

**Vienna Instruments**  
**Solo Download Instruments**  
**Flute II**  
**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 Flute II. 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.

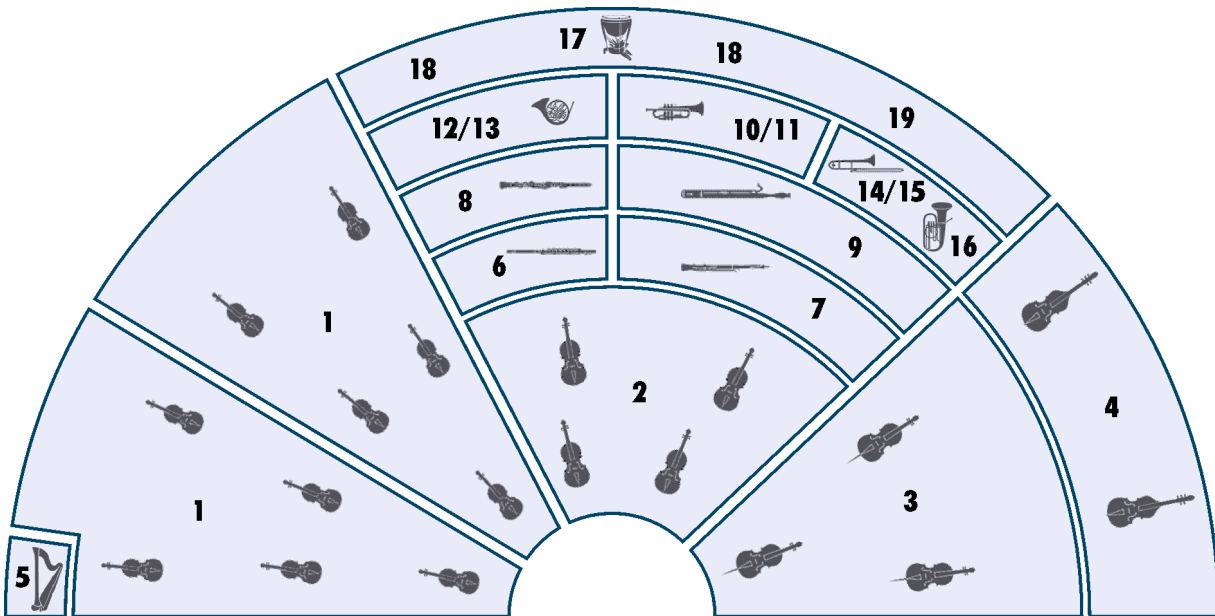
Abbreviation	Meaning	Abbreviation	Meaning
+	faster articulation (runs and arpeggios)	li	light
150, 160, ...	150, 160, ... BPM (beats per minute)	lo	long
1s, 2s, ...	tone length 1 sec., 2 sec., ...	ma	major
acc	accelerando	me	medium
all	combination of all Patches of a category	mi	minor
arp	arpeggio	mord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

## Articulations

<b>33 Flute II</b>	
<b>01 SHORT + LONG NOTES</b>	Staccato Portato short and medium Portato long with and without vibrato Sustained with and without vibrato
<b>02 DYNAMICS</b>	Medium dynamics with vibrato 2 and 3 sec. Medium dynamics without vibrato, 1.5, 2, and 3 sec. Strong dynamics without vibrato, 4 and 6 sec. pfp, 2, 4 and 8 sec. Fortepiano and sforzato with and without vibrato
<b>03 FLATTER + TRILLS</b>	Flutter tonguing normal and dynamics Trills, minor 2nd to 4th Trills dynamics, minor 2nd to minor 3rd
<b>10 PERF INTERVAL</b>	Legato Grace notes, legato, minor 2nd to octave Marcato
<b>11 PERF INTERVAL FAST</b>	Legato Marcato
<b>12 PERF TRILL</b>	Trills, legato, minor 2nd to major 3rd
<b>13 PERF REPETITION</b>	Legato slow and fast, normal and dynamics Portato Staccato
<b>14 FAST REPETITION</b>	Staccato, 9 repetitions, 160 to 210 BPM Staccato triplets, 12 repetitions, 130 to 160 BPM
<b>15 GRACE NOTES</b>	
<b>16 SCALE RUNS</b>	Octave runs, legato, up and down major and minor from C to B key, chromatic and whole tone 2 speeds for all
<b>17 ARPEGGIOS</b>	Arpeggios, legato and staccato, up and down diminished, major and minor from C to B key 2 speeds for staccato arpeggios

## The orchestra

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



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

## Pitch

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

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

## 33 Flute II

### The Instrument

#### Description

The flute is a woodwind instrument and usually made of metal (silver, gold, platinum) or wood (grenadilla, coco). The woodwind section of the modern orchestra usually uses two flutes (and a piccolo or bass flute).

#### Range and notation

The standard range is from B3–D7 (forced up to F7). The concert flute in C is a non-transposing instrument notated in treble clef.

#### Sound characteristics

Airy, light, poetic, mellow, bright, wafting, ethereal, rich, soft, graceful, penetrating, brilliant, clear, shrill, silvery, wind-like, whistling, whispering, humming, filigree, sighing, aspirate.

The timbre is homogeneous in all registers with only the very lowest and highest notes exhibiting any different qualities.

The lowest notes can sound rather dull, dry and hollow which gives them a melancholy character.

In the middle register the flute sounds mellow, light, wafting, bright and rich. These characteristics are often used for solo work. In quiet passages the flute's middle register sounds particularly graceful.


The higher notes possess great brilliance and can sound penetrating and shrill.

#### Combination with other instruments

Like the horn, the flute blends extremely well with all instrument groups. Particularly good blends are achieved with the woodwinds and the strings. High notes are ideally suited for playing melody lines along with the violins, and are therefore found fulfilling precisely this task in practically every orchestral work.




## Patches

01 SHORT + LONG NOTES		Range: B3–D7		
<b>01 FL2_staccato</b>			<b>Samples: 156</b>	<b>RAM: 9 MB</b>
Staccato 2 velocity layers 4 Alternations				
<b>02 FL2_portato_short</b>			<b>Samples: 226</b>	<b>RAM: 14 MB</b>
Portato, short 3 velocity layers 4 Alternations				
<b>03 FL2_portato_medium</b>		Range: B3–C7	<b>Samples: 222</b>	<b>RAM: 13 MB</b>
Portato, medium 3 velocity layers 4 Alternations				
<b>04 FL2_portato_long_Vib</b>			<b>Samples: 227</b>	<b>RAM: 14 MB</b>
Portato, long, with vibrato 3 velocity layers Release samples 2 Alternations				
<b>05 FL2_portato_long_noVib</b>			<b>Samples: 226</b>	<b>RAM: 14 MB</b>
Portato, long, without vibrato 3 velocity layers Release samples 2 Alternations				
<b>11 FL2_sus_Vib_progr</b>		Range: B3–E7	<b>Samples: 228</b>	<b>RAM: 14 MB</b>
Sustained, progressive vibrato 3 velocity layers Release samples				
<b>12 FL2_sus_noVib</b>			<b>Samples: 265</b>	<b>RAM: 16 MB</b>
Sustained, without vibrato 4 velocity layers Release samples				



## 02 DYNAMICS

<b>01 FL2_dyn-me_Vib_2s</b>	<b>Range: B3–A#6</b>	<b>Samples: 138</b>	<b>RAM: 8 MB</b>
Medium crescendo and diminuendo with vibrato, 2 sec. 2 velocity layers AB switch: crescendo/diminuendo			
<b>02 FL2_dyn-me_Vib_3s</b>	<b>Range: B3–D7</b>	<b>Samples: 145</b>	<b>RAM: 9 MB</b>
Medium crescendo and diminuendo with vibrato, 3 sec. 2 velocity layers AB switch: crescendo/diminuendo			
<b>03 FL2_dyn-me_noVib_1'5s</b>	<b>Range: B3–C#7</b>	<b>Samples: 150</b>	<b>RAM: 9 MB</b>
Medium crescendo and diminuendo without vibrato, 1.5 sec. 2 velocity layers AB switch: crescendo/diminuendo			
<b>04 FL2_dyn-me_noVib_2s</b>	<b>Range: B3–C#7</b>	<b>Samples: 150</b>	<b>RAM: 9 MB</b>
Medium crescendo and diminuendo without vibrato, 2 sec. 2 velocity layers AB switch: crescendo/diminuendo			
<b>05 FL2_dyn-me_noVib_3s</b>	<b>Range: B3–C#7</b>	<b>Samples: 148</b>	<b>RAM: 9 MB</b>
Medium crescendo and diminuendo without vibrato, 3 sec. 2 velocity layers AB switch: crescendo/diminuendo			
<b>06 FL2_dyn-str_noVib_4s</b>	<b>Range: B3–D7</b>	<b>Samples: 78</b>	<b>RAM: 4 MB</b>
Strong crescendo and diminuendo without vibrato, 4 sec. 1 velocity layer AB switch: crescendo/diminuendo			
<b>07 FL2_dyn-str_noVib_6s</b>	<b>Range: B3–D7</b>	<b>Samples: 78</b>	<b>RAM: 4 MB</b>
Strong crescendo and diminuendo without vibrato, 6 sec. 1 velocity layer AB switch: crescendo/diminuendo			
<b>08 FL2_pfp_Vib_2s</b>	<b>Range: B3–C7</b>	<b>Samples: 38</b>	<b>RAM: 2 MB</b>
Crescendo-diminuendo with vibrato, 2 sec. 2 velocity layers			
<b>09 FL2_pfp_Vib_4s</b>	<b>Range: B3–C7</b>	<b>Samples: 38</b>	<b>RAM: 2 MB</b>
Crescendo-diminuendo with vibrato, 4 sec. 2 velocity layers			
<b>10 FL2_pfp_Vib_8s</b>	<b>Range: B3–C7</b>	<b>Samples: 38</b>	<b>RAM: 2 MB</b>
Crescendo-diminuendo with vibrato, 8 sec. 2 velocity layers			

<b>11 FL2_fp_Vib</b> Fortepiano, with vibrato 1 velocity layer 2 Alternations	<b>Range: B3–C7</b>	<b>Samples: 37</b>	<b>RAM: 2 MB</b>
<b>12 FL2_sfz_Vib</b> Sforzato, with vibrato 1 velocity layer 2 Alternations	<b>Range: B3–C7</b>	<b>Samples: 37</b>	<b>RAM: 2 MB</b>
<b>13 FL2_fp_noVib</b> Fortepiano, without vibrato 1 velocity layer 2 Alternations	<b>Range: B3–D7</b>	<b>Samples: 39</b>	<b>RAM: 2 MB</b>
<b>14 FL2_sfz_noVib</b> Sforzato, without vibrato 1 velocity layer 2 Alternations	<b>Range: B3–D7</b>	<b>Samples: 39</b>	<b>RAM: 2 MB</b>
<b>03 FLATTER + TRILLS</b> 			
<b>01 FL2_flutter</b> Flutter tonguing 2 velocity layers Release samples	<b>Range: B3–D7</b>	<b>Samples: 152</b>	<b>RAM: 9 MB</b>
<b>02 FL2_flutter_dyn</b> Flutter tonguing, crescendo and diminuendo 1 velocity layer AB switch: crescendo/diminuendo	<b>Range: B3–C7</b>	<b>Samples: 74</b>	<b>RAM: 4 MB</b>
<b>11 FL2_trill_1</b> Trills, minor 2nd 2 velocity layers Release samples	<b>Range: B3–A#6</b>	<b>Samples: 138</b>	<b>RAM: 8 MB</b>
<b>12 FL2_trill_2</b> Trills, major 2nd 2 velocity layers Release samples	<b>Range: B3–A6</b>	<b>Samples: 128</b>	<b>RAM: 8 MB</b>
<b>13 FL2_trill_3</b> Trills, minor 3rd 2 velocity layers Release samples	<b>Range: B3–A#6</b>	<b>Samples: 72</b>	<b>RAM: 4 MB</b>

<b>14 FL2_trill_4</b> Trills, major 3rd 2 velocity layers Release samples	<b>Range: B3–F6</b>	<b>Samples: 60</b>	<b>RAM: 3 MB</b>
<b>15 FL2_trill_5</b> Trills, 4th 2 velocity layers Release samples	<b>Range: C4–A5</b>	<b>Samples: 44</b>	<b>RAM: 2 MB</b>
<b>16 FL2_trill_1_dyn</b> Trills, crescendo and diminuendo, minor 2nd 1 velocity layer AB switch: crescendo/diminuendo	<b>Range: B3–B6</b>	<b>Samples: 70</b>	<b>RAM: 4 MB</b>
<b>17 FL2_trill_2_dyn</b> Trills, crescendo and diminuendo, major 2nd 1 velocity layer AB switch: crescendo/diminuendo	<b>Range: B3–A6</b>	<b>Samples: 64</b>	<b>RAM: 4 MB</b>
<b>18 FL2_trill_3_dyn</b> Trills, crescendo and diminuendo, minor 3rd 1 velocity layer AB switch: crescendo/diminuendo	<b>Range: B3–A#6</b>	<b>Samples: 34</b>	<b>RAM: 2 MB</b>

**10 PERF INTERVAL**

<b>01 FL2_perf-legato</b> Legato 2 velocity layers Release samples	<b>Range: B3–B6</b>	<b>Samples: 1057</b>	<b>RAM: 66 MB</b>
<b>02 FL2_perf-legato_grace</b> Grace notes, legato, minor 2nd to octave 3 velocity layers Release samples	<b>Range: B3–C7</b>	<b>Samples: 1495</b>	<b>RAM: 93 MB</b>
<b>03 FL2_perf-marcato</b> Marcato 2 velocity layers Release samples	<b>Range: B3–C7</b>	<b>Samples: 968</b>	<b>RAM: 60 MB</b>

**11 PERF INTERVAL FAST****Range: B3–C7****01 FL2\_perf-legato\_fa****Samples: 1224 RAM: 76 MB**

Legato, fast  
2 velocity layers  
Release samples

**02 FL2\_perf-marcato\_fa****Samples: 1108 RAM: 69 MB**

Marcato, fast  
2 velocity layers  
Release samples

**12 PERF TRILL****Range: B3–C7****01 FL2\_perf-trill****Samples: 2294 RAM: 143 MB**

Performance trills, legato, minor 2nd to major 3rd  
2 velocity layers  
Release samples

**13 PERF REPETITION****Range: B3–C7****01 FL2\_perf-rep\_leg-sl****Samples: 190 RAM: 11 MB**

Legato, slow  
2 velocity layers

**02 FL2\_perf-rep\_leg-fa****Range: B3–D7****Samples: 200 RAM: 12 MB**

Legato, fast  
2 velocity layers

**03 FL2\_perf-rep\_por****Range: C4–D7****Samples: 414 RAM: 25 MB**

Portato  
3 velocity layers

**04 FL2\_perf-rep\_sta****Samples: 400 RAM: 25 MB**

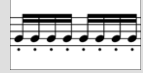
Staccato  
3 velocity layers

**21 FL2\_perf-rep\_dyn5\_leg-sl****Samples: 190 RAM: 11 MB**

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

**22 FL2\_perf-rep\_dyn5\_leg-fa****Range: B3–D7****Samples: 200 RAM: 12 MB**

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

**14 FAST REPETITION****Range: B3–C7****01 FL2\_fast-rep\_160 (170/180/190/200/210)****Samples: 114****RAM: 7 MB**

Staccato, 9 repetitions, 160–210 BPM  
 3 velocity layers  
 Release samples

**11 FL2\_fast-rep\_130T (140T/150T/160T)****Samples: 112****RAM: 7 MB**

Staccato triplets, 12 repetitions, 130–160 BPM  
 3 velocity layers  
 Release samples

**15 GRACE NOTES**

The samples are mapped to the target note.

**01 FL2\_grace-1****Range: B3–C#7****Samples: 188****RAM: 11 MB**

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

**02 FL2\_grace-2****Range: B3–D7****Samples: 188****RAM: 11 MB**

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

**03 FL2\_grace-3****Range: B3–B6****Samples: 178****RAM: 11 MB**

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

**04 FL2\_grace-4****Range: B3–C7****Samples: 178****RAM: 11 MB**

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

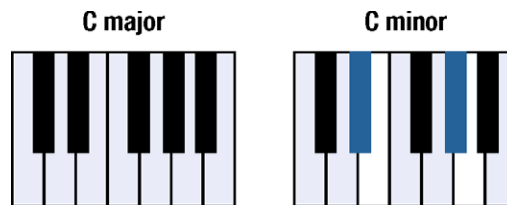
**05 FL2\_grace-5****Range: B3–B6****Samples: 172****RAM: 10 MB**

Grace notes, 4th  
 3 velocity layers  
 Release samples  
 AB switch: up/down

<b>06 FL2_grace-6</b>	<b>Range: B3–C7</b>	<b>Samples: 172</b>	<b>RAM: 10 MB</b>
Grace notes, diminished 5th 3 velocity layers Release samples AB switch: up/down			
<b>07 FL2_grace-7</b>	<b>Range: B3–B6</b>	<b>Samples: 166</b>	<b>RAM: 10 MB</b>
Grace notes, 5th 3 velocity layers Release samples AB switch: up/down			
<b>08 FL2_grace-8</b>	<b>Range: B3–C7</b>	<b>Samples: 166</b>	<b>RAM: 10 MB</b>
Grace notes, minor 6th 3 velocity layers Release samples AB switch: up/down			
<b>09 FL2_grace-9</b>	<b>Range: B3–B6</b>	<b>Samples: 160</b>	<b>RAM: 10 MB</b>
Grace notes, major 6th 3 velocity layers Release samples AB switch: up/down			
<b>10 FL2_grace-10</b>	<b>Range: B3–C7</b>	<b>Samples: 160</b>	<b>RAM: 10 MB</b>
Grace notes, minor 7th 3 velocity layers Release samples AB switch: up/down			
<b>11 FL2_grace-11</b>	<b>Range: B3–B6</b>	<b>Samples: 154</b>	<b>RAM: 9 MB</b>
Grace notes, major 7th 3 velocity layers Release samples AB switch: up/down			
<b>12 FL2_grace-12</b>	<b>Range: B3–C7</b>	<b>Samples: 154</b>	<b>RAM: 9 MB</b>
Grace notes, octave 3 velocity layers Release samples AB switch: up/down			

## 16 SCALE RUNS

Please note that upward runs can be played only to an octave below the upper play range, downward runs to an octave above the lower play range. The octave runs are mapped diatonically according to their scale. For the playing ranges and mappings of individual scales, please see the appendix.



### Legato major



#### 01 FL2\_run-leg\_C-ma (through to B-ma)

Samples: 32

RAM: 2 MB

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

### Legato minor



#### 01 FL2\_run-leg\_C-mi (through to B-mi)

Samples: 32

RAM: 2 MB

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

### Special



#### 01 FL2\_run-leg\_chromatic

Range: B3–C7

Samples: 26

RAM: 1 MB

Octave runs, legato  
Chromatic  
1 velocity layer  
AB switch: up/down

#### 02 FL2\_run-leg\_whole

Range: B3–D7

Samples: 28

RAM: 1 MB

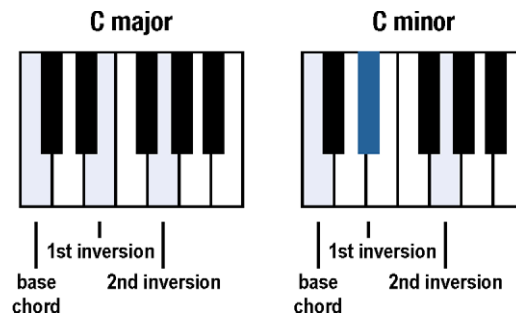
Octave runs, legato  
Whole tone  
1 velocity layer  
AB switch: up/down



## 17 ARPEGGIOS

Please note that the playing ranges vary with the key of the Patch used.

For the playing ranges and mappings for each key, please see the appendix.



### Legato diminished fast



#### 01 FL2\_arp-leg+\_dm

Range: B3–D7

Samples: 70

RAM: 4 MB

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

### Legato major fast



#### 01 FL2\_arp-leg+\_C-ma (through to B-ma)

Samples: 28

RAM: 1 MB

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

### Legato minor fast



#### 01 FL2\_arp-leg\_C-mi+ (through to B-mi+)

Samples: 28

RAM: 1 MB

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

**Staccato diminished****01 FL2\_arp-sta\_dm****Range: B3–D7****Samples: 70****RAM: 4 MB**

Arpeggios, staccato

Diminished

2 velocity layers

AB switch: up/down

**Staccato diminished fast****01 FL2\_arp-sta+\_dm****Range: B3–D7****Samples: 70****RAM: 4 MB**

Arpeggios, staccato, fast

Diminished

2 velocity layers

AB switch: up/down

**Staccato major****01 FL2\_arp-sta\_C-ma (through to B-ma)****Samples: 28****RAM: 1 MB**

Arpeggios, staccato

C to B major

2 velocity layers

AB switch: up/down

**Staccato major fast****01 FL2\_arp-sta+\_C-ma (through to B-ma)****Samples: 28****RAM: 1 MB**

Arpeggios, staccato, fast

C to B major

2 velocity layers

AB switch: up/down

**Staccato minor****01 FL2\_arp-sta\_C-mi (through to B-mi)****Samples: 28****RAM: 1 MB**

Arpeggios, staccato

C to B minor

2 velocity layers

AB switch: up/down



## Staccato minor fast

### 01 FL2\_arp-sta\_C-mi+ (through to B-mi+)

Samples: 28

RAM: 1 MB

Arpeggios, staccato, fast

C to B minor

2 velocity layers

AB switch: up/down

## 98 RESOURCES

Isolated dynamics repetitions: Legato slow and fast

Single layer long notes

Performance legato with sustain crossfading

## 01 Perf Rep dyn

### 01 FL2\_rep\_cre5\_leg-sl-1 (2/3/4/5)

Range: B3–C7

Samples: 19

RAM: 1 MB

Extracted repetition

Legato slow, cres, 1st to 5th note

1 velocity layer

### 01 FL2\_rep\_dim5\_leg-sl-1 (2/3/4/5)

Range: B3–C7

Samples: 19

RAM: 1 MB

Extracted repetition

Legato slow, dim, 1st to 5th note

1 velocity layer

### 02 FL2\_rep\_cre5\_leg-fa-1 (2/3/4/5)

Range: B3–D7

Samples: 20

RAM: 1 MB

Extracted repetition

Legato fast, cres, 1st to 5th note

1 velocity layer

### 02 FL2\_rep\_dim5\_leg-fa-1 (2/3/4/5)

Range: B3–D7

Samples: 20

RAM: 1 MB

Extracted repetition

Legato fast, dim, 1st to 5th note

1 velocity layer

## 02 Long Notes - Single Layer

### 01 FL2\_sus\_Vib-p

Range: B3–E7

Samples: 76

RAM: 4 MB

Sustained, piano, with vibrato

1 velocity layer

Release samples

### 02 FL2\_sus\_Vib-mf

Range: B3–E7

Samples: 78

RAM: 4 MB

Sustained, mezzoforte, with vibrato

1 velocity layer

Release samples

**03 FL2\_sus\_Vib-f****Range: B3–E7****Samples: 78****RAM: 4 MB**

Sustained, forte, with vibrato  
 1 velocity layer  
 Release samples

**03 Perf Speed variation****01 FL-3\_perf-leg\_sustain****Range: B3–B6****Samples: 1093****RAM: 68 MB**

Legato with sustain crossfading  
 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 FL2 Articulation Combi

**Samples: 1404   RAM: 87 MB**

Single note articulations

Staccato, portato short, sustained with progressive and without vibrato, crescendo-diminuendo 2 and 4 sec., fortetpiano and sforzato, flutter tonguing normal and dynamics, trills half and whole tone

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

	C1	C#1	D1	D#1	E1	F1
V1	stac	sus prog. vib.	pfp vib. 2s.	fp vib.	flutter	trill half
V2	port. short	sus no vib.	pfp vib. 4s.	sfz vib.	flutter dyn.	trill whole

### L1 FL2 Perf-Legato Speed

**Samples: 1980   RAM: 123 MB**

Interval performances

Legato with sustain crossfading, normal, and fast

Monophonic, Speed controller

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

	H1	H2	H3
Legato	sustain XF	normal	fast

### L1 FL2 Perf-Repetitions Combi

**Samples: 1004   RAM: 62 MB**

Repetition performances

Legato slow

Portato

Staccato

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

	repetitions
V1	legato slow
V2	portato
V3	staccato

## Matrix - LEVEL 2 A - Advanced

### O1 FL2 Perf-Universal

**Samples: 3119   RAM: 194 MB**

Interval performances

Legato with sustain crossfading, normal, and fast

Marcato normal and fast

Monophonic, Speed controller

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

	H1	H2	H3
legato	sustain	normal	fast
marcato	normal	normal	fast

**02 FL2 Perf-Trill Speed****Samples: 3240 RAM: 202 MB**

Multi interval performances

Legato and trills

Monophonic, Speed controller

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

	H1	H2
V1	legato	trills

**03 FL2 Short+Long notes - All****Samples: 984 RAM: 61 MB**

Single notes

Staccato, portato short and medium

Sustained with progressive and without vibrato

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

	C1	C#1	D1	D#1
V1	staccato	portato short	portato med.	sus. prog. vib.
V2	%	%	%	sus. no vib.

**Matrix - LEVEL 2 B - Standard****11 FL2 Perf-Legato Speed****Samples: 1980 RAM: 123 MB**

Interval performances

Legato with sustain crossfading, normal, and fast

Monophonic, Speed controller

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

	H1	H2	H3
Legato	sustain XF	normal	fast

**12 FL2 Perf-Marcato Speed****Samples: 1289 RAM: 80 MB**

Interval performances^mMarcato normal and fast

Monophonic, Speed controller

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

	H1	H2
Marcato	normal	fast

**13 FL2 Short notes - All****Samples: 944 RAM: 59 MB**

Single notes

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

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

**14 FL2 Long notes - All****Samples: 380 RAM: 23 MB**

Single notes

Sustained with progressive and without vibrato

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

	C1	C#1
sustained	vibrato	prog. vibrato

**15 FL2 Dynamics - Small****Samples: 289    RAM: 18 MB**

Dynamics

Medium crescendo and diminuendo 2 and 3 sec.

Fortepiano and sforzato

All with vibrato

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

	C1	C#1	D1
dynamics vib.	2 sec.	3 sec.	3 sec.
fp	%	%	%
sfz	%	%	%

**16 FL2 Dynamics - Large****Samples: 779    RAM: 48 MB**

Dynamics

Medium crescendo and diminuendo with and without vibrato

Crescendo-diminuendo 2, 4, and 8 sec.

Fortepiano and sforzato

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

	C1	C#1	D1
V1	dyn. vib. 2 sec.	dyn. vib. 3 sec.	dyn. vib. 3 sec.
V2	no vib. 2 sec.	no vib. 3 sec.	no vib. 4 sec.
V3	pfp 2 sec.	pfp 4 sec.	pfp 8 sec.
V4	fp	sfz	sfz

**17 FL2 Flutter****Samples: 226    RAM: 14 MB**

Flutter tonguing

Normal, dynamics, and normal/dynamics with Cell crossfading

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

	C1	C#1	D1
flutter	normal	dynamics	Cell XF

**18 FL2 Trills - normal****Samples: 610    RAM: 38 MB**

Trills: Minor 2nd to 4th, normal

Minor 2nd to minor 3rd, dynamics

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

	C1	C#1
min. 2nd	normal	dynamics
maj. 2nd	%	dynamics
min. 3rd	%	dynamics
maj. 3rd	%	normal
4th	%	normal

**Matrix - LEVEL 2 C - Repetitions****31 FL2 Perf-Repetitions - Combi****Samples: 1204 RAM: 75 MB**

Repetition performances

Slow and fast legato, portato, and staccato

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

	C1	C#1	D1	D#1
V1	leg. slow	leg. fast	portato	staccato

**32 FL2 Perf-Repetitions - Speed****Samples: 1204 RAM: 75 MB**

Repetition performances

Slow and fast legato, portato, and staccato

Speed controller

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

	H1	H2	H3	H4
V1	leg. slow	leg. fast	portato	staccato

**33 FL2 Fast-Repetitions****Samples: 1310 RAM: 81 MB**

Fast repetitions

160, 170, 180, 190, 200, 210 BPM

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

	C1	C#1	D1	D#1	E1	F1
speed/BPM	160	170	180	190	200	210

**34 FL2 Fast-Repetitions Trioles****Samples: 280 RAM: 17 MB**

Fast repetitions

Trioles at 130, 140, 150, and 160 BPM

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

	C1	C#1	D1	D#1
speed/BPM	130	140	150	160

**Matrix - LEVEL 2 D - Scale+Phrase****41 FL2 Scale runs-legato - Major****Samples: 188 RAM: 11 MB**

Octave runs, legato, C to B major

AB switch up/down

**Matrix switches:** Horizontal: Keyswitches, C1–B1

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

**42 FL2 Scale runs-legato - Minor****Samples: 186 RAM: 11 MB**

Octave runs, legato, C to B minor

AB switch up/down

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



**43 FL2 Scale runs-legato - Special****Samples: 54****RAM: 3 MB**

Octave runs, legato, chromatic and whole tone  
AB switch up/down

**Matrix switches:** Vertical: Modwheel, 2 zones

	legato
V1	chromatic
V2	whole tone

**44 FL2 Scale runs-legato - All****Samples: 428****RAM: 26 MB**

Octave runs, legato, C to B major and minor, chromatic and whole tone  
AB switch up/down

**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
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
chromatic	%	%	%	%	%	%	%	%	%	%	%	%
whole tone	%	%	%	%	%	%	%	%	%	%	%	%

**51 FL2 Arpeggios-legato - Major+****Samples: 158****RAM: 9 MB**

Arpeggios, legato 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
legato maj. fast	C	C#	D	D#	E	F	F#	G	G#	A	A#	B

**52 FL2 Arpeggios-legato - Minor+****Samples: 158****RAM: 9 MB**

Arpeggios, legato 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
legato min. fast	C	C#	D	D#	E	F	F#	G	G#	A	A#	B

**53 FL2 Arpeggios-legato - All+****Samples: 386****RAM: 24 MB**

Arpeggios, legato 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	%	%	%	%	%	%	%	%	%	%	%	%

**54 FL2 Arpeggios-staccato - Major****Samples: 164****RAM: 10 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

**55 FL2 Arpeggios-staccato - Major+****Samples: 164 RAM: 10 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

**56 FL2 Arpeggios-staccato - Minor****Samples: 156 RAM: 9 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

**57 FL2 Arpeggios-staccato - Minor+****Samples: 156 RAM: 9 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

**58 FL2 Arpeggios-staccato - All****Samples: 390 RAM: 24 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	%	%	%	%	%	%	%	%	%	%	%	%

**59 FL2 Arpeggios-staccato - All+****Samples: 390 RAM: 24 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	%	%	%	%	%	%	%	%	%	%	%	%

**61 FL2 Grace notes - All****Samples: 1200 RAM: 75 MB**

Grace notes, minor 2nd to octave  
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
interval	min. 2nd	maj. 2nd	min. 3rd	maj. 3rd	4th	dim. 5th	5th	min. 6th	maj. 6th	min. 7th	maj. 7th	octave

**Matrix - LEVEL 2 E - Keyswitch Vel****71 FL2 Legato slow - cre5****Samples: 95****RAM: 5 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 FL2 Legato fast - cre5****Samples: 100****RAM: 6 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 FL2 Combi - cre5****Samples: 195****RAM: 12 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	%	%	%	%

**74 FL2 Legato slow - dim5****Samples: 95****RAM: 5 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

**75 FL2 Legato fast - dim5****Samples: 100****RAM: 6 MB**

Fast legato notes: Diminuendo, keyswitch velocity

Keyswitches control 5 dynamic steps

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

**76 FL2 Combi - dim5****Samples: 195****RAM: 12 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	%	%	%	%

## Presets

### FL2 VSL Preset Level 1

Samples: 4086 RAM: 255 MB

L1 FL2 Perf-Legato Speed  
 L1 FL2 Articulation Combi  
 L1 FL2 Perf-Repetitions Combi  
 Preset keyswitches: C2–D2

### FL2 VSL Preset Level 2

Samples: 7728 RAM: 483 MB

01 FL2 Perf-Universal  
 02 FL2 Perf-Trill Speed  
 L1 FL2 Articulation Combi  
 31 FL2 Perf-Repetitions - Combi  
 73 FL2 Combi - cre5  
 44 FL2 Scale runs-legato - all  
 Preset keyswitches: C2–F2

## Appendix

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

### Scale runs - major

C major



C#/Db major



D major



D#/Eb major



E major



F major



F#/Gb major



G major



G#/Ab major



A major



A#/Bb major



B major



# Scale runs - 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

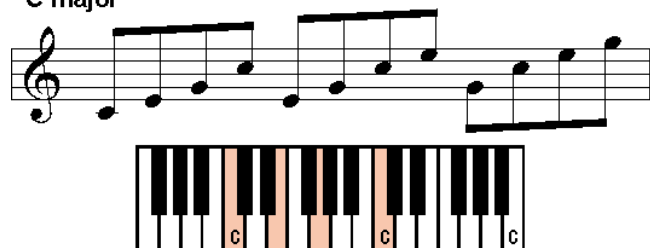


B minor

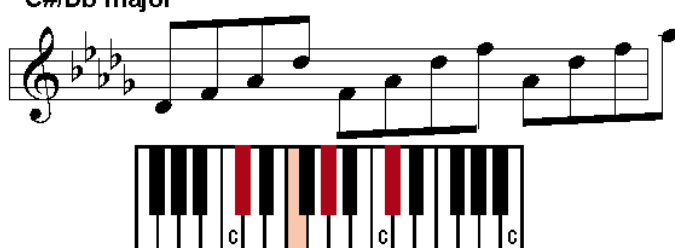


# Arpeggios – major

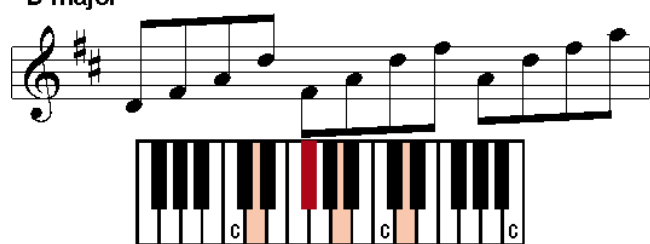
C major



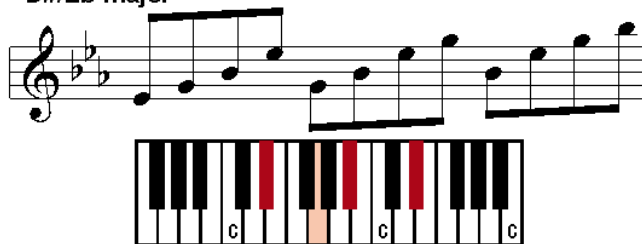
C#/Db major



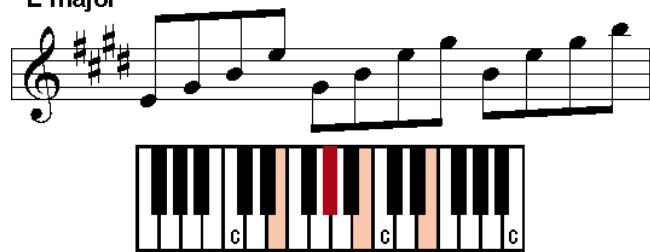
D major



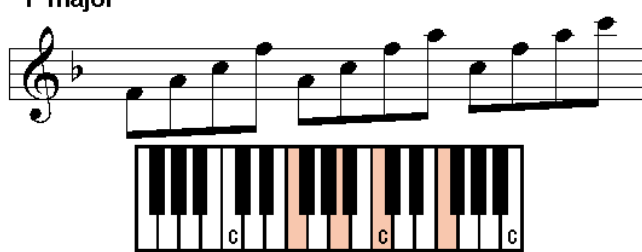
D#/Eb major



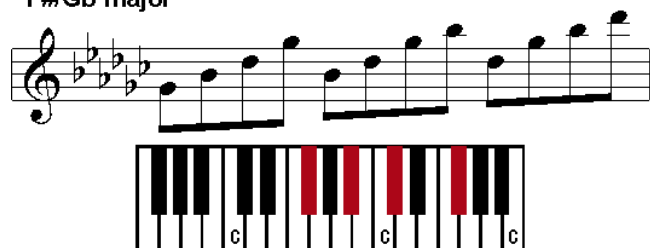
E major



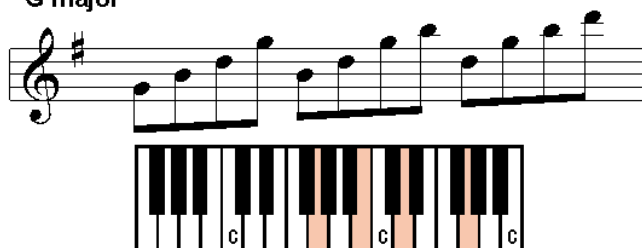
F major



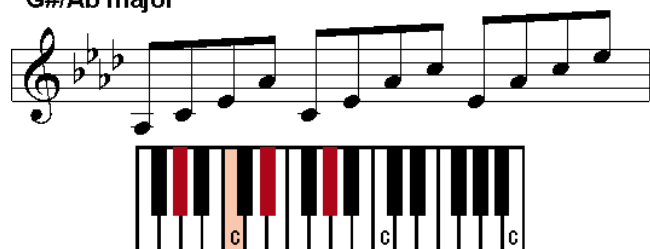
F#/Gb major



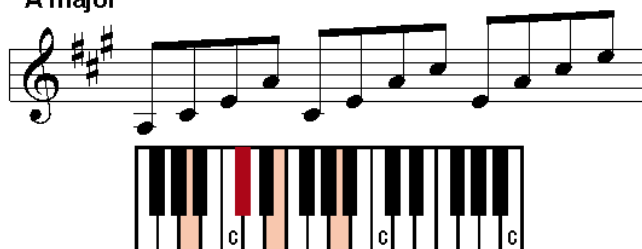
G major



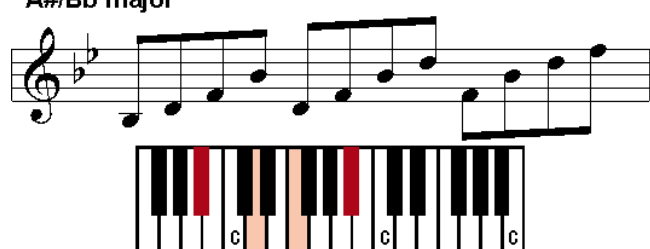
G#/Ab major



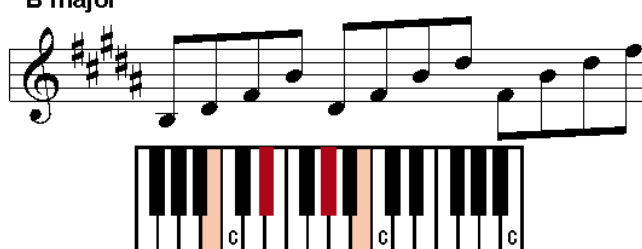
A major



A#/Bb major

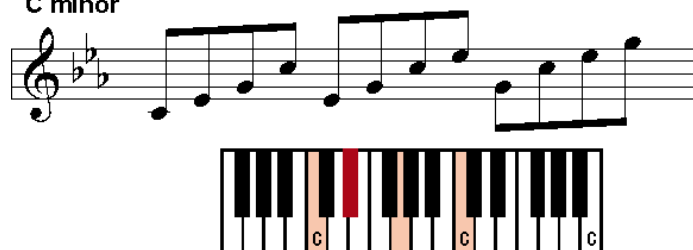


B major

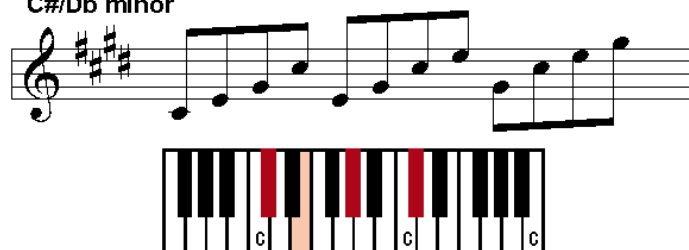


# Arpeggios – minor

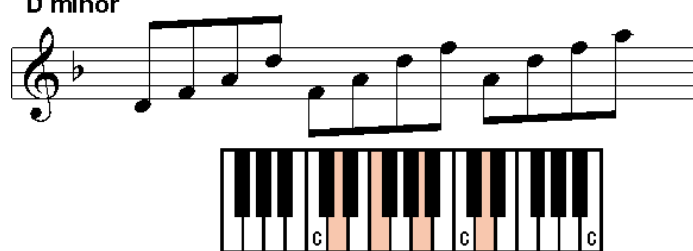
C minor



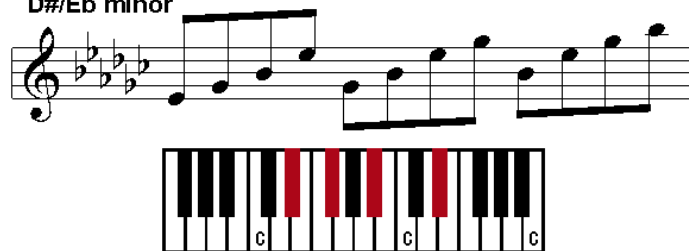
C#/Db minor



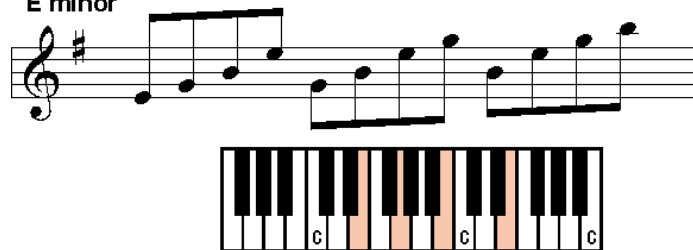
D minor



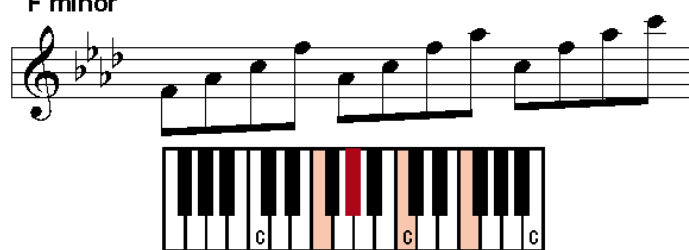
D#/Eb minor



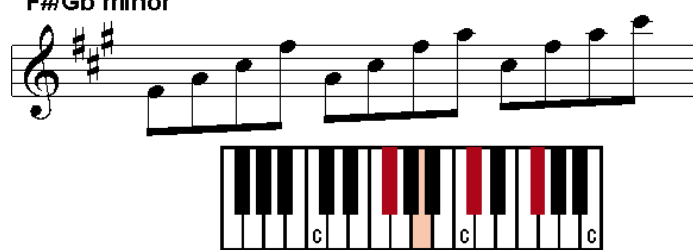
E minor



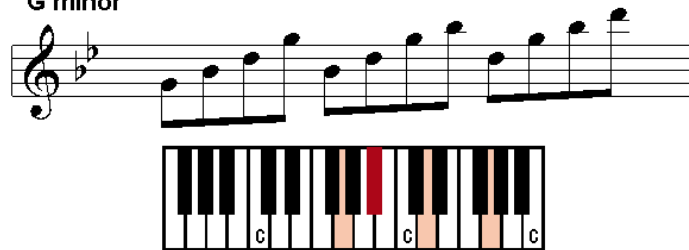
F minor



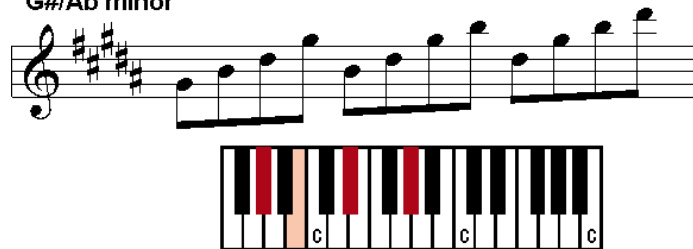
F#/Gb minor



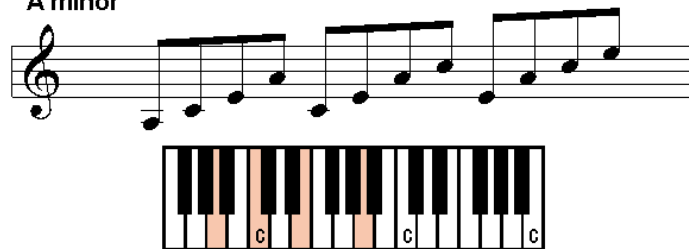
G minor



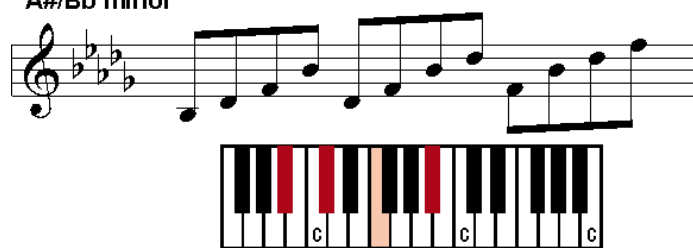
G#/Ab minor



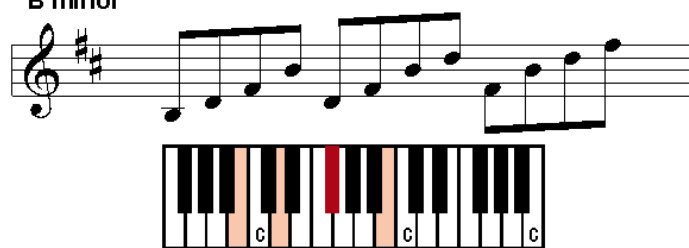
A minor



A#/Bb minor



B minor





## Scale and arpeggio ranges

### Octave runs

#### Legato major

	play range
01 FL2_run-leg_C-ma	C4–D7
02 FL2_run-leg_C#-ma	C4–C#7
03 FL2_run-leg_D-ma	C#4–D7
04 FL2_run-leg_D#-ma	C4–C7
05 FL2_run-leg_E-ma	C#4–C#7
06 FL2_run-leg_F-ma	C4–C7
07 FL2_run-leg_F#-ma	C#4–C#7
08 FL2_run-leg_G-ma	B3–C7
09 FL2_run-leg_G#-ma	C4–C#7
10 FL2_run-leg_A-ma	B3–C#7
11 FL2_run-leg_A#-ma	C4–D7
12 FL2_run-leg_B-ma	B3–C#7

#### Legato minor

	play range
01 FL2_run-leg_C-mi	C4–D7
02 FL2_run-leg_C#-mi	C4–C#7
03 FL2_run-leg_D-mi	C#4–D7
04 FL2_run-leg_D#-mi	B3–B6
05 FL2_run-leg_E-mi	C4–C7
06 FL2_run-leg_F-mi	C4–C#7
07 FL2_run-leg_F#-mi	C#4–D7
08 FL2_run-leg_G-mi	C4–C7
09 FL2_run-leg_G#-mi	C#4–C#7
10 FL2_run-leg_A-mi	C4–C7
11 FL2_run-leg_A#-mi	C#4–C#7
12 FL2_run-leg_B-mi	B3–C#7

### Arpeggios

#### Legato major fast

	play range
01 FL2_arp-leg+_C-ma	C4–C7
02 FL2_arp-leg+_C#-ma	C#4–C#7
03 FL2_arp-leg+_D-ma	D4–D7
04 FL2_arp-leg+_D#-ma	D#4–A#6
05 FL2_arp-leg+_E-ma	E4–B7
06 FL2_arp-leg+_F-ma	C4–C7
07 FL2_arp-leg+_F#-ma	C#4–C#7
08 FL2_arp-leg+_G-ma	D4–D7
09 FL2_arp-leg+_G#-ma	C4–C7
10 FL2_arp-leg+_A-ma	C#4–A6
11 FL2_arp-leg+_A#-ma	D4–A#6
12 FL2_arp-leg+_B-ma	B3–B7

#### Legato minor fast

	play range
01 FL2_arp-leg+_C-mi+	C4–C7
02 FL2_arp-leg+_C#-mi+	C#4–C#7
03 FL2_arp-leg+_D-mi+	D4–D7
04 FL2_arp-leg+_D#-mi+	D#4–A#6
05 FL2_arp-leg+_E-mi+	E4–B6
06 FL2_arp-leg+_F-mi+	C4–C7
07 FL2_arp-leg+_F#-mi+	C#4–C#7
08 FL2_arp-leg+_G-mi+	D4–A#6
09 FL2_arp-leg+_G#-mi+	D#4–B6
10 FL2_arp-leg+_A-mi+	C4–C7
11 FL2_arp-leg+_A#-mi+	C#4–C#7
12 FL2_arp-leg+_B-mi+	B3–B6

#### Staccato major

	play range
01 FL2_arp-sta+_C-ma	C4–C7
02 FL2_arp-sta+_C#-ma	C#4–C#7
03 FL2_arp-sta+_D-ma	D4–D7
04 FL2_arp-sta+_D#-ma	D#4–A#6
05 FL2_arp-sta+_E-ma	E4–B7
06 FL2_arp-sta+_F-ma	C4–C7
07 FL2_arp-sta+_F#-ma	C#4–C#7
08 FL2_arp-sta+_G-ma	D4–D7
09 FL2_arp-sta+_G#-ma	C4–C7
10 FL2_arp-sta+_A-ma	C#4–C#7
11 FL2_arp-sta+_A#-ma	D4–D7
12 FL2_arp-sta+_B-ma	B3–B7

#### Staccato major fast

	play range
01 FL2_arp-sta+_C-ma	C4–C7
02 FL2_arp-sta+_C#-ma	C#4–C#7
03 FL2_arp-sta+_D-ma	D4–D7
04 FL2_arp-sta+_D#-ma	D#4–A#6
05 FL2_arp-sta+_E-ma	E4–B7
06 FL2_arp-sta+_F-ma	C4–C7
07 FL2_arp-sta+_F#-ma	C#4–C#7
08 FL2_arp-sta+_G-ma	D4–D7
09 FL2_arp-sta+_G#-ma	C4–C7
10 FL2_arp-sta+_A-ma	C#4–C#7
11 FL2_arp-sta+_A#-ma	D4–D7
12 FL2_arp-sta+_B-ma	B3–B7

### Staccato minor

	play range
01 FL2_arp-sta_C-mi	C4–C7
02 FL2_arp-sta_C#-mi	C#4–C#7
03 FL2_arp-sta_D-mi	D4–D7
04 FL2_arp-sta_D#-mi	D#4–A#6
05 FL2_arp-sta_E-mi	E4–B6
06 FL2_arp-sta_F-mi	C4–C7
07 FL2_arp-sta_F#-mi	C#4–C#7
08 FL2_arp-sta_G-mi	D4–A#6
09 FL2_arp-sta_G#-mi	D#4–B6
10 FL2_arp-sta_A-mi	C4–C7
11 FL2_arp-sta_A#-mi	C#4–C#7
12 FL2_arp-sta_B-mi	B3–B6

### Staccato minor fast

	play range
01 FL2_arp-sta_C-mi+	C4–C7
02 FL2_arp-sta_C#-mi+	C#4–C#7
03 FL2_arp-sta_D-mi+	D4–D7
04 FL2_arp-sta_D#-mi+	D#4–A#6
05 FL2_arp-sta_E-mi+	E4–B6
06 FL2_arp-sta_F-mi+	C4–C7
07 FL2_arp-sta_F#-mi+	C#4–C#7
08 FL2_arp-sta_G-mi+	D4–A#6
09 FL2_arp-sta_G#-mi+	D#4–B6
10 FL2_arp-sta_A-mi+	C4–C7
11 FL2_arp-sta_A#-mi+	C#4–C#7
12 FL2_arp-sta_B-mi+	B3–B6