Repetitions: 1 upbeat, 80–140, and 160 BPM

Matrix switches: Horizontal: Keyswitches, C1–G1

	C1	C#1	D1	D#1	E1	F1	F#1	G1
speed/BPM	80	90	100	110	120	130	140	160

35 HO-8 Upbeats a2   **Samples: 312** **RAM: 19 MB**   **Level 2**

Repetitions: 2 upbeats, 80–140, and 160 BPM

Matrix switches: Horizontal: Keyswitches, C1–G1

	C1	C#1	D1	D#1	E1	F1	F#1	G1
speed/BPM	80	90	100	110	120	130	140	160

36 HO-8 Upbeats a3   **Samples: 312** **RAM: 19 MB**   **Level 2**

Repetitions: 3 upbeats, 80–140, and 160 BPM

Matrix switches: Horizontal: Keyswitches, C1–G1

	C1	C#1	D1	D#1	E1	F1	F#1	G1
speed/BPM	80	90	100	110	120	130	140	160

37 HO-8 Upbeats all   **Samples: 936** **RAM: 58 MB**   **Level 2**

Repetitions: 1–3 upbeats, 80–140, and 160 BPM

Matrix switches: Horizontal: Keyswitches, C1–G1   Vertical: Modwheel, 3 zones

	C1	C#1	D1	D#1	E1	F1	F#1	G1
1 upbeat	80	90	100	110	120	130	140	160
2 upbeats	80	90	100	110	120	130	140	160
3 upbeats	80	90	100	110	120	130	140	160

Matrix - LEVEL 2 E - Keyswitch Vel

71 HO-8 Legato - cre5   Samples: 100   RAM: 6 MB   Level 2

Legato notes: Crescendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
velocity	1st	2nd	3rd	4th	5th

72 HO-8 Portato - cre9   Samples: 180   RAM: 11 MB   Level 2

Portato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

73 HO-8 Staccato - cre9   Samples: 180   RAM: 11 MB   Level 2

Staccato notes: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

74 HO-8 Combi - cre9   Samples: 360   RAM: 22 MB   Level 2

Portato and staccato: Crescendo, keyswitch velocity
Keyswitches control 9 dynamic steps

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

75 HO-8 Legato - dim5   Samples: 100   RAM: 6 MB   Level 2

Legato notes: Diminuendo, keyswitch velocity
Keyswitches control 5 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–E1

	C1	C#1	D1	D#1	E1
velocity	1st	2nd	3rd	4th	5th

76 HO-8 Portato - dim9   Samples: 180   RAM: 11 MB   Level 2

Portato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

77 HO-8 Staccato - dim9 **Samples: 180** **RAM: 11 MB** **Level 2**

Staccato notes: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

Matrix switches: Horizontal: Keyswitches, C1–G#1

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
velocity	1st	2nd	3rd	4th	5th	6th	7th	8th	9th

78 HO-8 Combi - dim9 **Samples: 360** **RAM: 22 MB** **Level 2**

Portato and staccato: Diminuendo, keyswitch velocity
Keyswitches control 9 dynamic steps

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

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1
portato	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
staccato	1st	%	%	%	%	%	%	%	%

Presets

HO-8 VSL Preset Level 1 **Samples: 2506** **RAM: 156 MB** **Level 1**

L1 HO-8 Perf-Legato Speed
L1 HO-8 Articulation Combi
L1 HO-8 Perf-Repetitions Combi
Preset keyswitches: C6–D6

HO-8 VSL Preset Level 2 **Samples: 2866** **RAM: 179 MB** **Level 2**

01 HO-8 Perf-Legato
01 HO-8 Perf-Legato
L1 HO-8 Articulation Combi
31 HO-8 Perf-Repetitions - Combi
74 HO-8 Combi - cre9
Preset keyswitches: C6–E6
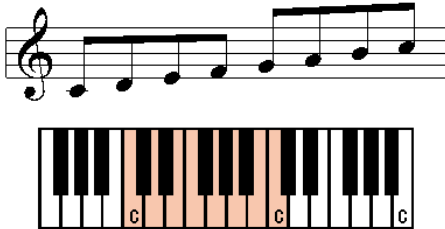
Appendix 1 – Scale Layouts and Ranges
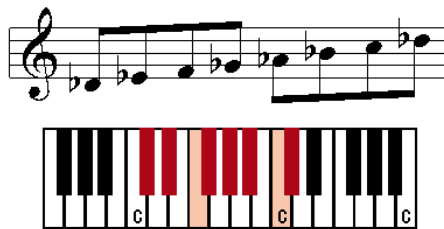
In the following, you will find notations and keyboard layout graphics for major scale runs, as well as a list of playing ranges for the piccolo trumpet's runs.

Scale runs - major
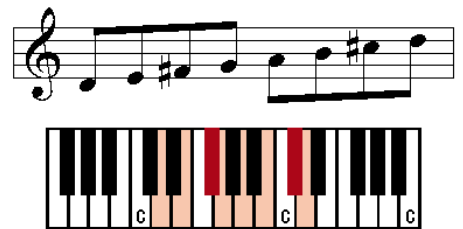
C major
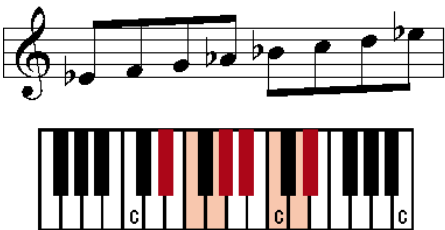
C#/Db major
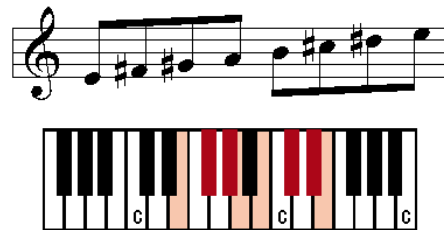
D major
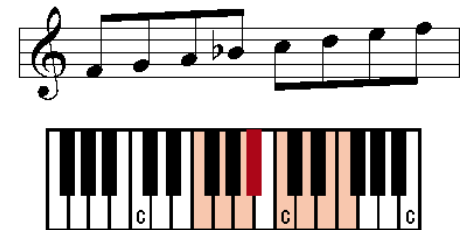
D#/Eb major
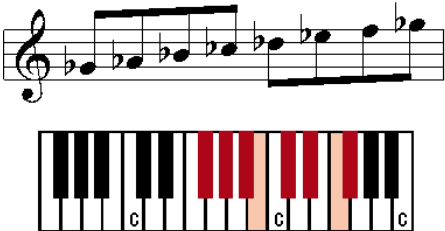
E major
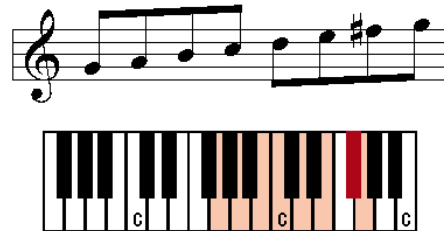
F major
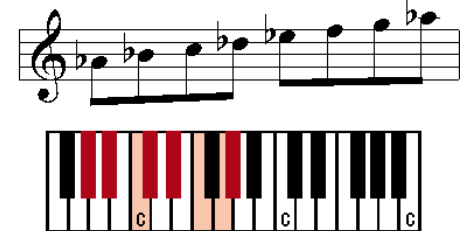
F#/Gb major
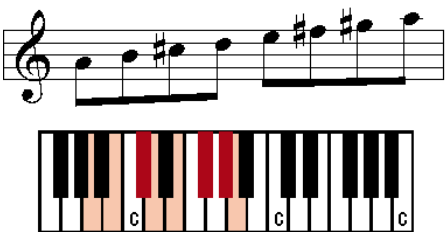
G major
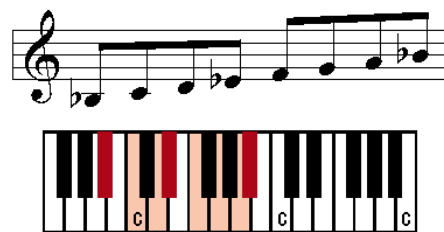
G#/Ab major
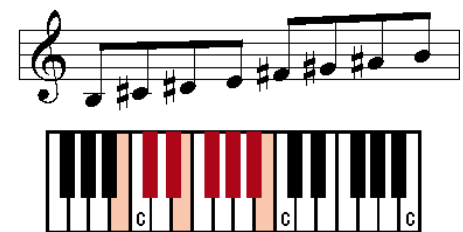
A major

A#/Bb major

B major

Piccolo Trumpet scale ranges

Octave runs

Legato major	play range
01 PTr_run-leg_C-ma	D4–D6
02 PTr_run-leg_C#-ma	D#4–D#6
03 PTr_run-leg_D-ma	D4–C#6
04 PTr_run-leg_D#-ma	D#4–D6
05 PTr_run-leg_E-ma	C#4–C#6
06 PTr_run-leg_F-ma	D4–D6
07 PTr_run-leg_F#-ma	C#4–C#6
08 PTr_run-leg_G-ma	D4–D6
09 PTr_run-leg_G#-ma	C#4–C#6
10 PTr_run-leg_A-ma	D4–D6
11 PTr_run-leg_A#-ma	D4–C6
12 PTr_run-leg_B-ma	D#4–D#6

Appendix 2 – Vienna Instruments PRO II Matrices and Presets

Introduction

Update Installation – DVD Collections

All new VI PRO 2 Presets and Matrices are installed by installing the Library Updates, available in your User Area www.vsl.co.at/user.

Make sure that you have installed the latest version of Vienna Instruments PRO 2 and launch the Directory Manager.

WIN: "Start" button => "All programs" => "Vienna Instruments PRO"

OS X: "Applications" => "Vienna Instruments PRO"

Drag your downloaded Library Update .zip files on top of the sample content folder list in the Directory Manager; there is no need to unpack them first. It is also possible to take more than one .zip, as they will be installed one after the other. You will be guided through the update installation.

> **Attention:** Please make sure to have all the Vienna Instruments Libraries you want to update loaded entirely in the Directory Manager – this will save you a few mouseclicks.

General Information

All Vienna Instruments PRO 2 Presets and Matrices have been saved with their cells disabled. This way you can load them quickly to analyze the various loaded Presets and Matrices.
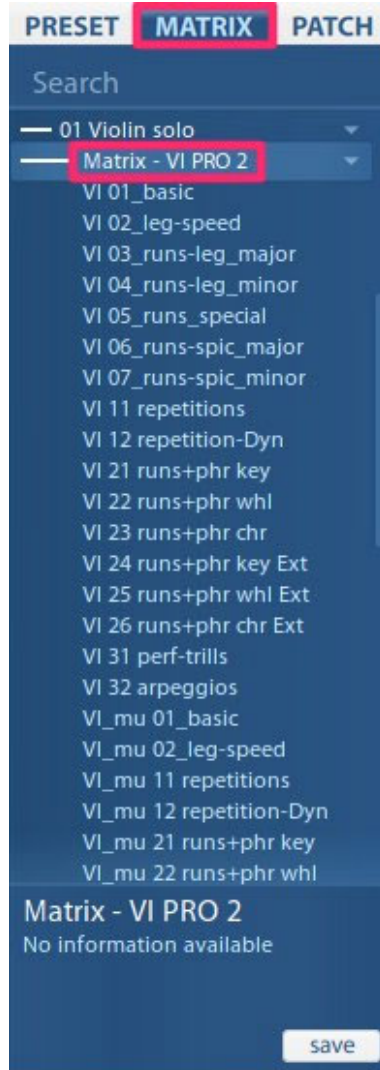
If you activate "Force Enabled ON" in the Settings Menu, these Presets and Matrices will be loaded with enabled cells.

Single Instrument Matrices

There are special folders for Vienna Instruments PRO 2 in the Matrix list of all String and Wind Instruments:

"MATRIX – VI PRO 2"

These folders hold up to 17 new Matrices.

Matrices from 01–09 are "conventional" matrices, without the internal APP Sequencer activated.

Matrix 11 and higher contain sequence-based Matrices.

"01_basic" – The Allround Matrix

Available for all String and Wind Instruments.

A collection of the most essential articulations of the given instrument, with up to 40 different patches.

The Patches have been assembled from the Standard & Extended Library content of each Vienna Instruments Collection, but of course these Matrices are also available if you only have a license for the Standard Library of your Collection. The Patches that are not available will appear with a red background in the Matrix Cells and in the Slot Rack.

X-Axis Controller (horizontal): Keyswitches

For Bass to Soprano Instruments (lowest note C2): C1 upwards
For Contra Bass Instruments (lowest notes below C2): C6 upwards

Use these Keyswitches to change between main categories of Patches like short notes, sustains and Performance Intervals.

Y-Axis Controller (vertical): CC1 (ModWheel)

Use the ModWheel to access different variations of a main category, e.g., sustains: with and without vibrato, with progressive vibrato.

Cell Configuration:

C   Short Single Note samples (staccato, détaché, portato)
C#   Sustains (with/without vibrato)
D   Dynamic Single Notes (fortepiano, sforzando, sforzantissimo)
D#   Performance Intervals (legato, trills, marcato, portamento)
E   Performance Repetitions (legato, portato, staccato, spiccato, harsh)
F   Fast Repetitions (in different tempos)
F#   Tremolo, flutter tongue, recorded trills
G   pizzicato, col legno (strings only)
G#   Harmonics (strings only)
A   Ponticello (strings only)

The configuration of individual Cells has been designed to be interchangeable throughout all instruments; e.g., a staccato will always be found in the same Cell position, irrespective of whether you are using a string or a wind instrument. This allows a quick change of instruments in your arrangement.

"02_leg-speed" (resp. "glissando-speed") – Tweakable Intervals

Available for all String and Woodwind Instruments, as well as for Brass Instruments with Glissando/Portamento Patches.

The new Enveloped Stretching tools in Vienna Instruments PRO 2 allow you to control the transition length of Performance Interval Patches in real-time.

> **Attention:** Loading or "enabling" these matrices for the first time will cause some delay due to the necessary rendering time.

X-Axis Controller (horizontal): Keyswitches

For Bass to Soprano Instruments (lowest note C2): C1 upwards
For Contrabass Instruments (lowest notes below C2): C6 upwards

Use these Keyswitches to change between different Performance Interval Patches (legato, portamento, glissando).

Y-Axis Controller (vertical): CC1 (ModWheel)

Use the ModWheel to access different transition lengths for the Performance Interval Patches.

CC1 =1   Slow transitions
CC1 = 64   Regular transitions
CC1 = 127   Fast transitions

"03_runs-leg_major" – Major runs on Speed

Available for all String and Wind Instruments with originally recorded Run Patches (Solo Violin, Orchestral Strings, selected Woodwinds, Trumpets)

Enveloped time-stretching lets you switch between different rendered speeds of the recorded runs in real-time.

The first cells of each matrix row show the tempo in BPM.

The originally played runs were performed as 32nd notes.

X-Axis Controller (horizontal): Keyswitches

For Bass to Soprano Instruments (lowest note C2): C1 upwards
For Contrabass Instruments (lowest notes below C2): C6 upwards

Use these Keyswitches to change between different scales from C major to B major.

Y-Axis Controller (vertical): CC1 (ModWheel)

Use the ModWheel to trigger different speed variations, up to 7 tempo variations.

CC1 = 1   Slowest
CC1 = 127   Fastest

> **Hint:** For a more accurate selection of the intended playing speed it will make sense to change the Y-Axis Controller to Keyswitches.

"04_runs-leg_minor" – Minor runs on Speed

Like Matrix "03_runs-leg_major", but based on minor harmonic scales.

"05_runs-special" – Special Scale runs on Speed

Like Matrix "03_runs-leg_major", but based on chromatic and whole-tone scales.

"11 repetitions" – Repetitions without restrictions

Available for all String and Wind Instruments.

An APP Sequencer based Matrix with Host Tempo Sync activated by default.

X-Axis Controller (horizontal): Articulations/Patches are assigned in the APP Sequencer (Cell Tab)

Y-Axis Controller (vertical): Keyswitches

For Bass to Soprano Instruments (lowest note C2): C1 upwards

For Contrabass Instruments (lowest notes below C2): C6 upwards

The variations available in the Y-Axis are generally sequences assembled from one or 2 different articulations. For Strings, these are spiccato and staccato Performance Repetitions. For Wind Instruments, these are portato and staccato Performance Repetitions.

You can access up to 12 different pre-programmed patterns:

Slot 1	**"16th"**	16th notes based on one articulation.
Slot 2	**"16 2mc"**	16th notes based on two different articulations, accents are achieved by using the "longer" articulation.
Slot 3	**"16 mc"**	16th notes based on two different articulations, accents are achieved by using 2 "longer" articulations.
Slot 4	**"up 2"**	Sequence of one 8th note and two 16th notes.
Slot 5	**"up 1"**	Upbeats, sequence of one 8th note and one 16th note.
Slot 6	**"16 a3"**	Sequence of three 16th notes and one 16th rest.
Slot 7	**"triplet"**	8th triplets based on one articulation.
Slot 8	**"trip mc"**	8th triplets based on two different articulations, accents are achieved by using the "longer" articulation.
Slot 9	**"trip mc2"**	8th triplets based on two different articulations, every quarter beat is accentuated by using the "longer" articulation.
Slot 10	**"trip up1"**	Triplet Upbeats
Slot 11	**"Phrase A"**	Example 1 of a combination of different articulations.
Slot 12	**"Phrase B"**	Example 2 of a combination of different articulations.

"12 repetition-Dyn" – Dynamite Dynamics

Available for all String and Wind Instruments with perf-repetition_dyn Patches.

An APP Sequencer based Matrix with Host Tempo Sync activated by default.

X-Axis Controller (horizontal): Articulations/Patches are assigned in the APP Sequencer (Cell Tab)

The available patterns are based on Performance Repetition Patches. The different volumes of the contained notes are as originally recorded and are NOT triggered by MIDI velocity.

There are up to 9 different volume levels available for every recorded dynamic repetition pattern.

Y-Axis Controller (vertical): Keyswitches

For Bass to Soprano Instruments (lowest note C2): C1 upwards
For Contrabass Instruments (lowest notes below C2): C6 upwards

The available variations are different successions of crescendo and diminuendo repetition patters in 16th notes.

Slot 1	**"cre-dim"**	Sequence of eight 16th notes from pp–ff, followed by eight 16th notes from ff–pp
Slot 2	**"dim-cre"**	Sequence of eight 16th notes from ff–pp, followed by eight 16th notes from pp–ff
Slot 3	**"cr-di sh"**	Sequence of four 16th notes from pp–ff, followed by 4 16th notes from ff–pp
Slot 4	**"di-cr sh"**	Sequence of four 16th notes from ff–pp, followed by four 16th notes from pp–ff
Slot 5	**"cre step"**	A series of 4 sequences, each with 4 16th notes, starting with pp. Every following sequence starts at the next higher volume from the preceding one.
Slot 6	**"dim step"**	A series of 4 sequences, each with 4 16th notes, starting with ff. Every following sequence starts with the next lower volume from the preceding one.
Slot 7	**"accent A"**	A series of 4 sequences, each with 4 16th notes, with an accentuation on the quarter beat and crescendos towards the accentuated notes.
Slot 8	**"accent B"**	A series of 4 sequence parts, each with 4 16th notes, with an accentuation on the quarter beat and strong cresendos towards the accentuated notes.
Slot 9	**"Phrase A"**	Example 1 of a combination of different articulations.
Slot 10	**"Phrase B"**	Example 2 of a combination of different articulations.
Slot 11	**"Phrase C"**	Example 3 of a combination of different articulations.
Slot 12	**"Phrase D"**	Example 4 of a combination of different articulations.

"21 runs+phr key" – Diatonic Runs & Phrases

Available for all String and Wind Instruments.

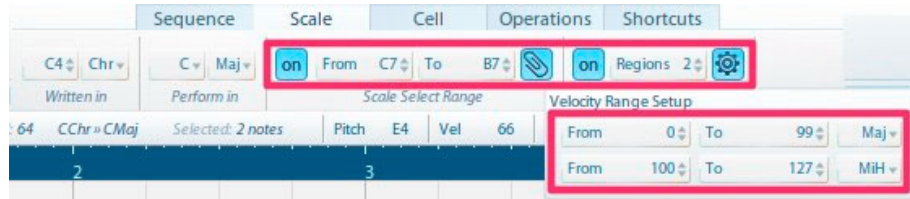An APP Sequencer based Matrix with Host Tempo Sync activated by default.
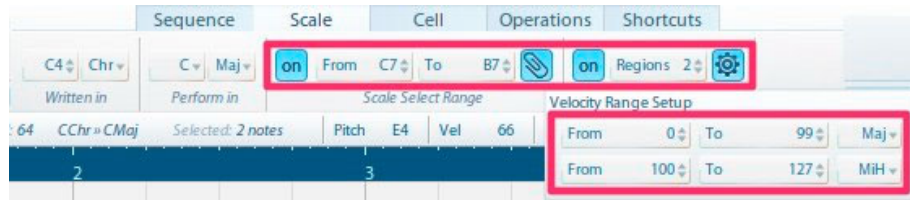
Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7 (except Piccolo Flute: C3–B3).

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major scale
Velocity 100–127: Minor harmonic scale

> **Attention:** If this Matrix is loaded into an empty preset on its own, the "Scale Select Range" and "Velocity Switch" functions in the APP sequencer (Scale Tab) must be activated.

<u>X-Axis Controller (horizontal):</u> Articulations/Patches are assigned in the APP Sequencer (Cell Tab). The major part of the patches used is based on Performance Fast Legatos, and Slurred Fast Legatos for most string ensembles.

<u>Y-Axis Controller (vertical):</u> Keyswitches

For Bass to Soprano Instruments (lowest note C2): C1 upwards
For Contrabass Instruments (lowest notes below C2): C6 upwards

The available variations in the Y-Axis consist of upwards and downwards runs and phrases in different lengths.

Slot 1	**"Oct up"**	Diatonic run upwards, 1 octave
Slot 2	**"Oct do"**	Diatonic run downwards, 1 octave
Slot 3	**"Oct ac-u"**	Diatonic run upwards, 1 octave, with a slight accelerando
Slot 4	**"Oct ac-d"**	Diatonic run downwards, 1 octave, with a slight accelerando
Slot 5	**"2 Oct up"**	Diatonic run upwards, 2 octaves
Slot 6	**"2 Oct do"**	Diatonic run downwards, 2 octaves
Slot 7	**"Quint up"**	Diatonic run upwards, 1 fifth
Slot 8	**"Quint do"**	Diatonic run downwards, 1 fifth
Slot 9	**"Phr A up"**	Progressive phrase upwards (step by step) with a repetition note, 1 octave.
Slot 10	**"Phr A do"**	Progressive phrase downwards (step by step) with a repetition note, 1 octave.
Slot 11	**"Phr B up"**	Progressive "mordent phrase" upwards (step by step), 1 octave.
Slot 12	**"Phr B do"**	Progressive "mordent phrase" downwards (step by step), 1 octave.

"22 runs+phr whl" – Whole-tone Runs & Phrases

Like Matrix "21 runs+phr key", but based on whole-tone scales.

"23 runs+phr chr" – Chromatic Runs & Phrases

Like Matrix "21 runs+phr key", but based on chromatic scales.

"24 runs+phr key ext"

Like Matrix "21 runs+phr key", based on fast Marcato Performance Patches.

> **Attention:** "Ext" Matrices are only available if the Extended Library of the corresponding Collection is available, and only for instruments that contain marcato and/or spiccato Performance Patches.

"25 runs+phr whl ext"

Like Matrix "21 runs+phr key", based on fast Marcato Performance Patches and whole-tone scales.

"26 runs+phr chr ext"

Like Matrix "21 runs+phr key", based on fast Marcato Performance Patches and chromatic scales.

"31 perf-trills" – Thrilling Trills

Available for all String and Wind Instruments with Performance Trill Patches.

An APP Sequencer based Matrix with Host Tempo Sync NOT activated by default. Trill speed can be set directly in the APP sequencer's "Sequence" tab.

Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7 (except Piccolo Flute: C3–B3).

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major Scale
Velocity 100–127: Minor Harmonic Scale

> **Attention:** If this Matrix is loaded into an empty preset on its own, the "Scale Select Range" and "Velocity Switch" functions in the APP sequencer (Scale Tab) must be activated.

X-Axis Controller (horizontal): Articulations/Patches are assigned in the APP Sequencer (Cell Tab). The major part of the Patches used is based on Performance Trill Patches.

Y-Axis Controller (vertical): Keyswitches

For Bass to Soprano Instruments (lowest note C2): C1 upwards
For Contrabass Instruments (lowest notes below C2): C6 upwards

The available variations in the Y-Axis consist of trills in different speeds, accelerating or decelerating, plus a variety of mordents and inverted mordents ("Pralltriller").

Slot 1	**"trill"**	Trill, middle tempo.
Slot 2	**"trill ac"**	Trill, accelerating.
Slot 3	**"trill fa"**	Trill, fast tempo.
Slot 4	**"trill ri"**	Trill, decelerating.
Slot 5	**"mord up1"**	Embellishment, starting with upwards note.
Slot 6	**"mord do1"**	Embellishment, starting with downwards note.
Slot 7	**"mord up2"**	Embellishment, starting with two upwards notes.
Slot 8	**"mord up2+"**	Embellishment, starting with two upwards notes (variation).
Slot 9	**"mord do2"**	Embellishment, starting with two downwards notes.
Slot 10	**"mord do2+"**	Embellishment, starting with two downwards notes (variation).
Slot 11	**"Prall up"**	Inverted mordent ("Pralltriller") upwards
Slot 12	**"Prall do"**	Inverted mordent ("Pralltriller") downwards

"32 arpeggios" – Fantastic Four String Arpeggios

Available for all String Instruments except Double Basses.

APP Sequencer-based Matrix, Host Tempo Sync activated by default.

Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7.

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major scale
Velocity 100–127: Minor harmonic scale

> **Attention:** If this Matrix is loaded into an empty preset on its own, the "Scale Select Range" and "Velocity Switch" in the APP sequencer (Scale Tab) must be activated.
>
>
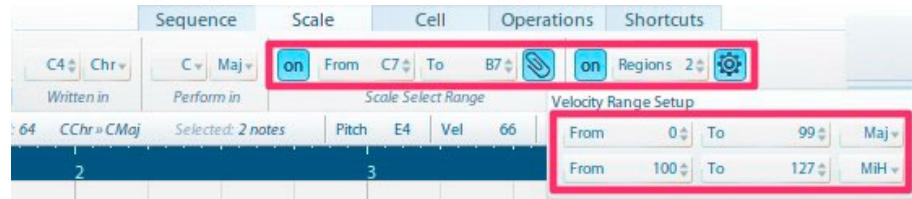
X-Axis Controller: Articulations are assigned in the APP Sequencer (Cell Tab)

The major part of the used patches is based on Performance Legato Patches, in combination with Performance Repetitions.

Y-Axis Controller: Keyswitches

Only for Bass to Soprano Instruments (lowest note C2): C1 upwards

The available variations in the Y-Axis are the most essential arpeggio chords over 4 strings within a scale (except #12).

Slot 1	"ma3 root"	Arpeggio Sequence, as an example in C major: C–G–E–C
Slot 2	"ma3 inv1"	Arpeggio Sequence, as an example in C major: C–A–E–A
Slot 3	"ma3 inv2"	Arpeggio Sequence, as an example in C major: C–A–F–C
Slot 4	"ma7 root"	Arpeggio Sequence, as an example in C major: C–G–E–B
Slot 5	"ma7 inv1"	Arpeggio Sequence, as an example in C major: C–G–E–A
Slot 6	"ma7 inv2"	Arpeggio Sequence, as an example in C major: C–A–F–E
Slot 7	"ma7 inv3"	Arpeggio Sequence, as an example in C major: C–A–F–D
Slot 8	"ma9 1"	Arpeggio Sequence, as an example in C major: C–G–D–B
Slot 9	"ma9 2"	Arpeggio Sequence, as an example in C major: C–G–E–D
Slot 10	"ma9 3"	Arpeggio Sequence, as an example in C major: C–A–E–D
Slot 11	"Qua–Qui"	Arpeggio Sequence, as an example in C major: C–F–C–F
Slot 12	"augm chr"	Arpeggio Sequence, as an example in C major: C–G#–E–C

Single Instrument Presets

All Vienna Instruments PRO 2 Single Instrument Presets are contained in the already existing Preset folders. They are placed right before the original Vienna Instruments Presets.

All Cells are saved in "disabled" status (without any loaded samples). If you want your Presets to be loaded with their Cells automatically enabled, just activate "Force Enabled ON/OFF" in the Settings menu.

Use Keyswitches to switch between Matrices. Alternatively, you can also use Program Changes or MIDI Control Changes.

Matrix switching: Keyswitches

For Alto and Soprano Instruments (lowest note C3): C2 upwards
For Bass and Tenor Instruments (lowest notes below C3): C6 upwards
For Contrabass Instruments (lowest notes below C2): C5 upwards

Internal reverb is activated!

Tuning Table: 12-tone

Assignment of the most important controllers (pre-configured sliders in Basic View)

Master Volume	CC7
Velocity X-Fade	CC2
Velocity X-Fade ON/OFF switch	CC28
Dyn Range scaler	CC30
Start Offset scaler	CC21
Expression	CC11
Filter	CC24
Tuning	CC26 (scales Humanize Tuning Curves)
Reverb Dry/Wet	CC14
Reverb ON/OFF switch	CC15

Common Matrix assignments (if corresponding Patches are available):

C	01_basic
C#	11 repetitions
D	12 repetition-Dyn
D#	21 runs+phr key
E	22 runs+phr whl
F	23 runs+phr chr
F#	24 runs+phr key ext
G	25 runs+phr whl ext
G#	26 runs+phr chr ext
A	31 perf-trills
A#	32 arpeggios

Chord Matrices

The Matrix Browser displays Chord Matrices in a new folder above the corresponding instrument group's original Single Instruments folder.

The following Chord Matrix folders are available and will be displayed if the respective licenses are available:
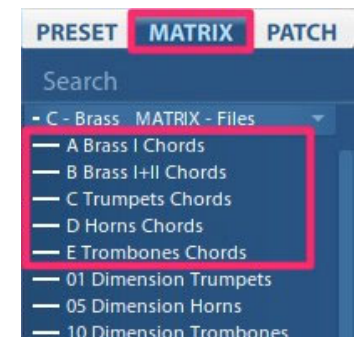
Woodwind MATRIX Files

A	Woodwinds I	*License:* Woodwind I
B	Woodwind II	*License:* Woodwind II
C	Woodwind I+II	*Licenses:* Woodwind I, Woodwind II
D	Flutes	*Licenses:* Woodwind I, Woodwind II, Woodwind III (Special Woodwinds)
E	Oboes	*Licenses:* Woodwind I, Woodwind II, Woodwind III (Special Woodwinds)
F	Clarinets	*Licenses:* Woodwind I, Woodwind II, Woodwind III (Special Woodwinds)
G	Saxophones	*Licenses:* Saxophones

Brass MATRIX Files

A	Brass I	*License:* Brass I
B	Brass I+II	*License:* Brass I, Brass II
C	Trumpets	*Licenses:* Brass I, Brass II, Brass III (Special Brass), Dimension Brass, DL Trumpet (B)
D	Horns	*Licenses:* Brass I, Brass II, Dimension Brass
E	Trombones	*Licenses:* Brass I, Brass II, Dimension Brass

All Chord Matrices are based on APP Sequences and consist of chords with 4 or 5 voices with the following voicing:

Woodwinds I

1st Voice	Flutes
2nd Voice	Oboes
3rd Voice	Clarinets
4th Voice	Bassoons

Woodwinds II

1st Voice	Flute & Piccolo (in octaves)
2nd Voice	Clarinet & Oboe
3rd Voice	Alto Flute & English Horn
4th Voice	Bass Clarinet
5th Voice	Contra Bassoon

Woodwinds I+II

1st Voice	Flute & Piccolo (in octaves)
2nd Voice	Clarinet & Oboe
3rd Voice	Bass Clarinet & English Horn
4th Voice	Bassoon
5th Voice	Contra Basson

Flutes

1st Voice	Flute 1 & Piccolo (in octaves)
2nd Voice	Flute 2
3rd Voice	Alto Flute
4th Voice	Bass Flute

Oboes

1st Voice	Oboe
2nd Voice	Oboe d'amore
3rd Voice	English Horn
4th Voice	Heckelphone

Clarinets

1st Voice	Eb Clarinet
2nd Voice	Bb Clarinet
3rd Voice	Clarinets
4th Voice	Bass Clarinet
5th Voice	Contra Bass Clarinet

Saxophones

1st Voice	Soprano Saxophone
2nd Voice	Alto Saxophone
3rd Voice	Tenor Saxophone
4th Voice	Baritone Saxophone
5th Voice	Bass Saxophone

Brass I

1st Voice	Trumpets
2nd Voice	Horns
3rd Voice	Trombones
4th Voice	Trombones
5th Voice	Tuba

Brass I+II

1st Voice	Trumpets
2nd Voice	Horns
3rd Voice	Trombones
4th Voice	Bass Trombone
5th Voice	Contrabass Tuba

Trumpets

1st Voice	1st Trumpets
2nd Voice	2nd Trumpets
3rd Voice	3rd Trumpets
4th Voice	Bass Trumpet

Horns

1st Voice	1st Horns
2nd Voice	2nd Horns
3rd Voice	3rd Horns
4th Voice	4th Horns

Trombones

1st Voice	1st Trombones
2nd Voice	2nd Trombones
3rd Voice	3rd Trombones
4th Voice	Bass Trombone
5th Voice	Contrabass Trombone

Chord Matrices

"01 Chords (8)"

Available for all instrument groups with Chord Matrices.

Play range: C3–B5 (depending on the instrument group and played chord, some limitations in the highest play range will apply)

Selection of 12 scales from C major/minor to B major/minor by Keyswitches C7–B7.

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major scale
Velocity 100–127: Minor harmonic scale

X-Axis Controller (horizontal): Keyswitches to trigger the most important articulations:

C6	Performance Legato
C#6	Portamento (Strings) or Sustain Vibrato (Winds)
D6	Staccato
D#6	Détaché (Strings) or Portato short (Winds)
E6	Sustain with vibrato (Strings) or Sustain without vibrato (Winds)
F6	Fortepiano (Appassionata Strings: Sforzando)
F#6	Sforzando
G6	Performance Repetition (Legato)
G#6	Performance Repetition Portato (Solo Strings: Staccato)
A6	Performance Repetition Spiccato (Strings) or Staccato (Winds)
A#6	Tremolo (Strings) or Flutter Tongue (Winds)
B6	Pizzicato (Strings) or Sforzatissimo (Winds)

Y-Axis Controller (vertical): Keyswitches for a choice of different chord inversions and additional chords like diminished, augmented and ninth chords

With all variations, the soprano voice plays the root note.

C1	"ma3 root"	Triad, bass note on the root note
C#1	"ma3 inv1"	Triad, bass note on the third
D1	"ma3 inv2"	Triad, bass note on the fifth
D#1	"ma7 root"	Seventh chord, bass note as root
E1	"ma7 inv1"	Seventh chord, bass note on the third
F1	"ma7 inv2"	Seventh chord, bass note on the fifth
F#1	"ma7 inv3"	Seventh chord, bass note on the seventh
G1	"ma9"	Ninth chord
G#1	"dim7 chr"	Diminished Seventh chord (chromatic transposition)
A1	"augm chr"	Augmented Triad (chromatic transposition)
A#1	"root + 5th"	Chord without third
B1	"5th 3x"	Chord in steps of fifths

"02 Chords (3)"

Like Matrix "01 Chords (8)", soprano voice on the third

"03 Chords (5)"

Like Matrix "01 Chords (8)", soprano voice on the fifth

"04 Chords (7+8)"

Like Matrix "01 Chords (8)", soprano voice on the octave or on the seventh (with all Seventh chords)

"05 Chords (8) Ext"

Like Matrix "01 Chords (8)", partly based on alternative articulations in the X-Axis (if Extended Library content is available).

C6   Performance Trills

C#6   Performance Marcato

D6   Performance Spiccato (Strings) or Single Note Staccato (Winds)

D#6   Détaché long (Strings) or Portato medium (Winds)

E6   Sustain without vibrato

F6   Short Crescendos & Diminuendos (ca. 2 seconds), switch with A/B Switch

F#6   pfp (crescendo – diminuendo)

•G6   Performance Repetition Legato (except Appassionata Strings: pfp long)

G#6   Performance Repetition Portato (except Appassionata Strings: Performance sfz)

A6   Performance Repetition Harsh (Strings) or Staccato (Winds)

A#6   Harmonics (Strings except Appassionata Strings) or Flutter tongue (Winds)

B6   (Snap) Pizzicato (Strings) or Sforzatissimo (Winds)

"06 Chords (3) Ext"

Like Matrix "05 Chords (8) Ext", soprano voice on the third

"07 Chords (5) Ext"

Like Matrix "05 Chords (8) Ext", soprano voice on the fifth

"08 Chords (7+8) Ext"

Like Matrix "05 Chords (8) Ext", soprano voice on the octave or on the seventh (with all seventh chords)

"11 Cho-rep (8)"

Available for all instrument groups with Chord Matrices.

Play range: C3–B5 (depending on the instrument group and played chord, some limitations in the highest play range will apply)

Host Tempo Sync activated by default.

Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7.

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major scale
Velocity 100–127: Minor harmonic scale

<u>X-Axis Controller (horizontal):</u> Articulations/Patches are assigned in the APP Sequencer (Cell Tab)

<u>Y-Axis Controller (vertical):</u> Keyswitches for a choice between different chord inversions and additional chords like diminished, augmented and ninth chords

With all variations, the soprano voice plays the root note; all sequences are based on a 16th-note repetition pattern chord.

C1	"ma3 root"	Triad, bass note on the root note
C#1	"ma3 inv1"	Triad, bass note on the third
D1	"ma3 inv2"	Triad, bass note on the fifth
D#1	"ma7 root"	Seventh chord, bass note as root
E1	"ma7 inv1"	Seventh chord, bass note on the third
F1	"ma7 inv2"	Seventh chord, bass note on the fifth
F#1	"ma7 inv3"	Seventh chord, bass note on the seventh
G1	"ma9"	Ninth chord
G#1	"dim7 chr"	Diminished Seventh chord (chromatic transposition)
A1	"augm chr"	Augmented Triad (chromatic transposition)
A#1	"root + 5th"	Chord without third
B1	"5th 3x"	Chord in steps of fifths

"12 Cho-rep (3)"

Like Matrix "11 Cho-rep (8)", soprano voice on the third

"13 Cho-rep (5)"

Like Matrix "11 Cho-rep (8)", soprano voice on the fifth

"14 Cho-rep (7+8)"

Like Matrix "11 Cho-rep (8)", soprano voice on the octave or on the seventh (with all seventh chords)

"15 Cho-repDyn (8)"

Available for all instrument groups with Chord Matrices.

Play range: C3–B5 (depending on the instrument group and played chord, some limitations in the highest play range will apply)

Host Tempo Sync activated by default.

Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7.

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major scale
Velocity 100–127: Minor harmonic scale

<u>X-Axis Controller (horizontal):</u> Articulations/Patches are assigned in the APP Sequencer (Cell Tab)

<u>Y-Axis Controller (vertical):</u> Keyswitches for a choice between different chord inversions and additional chords like diminished, augmented and ninth chords

With all variations, the soprano voice plays the root note; all sequences are based on a 16th-note repetition pattern chord with dynamic changes, and contain eight 16ths from pp–ff and eight 16ths from ff–pp.

C1	"ma3 root"	Triad, bass note on the root note
C#1	"ma3 inv1"	Triad, bass note on the third
D1	"ma3 inv2"	Triad, bass note on the fifth
D#1	"ma7 root"	Seventh chord, bass note as root
E1	"ma7 inv1"	Seventh chord, bass note on the third
F1	"ma7 inv2"	Seventh chord, bass note on the fifth
F#1	"ma7 inv3"	Seventh chord, bass note on the seventh
G1	"ma9"	Ninth chord
G#1	"dim7 chr"	Diminished Seventh chord (chromatic transposition)
A1	"augm chr"	Augmented Triad (chromatic transposition)
A#1	"root + 5th"	Chord without third
B1	"5th 3x"	Chord in steps of fifths

"16 Cho-repDyn (3)"

Like Matrix "15 Cho-repDyn (8)", soprano voice on the third

"17 Cho-repDyn (5)"

Like Matrix "15 Cho-repDyn (8)", soprano voice on the fifth

"18 Cho-repDyn (7+8)"

Like Matrix "15 Cho-repDyn (8)", soprano voice on the octave or on the seventh (with all seventh chords)

"21 Cho-Run key"

Available for all Instrument Groups with Chord Matrices.

Play range: C3–C5 (depending on the instrument group and played chord, some limitations in the highest play range will apply)

Host Tempo Sync activated by default.

Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7.

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major scale
Velocity 100–127: Minor harmonic scale

<u>X-Axis Controller (horizontal):</u> Articulations/Patches are assigned in the APP Sequencer (Cell Tab). The main part of the used Patches is based on Performance Fast Legatos, and Slurred Fast Legatos for most String ensembles.

<u>Y-Axis Controller (vertical):</u> Keyswitches for a choice between different runs upwards and downwards in different lengths and chord combinations. (Switches G#1–B1 are not available for the chord groups of Trumpets, Horns and Trombones due to the limited play range of these instrument groups).

C1	"up Octav"	Octave run upwards, chord in unison in octaves
C#1	"do Octav"	Octave run downwards, chord in unison in octaves
D1	"up Oc+Qi"	Octave run upwards, chord in fifths and octaves
D#1	"do Oc+Qi"	Octave run downwards, chord in fifths and octaves
E1	"up Ch-sh"	Fourth run, crossed voices: upper voices upwards, lower voices downwards
F1	"do Ch-sh"	Fourth run, crossed voices: upper voices downwards, lower voices upwards
F#1	"up Ch-me"	Octave run, crossed voices: upper voices upwards, lower voices downwards
G1	"do Ch-me"	Octave run, crossed voices: upper voices downwards, lower voices upwards
G#1	"up Ch-lo"	Run over 2 octaves, crossed voices: upper voices upwards, lower voices upwards and downwards
A1	"do Ch-lo"	Run over 2 octaves, crossed voices: upper voices downwards, lower voices downwards and upwards
A#1	"up solo"	Run over 4 octaves in unison, upwards with changing instrumentation
B1	"do solo"	Run over 4 octaves in unison, downwards with changing instrumentation

"22 Cho-Run whl"

Like Matrix "21 Cho-Run key", based on whole-tone scales

"23 Cho-Run chr"

Like Matrix "21 Cho-Run key", based on chromatic scales

"24 Cho-Run key Ext"

Like Matrix "21 Cho-Run key", based on fast Marcato Performance Patches.

> **Attention:** "Ext" Matrices are only available if the corresponding Instrument's Extended Library is available, and only for instruments that contain marcato and/or spiccato Performance Patches.

"25 Cho-Run whl Ext"

Like Matrix "21 Cho-Run key", based on fast Marcato Performance Patches and whole-tone scales.

"26 Cho-Run chr Ext"

Like Matrix "21 Cho-Run key", based on fast Marcato Performance Patches and chromatic scales.

"31 Cho-Phr key"

Available for all instrument groups with Chord Matrices.

Play range: C3–C5 (depending on the instrument group and played chord, some limitations in the highest play range will apply)

Host Tempo Sync activated by default.

Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7.

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major scale
Velocity 100–127: Minor harmonic scale

<u>X-Axis Controller (horizontal):</u> Articulations/Patches are assigned in the APP Sequencer (Cell Tab). The main part of the Patches used is based on Performance Fast Legatos.

<u>Y-Axis Controller (vertical):</u> Keyswitches for a choice between different phrases, upwards and downwards in different chord combinations.

C1	"up Octav"	Incremental octave phrase upwards with repetition note, chord in unison, arranged in octaves
C#1	"do Octav"	Incremental octave phrase downwards with repetition note, chord in unison, arranged in octaves
D1	"up Oc+Ch"	Incremental octave phrase upwards with repetition note, arranged in triads
D#1	"do Oc+Ch"	Incremental octave phrase downwards with repetition note, arranged in triads
E1	"up Phr"	Phrase upwards, starting with repetition note, chord in unison, arranged in octaves
F1	"do Phr"	Phrase downwards, starting with repetition note, chord in unison, arranged in octaves
F#1	"up Octav"	Incremental octave phrase upwards with changed note (cambiata), chord in unison, arranged in octaves
G1	"do Octav"	Incremental octave phrase downwards with changed note (cambiata), chord in unison, arranged in octaves
G#1	"up Oc+Ch"	Incremental octave phrase upwards with changed note (cambiata), arranged in triads
A1	"do Oc+Ch"	Incremental octave phrase downwards with changed note (cambiata), arranged in triads
A#1	"up Phr"	Phrase upwards starting with changed note (cambiata), chord in unison, arranged in octaves
B1	"do Phr"	Phrase downwards with changed note (cambiata) downwards, chord in unison, arranged in octaves

"32 Cho-Phr whl"

Like Matrix "31 Cho-Phr key", based on whole-tone scales.

"33 Cho-Phr chr"

Like Matrix "31 Cho-Phr key", based on chromatic scales.

"34 Cho-Phr key Ext"

Like Matrix "31 Cho-Phr key", based on fast Marcato Performance Patches.

Attention: "Ext" Matrices are only available if the corresponding Instrument's Extended Library is available, and only for instruments that contain marcato and/or spiccato Performance Patches.

"35 Cho-Phr whl Ext"

Like Matrix "31 Cho-Phr key", based on fast Marcato Performance Patches and whole-tone scales.

"36 Cho-Phr chr Ext"

Like Matrix "31 Cho-Phr key", based on fast Marcato Performance Patches and chromatic scales.

"41 Cho-trem"

Finger tremolos available for all String and Woodwind groups with Chord Matrices and Performance Trill Patches. (Extended Library Content required!)

An APP Sequencer based Matrix with Host Tempo Sync NOT activated by default. Trill speed can be set directly in the APP sequencer's "Sequence" tab.

Play range: C3–B5 (depending on the instrument group and played chord, some limitations in the highest play range will apply)

Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7.

Change between major and minor harmonic scales by Velocity Switch:
Velocity 0–99: Major scale
Velocity 100–127: Minor harmonic scale

X-Axis Controller (horizontal): Articulations are assigned in the APP Sequencer (Cell Tab).

Y-Axis Controller (vertical): Keyswitches for a choice of different chord inversions and additional chords like diminished, augmented and ninth chords.

Chord Presets

The Vienna Instruments PRO 2 Chord Presets are located in a folder above the original Single Instruments folder in the Preset Browser of the corresponding instrument group.

All Cells are saved in "disabled" status (without any loaded samples). To load your Presets with all cells automatically enabled, simply activate "Force Enabled ON/OFF" in the Settings menu.

Use Keyswitches to switch between Matrices. Alternatively, you can also use Program Changes or MIDI Control Changes.

Internal Reverb is activated!

Tuning Table: 12-tone

Assignment of the most essential controllers (pre-configured sliders in Basic View)

Master Volume	CC7
Velocity X-Fade	CC2
Velocity X-Fade ON/OFF switch	CC28
Dyn Range Scaler	CC30
Start Offset Scaler	CC21
Expression	CC11
Filter	CC24
Tuning	CC26 (scales Humanize Tuning Curves)
Reverb Dry/Wet	CC14
Reverb ON/OFF switch	CC15

Preset "Chords Std Set"

Contains the most important 11 Chord Matrices, based mostly on Standard Library Content.

C2	01 Chords (8)
C#2	02 Chords (3)
D2	03 Chords (5)
D#2	04 Chords (7+8)
E2	11 Cho-rep (8)
F2	12 Cho-rep (3)
F#2	13 Cho-rep (5)
G2	14 Cho-rep (7+8)
G#2	21 Cho-Run key
A2	22 Cho-Run whl
A#2	23 Cho-Run chr

Preset "Chords Full Set"

Contains all available Chord Matrices (except Phrase Matrices), therefore based on Full Library Content.

If you intend to use all matrices via Keyswitches, you will need a second keyboard for playing live!

C2	01 Chords (8)
C#2	02 Chords (3)
D2	03 Chords (5)
D#2	04 Chords (7+8)
E2	11 Cho-rep (8)
F2	12 Cho-rep (3)
F#2	13 Cho-rep (5)
G2	14 Cho-rep (7+8)
G#2	21 Cho-Run key
A2	22 Cho-Run whl
A#2	23 Cho-Run chr
C ~	05 Chords (8) Ext
C# ~	06 Chords (3) Ext
D ~	07 Chords (5) Ext
D# ~	08 Chords (7+8) Ext
E ~	15 Cho-repDyn (8)
F ~	16 Cho-repDyn (3)
F# ~	17 Cho-repDyn (5)
G ~	18 Cho-repDyn (7+8)
G# ~	24 Cho-Run key Ext
A ~	25 Cho-Run whl Ext
A# ~	26 Cho-Run chr Ext