# Vienna Instruments
# Solo Download Instruments
# Horn ensemble
# Full Library

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# Introduction

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

## “Full” Library

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

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

### Data paths and Patch name conventions

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

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

Special Patch configurations which sometimes are part of a Standard Download Instrument may be found in a reserved folder called "98 RESOURCES" in the Full Instrument. E.g., Flute 1 Standard contains the Patch "22D FL1 legato-sus"; in Flute 1 Full, this Patch is called "01 FL1_perf_leg_sustain" and is located in the Resources' subfolder "03 Perf Speed variation". (Apart from that, it also contains more samples.) Other articulations that can be found in the Resources folder are isolated dynamics repetitions in the subfolder "01 Perf Rep dyn" – e.g., the five repetitions of a legato crescendo, divided into separate Patches – and extracted velocity layers of sustained notes in the subfolder "02 Long Notes – Single Layer".

## Patch information

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

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

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

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

| Layers | Layer 1 | Layer 2 | Layer 3 | Layer 4 | Layer 5 | Layer 6 |
|---|---|---|---|---|---|---|
| 2 | 1–88 | 89–127 | | | | |
| 3 | 1–55 | 56–88 | 89–127 | | | |
| 4 | 1–55 | 56–88 | 89–108 | 109-127 | | |
| 5 | 1–24 | 25–55 | 56–88 | 89–108 | 109–127 | |
| 6 | 1–24 | 25–55 | 56–88 | 89–108 | 109–118 | 119–127 |

### Interval performances

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

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

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

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

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

## Matrix information

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

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

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

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

# Preset information

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

# Abbreviations

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

| Abbreviation | Meaning |
|---|---|
| + | faster articulation (runs and arpeggios) |
| 150, 160, … | 150, 160, … BPM (beats per minute) |
| 1s, 2s, … | tone length 1 sec., 2 sec., … |
| acc | accelerando |
| all | combination of all Patches of a category |
| arp | arpeggio |
| blare | "blared" tones (horn) |
| cre | crescendo |
| dim | diminuendo |
| dm | diminished (arpeggios) |
| dyn | dynamics (crescendo and diminuendo) |
| dyn5, dyn9 | dynamics, 5/9 repetitions |
| fa | fast |
| faT | fast triplets |
| fA | fast attack |
| fA_auto | attack automation (normal/fast attack) |
| fast-rep | fast repetitions |
| flatter | flutter tonguing |
| fx | effect sound |
| gliss | glissando |
| hA | hard attack |
| leg | legato |
| li | light |

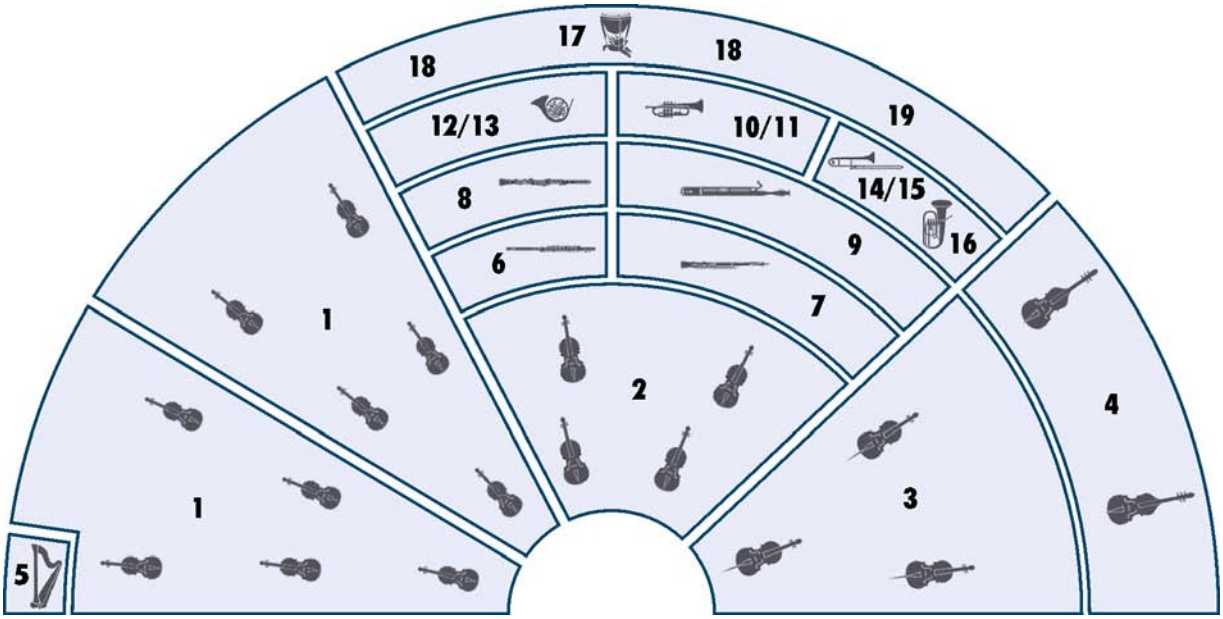
| Abbreviation | Meaning |
|---|---|
| lo | long |
| ma | major |
| marc | marcato |
| me | medium |
| mi | minor |
| mord | mordent |
| mu | muted |
| muA, muB | muted, variation A/B |
| nA | normal attack |
| noVib | without vibrato |
| perf-rep | repetition performance |
| por | portato |
| run | octave run |
| sA | soft attack |
| sl | slow |
| sta, stac | staccato |
| sto | stopped (horns) |
| str | strong |
| sus | sustained |
| T | triplets |
| tune | "tuning in" articulation |
| UB | upbeat |
| UB-a1, -a2 | 1, 2 upbeats |
| v1, v2 … | 1st, 2nd, … variation |
| Vib | with (medium) vibrato |
| Vib-progr | progressive vibrato |
| XF | cell crossfade Matrix |

# Articulations

| 64 Horns - a4 | |
|---|---|
| **01 SHORT + LONG NOTES** | Staccato<br>Portato short, medium and long<br>Sustained, normal, marcato, and blared |
| **02 DYNAMICS** | Medium crescendo and diminuendo, 1.5, 2, 3, 4, and 6 sec.<br>Strong crescendo and diminuendo, 3, 4, and 6 sec.<br>pfp, 4 and 6 sec.<br>Fortepiano, sforzato, sforzatissimo |
| **03 FLATTER** | Flutter tonguing normal and crescendo |
| **10 PERF INTERVAL** | Legato, normal and with sustain crossfading<br>Marcato |
| **11 PERF INTERVAL FAST** | Legato<br>Marcato |
| **12 PERF TRILL** | Trills, legato, minor to major 2nd |
| **13 PERF REPETITION** | Legato, portato, staccato<br>Slow and fast<br>Dynamics for all repetitions |
| **14 PERF UPBEAT REPETITION** | 1 and 2 upbeats, slow and fast, normal and dynamics |
| **15 FAST REPETITION** | Staccato, 9 repetitions, 150 to 190 BPM<br>Normal and dynamics |
| **16 UPBEAT REPETITION** | 1 upbeat, 80–130 BPM<br>2–3 upbeats, 80–140, 160, and 180 BPM |
| **17 ARPEGGIOS** | Arpeggios, staccato<br>Diminished, major and minor from C to B key<br>Up and down, 2 speeds for all |
| **18 GLISSANDI** | Performance glissandos, minor 3rd to octave<br>Fixed glissandos, 4th to octave, up and down |

# 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.

# 64 Horns - a4

## The instrument

### Description

The French horn in F is a brass wind instrument with a funnel-shaped mouthpiece.

In the 19th century it became the most important wind instrument in the Romantic orchestra. The brass section of the modern orchestra usually uses four horns, especially large sections may even have six or eight horns.

### Range and notation

The horn in F has a range from B1–F5.

It is notated in F; in bass clef and treble clef it is written a fifth higher than it sounds.

### Sound characteristics

Full, warm, velvety, clear, bright, intense, heroic, distant, mellow, metallic, powerful, expressive, resounding, sonorous.

Low notes are most effective played *piano*, when forced they take on a slightly rough tone. Ideal for the performance of thematic tasks.

The notes in the middle register sound mellow, full and resounding.

The high notes are soft as velvet, bright and very intense, brilliant. This characteristic horn sound develops best around C5.

### Combination with other instruments

The horn blends with all the instrument groups in the orchestra better than any other instrument.

Played together with other brass instruments the horn loses its mellow euphony, for cup and funnel-shaped mouthpieces mutually cancel out their characteristic sounds.

Of the woodwinds, the clarinet and bassoon blend very well with the horn.

Strings combined with horns blend into a homogeneous overall sound.

# Patches

## 01 SHORT + LONG NOTES — Range: G2–E5

**01 HO-4_staccato** — **Samples: 159** — **RAM: 9 MB**

Staccato
3 velocity layers
4 Alternations

**02 HO-4_portato_short** — **Samples: 162** — **RAM: 10 MB**

Portato, short
3 velocity layers
4 Alternations

**03 HO-4_portato_medium** — **Samples: 215** — **RAM: 13 MB**

Portato, medium
4 velocity layers
4 Alternations

**04 HO-4_portato_long** — **Samples: 162** — **RAM: 10 MB**

Portato, long
3 velocity layers
Release samples
2 Alternations

**11 HO-4_sus** — **Samples: 162** — **RAM: 10 MB**

Sustained
3 velocity layers
Release samples

**12 HO-4_sus_marcato** — **Samples: 54** — **RAM: 3 MB**

Sustained, marcato
1 velocity layer
Release samples
2 Alternations

**13 HO-4_sus_blare** — **Samples: 54** — **RAM: 3 MB**

Sustained, blared
1 velocity layer
Release samples
2 Alternations

## 02 DYNAMICS Range: G2–E5

**01 HO-4_dyn-me_1'5s** **Samples: 108** **RAM: 6 MB**

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

**02 HO-4_dyn-me_2s** **Samples: 108** **RAM: 6 MB**

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

**03 HO-4_dyn-me_3s** **Samples: 108** **RAM: 6 MB**

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

**04 HO-4_dyn-me_4s** **Samples: 108** **RAM: 6 MB**

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

**05 HO-4_dyn-me_6s** **Samples: 108** **RAM: 6 MB**

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

**11 HO-4_dyn-str_3s** **Samples: 54** **RAM: 3 MB**

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

**12 HO-4_dyn-str_4s** **Samples: 54** **RAM: 3 MB**

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

**13 HO-4_dyn-str_6s** **Samples: 54** **RAM: 3 MB**

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

**21 HO-4_pfp_4s** **Samples: 14** **RAM: 1 MB**

Crescendo-diminuendo, 4 sec.
1 velocity layer

**22 HO-4_pfp_6s** **Samples: 14** **RAM: 1 MB**

Crescendo-diminuendo, 6 sec.
1 velocity layer

**31 HO-4_fp** **Samples: 27** **RAM: 1 MB**

Fortepiano
1 velocity layer
2 Alternations

**32 HO-4_sfz** **Samples: 27** **RAM: 1 MB**

Sforzato
1 velocity layer
2 Alternations

**33 HO-4_sffz** **Samples: 27** **RAM: 1 MB**

Sforzatissimo
1 velocity layer
2 Alternations

## 03 FLATTER Range: G2–E5

**01 HO-4_flatter** **Samples: 54** **RAM: 3 MB**

Flutter tonguing
1 velocity layer
Release samples

**02 HO-4_flatter_cre** **Samples: 27** **RAM: 1 MB**

Flutter tonguing, crescendo
1 velocity layer

## 10 PERF INTERVAL Range: G2–D5

**01 HO-4_perf-legato** **Samples: 512** **RAM: 32 MB**

Legato
2 velocity layers
Release samples

**02 HO-4_perf-legato_sus** **Samples: 570** **RAM: 35 MB**

Legato
Sustain crossfading
4 velocity layers
Release samples

**03 HO-4_perf-marcato** **Samples: 664** **RAM: 41 MB**

Marcato
2 velocity layers
Release samples

## 11 PERF INTERVAL FAST — Range: G2–D5

**01 HO-4_perf-legato_fa** — **Samples: 632** — **RAM: 39 MB**

Legato, fast
2 velocity layers
Release samples

**02 HO-4_perf-marcato_fa** — **Samples: 760** — **RAM: 47 MB**

Marcato, fast
2 velocity layers
Release samples

## 12 PERF TRILL — Range: G2–D5

**01 HO-4_perf-trill** — **Samples: 1140** — **RAM: 71 MB**

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

## 13 PERF REPETITION — Range: G2–E5

**01 HO-4_perf-rep_leg-sl** — **Samples: 210** — **RAM: 13 MB**

Legato, slow
3 velocity layers

**02 HO-4_perf-rep_leg-fa** — **Samples: 210** — **RAM: 13 MB**

Legato, fast
3 velocity layers

**03 HO-4_perf-rep_por-sl** — **Samples: 378** — **RAM: 23 MB**

Portato, slow
3 velocity layers

**04 HO-4_perf-rep_por-fa** — **Samples: 378** — **RAM: 23 MB**

Portato, fast
3 velocity layers

**05 HO-4_perf-rep_sta-sl** — **Samples: 378** — **RAM: 23 MB**

Staccato, slow
3 velocity layers

**06 HO-4_perf-rep_sta-fa** — **Samples: 378** — **RAM: 23 MB**

Staccato, fast
3 velocity layers

**21 HO-4_perf-rep_dyn5_leg-sl** **Samples: 140** **RAM: 8 MB**

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

**22 HO-4_perf-rep_dyn5_leg-fa** **Samples: 140** **RAM: 8 MB**

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

**23 HO-4_perf-rep_dyn9_por-sl** **Samples: 252** **RAM: 15 MB**

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

**24 HO-4_perf-rep_dyn9_por-fa** **Samples: 252** **RAM: 15 MB**

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

**25 HO-4_perf-rep_dyn9_sta-sl** **Samples: 252** **RAM: 15 MB**

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

**26 HO-4_perf-rep_dyn9_sta-fa** **Samples: 252** **RAM: 15 MB**

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

## 14 PERF UPBEAT REPETITION Range: G2–E5

**01 HO-4_perf-rep_UB-a1_sl** **Samples: 112** **RAM: 7 MB**

1 upbeat, slow
2 velocity layers

**02 HO-4_perf-rep_UB-a2_sl** **Samples: 112** **RAM: 7 MB**

2 upbeats, slow
2 velocity layers

**03 HO-4_perf-rep_UB-a1_fa** **Samples: 112** **RAM: 7 MB**

1 upbeat, fast
2 velocity layers

**04 HO-4_perf-rep_UB-a2_fa** **Samples: 112** **RAM: 7 MB**

2 upbeats, fast
2 velocity layers

**11 HO-4_perf-rep_dyn4_UB-a1_sl** **Samples: 112** **RAM: 7 MB**

1 upbeat, slow, dynamics
4 repetitions
1 velocity layer
AB switch crescendo/diminuendo

**12 HO-4_perf-rep_dyn4_UB-a2_sl** **Samples: 112** **RAM: 7 MB**

2 upbeats, slow, dynamics
4 repetitions
1 velocity layer
AB switch crescendo/diminuendo

**13 HO-4_perf-rep_dyn4_UB-a1_fa** **Samples: 112** **RAM: 7 MB**

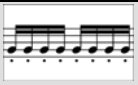
1 upbeat, fast, dynamics
4 repetitions
1 velocity layer
AB switch crescendo/diminuendo

**14 HO-4_perf-rep_dyn4_UB-a2_fa** **Samples: 112** **RAM: 7 MB**

2 upbeats, fast, dynamics
4 repetitions
1 velocity layer
AB switch crescendo/diminuendo

## 15 FAST REPETITION

**Range: G2–E5**



**01 HO-4_fast-rep_150 (160/170/180/190)** **Samples: 56** **RAM: 3 MB**

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

**11 HO-4_fast-rep_150_dyn (160/170/180/190)** **Samples: 28** **RAM: 1 MB**

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

## 16 UPBEAT REPETITION

### A Single Upbeat

**Range: G2–E5**

**01 HO-4_UB-a1_80 (90/100/110/120/130)** **Samples: 81** **RAM: 5 MB**

1 upbeat, 80–130 BPM
3 velocity layers

### B Double Upbeats

**Range: G2–E5**

**01 HO-4_UB-a2_80 (90/100/110/120/130/140/160/180)** **Samples: 81** **RAM: 5 MB**

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

### C Triple Upbeats

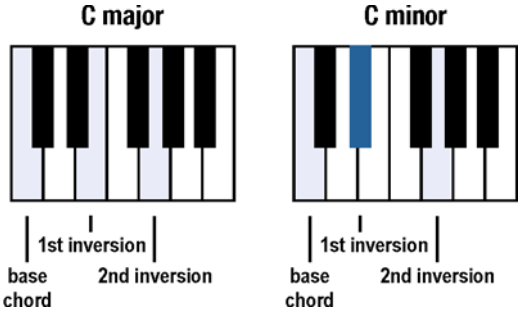
**Range: G2–E5**

**01 HO-4_UB-a3_80 (90/100/110/120/130/140/160/180)** **Samples: 81** **RAM: 5 MB**

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

## 17 ARPEGGIOS

Please note that the playing ranges vary with the key of the Patch used.
For playing ranges and mappings for each key, please see the appendix.




### Staccato diminished

**01 HO-4_arp-sta_dm** **Range: A2–E5** **Samples: 56** **RAM: 3 MB**

Arpeggios, staccato
Diminished
2 velocity layers
AB switch: up/down

### Staccato diminished fast

**01 HO-4_arp-sta+_dm** **Range: A2–E5** **Samples: 56** **RAM: 3 MB**

Arpeggios, staccato, fast
Diminished
2 velocity layers
AB switch: up/down

## Staccato major

**01 HO-4_arp-sta_C-ma (through to B-ma)** **Samples: 20** **RAM: 1 MB**

Arpeggios, staccato
C to B major
2 velocity layers
AB switch: up/down

## Staccato major fast

**01 HO-4_arp-sta+_C-ma (through to B-ma)** **Samples: 20** **RAM: 1 MB**

Arpeggios, staccato, fast
C to B major
2 velocity layers
AB switch: up/down

## Staccato minor

**01 HO-4_arp-sta_C-mi (through to B-mi)** **Samples: 20** **RAM: 1 MB**

Arpeggios, staccato
C to B minor
2 velocity layers
AB switch: up/down

## Staccato minor fast

**01 HO-4_arp-sta_C-mi+ (through to B-mi)** **Samples: 20** **RAM: 1 MB**

Arpeggios, staccato, fast
C to B minor
2 velocity layers
AB switch: up/down

## 18 GLISSANDI **Range: G2–D5**

Please note that fixed glissandos have different up and down ranges.

**01 HO-4_perf-gliss** **Samples: 244** **RAM: 15 MB**

Glissando, minor 3rd to octave
2 velocity layers
Release samples

**11 HO-4_gliss-5** **Samples: 22** **RAM: 1 MB**

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

**12 HO-4_gliss-6** **Samples: 20** **RAM: 1 MB**

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

**13 HO-4_gliss-7** **Samples: 20** **RAM: 1 MB**

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

**14 HO-4_gliss-8** **Samples: 18** **RAM: 1 MB**

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

**15 HO-4_gliss-9** **Samples: 18** **RAM: 1 MB**

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

**16 HO-4_gliss-10** **Samples: 16** **RAM: 1 MB**

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

**17 HO-4_gliss-11** **Samples: 16** **RAM: 1 MB**

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

**18 HO-4_gliss-12** **Samples: 16** **RAM: 1 MB**

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

## 98 RESOURCES

Slow legato Interval Performance
Isolated dynamics repetitions: Legato slow and fast, portato, staccato
Single layer long notes

### 01 Perf Rep dyn Range: G2–E5

**01 HO-4_rep_cre5_leg-sl-1 (2/3/4/5)** **Samples: 14** **RAM: 1 MB**

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

**01 HO-4_rep_dim5_leg-sl-1 (2/3/4/5)** **Samples: 14** **RAM: 1 MB**

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

**02 HO-4_rep_cre5_leg-fa-1 (2/3/4/5)** **Samples: 14** **RAM: 1 MB**

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

**02 HO-4_rep_dim5_leg-fa-1 (2/3/4/5)** **Samples: 14** **RAM: 1 MB**

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

**03 HO-4_rep_cre9_por-1 (2/3/4/5/6/7/8/9)** **Samples: 14** **RAM: 1 MB**

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

**03 HO-4_rep_dim9_por-1 (2/3/4/5/6/7/8/9)** **Samples: 14** **RAM: 1 MB**

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

**04 HO-4_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)** **Samples: 14** **RAM: 1 MB**

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

**04 HO-4_rep_dim9_sta-1 (2/3/4/5/6/7/8/9)** **Samples: 14** **RAM: 1 MB**

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

## 02 Long Notes - Single Layer Range: G2–E5

**01 HO-4_sus-p** **Samples: 54** **RAM: 3 MB**

Sustained, piano
1 velocity layer
Release samples

**02 HO-4_sus-mf** **Samples: 54** **RAM: 3 MB**

Sustained, mezzoforte
1 velocity layer
Release samples

**03 HO-4_sus-f** **Samples: 54** **RAM: 3 MB**

Sustained, forte
1 velocity layer
Release samples

## 03 Perf Speed variation Range: G2–D5

### 01 HO-4_perf-legato_slow Samples: 543 RAM: 33 MB

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 HO-4 Articulation Combi — Samples: 673 RAM: 42 MB

Single note articulations
Staccato, portato short, sustained, marcato 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 | marcato | pfp 6s. | sfz | flutter cres. |

### L1 HO-4 Perf-Legato Speed — Samples: 747 RAM: 46 MB

Interval performances
Legato slow, normal, and fast
Monophonic, Speed controller

**Matrix switches:** Horizontal: Speed, 3 zones

| | H1 | H2 | H3 |
|---|---|---|---|
| legato | slow | normal | fast |

### L1 HO-4 Perf-Repetitions Combi — Samples: 966 RAM: 60 MB

Repetition performances
Legato slow
Portato slow
Staccato slow

**Matrix switches:** Vertical: Modwheel, 3 zones

| | repetitions |
|---|---|
| V1 | legato slow |
| V2 | portato slow |
| V3 | staccato slow |

## Matrix - LEVEL 2 A - Advanced

### 01 HO-4 Perf-Universal — Samples: 1557 RAM: 97 MB

Interval performances
Legato slow, normal, and fast
Marcato normal and fast
Monophonic, Speed controller

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

| | H1 | H2 | H3 |
|---|---|---|---|
| legato | slow | normal | fast |
| marcato | normal | normal | fast |

### 02 HO-4 Perf-Trill Speed — Samples: 1140 RAM: 71 MB

Multi interval performances
Legato and trills
Monophonic, Speed controller

**Matrix switches:** Horizontal: Speed, 2 zones

| | H1 | H2 |
|---|---|---|
| V1 | legato | trills |

### 03 HO-4 Short+Long notes — Samples: 752 RAM: 47 MB

Single notes
Staccato, portato short and medium
Sustained normal, marcato, and blared

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

| | C1 | C#1 | D1 | D#1 |
|---|---|---|---|---|
| V1 | staccato | port. short | port.med. | sustained |
| V2 | % | % | % | marcato |
| V3 | % | % | % | blared |

## Matrix - LEVEL 2 B - Standard

### 11 HO-4 Perf-Legato Speed — Samples: 747 RAM: 46 MB

Interval performances
Legato slow, normal, and fast
Monophonic, Speed controller

**Matrix switches:** Horizontal: Speed, 3 zones

| | H1 | H2 | H3 |
|---|---|---|---|
| legato | slow | normal | fast |

### 12 HO-4 Perf-Marcato Speed — Samples: 864 RAM: 54 MB

Interval performances^mMarcato normal and fast
Monophonic, Speed controller

**Matrix switches:** Horizontal: Speed, 2 zones

| | H1 | H2 |
|---|---|---|
| marcato | normal | fast |

### 13 HO-4 Short notes — Samples: 698 RAM: 43 MB

Single notes
Staccato, portato short, medium, and long

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

| | C1 | C#1 | D1 | D#1 |
|---|---|---|---|---|
| V1 | staccato | port.short | port.medium | port.long |

### 14 HO-4 Long notes - All — Samples: 216 RAM: 13 MB

Single notes
Sustained normal, marcato, and blared

**Matrix switches:** Horizontal: Keyswitches, C1–D1

| | C1 | C#1 | D1 |
|---|---|---|---|
| sustained | normal | marcato | blared |

### 15 HO-4 Dynamics - Small — Samples: 405 RAM: 25 MB

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 | % | % | % |

### 16 HO-4 Dynamics - Large — Samples: 541 RAM: 33 MB

Dynamics
Medium crescendo and diminuendo, 2, 3, and 4 sec.
Strong crescendo and diminuendo, 3 and 4 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. | 3 sec. | 4 sec. |
| pfp | 4 sec. | 4 sec. | 6 sec. |
| fp/sfz/sffz | fp | sfz | sffz |

### 17 HO-4 Flatter — Samples: 81 RAM: 5 MB

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 HO-4 Perf-Repetitions - Combi — Samples: 1722 RAM: 107 MB

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

**Matrix switches:** Horizontal: Keyswitches, C1–E1

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

### 32 HO-4 Perf-Repetitions - Speed — Samples: 1344 RAM: 84 MB

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

**Matrix switches:** Horizontal: Speed, 4 zones

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

## 33 HO-4 Fast-Repetitions — Samples: 168 RAM: 10 MB

Fast repetitions: Staccato, 150–190 BPM

**Matrix switches:** Horizontal: Keyswitches, C1–E1

| | C1 | C#1 | D1 | D#1 | E1 |
|---|---|---|---|---|---|
| speed/BPM | 150 | 160 | 170 | 180 | 190 |

## 34 HO-4 Perf Upbeat Repetitions — Samples: 448 RAM: 28 MB

Repetition performances
1 and 2 upbeats, slow and fast

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

| | C1 | C#1 |
|---|---|---|
| 1 upbeat | slow | fast |
| 2 upbeats | slow | fast |

## 35 HO-4 Upbeats a1 — Samples: 486 RAM: 30 MB

Repetitions: 1 upbeat, 80–130 BPM

**Matrix switches:** Horizontal: Keyswitches, C1–F1

| | C1 | C#1 | D1 | D#1 | E1 | F1 |
|---|---|---|---|---|---|---|
| speed/BPM | 80 | 90 | 100 | 110 | 120 | 130 |

## 36 HO-4 Upbeats a2 — Samples: 729 RAM: 45 MB

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

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

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

## 37 HO-4 Upbeats a3 — Samples: 729 RAM: 45 MB

Repetitions: 3 upbeats, 80–140, 160, and 180 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 |

## 38 HO-4 Upbeats all — Samples: 1944 RAM: 121 MB

Repetitions: 1–3 upbeats, 80–140, 160, and 180 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 | 80 | 90 | 100 | 110 | 120 | 130 | 130 | 130 | 130 |
| 2 upbeats | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 160 | 180 |
| 3 upbeats | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 160 | 180 |

## Matrix - LEVEL 2 D - Scale+Phrase

### 51 HO-4 Arpeggios-staccato - Major — Samples: 112 RAM: 7 MB

Arpeggios, staccato, 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| staccato maj. | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |

### 52 HO-4 Arpeggios-staccato - Major+ — Samples: 112 RAM: 7 MB

Arpeggios, staccato fast, 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| staccato maj. fast | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |

### 53 HO-4 Arpeggios-staccato - Minor — Samples: 104 RAM: 6 MB

Arpeggios, staccato, C to B minor
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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| staccato min. | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |

### 54 HO-4 Arpeggios-staccato - Minor+ — Samples: 104 RAM: 6 MB

Arpeggios, staccato fast, C to B minor
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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| staccato min. fast | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |

### 55 HO-4 Arpeggios-staccato - All — Samples: 272 RAM: 17 MB

Arpeggios, staccato, C to B major and minor, diminished
AB switch up/down

**Matrix switches:** Horizontal: Keyswitches, C1–B1 Vertical: Modwheel, 3 zones

| | C1 | C#1 | D1 | D#1 | E1 | F1 | F#1 | G1 | G#1 | A1 | A#1 | B1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| major | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |
| minor | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |
| diminished | % | % | % | % | % | % | % | % | % | % | % | % |

### 56 HO-4 Arpeggios-staccato - All+ — Samples: 272 RAM: 17 MB

Arpeggios, staccato fast, C to B major and minor, diminished
AB switch up/down

**Matrix switches:** Horizontal: Keyswitches, C1–B1 Vertical: Modwheel, 3 zones

| | C1 | C#1 | D1 | D#1 | E1 | F1 | F#1 | G1 | G#1 | A1 | A#1 | B1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| major | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |
| minor | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |
| diminished | % | % | % | % | % | % | % | % | % | % | % | % |

## Matrix - LEVEL 2 E - Keyswitch Vel

### 71 HO-4 Legato slow - cre5 — Samples: 70 — RAM: 4 MB

Slow 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-4 Legato fast - cre5 — Samples: 70 — RAM: 4 MB

Fast 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 |

### 73 HO-4 Portato - cre9 — Samples: 126 — RAM: 7 MB

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 HO-4 Staccato - cre9 — Samples: 126 — RAM: 7 MB

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 HO-4 Combi - cre5 — Samples: 140 — RAM: 8 MB

Slow and fast legato: Crescendo, keyswitch velocity
Keyswitches control 5 dynamic steps

**Matrix switches:** Horizontal: Keyswitches, C1–E1 Vertical: Modwheel, 2 zones

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

### 76 HO-4 Combi - cre9 — Samples: 252 — RAM: 15 MB

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 HO-4 Legato slow - dim5 — Samples: 70 — RAM: 4 MB

Slow 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 |

### 78 HO-4 Legato fast - dim5 — Samples: 70 — RAM: 4 MB

Fast 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 |

### 79 HO-4 Portato - dim9 — Samples: 126 — RAM: 7 MB

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 |

### 80 HO-4 Staccato - dim9 — Samples: 126 — RAM: 7 MB

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 |

### 81 HO-4 Combi - dim5 — Samples: 140 — RAM: 8 MB

Slow and fast legato: Diminuendo, keyswitch velocity
Keyswitches control 5 dynamic steps

**Matrix switches:** Horizontal: Keyswitches, C1–E1 Vertical: Modwheel, 2 zones

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

### 82 HO-4 Combi - dim9 — Samples: 252 — RAM: 15 MB

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-4 VSL Preset Level 1** **Samples: 2251** **RAM: 140 MB**

L1 HO-4 Perf-Legato Speed
L1 HO-4 Articulation Combi
L1 HO-4 Perf-Repetitions Combi
**Preset keyswitches:** C6–D6

**HO-4 VSL Preset Level 2** **Samples: 4639** **RAM: 289 MB**

01 HO-4 Perf-Universal
02 HO-4 Perf-Trill Speed
L1 HO-4 Articulation Combi
31 HO-4 Perf-Repetitions - Combi
76 HO-4 Combi - cre9
**Preset keyswitches:** C6–E6

# 64 Horns - a4 stopped

## Patches

### 01 SHORT + LONG NOTES — Range: A#1–D5

**01 HO-4_sto_staccato** — **Samples: 114** — **RAM: 7 MB**

Staccato
3 velocity layers
2 Alternations

**11 HO-4_sto_sus** — **Samples: 114** — **RAM: 7 MB**

Sustained
3 velocity layers
Release samples

### 02 DYNAMICS — Range: A#1–D5

**01 HO-4_sto_dyn-me_1'5s** — **Samples: 76** — **RAM: 4 MB**

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

**02 HO-4_sto_dyn-me_2s** — **Samples: 76** — **RAM: 4 MB**

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

**11 HO-4_sto_dyn-str_3s** — **Samples: 38** — **RAM: 2 MB**

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

**12 HO-4_sto_dyn-str_4s** — **Samples: 38** — **RAM: 2 MB**

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

**21 HO-4_sto_fp** — **Samples: 19** — **RAM: 1 MB**

Fortepiano
1 velocity layer

**22 HO-4_sto_sfz** — **Samples: 19** — **RAM: 1 MB**

Sforzato

1 velocity layer

**23 HO-4_sto_sffz** **Samples: 19** **RAM: 1 MB**

Sforzatissimo
1 velocity layer

## 10 PERF INTERVAL Range: A#1–D5

**01 HO-4_sto_perf-legato** **Samples: 465** **RAM: 29 MB**

Legato
1 velocity layer
Release samples

**02 HO-4_sto_perf-legato_sus** **Samples: 486** **RAM: 30 MB**

Legato
Sustain crossfading
3 velocity layers
Release samples

## 11 PERF REPETITION Range: A#1–D5

**01 HO-4_sto_perf-rep_leg** **Samples: 190** **RAM: 11 MB**

Legato
2 velocity layers

**02 HO-4_sto_perf-rep_por** **Samples: 342** **RAM: 21 MB**

Portato
2 velocity layers

**03 HO-4_sto_perf-rep_sta** **Samples: 342** **RAM: 21 MB**

Staccato
2 velocity layers

**21 HO-4_sto_perf-rep_dyn5_leg** **Samples: 190** **RAM: 11 MB**

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

**22 HO-4_sto_perf-rep_dyn9_por** **Samples: 342** **RAM: 21 MB**

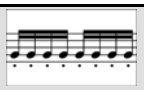
Portato dynamics, 9 repetitions
1 velocity layer
AB switch: crescendo/diminuendo

**23 HO-4_sto_perf-rep_dyn9_sta** **Samples: 342** **RAM: 21 MB**

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

## 12 FAST REPETITION

**Range: A#1–D5**



**01 HO-4_sto_fast-rep_140 (150/160/170/180/190)** **Samples: 76** **RAM: 4 MB**

Fast repetitions: 140–190 BPM
2 velocity layers
Release samples

**06 HO-4_sto_fast-rep_140_dyn (150/160/170/180/190)** **Samples: 38** **RAM: 2 MB**

Fast repetitions: Dynamics, 140–190 BPM
1 velocity layer

## 13 UPBEAT REPETITION

### A Single Upbeat

**Range: A#1–D5**

**01 HO-4_sto_UB-a1_90 (100/110/120/130/140)** **Samples: 38** **RAM: 2 MB**

1 upbeat, 90–140 BPM
2 velocity layers

### B Double Upbeats

**Range: A#1–D5**

**01 HO-4_sto_UB-a2_90 (100/110/120/130/140)** **Samples: 38** **RAM: 2 MB**

2 upbeats, 90–140 BPM
2 velocity layers

### C Triple Upbeats

**Range: A#1–D5**

**01 HO-4_sto_UB-a3_90 (100/110/120/130/140)** **Samples: 38** **RAM: 2 MB**

3 upbeats, 90–140 BPM
2 velocity layers

## 98 RESOURCES

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

### 01 Perf Rep dyn

**Range: A#1–D5**

**01 HO-4_sto_rep_cre5_leg-1 (2/3/4/5)** **Samples: 19** **RAM: 1 MB**

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

**01 HO-4_sto_rep_dim5_leg-1 (2/3/4/5)** **Samples: 19** **RAM: 1 MB**

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

**02 HO-4_sto_rep_cre9_por-1 (2/3/4/5/6/7/8/9)** **Samples: 19** **RAM: 1 MB**

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

**02 HO-4_sto_rep_dim9_por-1 (2/3/4/5/6/7/8/9)** **Samples: 19** **RAM: 1 MB**

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

**03 HO-4_sto_rep_cre9_sta-1 (2/3/4/5/6/7/8/9)** **Samples: 19** **RAM: 1 MB**

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

**03 HO-4_sto_rep_dim9_sta-1 (2/3/4/5/6/7/8/9)** **Samples: 19** **RAM: 1 MB**

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

## 02 Long Notes - Single Layer Range: A#1–D5

**01 HO-4_sto_sus-p** **Samples: 38** **RAM: 2 MB**

Sustained, piano
1 velocity layer
Release samples

**02 HO-4_sto_sus-mf** **Samples: 38** **RAM: 2 MB**

Sustained, mezzoforte
1 velocity layer
Release samples

**03 HO-4_sto_sus-f** **Samples: 38** **RAM: 2 MB**

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 2 B - Standard

### 11 HO-4_sto Perf-Legato — Samples: 560 RAM: 35 MB

Interval performances
Legato normal and with sustain crossfading
Monophonic

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

| | C1 | C#1 |
|---|---|---|
| legato | normal | sus-XF |

### 12 HO-4_sto Short + Long notes — Samples: 228 RAM: 14 MB

Single notes: Staccato and sustained

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

| | C1 | C#1 |
|---|---|---|
| V1 | staccato | sustained |

### 13 HO-4_sto Dynamics — Samples: 209 RAM: 13 MB

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

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

| | C1 | C#1 | D1 |
|---|---|---|---|
| cres/dim | med. 2 sec. | str. 3 sec. | str. 4 sec. |
| fp | % | % | % |
| sfz | % | % | % |
| sffz | % | % | % |

## Matrix - LEVEL 2 C - Repetitions

### 31 HO-4_sto Perf-Repetitions - Combi — Samples: 874 RAM: 54 MB

Repetition performances
Legato, portato, and staccato

**Matrix switches:** Horizontal: Keyswitches, C1–D1

| | C1 | C#1 | D1 |
|---|---|---|---|
| V1 | legato | portato | staccato |

### 32 HO-4_sto Perf-Repetitions - Speed — Samples: 874 RAM: 54 MB

Repetition performances
Legato, portato, and staccato
Speed controller

**Matrix switches:** Horizontal: Speed, 3 zones

| | H1 | H2 | H3 |
|---|---|---|---|
| V1 | legato | portato | staccato |

### 33 HO-4_sto Fast-Repetitions — Samples: 266 RAM: 16 MB

Fast repetitions: Staccato, 140–190 BPM

**Matrix switches:** Horizontal: Keyswitches, C1–F1

| | C1 | C#1 | D1 | D#1 | E1 | F1 |
|---|---|---|---|---|---|---|
| speed/BPM | 140 | 150 | 160 | 170 | 180 | 190 |

### 35 HO-4_sto Upbeats a1 — Samples: 228 RAM: 14 MB

Repetitions: 1 upbeat, 90–140 BPM

**Matrix switches:** Horizontal: Keyswitches, C1–F1

| | C1 | C#1 | D1 | D#1 | E1 | F1 |
|---|---|---|---|---|---|---|
| speed/BPM | 90 | 100 | 110 | 120 | 130 | 140 |

### 36 HO-4_sto Upbeats a2 — Samples: 228 RAM: 14 MB

Repetitions: 2 upbeats, 90–140 BPM

**Matrix switches:** Horizontal: Keyswitches, C1–F1

| | C1 | C#1 | D1 | D#1 | E1 | F1 |
|---|---|---|---|---|---|---|
| speed/BPM | 90 | 100 | 110 | 120 | 130 | 140 |

### 37 HO-4_sto Upbeats a3 — Samples: 228 RAM: 14 MB

Repetitions: 3 upbeats, 90–140 BPM

**Matrix switches:** Horizontal: Keyswitches, C1–F1

| | C1 | C#1 | D1 | D#1 | E1 | F1 |
|---|---|---|---|---|---|---|
| speed/BPM | 90 | 100 | 110 | 120 | 130 | 140 |

### 38 HO-4_sto Upbeats all — Samples: 612 RAM: 38 MB

Repetitions: 1–3 upbeats, 90–140 BPM

**Matrix switches:** Horizontal: Keyswitches, C1–F1 Vertical: Modwheel, 3 zones

| | C1 | C#1 | D1 | D#1 | E1 | F1 |
|---|---|---|---|---|---|---|
| 1 upbeat | 90 | 100 | 110 | 120 | 130 | 140 |
| 2 upbeats | 90 | 100 | 110 | 120 | 130 | 140 |
| 3 upbeats | 90 | 100 | 110 | 120 | 130 | 140 |

## Matrix - LEVEL 2 E - Keyswitch Vel

### 71 HO-4_sto Legato - cre5 — Samples: 95 RAM: 5 MB

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-4_sto Portato - cre9 — Samples: 171 RAM: 10 MB

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-4_sto Staccato - cre9 — Samples: 171 RAM: 10 MB

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-4_sto Combi - cre9 — Samples: 342 RAM: 21 MB

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-4_sto Legato - dim5 — Samples: 95 RAM: 5 MB

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-4_sto Portato - dim9 — Samples: 171 RAM: 10 MB

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-4_sto Staccato - dim9 — Samples: 171 RAM: 10 MB

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-4_sto Combi - dim9 — Samples: 342 RAM: 21 MB

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-4_sto VSL Preset Level 2** **Samples: 1890** **RAM: 118 MB**

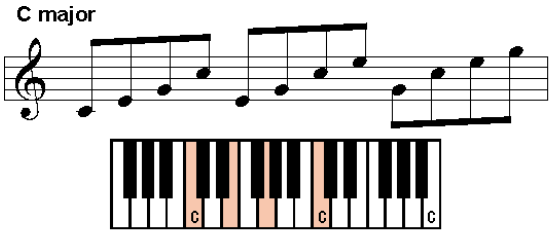
11 HO-4_sto Perf-Legato
11 HO-4_sto Perf-Legato
12 HO-4_sto Short + Long notes
31 HO-4_sto Perf-Repetitions - Combi
74 HO-4_sto Combi - cre9
**Preset keyswitches:** C6–E6

# Appendix

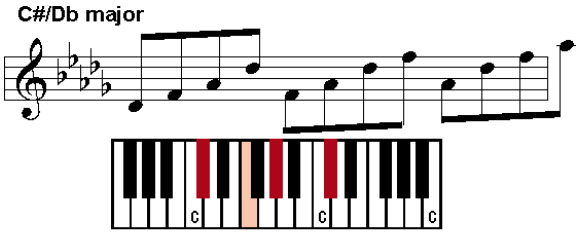
In the following, you will find notations and keyboard layout graphics for major and minor arpeggios, as well as a list of playing ranges for the individual arpeggio Patches.

## Arpeggios – major

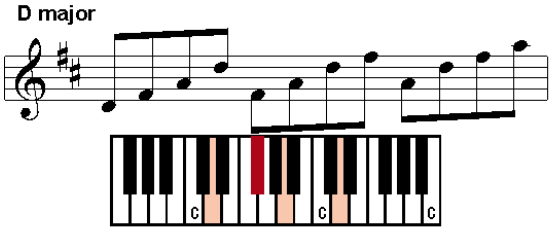
C major



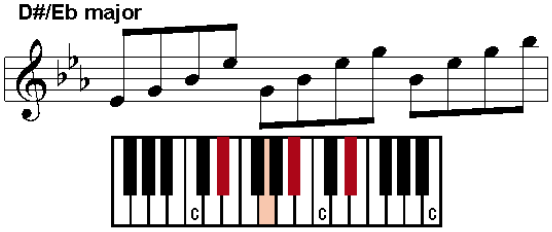
C#/Db major



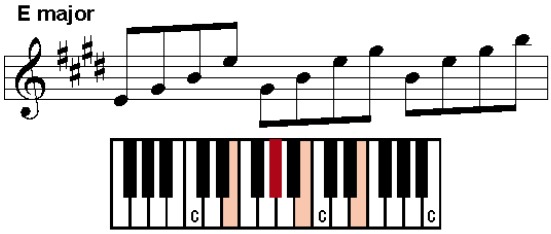
D major



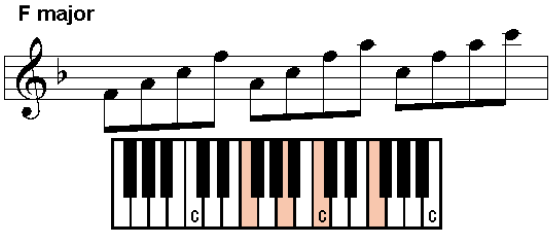
D#/Eb major



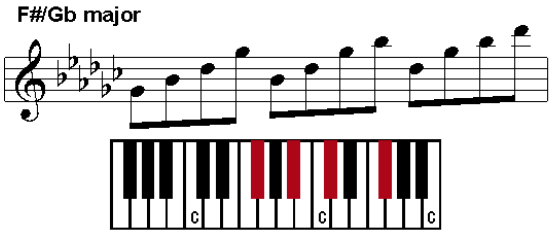
E major



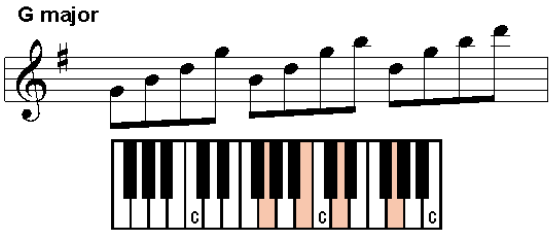
F major



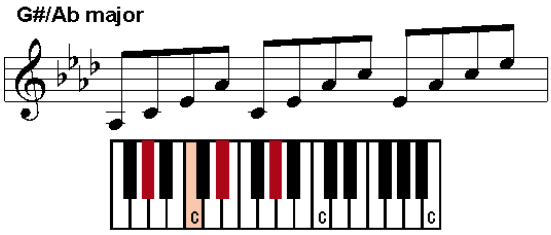
F#/Gb major



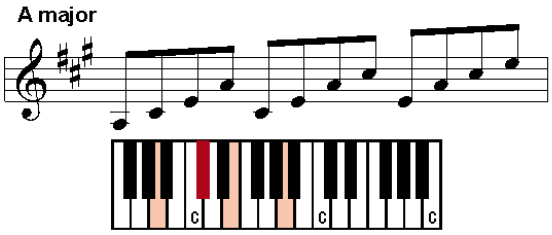
G major



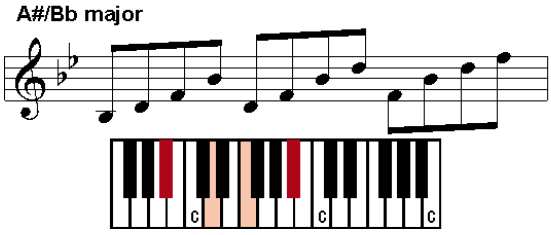
G#/Ab major



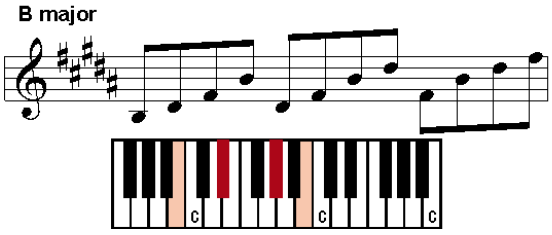
A major



A#/Bb major

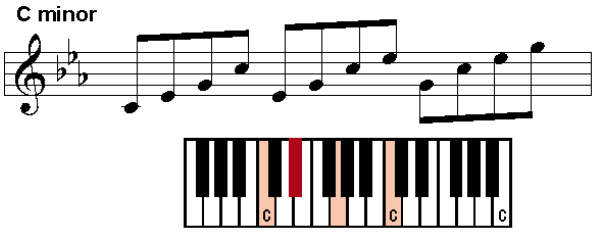


B major

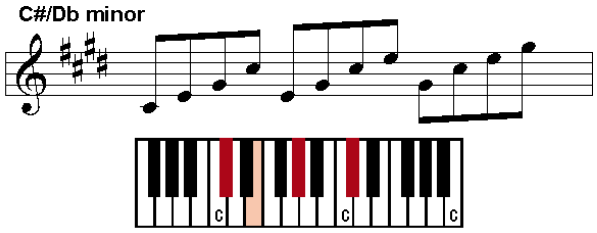


# Arpeggios – minor

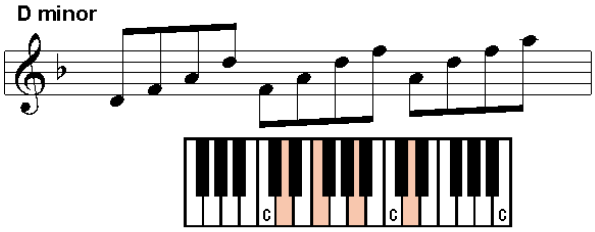
C minor



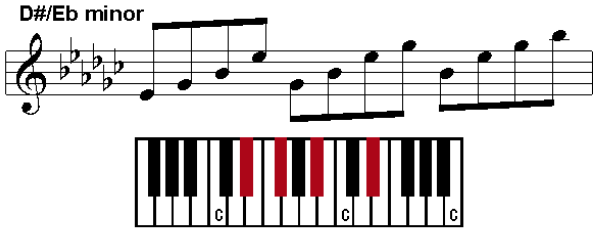
C#/Db minor



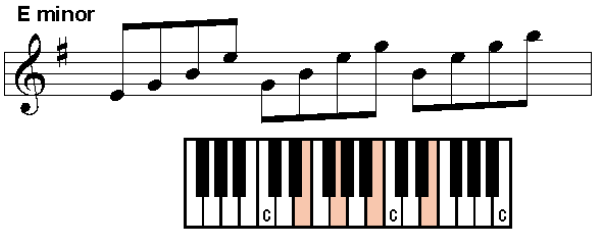
D minor



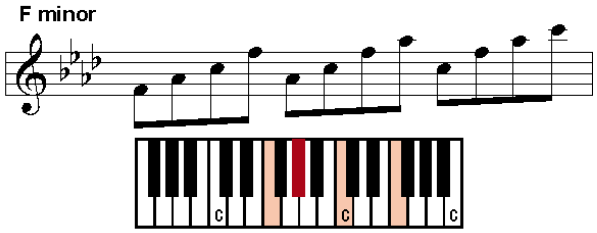
D#/Eb minor



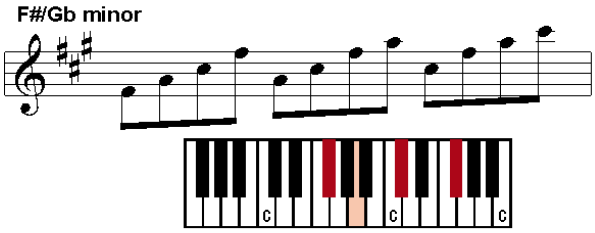
E minor



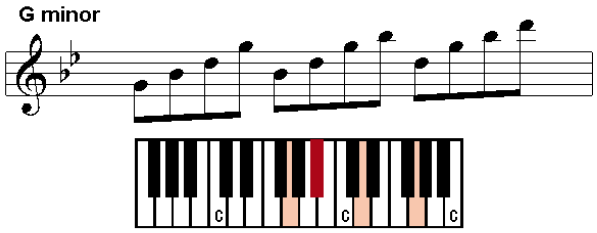
F minor



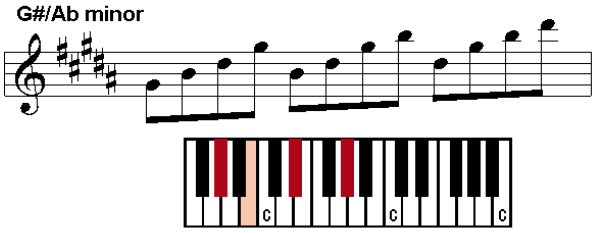
F#/Gb minor



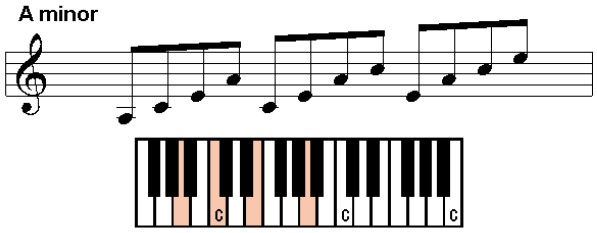
G minor



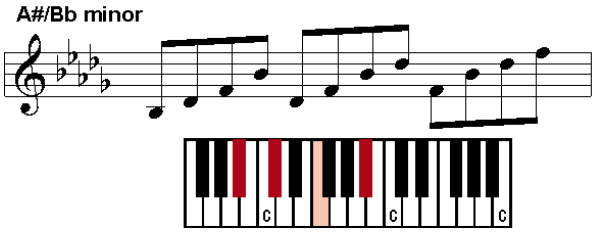
G#/Ab minor



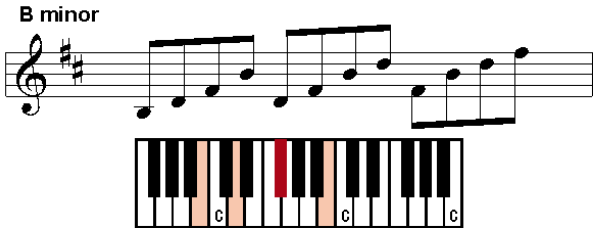
A minor



A#/Bb minor



B minor



# Arpeggio ranges

| Staccato major | play range |
|---|---|
| 01 HO-4_arp-sta_C-ma | C3–C5 |
| 02 HO-4_arp-sta_C#-ma | C#3–C#5 |
| 03 HO-4_arp-sta_D-ma | D3–D5 |
| 04 HO-4_arp-sta_D#-ma | A#2–D#5 |
| 05 HO-4_arp-sta_E-ma | B2–E5 |
| 06 HO-4_arp-sta_F-ma | A2–C5 |
| 07 HO-4_arp-sta_F#-ma | A#2–C#5 |
| 08 HO-4_arp-sta_G-ma | B2–D5 |
| 09 HO-4_arp-sta_G#-ma | C3–D#5 |
| 10 HO-4_arp-sta_A-ma | A2–C#5 |
| 11 HO-4_arp-sta_A#-ma | A#2–D5 |
| 12 HO-4_arp-sta_B-ma | B2–B4 |

| Staccato minor | play range |
|---|---|
| 01 HO-4_arp-sta_C-mi | C3–C5 |
| 02 HO-4_arp-sta_C#-mi | C#3–C#5 |
| 03 HO-4_arp-sta_D-mi | D3–D5 |
| 04 HO-4_arp-sta_D#-mi | D#3–D#5 |
| 05 HO-4_arp-sta_E-mi | E3–E5 |
| 06 HO-4_arp-sta_F-mi | C3–F5 |
| 07 HO-4_arp-sta_F#-mi | C#3–F#5 |
| 08 HO-4_arp-sta_G-mi | A#2–D5 |
| 09 HO-4_arp-sta_G#-mi | B2–D#5 |
| 10 HO-4_arp-sta_A-mi | A2–C5 |
| 11 HO-4_arp-sta_A#-mi | A#2–C#5 |
| 12 HO-4_arp-sta_B-mi | B2–B4 |

| Staccato major fast | play range |
|---|---|
| 01 HO-4_arp-sta+_C-ma | C3–C5 |
| 02 HO-4_arp-sta+_C#-ma | C#3–C#5 |
| 03 HO-4_arp-sta+_D-ma | D3–D5 |
| 04 HO-4_arp-sta+_D#-ma | A#2–D#5 |
| 05 HO-4_arp-sta+_E-ma | B2–E5 |
| 06 HO-4_arp-sta+_F-ma | A2–C5 |
| 07 HO-4_arp-sta+_F#-ma | A#2–C#5 |
| 08 HO-4_arp-sta+_G-ma | B2–D5 |
| 09 HO-4_arp-sta+_G#-ma | C3–D#5 |
| 10 HO-4_arp-sta+_A-ma | A2–C#5 |
| 11 HO-4_arp-sta+_A#-ma | A#2–D5 |
| 12 HO-4_arp-sta+_B-ma | B2–B4 |

| Staccato minor fast | play range |
|---|---|
| 01 HO-4_arp-sta_C-mi+ | C3–C5 |
| 02 HO-4_arp-sta_C#-mi+ | C#3–C#5 |
| 03 HO-4_arp-sta_D-mi+ | D3–D5 |
| 04 HO-4_arp-sta_D#-mi+ | D#3–D#5 |
| 05 HO-4_arp-sta_E-mi+ | E3–E5 |
| 06 HO-4_arp-sta_F-mi+ | C3–F5 |
| 07 HO-4_arp-sta_F#-mi+ | C#3–F#5 |
| 08 HO-4_arp-sta_G-mi+ | A#2–D5 |
| 09 HO-4_arp-sta_G#-mi+ | B2–D#5 |
| 10 HO-4_arp-sta_A-mi+ | A2–C5 |
| 11 HO-4_arp-sta_A#-mi+ | A#2–C#5 |
| 12 HO-4_arp-sta_B-mi+ | B2–B4 |