Vienna
Dimension Strings

Violins, Player 1–8
Violas, Player 1–6
Cellos, Player 1–6
Basses, Player 1–4

Contents

Introduction

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

Patch information

The Patch information includes articulation type, the number of velocity layers and alternations, AB switching possibilities, etc., as well as Patch specific information if necessary. Playing range, the number of samples used, and RAM requirements are omitted since they vary for different instruments. RAM requirements are displayed in the *Vienna Instruments* Player when you click on a Patch/Matrix in the Instruments browser, and the playing range is shown on the player's keyboard. Here's an overview of the articulations/Patches contained in this Collection:

Single notes: Staccato, détaché short and long
    Sustained without, with normal and progressive vibrato
    Pizzicato normal and snap, col legno
    Tremolo normal and slow
Dynamics: Medium crescendo and diminuendo 2/3/4 sec.
    Crescendo-diminuendo 2/4/6 sec.
    Fortepiano, sforzato, sforzatissimo
Harmonics: Artificial harmonics staccato, sustained, tremolo normal and slow (mapped one octave lower than they sound)
Interval performances: Legato with and without vibrato, espressivo (except basses)
    Portamento with and without vibrato, espressivo (except open string articulations and basses)
    Trills legato (min. 2nd to maj. 3rd) and marcato (min. 2nd to octave)
Repetition performances: Legato, portato, staccato, spiccato
    Normal and crescendo
    The top velocity layer of the normal portato, staccato, and spiccato Patches is played "harsh", i.e., very forcefully
Fast repetitions: 16ths at 140 to 180, and 200 BPM
Effects: Finger noises, various effect sounds

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

As the Patches in this Collection are the same for all players of each group, only the first set of the violins is listed in this manual. If there are any differences between the same patches of different instruments, these will be listed in the patch information.

Innovations

Vienna Dimension Strings contain a few features which have never before appeared in any of our Libraries:

Slow tremolos played normal and in artificial harmonics. The differences between individual players are much more pronounced in these than in the faster "normal" tremolos.

Marcato performance trills from minor 2nd to the octave, which are also used in *Vienna Instruments PRO*'s "ru+ph Ext" Matrices that contain runs and phrases designed with the internal APP sequencer.

Fast repetitions now don't sound release samples when you let go of the key after the repetition has ended.

Finger noises were recorded in the manner of interval performances and can be used, e.g., in combination with short articulations to enhance the natural playing sound. We have prepared a special "shorts+noise" Matrix for every player so that you have quick access to this feature. However, you should take care not to use them for all players at once and randomize their occurrence a bit to achieve best results.

Articulation groups

The Library's Patches are subdivided in 6 groups according to basic playing techniques: regular, open string, and "forced" strings. Each group contains the same type of Patches, only the "open string" group has no portamento interval performances.

Regular contains "normal" playing without any special attention to string registers.

Open string accordingly concentrates on switching to open strings where indicated.

**Force string:** the respective string is played as far as possible.

Here is a list of the playing ranges of each technique:

Violin

Regular: The string ranges for these patches are G: g3–e4, D: f4–c5, A: c#5–g5, E: g#5–a7 for "normal" articulations, and G: g4–e5, D: f5–c6, A: c#6–g6, E: g#6–c8 for harmonics. Please note that the harmonics patches are mapped one octave lower than they sound.
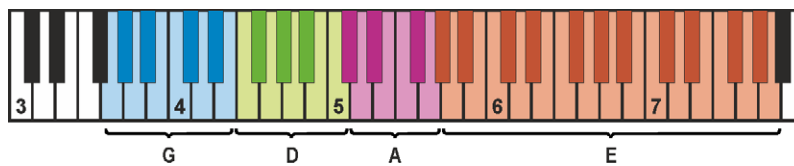
Open string: G: g3–c#4, D: d4–g#4, A: a4–d#5, E: e5–a7; one octave higher and ranging to C8 for harmonics.
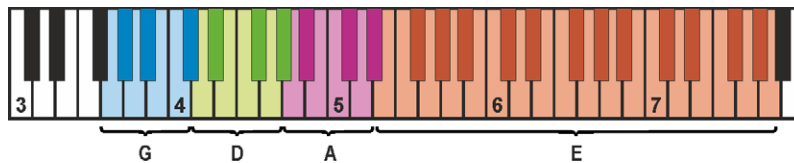
Force G string: G: g3–d5, A: d#5–g5, E: g#5–a7; harmonics G: g4–a5, A: a#5–g6, E: g#6–c8.
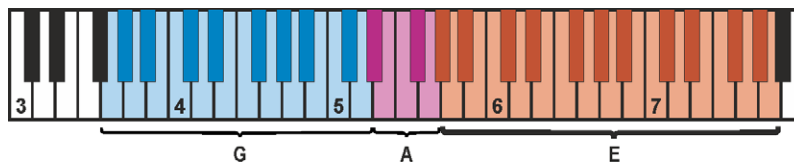
Force D string: G: g3–c#4, D: d4–a5, E: a#5–a7; harmonics G: g4–c#5, D: d5–e6, E: f6–c8.

Force A string: G: g3–e4, D: f4–g#4, A: a4–e6, E: f6–a7; harmonics G: g4–e5, D: f5–g#5, A: a5–b6, E: c7–c8.

Force E string: G: g3–e4, D: f4–c5, A: c#5–d#5, E: e5–a7; harmonics G: g4–e5, D: f5–c6, A: c#6–d#6 E: e6–c8.

Cello, Viola

The ranges for the viola comprise the same notes as the cello's but one octave higher; also, the viola's upper range only extends to E6 (E7 for harmonics).
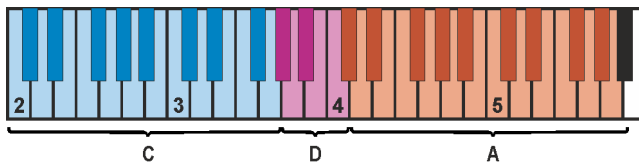
Regular: C: c2–a2, G: a#2–f3, D: f#3–c4, A: c#4–a5 for "normal" articulations, and C: c4–g4, G: g#4–f5, D: f#5–c6, A: c#6–a7 for harmonics. Please note that the harmonics patches are mapped one octave lower than they sound.
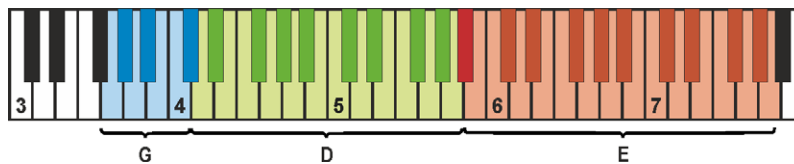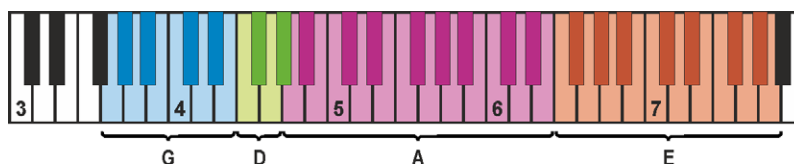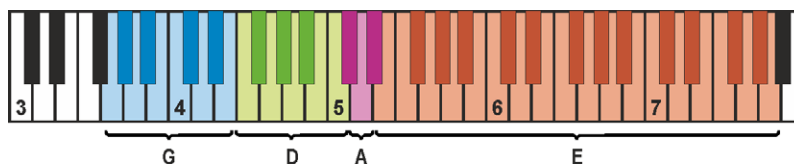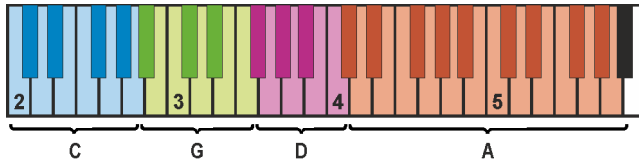

Open string: C: c2–f#2, G: g2–c#3, D: d3–g#4, A: a4–a7; harmonics C: c4–f4, G: f#4–c5, D: c#5–g5, A: g#5–a7.
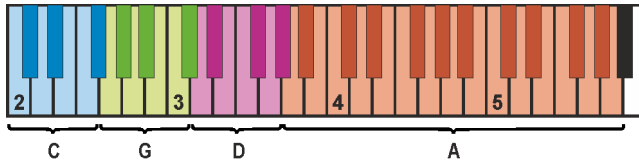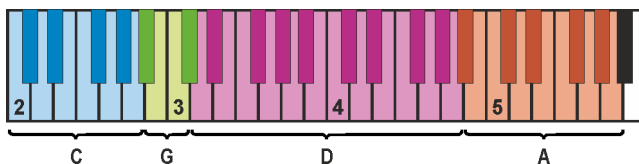
Force C string: C: c2–g3, D: g#3–c4, A: c#4–a5; harmonics C: c4–f5, D: f#5–c6, A: c#6–a7.
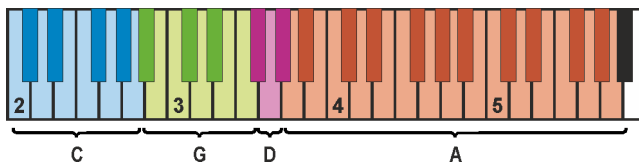
Force G string: C: c2–f#2, G: g2–d4, A: d#4–a5; harmonics C: c4–f4, G: f#4–c6, A: c#6–a7.
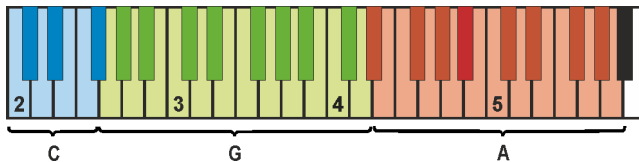
Force D string: C: c2–a2, G: a#2–c#3, D: d3–a4, A: a#4–a5; harmonics C: c4–g4, G: g#4–c5, D: c#5–f6, A: f#6–a7.

Force A string: C: c2–a2, G: a#2–f3, D: f#3–g#3, A: a3–a5; harmonics C: c4–g4, G: g#4–f5, D: f#5–g5, A: g#5–a7.

Double bass

Regular: B: b0–f#1, E: g1–b1, A: c2–e2, D: f2–a2, G: a#2–g4 for "normal" articulations, and B: b1–f2, E: f#2–a#2, A: b2–f3, D: f#3–a#3, G: b3–c#5 for harmonics. Please note that the harmonics patches are mapped one octave lower than they sound.

Open string: B: b0–d#1, E: e1–g#1, A: a1–c#2, D: d2–f#2, G: g2–g4; harmonics B: b1–d#2, E: e2–g#2, A: a2–c#3, D: d3–f#4, G: g4–c#5.
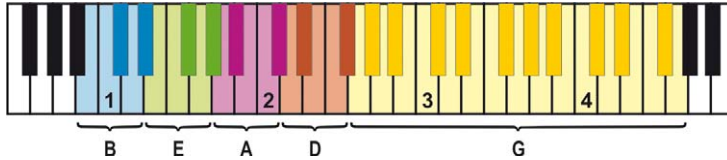
Force B string: B: b0–b1, A: c2–e2, D: f2–a2, G: a#2–g4; harmonics B: b1–b2, A: c3–f3, D: f#3–a#3, G: b3–c#5.
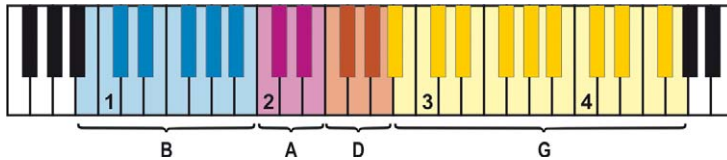
Force E string: B: b0–d#1, E: e1–e2, D: f2–a2, G: a#2–g4; harmonics B: b1–d#2, E: e2–g#3, G: a3–c#5.
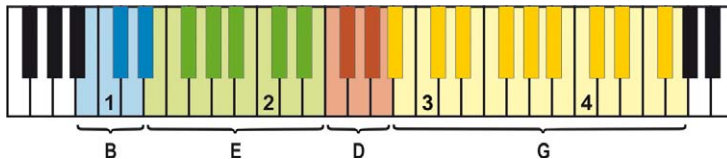
Force A string: B: b0–f#1, E: g1–g#1, A: a1–a2, G: a#2–g4; harmonics B: b1–g2, E: g#2, A: a2–c#4, G: d4–c#5.
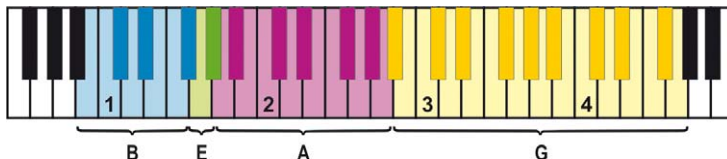
Force D string: B: b0–f#1, E: g1–b1, A: c2–c#2, D: d2–d3, G: d#3–g4; harmonics B: b1–g2, E: g#2–c3, A: c#3, D: d3–f#4, G: g4–c#5.
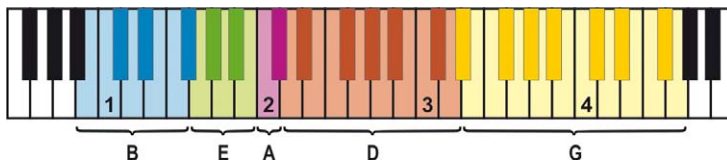
Interval performances

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

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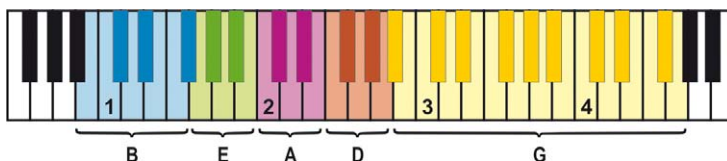50 ms. Otherwise, a sustained starting note will sound so that you can easily start a new phrase without leaving the legato Patch. For note repetitions, the threshold is 200 ms: a break up to that duration will yield a legato repetition; if the break is longer, a new starting note. But of course, it's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

Due to their nature, all interval performances are monophonic; otherwise, the software would have to be able to decide which source note belongs to which target note. To circumvent this, you can open two VI instances of the same instrument on separate MIDI tracks without any additional strain on your RAM. Note: the *Vienna Instruments PRO* player software also allows you to play polyphonic lnterval performances.

Trill performances

Trill performances are a special kind of Interval performance, played faster than normal Legato performances and with 6 alternations for each note, ranging up to a major 3rd with the other intervals played legato. The Vienna Dimension Strings also contain marcato trill performances which go up to the octave interval.

Matrix and Preset 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.

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

Vienna Instruments (VI) and Vienna Instruments PRO (VI PRO) Matrices and Presets

This Collection contains different Matrices and Presets for the free *Vienna Instruments* Player software and for *Vienna Instruments PRO*, which features powerful functions for enhancing the "human" sound of your compositions, distributing voices, etc. While Matrices and Presets of the same name contain the same Patches and samples, the PRO versions make use of these functions to create a more lively and natural-sounding impression. Also, there are additional PRO Matrices which make use of the internal sequencer to create runs and arpeggios (see Appendix).

Please note that *Vienna Instruments PRO* Matrices and Presets do not appear in the "standard" *Vienna Instruments'* file browser.

When using the *Vienna Instruments PRO* player, we strongly recommend loading the VI PRO Matrices and Presets, since only they make full use of the software's features.

Desks and Groups

Desk Matrices and Presets each comprise the articulations of two players:

Violin:	**Viola and Cello**	**Bass**
Desk 1 – player 1 and 3	Desk 1 – player 1 and 3	Desk 1 – player 1 and 3
Desk 2 – Player 2 and 4	Desk 2 – Player 2 and 4	Desk 2 – Player 2 and 4
Desk 3 – player 5 and 6	Desk 3 – player 5 and 6	
Desk 4 – player 7 and 8		

The Desks' instrument panning is adjusted to half left and half right in the stereo image. Desks can be used if you quickly want to implement one or two smaller groups of players.

If you load one of these, it is good to listen to the players individually to adjust their balance and panning to your liking, since the players also have distinct microphoning.

> **Note:** While Desks and Groups can be handy for quick editing, it is recommended to use individual players if you want to fine-tune your composition and create a special sound. The players sound quite different, and by listening to them separately you can determine which ones you want to use to achieve the timbre you have in mind. Apart from that, you also get better control over their volume and other playing parameters.

Group Matrices and Presets are only available for Vienna Instruments PRO and contain four (violin) resp. three players (viola, cello) each: Group 1 – player 1, 3, 5, (7); Group 2 – player 2, 4, 6, (8). Apart from that, there is no difference to the handling of Desks.

Vienna Dimension Strings and Vienna Instruments PRO

The Vienna Dimension Strings are optimized for *Vienna Instruments PRO*, allowing you to make full use of the software's powerful features. Here's a few tips to facilitate your workflow.

Panning

All the samples of this Collection are mono. In *Vienna Instrument PRO*'s Mixer panel (Advanced View), this is shown by a single fader handle instead of the two handles of a stereo instrument. The Matrices of single instruments are set to center by default; in combined Matrices the individual instruments' panning is distributed across the stereo range.

> **Note:** If you use combined Matrices/Presets in *Vienna MIR*, the stereo width will automatically be adapted to the width defined for the respective instrument on MIR's stage. If you want better control, we recommend using single instrument Matrices and Presets to place each instrument in a dedicated position on your MIR venue.

With the *Vienna Instruments PRO* VST plug-in, you can use the instrument channel's stereo pan (or other panning devices, e.g. *Vienna Suite*'s PowerPan) to define the stereo position and width of your combined Matrices and Presets. The same of course goes for *Vienna Ensemble* and *Vienna Ensemble PRO*.

In case you want to have special mixer settings for the instruments of a combined Matrix, you can define them in *Vienna Instruments PRO* and save the result as a custom Matrix – A tedious job made easier by the fact that *Vienna Instruments PRO* allows you to copy and paste mixer settings by right-clicking on a mixer channel!

Volume

Naturally, you can also set the volume of individual instruments within a combined Matrix to work out the special sound of one player or achieve special effects. Please note that Player #1 and #2 always are the most precise ones and therefore easier to handle as soloist or predominant voices, while the other players' Humanize settings deviate more from playing exactly on the beat.

Humanize

In a Dimension Strings PRO Matrix, each instrument has its own Humanize settings, thus creating that slight deviation from hard sequencing that is so pleasant to our ears, and further enhancing the "real instrument" effect. If you want to create your own Matrices, please make sure that the players have different Humanize settings for the same articulations – otherwise, the effect will be lost. Here, too, you can use copy and paste to transfer an existing instrument's Humanize settings to another one.

> **Note:** For runs as well as arpeggio and trill Matrices we recommend lowering the Humanize effect or turning it off altogether, since the sequences themselves already implement individual timing differences; additional Humanizing could therefore lead to unwanted (or at least unexpected) results.

Pitch

For designating pitch, the Vienna Symphonic Library by default 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; however, the *Vienna Instruments* Software allows you to set middle C to C3 or C5 if desired. 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.

Dimension Strings

Since all players have the same Patches, Matrices, and Presets, and Patches are the same for all sections (regular, open string, etc.), only Player 1 "regular" of the violins is listed here.

Group Matrices and Presets contain the same patches as single instrument Matrices; since each Group includes two instruments, the sample number and RAM requirements will simply double for Groups, and likewise triple (violas and cellos) or quadruple (violins) for VI PRO's Desks and be six/eight times as much for "All Players".

Patches

01 Violins Player 1/01 Regular

01 SHORT + LONG NOTES

Standard: Staccato
Short détaché
Sustained with vibrato
Pizzicato
Tremolo normal

Extended: Long détaché
Sustained with progressive and without vibrato
Snap pizzicato
Col legno
Tremolo slow

01 VI-P1_RE_staccato   Std

Staccato
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 ff
8 Alternations

02 VI-P1_RE_detache-short   Std

Short détaché
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 ff
8 Alternations

03 VI-P1_RE_detache-long   Ext

Long détaché
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 ff
8 Alternations

11 VI-P1_RE_sus_Vib   Std

Sustained, with vibrato
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples
3 Alternations

12 VI-P1_RE_sus_Vib-progr   Ext

Sustained, with progressive vibrato
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples
3 Alternations

13 VI-P1_RE_sus_noVib   Ext

Sustained, without vibrato
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples
3 Alternations

21 VI-P1_RE_pizz   Std

Pizzicato
3 velocity layers: 0–55 p; 56–108 mf; 109–127 ff
8 Alternations

22 VI-P1_RE_pizz-snap   Ext

Snap pizzicato
1 velocity layer
8 Alternations

23 VI-P1_RE_col-legno   Ext

Col legno

31 VI-P1_RE_tremolo   Std

Tremolo, normal
3 velocity layers: 0–55 p; 56–108 mf; 109–127 f
Release samples

32 VI-P1_RE_tremolo_fA   Std

Tremolo, fast attack for legato play
3 velocity layers: 0–55 p; 56–108 mf; 109–127 f
Release samples

33 VI-P1_RE_tremolo-slow   Ext

Tremolo, slow
3 velocity layers: 0–55 p; 56–108 mf; 109–127 f
Release samples

02 DYNAMICS

Standard: Fortepiano
Sforzato

Extended: Medium dynamics, 2/3/4 sec.
Crescendo-diminuendo, 2/4/6 sec.
Sforzatissimo

01 VI-P1_RE_dyn-me_2s   Ext

Medium crescendo and diminuendo, 2 sec.
2 velocity layers: 0–88 mf; 89–127 f
AB switch: crescendo/diminuendo

02 VI-P1_RE_dyn-me_3s   Ext

Medium crescendo and diminuendo, 3 sec.
2 velocity layers: 0–88 mf; 89–127 f
AB switch: crescendo/diminuendo

03 VI-P1_RE_dyn-me_4s   Ext

Medium crescendo and diminuendo, 4 sec.
2 velocity layers: 0–88 mf; 89–127 f
AB switch: crescendo/diminuendo

11 VI-P1_RE_pfp_2s   Ext

Crescendo-diminuendo , 2 sec.
2 velocity layers: 0–88 p; 89–127 f

12 VI-P1_RE_pfp_4s   Ext

Crescendo-diminuendo , 4 sec.
2 velocity layers: 0–88 p; 89–127 f

13 VI-P1_RE_pfp_6s   Ext

Crescendo-diminuendo , 6 sec.
2 velocity layers: 0–88 p; 89–127 f

21 VI-P1_RE_fp   Std

Fortepiano
1 velocity layer
3 Alternations

22 VI-P1_RE_sfz   Std

Sforzato
1 velocity layer
3 Alternations

23 VI-P1_RE_sffz   Ext

Sforzatissimo
1 velocity layer
3 Alternations

05 HARMONICS

Extended: Artifical harmonics
Staccato
Sustained
Tremolo normal and slow

01 VI-P1_RE_harm-fing_stac   **Ext**

Artificial harmonics, staccato
2 velocity layers: 0–88 p; 89–127 f
2 Alternations

02 VI-P1_RE_harm-fing_sus   **Ext**

Artificial harmonics, sustained
2 velocity layers: 0–88 p; 89–127 f
Release samples
3 Alternations

03 VI-P1_RE_harm-fing_trem   **Ext**

Artificial harmonics, tremolo
2 velocity layers: 0–88 p; 89–127 f
Release samples

04 VI-P1_RE_harm-fing_trm-sl   **Ext**

Artificial harmonics, slow tremolo
2 velocity layers: 0–88 p; 89–127 f
Release samples

10 PERF INTERVAL

Standard: Legato with vibrato
Portamento with vibrato

Extended: Legato espressivo (except basses) and without vibrato
Portamento espressivo (except basses) and without vibrato

01 VI-P1_RE_perf-leg_Vib   **Std**

Legato, with vibrato
Monophonic
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples

02 VI-P1_RE_perf-leg_espr   **Ext**

Legato, espressivo
Monophonic
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples

03 VI-P1_RE_perf-leg_noVib   Ext

Legato, without vibrato
Monophonic
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples

11 VI-P1_RE_perf-porta_Vib   Std

Portamento, vibrato
Monophonic
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples

12 VI-P1_RE_perf-porta_espr   Ext

Portamento, espressivo
Monophonic
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples

13 VI-P1_RE_perf-porta_noVib   Ext

Portamento, no vibrato
Monophonic
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples

11 PERF TRILL

Extended: Performance trills, legato and marcato

01 VI-P1_RE_perf-trill_leg   Ext

Legato trills, minor 2nd to major 3rd (larger intervals: legato)
Monophonic
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples

02 VI-P1_RE_perf-trill_marc   Ext

Marcato trills, minor 2nd to octave
Monophonic
4 velocity layers: 0–55 p; 56–88 mp; 89–108 mf; 109–127 f
Release samples

12 PERF REPETITION

Standard: Repetition performances
Legato, portato, spiccato

Extended: Repetition performances, staccato
Crescendo for all articulations

01 VI-P1_RE_perf-rep_leg   **Std**

Legato repetitions
2 velocity layers: 0–88 p; 89–127 f

02 VI-P1_RE_perf-rep_port   **Std**

Portato repetitions
3 velocity layers: 0–88 p; 89–108 f; 109–127 harsh

03 VI-P1_RE_perf-rep_sta   **Ext**

Staccato repetitions
3 velocity layers: 0–88 p; 89–108 f; 109–127 harsh

04 VI-P1_RE_perf-rep_spi   **Std**

Spiccato repetitions
3 velocity layers: 0–55 p; 56–108 f; 109–127 harsh

11 VI-P1_RE_perf-rep_cre5_leg   **Ext**

Legato repetitions, crescendo
1 velocity layer
5 Repetitions

12 VI-P1_RE_perf-rep_cre9_port   **Ext**

Portato repetitions, crescendo
1 velocity layer
9 Repetitions

13 VI-P1_RE_perf-rep_cre9_sta   **Ext**

Staccato repetitions, crescendo
1 velocity layer
9 Repetitions

14 VI-P1_RE_perf-rep_cre9_spi   **Ext**

Spiccato repetitions, crescendo
1 velocity layer
9 Repetitions

13 FAST REPETITION

Extended: Staccato repetitions, 16ths at 140 to 180, and 200 BPM

01 VI-P1_RE_fast-rep_140 (150/160/170/180/200)   **Ext**

Staccato repetitions, 140 to 180, and 200 BPM

21 FX

Standard: Finger noises
              Various effect sounds

01 VI-P1_fingernoises   Std

Finger noises
This effect was recorded like interval performances and can be combined with other articulations to add the appropriate sounds of fingering.
1 velocity layer

02 VI-P1_ambientnoises   Std

Various effect sounds
1 velocity layer

Mapping – Violin:
C3–D#3: breathing, fast
E3–G3: breathing, medium
G#3–B3: breathing, slow

C4–D#4: turning page, p
E4–F4: turning page, f
F#4–G4: turning page, ff

C5–D#5: sordino down
E5–G5: sordino up

G#5–A#5: adjusting violin

C6–D#6: player shifting backwards
E6–G6: player shifting forwards
A6–B6: taking up violin

C7: general noise, 30 sec.

:

Mapping – Viola:

C3–D#3: breathing, fast
E3–G3: breathing, medium
G#3–B3: breathing, slow

C4–D#4: turning page, p
E4–F4: turning page, f
F#4–G4: turning page, ff
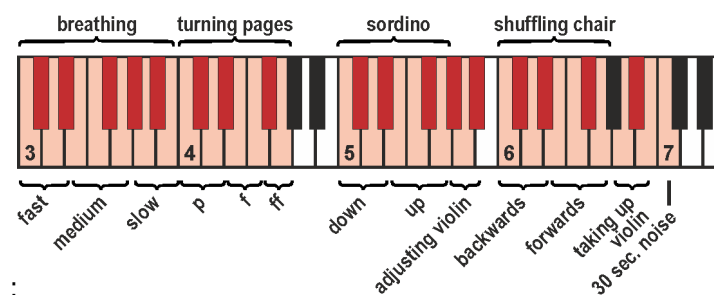
C5–D#5: sordino down
E5–G5: sordino up

G#5–A#5: adjusting violin

C6–D#6: player shifting backwards
E6–G6: player shifting forwards
A6–B6: taking up violin

C7: general noise, 30 sec.
D7–G7: instrument noises
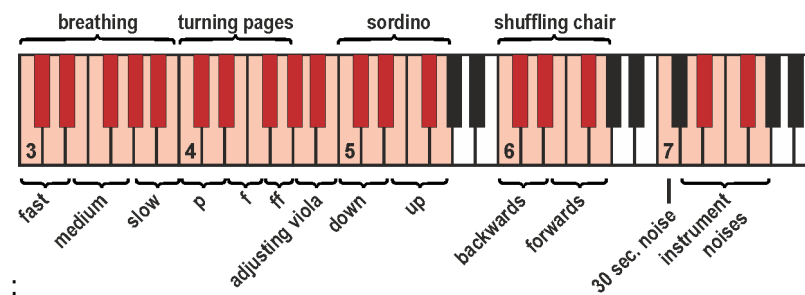
Mapping – Cello:
C3–D#3: breathing, fast
E3–G3: breathing, medium
G#3–B3: breathing, slow

C4–D#4: turning page, p
E4–F4: turning page, f
F#4–G4: turning page, ff
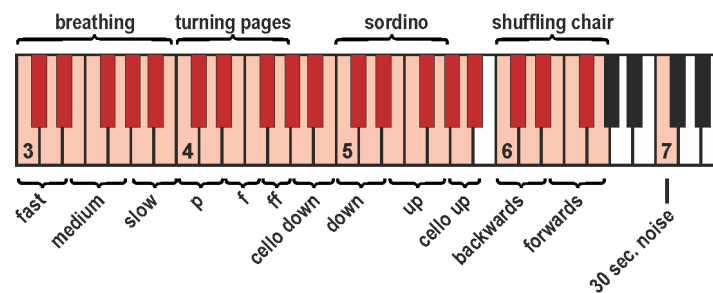
G#4–B4: putting cello down

C5–D#5: sordino down
E5–G5: sordino up

G#5–A#5: taking cello up

C6–D#6: player shifting backward
E6–G6: player shifting forward

C7: general noise, 30 sec.

Mapping – Bass:
C1–D#1: setting neck, upwards
D1–G1: setting neck, downwards

G#1-B1: spike noise, var. 1–4

C2–D#2: breathing, fast
E2–G2: breathing, medium
G#2–B2: breathing, slow

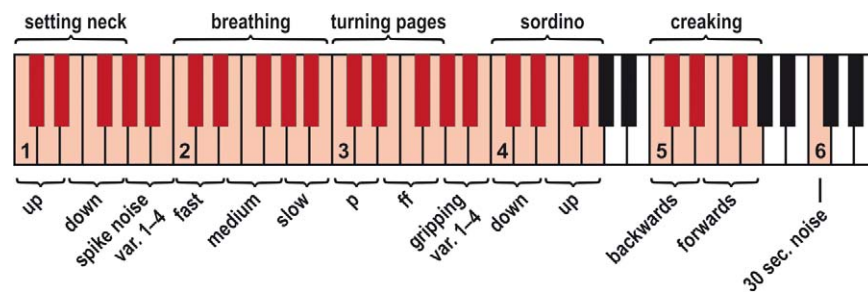C3–D#3: turning page, p
E3–G3: turning page, ff

G#3–B3: gripping noise, var. 1–4

C4–D#4: sordino down
E4–G4: sordino up

C5–D#5: creaking, backward movement
E5–G5: creaking, forward movement

C6: general noise, 30 sec.

Matrices

The Matrix keyswitches for violin, viola and cello are assigned to C1–B1, those for bass to C6–B6.

Matrix - VI

01 Regular

01 VI-P1_RE_L1_Art-Combi   Std

Staccato, détaché short
Sustained with vibrato, normal and with staccato attack
Fortepiano, sforzato
Legato with vibrato, portamento with vibrato
Repetitions legato, spiccato
Tremolo normal and with staccato attack
Pizzicato

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

	C1	C#1	D1	D#1	E1	F1	F#1
V1	staccato	sustained vib.	fortepiano	legato vib.	legato reps.	tremolo	pizzicato
V2	dét. short	sus vib./stacc. attack	sforzato	porta vib.	spiccato reps.	trem/stacc. attack	pizzicato

02 VI-P1_RE_L2_Art-Combi   Ext

Staccato, détaché short and long
Sustained without, with normal and progressive vibrato, vibrato/no vibrato x-fade
Fortepiano, sforzato, sforzatissimo
Legato and portamento with and without vibrato, espressivo, vibrato/no vibrato x-fade
Trills legato, marcato
Repetitions legato, portato, staccato, spiccato
Fast repetitions, 150/160/180/200 BPM
Tremolo normal and fast attack, tremolo slow
Harmonics staccato, sustained, tremolo normal and slow
Pizzicato normal and snap, col legno

Matrix switches: Horizontal: Keyswitches, C1–B1   Vertical: Modwheel, 4 zones

	C1	C#1	D1	D#1	E1	F1	F#1	G1	G#1	A1	A#1	B1
V1	staccato	sus vib.	fp	legato vib.	porta vib.	trills leg.	legato reps.	reps. 150BPM	tremolo	harm stacc	dyn. 2s	pizzicato
V2	dét. short	sus no vib.	sfz	leg no vib.	porta no vib.	trills leg.	portato reps.	reps. 160BPM	trem/fast attack	harm sus.	dyn. 4s	snap pizz.
V3	dét. short	sus espr.	sfz	leg espr. bass: no vib.	porta espr. bass: no vib.	trills marc.	staccato reps.	reps. 180BPM	trem/fast attack	harm trem.	pfp 2s	snap pizz.
V4	dét. long	sus vib/no vib x-fade	sffz	leg vib/no vib x-fade	porta vib/no vib x-fade	trills marc.	spiccato reps.	reps. 200BPM	trem slow	harm trem. slow	pfp 4s	col legno

O3 VI-P1_RE_shorts+noise   Ext

Short articulations with finger noises
Staccato, détaché
Repetitions portato, staccato, spiccato, normal and crescendo
Pizzicato normal and snap, col legno

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

	C1	C#1	D1	D#1
V1	staccato	reps. portato	reps. portato cres.	pizzicato
V2	détaché short	reps. staccato	reps. staccato cres.	snap pizzicato
V3	détaché long	reps. spiccato	reps. spiccato cres.	col legno

Presets

Preset - VI

A - Violin 1

01 VI-P1_Small Set L1   Std

Matrices:
01 VI-P1_RE_L1_Art-Combi
01 VI-P1_OS_L1_Art-Combi
01 VI-P1_C_L1_Art-Combi
Matrix Keyswitches: Violin, Viola: C2–D2; Cello: C6–D6; Bass: C5–D5

02 VI-P1_Small Set L2   Ext

Matrices:
02 VI-P1_RE_L2_Art-Combi
02 VI-P1_OS_L2_Art-Combi
02 VI-P1_C_L2_Art-Combi
Matrix Keyswitches: Violin, Viola: C2–D2; Cello: C6–D6; Bass: C5–D5

03 VI-P1_Large Set L1   Std

Matrices:
01 VI-P1_RE_L1_Art-Combi
01 VI-P1_OS_L1_Art-Combi
01 VI-P1_C/G/D/A_L1_Art-Combi
Matrix Keyswitches: Violin, Viola: C2–F2; Cello: C6–F6; Bass: C5–F5

04 VI-P1_Large Set L2   Ext

Matrices:
02 VI-P1_RE_L2_Art-Combi
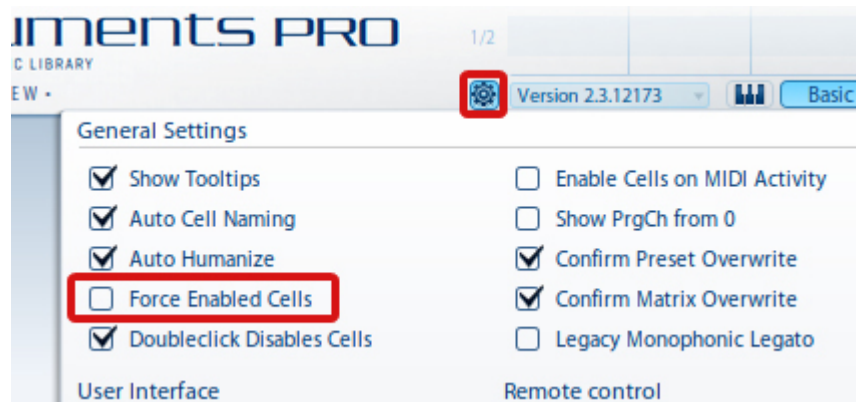02 VI-P1_OS_L2_Art-Combi
02 VI-P1_C/G/D/A_L2_Art-Combi
Matrix Keyswitches: Violin, Viola: C2–F2; Cello: C6–F6; Bass: C5–F5

Appendix – Vienna Instruments PRO Matrices and Presets

General Information

All *Vienna Instruments PRO* Presets and Matrices have been saved with their cells disabled. This way you can load them quickly to analyze their contents before activating what you need, and thus save memory.
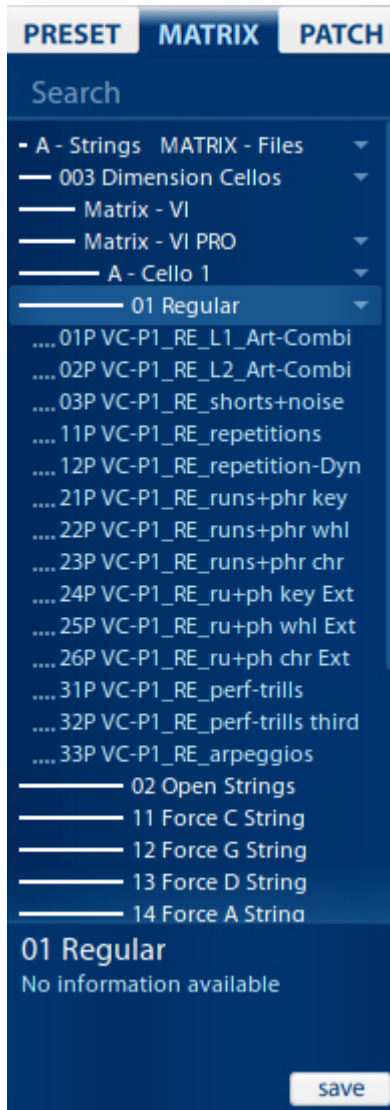
If you activate "Force Enabled ON" in the Settings Menu, these Presets and Matrices will be loaded with enabled cells.

Matrices

There are special folders for *Vienna Instruments PRO* in the Matrix list:

"MATRIX – VI PRO"

These folders hold 14 Matrices.

Matrices 01 to 03 are the same as their Vienna Instruments namesakes, with additional VI PRO features (Humanizing, etc.).

Matrix 11 and higher contain sequence-based Matrices, and are described below.

"11 repetitions" – Repetitions without restrictions

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

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

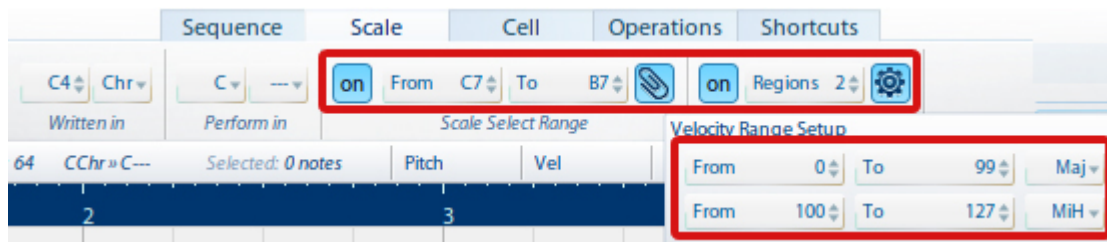An APP Sequencer based Matrix with Host Tempo Sync activated by default.

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" 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 Fast Legatos, and Slurred Fast Legatos for most string ensembles.

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 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 Marcato Performance Trill Patches.

Attention: "Ext" Matrices are only available if the Extended Library of the corresponding Collection is available.

"25 runs+phr whl ext"

Like Matrix "21 runs+phr key", based on Marcato Performance Trill Patches and whole-tone scales.

"26 runs+phr chr ext"

Like Matrix "21 runs+phr key", based on Marcato Performance Trill Patches and chromatic scales.

"31 perf-trills" – Thrilling Trills

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.
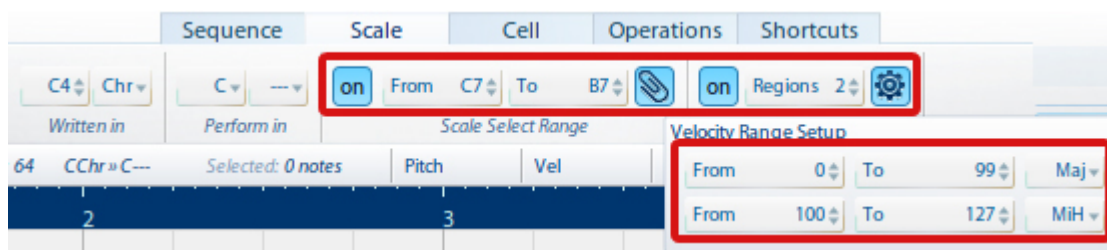
Selection of 12 Scales from C major/minor to B major/minor by Keyswitches C7–B7 (except Piccolo Flute: C3–B3).

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" 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 perf-trills third"

Similar to "31 perf-trills", but featuring minor and major 3rd trills.

"33 arpeggios" – Fantastic Four String Arpeggios

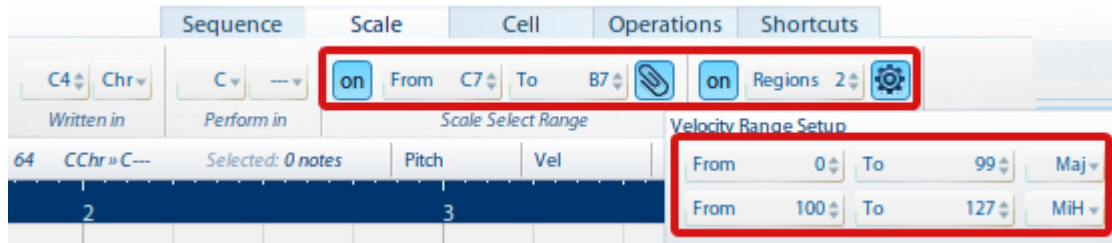APP Sequencer-based Matrix, Host Tempo Sync activated by default.

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

Presets

All *Vienna Instruments PRO* Presets are contained in the their own folder named "PRESET – VI PRO".

"PRESET – VI PRO"

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.
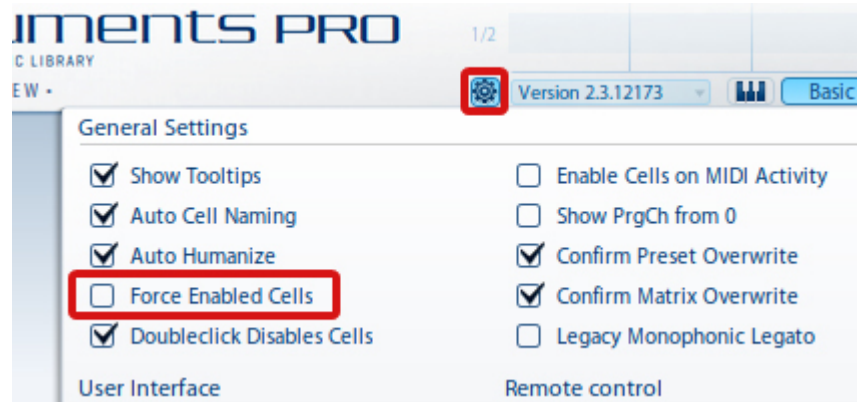
Use Keyswitches to switch between Matrices. Alternatively, you can also use Program Changes or MIDI Control Changes.

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
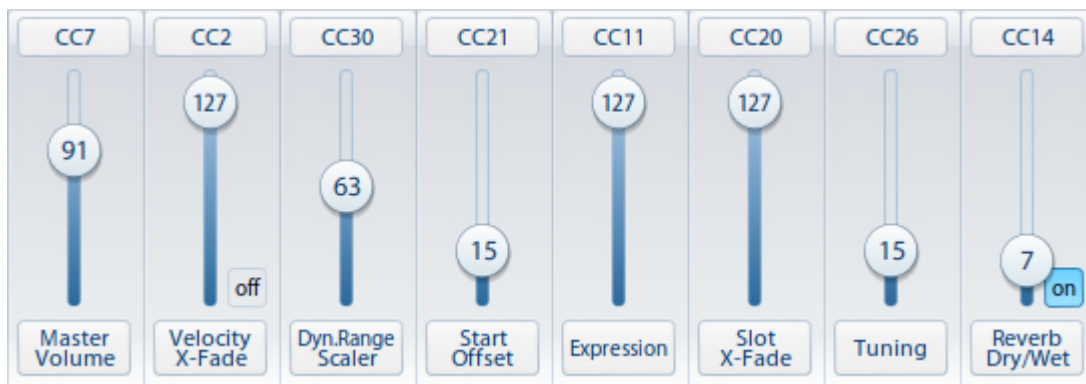
Standard (Level 1) Matrix assignments:

Small Set L1:

C2/C6	RE_L1_Art-Combi
C#2/C#6	OS_L1_Art-Combi
D2/D6	G_L1_Art-Combi

Large Set L1:

C2/C6	RE_L1_Art-Combi
C#2/C#6	OS_L1_Art-Combi
D2/D6	G_L1_Art-Combi
D#2/D#6	D_L1_Art-Combi
E2/E6	A_L1_Art-Combi
F2/F6	E_L1_Art-Combi

"L1+Seq" Presets (Regular, Open String, and Force C):

C2/C6	L1_Art-Combi
C#2/C#6	repetitions
D2/D6	runs+phr key
D#2/D#6	runs+phr whl
E2/E6	runs+phr chr
F2/F6	arpeggios

Extended (Level 2) Matrix assignments:

Small Set L2:

C2/C6	RE_L2_Art-Combi
C#2/C#6	OS_L2_Art-Combi
D2/D6	G_L2_Art-Combi

Large Set L2:

C2/C6	RE_L2_Art-Combi
C#2/C#6	OS_L2_Art-Combi
D2/D6	G_L2_Art-Combi
D#2/D#6	D_L2_Art-Combi
E2/E6	A_L2_Art-Combi
F2/F6	E_L2_Art-Combi

"L2+Seq" Presets (Regular, Open String, and Force C):

C2/C6	L2_Art-Combi
C#2/C#6	shorts+noise
D2/D6	repetitions
D#2/D#6	repetition-Dyn
E2/E6	ru+ph key Ext
F2/F6	ru+ph whl Ext
F#2/F#6	ru+ph chr Ext
G2/G6	perf-trills
G#2/G#6	perf-trills third
A2/A6	arpeggios